Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at

Jawaharlal Institute of Postgraduate Medical Education & Research

Puducherry

Request For Proposal – Volume I

DECEMBER 2013

TENDER NO. HLL / ID / 13 /102

HLL LIFECARE LIMITED
Infrastructure Development Division
"Adarsh" TC 6/1781, Vettamukku,
Thirumala P.O
Thiruvananthapuram-695006

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DISCLAIMER

HLL Lifecare Limited, India (HLL) has prepared this document on behalf of Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER), Puducherry to give bidders, background information on the Project. The information is provided to bidders on the terms and conditions set out in this RFP document and any other terms and conditions subject to which such information is provided.

This RFP document is not an agreement, is not an offer or invitation to any other party. The purpose of this RFP document is to provide interested parties with information to assist the formulation of their bid. The information is not intended to be exhaustive. Bidders are required to make their own inquiries and respondents will be required to confirm in writing that they have done so and they do not rely solely on the information in RFP.

The information is provided on the basis that it is non – binding on Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER), or HLL Lifecare Limited, any of its authorities or agencies or any of their respective officers, employees, agents or advisors.

Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER), reserves the right not to proceed with the Project or to change the configuration of the Project, to alter the timetable reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the Project further with any party submitting the Tender.

While HLL Lifecare Limited and JIPMER have taken due care in the preparation of the information contained herein and believe it to be accurate neither Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER), nor HLL Lifecare Limited, any of its authorities or agencies nor any of their respective officers, employees, agents or advisors gives any warranty or make any representations, express or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

No reimbursement of cost of any type will be paid to persons or entities submitting their Tender.

DEFINITIONS

"Engineer" means the person(s) named by the Employer in the Contract or appointed from time to time by the Employer, who acts on behalf of the Employer under the contract.

"Employer" means JIPMER, which has invited bids for the project.

"HLL" means HLL Lifecare Limited, consultant to JIPMER for the project.

"JIPMER" means Jawaharlal Institute of Post-Graduate Medical Education and Research at Puducherry, India .

"MoHFW" means Ministry of Health and Family Welfare, Government of India.

"Project" means Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at JIPMER on a turnkey basis.

"Site" means the place where the above-mentioned project work is to be executed.

"Tender" or **"Bid"** shall mean the offer submitted by a Tenderer in accordance with this document for the above project.

"Tenderer" means a firm that has submitted its Tender of Bid for the Project**.**

SECTION I

1. NOTICE INVITING TENDER (NIT)

1.1 GENERAL

1.1.1 Jawaharlal Institute of Post-Graduate Medical Education and Research invites sealed tenders from reputed Indian Firms for **Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at JIPMER**, Puducherry, on turnkey basis.

1.1.2 The bidder should be Original Equipment Manufacturer (OEM) of Gamma Camera and PET-CT.

1.1.3 JIPMER invites sealed tenders for the above-mentioned work (clause 1.1.1).

Approximate cost of work	**Rs. 16 Crores (Rs. Sixteen Crores only)**
Tender Security amount (EMD) as DD. However optionally 50% of the EMD shall be in the form of DD and balance in the form of BG	**Rs.26 Lakhs(Rs.Twenty Six Lakhs only)**
Cost of Tender form **(Non-refundable)**	Rs.5250/- (Rs. Five Thousand Two Hundred Fifty Only) payable by a Demand Draft in favour of "HLL Lifecare Limited" at Thiruvananthapuram.
Completion period of the Work	12 Months (Twelve Months Only) from the date of issue of letter of acceptance.
Tender documents on sale	From 20/12/2013 to 02/01/2014 (between 10.00 Hrs to 17.00 Hrs) on working days.
Last date for submission of queries/Pre-Bid conference	07/01/2014
Last date for Issue of addendum	14/01/2014
Pre-Bid Meeting at HLL Project Office,JIPMER	07/01/2014 at 11.00am
Last Date & time of Submission of Tender	23/01/2014, up to 15.00 Hrs
Date & time of opening of Tender	23/01/2014, 15.30 Hrs

One set of tender documents (Non-transferable) can be obtained from the office of HLL Lifecare Limited, (A Government of India Enterprise), ID Division, Adarsh, TC 6/1718,Vettamukku, Thirumala P.O., Thiruvananthapuram - 695006.

1.2 POINTS TO BE NOTED

1.2.1 Works envisaged under this contract are required to be completed in all respects within the period of completion mentioned above.

1.2.2 Applicant should be an Indian firm and fulfill the criteria set out in para 2.1 to 2.4 of Section II, Instructions to Tenderers (ITT).

1.2.3 This tender is to be submitted in two parts i.e. TECHNICAL PACKAGE and FINANCIAL PACKAGE. Technical package is to be submitted in two parts, Part-I shall consists of Information /details of the tenderer and Part -II shall be the Technical proposal. Financial Package shall also consist of two parts, Part A – Civil and service works, Part B – SITC of Medical Equipments. The tender will be awarded to the lowest bid.

1.2.4 Applicant/Tenderer must not have been blacklisted or deregistered by any govt. agencies or public sector undertaking during the last 7 years.

1.2.5 Tender documents consist of

Volume 1

- Notice Inviting Tender (NIT)
- Instructions to Tenderers (ITT) (Including Annexures)
- Special Conditions of Contract (SCC)
- Employers requirements

Volume 2

- General Conditions of Contract (GCC)

1.2.6 The Contract shall be governed by the documents listed in Para 1.2.5 above and relevant standards and specifications.

1.2.7 Tenderers may obtain further information in respect of these tender documents from the office of the Deputy Vice President (T), HLL Lifecare Limited, (A Government of India Enterprise), ID Division, Adarsh, TC 6/1718,Vettamukku, Thirumala P.O., Thiruvananthapuram – 695006, Ph: 0471 – 2365872/73, Fax: 0471 – 2368144.

1.2.8 All Tenderers are hereby cautioned that tenders containing any material deviation or reservation as described in Clause 6.4 of “Instructions to Tenderers” and/ or minor deviation without quoting the cost of withdrawal shall be considered as non-responsive and shall be summarily rejected.

1.2.9 The offers of Tenderers who fulfill the minimum requirements as specified in para 2.1 to 2.4 and para 6.5.1 of Section II (ITT), only shall be evaluated further.

1.2.10 JIPMER reserves the right to accept or reject any or all proposals without assigning any reasons, No tenderer shall have any cause of action or claim against the JIPMER for rejection of his proposal bid.

For and on behalf of JIPMER
Deputy Vice President (Technical)
HLL Lifecare Limited

2. SCOPE OF WORK

2.1 GENERAL

2.1.1 Augmentation of Nuclear Medicine Department including necessary civil , electrical works & all services and SITC of Equipments like PET CT and Dual head Gamma camera at JIPMER, Puducherry.

2.2 WORK CONTENT

2.2.1 Brief Scope

The project involves procurement, installation, testing and commissioning of equipments, and construction of treatment rooms and associated facilities at the Regional Cancer Centre at JIPMER. The project has the following components.

- Procurement, installation, testing and commissioning of Positron Emission Tomography / Computed Tomography (PET / CT) Imaging System.
- Procurement, installation, testing and commissioning of Dual Head Gamma Camera.
- Procurement, installation, testing and commissioning of Medical equipment & furniture.
- Horizontal extension of the existing Regional Cancer Centre building for installation of the equipment and providing associated facilities. All services shall be provided for the building to make it functional.
- Latest model Ceiling mounted LCD Projector with USB drive retractable white screen at Satellite work station cum seminar room.
- Providing desktop computers with latest configuration, UPS, printers, printer cum fax cum Xerox machine etc.
- Telephone connection (direct line with STD Facility) and intercom (all hardware included).

The scope of work consists Project planning, design, construction, procurement, installation, testing and commissioning of equipments, and integrated commissioning of the Nuclear Medicine Dept. Necessary building work is to be designed and executed as per relevant codes, Technical Specifications, conceptual / layout drawings and AERB regulations.

The work shall, inter-alia, include the following:

i. The construction design shall be appropriate to the type of equipment to be installed and shall conform to AERB regulations.

ii. Approval of Atomic Energy Regulatory Board shall be obtained for the design, construction, installation and commissioning of equipment.

iii. Detailed design engineering including architectural design and construction documents, structural engineering, electrical engineering, heating ventilation and air conditioning plans, medical gases and manifold plan, plan for the central sterile services department, communication and networking plan, fire detection and protection plan and waste management etc.

iv. Site clearance and dismantling of obstructions etc., before commencement of work.

v. Getting approvals / permissions / permits of the statutory / local / governmental agencies including AERB for using the facility for patient care purposes.

vi. Building construction and installation of all services and making all the building services fully and functionally operative.

vii. Procurement, installation, testing and commissioning of medical equipment as per specifications provided.

viii. Procurement and installation of furniture and fixtures including internal and external signages.

ix. All aspects of quality assurance, including testing of medical equipments and other components of the work shall be done and the report to be given to JIPMER. Manufactures test data certifying compliance with specified performance requirements and with requirements of the contract document should be also given to JIPMER.

x. Project Management to ensure completion of Project as per the specified timelines.

xi. Submission of the completion (i.e. 'as-built') drawings and other related documents. A soft copy in Auto CAD or other similar softwares shall also be submitted.

xii. Clearance of site before Handing over of the facilities after fulfilling all the obligations under "Employer's Requirement".

xiii. Making good any defect (if any) in Defects Liability Period.

Sl No.	Room Description	Flooring	Walls	Drains	Ventilation	Power / Isolator	Lighting & Fans
1	PET CT	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	415 volt, 3 ph x 1; 15Amp x 2; 5Amp x 2	Fluorescent lighting
2	Console room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amp x 2, 5 Amp x 10	Fluorescent lighting
3	Gamma Camera	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	415 volt, 3 ph x 1; 15Amp x 2; 5Amp x 2	Fluorescent lighting
4	UPS	Epoxy flooring	Water resistant, plastic emulsion paint		AC	200 Amps x 1, 63 Amps x 1	Fluorescent lighting
5	Seminar Hall	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 2, 5 Amps x 6	Fluorescent lighting
6	Consultant room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
7	Board room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 6	Fluorescent lighting
8	HOD room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
9	PA room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
10	AHU room	Epoxy flooring	Water resistant, plastic emulsion paint		AC	415 volt, 3 ph x 1; 15Amp x 2; 5Amp x 2	Fluorescent lighting
11	Resident cabin	Vitrified Floor Tiles	Wooden partition		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
12	OPD cabin	Vitrified Floor Tiles	Wooden partition		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
13	Waiting hall	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
14	Toilet staff	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2"	AC	5 Amps x 1	Fluorescent lighting
15	Toilet male	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2"	AC	5 Amps x 1	Fluorescent lighting

16	Toilet female	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2"	AC	5 Amps x 1	Fluorescent lighting
17	Resident room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
18	Phy/Tech Room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
19	Pantry	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2"	AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
20	Nursing station	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
21	TMT room	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
22	Inj waiting room for Gamma camera	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
23	Active Toilet 1	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2”	AC	5 Amps x 1	Fluorescent lighting
24	Inj waiting room for PET CT	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
25	Active Toilet 2	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2”	AC	5 Amps x 1	Fluorescent lighting
26	Hot Lab	Vitrified Floor Tiles	Vitrified Wall tiles upto fall ceiling	2"	AC	15 Amps x 2, 5 Amps x 5	Fluorescent lighting
27	Dose cabin	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC		Fluorescent lighting
28	Decontamination room	Anti-skid Floor Tiles	Vitrified Wall tiles upto fall ceiling	2"	AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting
29	Storage	Vitrified Floor Tiles	Water resistant, plastic emulsion paint		AC	15 Amps x 1, 5 Amps x 3	Fluorescent lighting

CIVIL WORKS

Bidder shall be responsible for the design and construction of the proposed nuclear medicine block.

Bidders are strongly advised to visit the site and carry out the assessment of works. All material should be of high quality and sample should get approved by HLL commencing the use. Indicative design layout is attached. However Bidder shall be responsible for complete design of building as per AERB requirement and other statutory requirements. The bidder should ensure structural stability of proposed building with 3 levels (G+2) building.

All the walls/partitions of the nuclear medicine department should be as per AERB norms. Total area of construction will be around 790 square metres.

Bidder shall be responsible for the interior design including construction of counters, doors with and without lead lining, windows and any other work required for the smooth functioning of the nuclear medicine department.

List of Approved makes

Wall tiles – Kajaria or Johnson

Floor tiles - Kajaria or Johnson

AIR- CONDITIONING ,DUCTING AND FALSE CEILING

Bidder shall be responsible for air conditioning inside the proposed nuclear medicine department. The existing chiller has capacity to cater the demand of the proposed block. Bidder shall be responsible for supply, installation, testing and commission of the HVAC system ie AHU, ducting and other related work .Temperature should be 22 ± 2 degree Celsius and relative humidity should be 50 ± 5%.Total tonnage required will be around 30 TR. Proper insulation of ducting has to be done by the bidder. Bidder shall be responsible for the false ceiling work inside the proposed block. Bidder has to carry out all the works as per latest national/international standards. Heat dissipation of equipment in to scanner room should be considered in the design. Humidity control should be provided as required.

LIST OF APPROVED MAKES FOR EQUIPMENT & MATERIALS

S.No	Details of Materials / Equipment	Manufacturer's Name
1.	Air Handling Unit	Blue Star, Carrier, Voltas, VTS, Caryaire, Edgetech, Zeco
2.	Fan Coil/Cassette Unit	Blue Star, Voltas, Caryaire, Mukund, Edgetech, Zeco, Midea
3.	Centrifugal fans	Nikotra, Comfrei, Kruger
4.	Thermal Heat Recovery Wheel	ABB, Bry Air, Novelaire
5.	M.S. & GI Pipes.	Tata Steel, Jindal
6.	Ball valve (up to 30 mm)	Danfoss, RB, Sant, Rapid
7.	Butterfly valve	Intervlalve, C&R, Audco, Advance, Econsto
8.	Pressure Gauge	Fiebig, Wika, H Guru.
9.	Thermometer	Emerald, H Guru, Feibig
10.	Ball valves (Fan Coil Units)	Rapid Control, Emerald, Castel
11.	Auto Air Vent Valve	Rapid Control, RB, Anergy
12.	Grille/diffuser	Caryaire, Ravistar, Air Master, Dynacraft, Air Breeze / Ajanta
21.	Volume/Fire Damper	Caryaire, Ravistar, Air Master, Dynacraft Air Breeze / Ajanta
13.	Closed Cell Elastomeric Insulation along with adhesive	Armacell, Armaflex, Eurobatex, K Flex
14.	Fibreglass (Foil Faced)	UP Twiga, Owens Corning, Kimmco
15.	Expanded Polystyrene (TF Quality)	Beardsell, Qualty thermopack, Coolite
16.	Two way motorized valve for AHU & FCUs	Tour Andover , Johnson Control , Honeywell, Siemens
17.	Room Thermostat/Humidistat	Tour Andover , Johnson Control, Honeywell, Siemens
18.	Flow Switch	Honeywell, Siemens, Rapid Control
19.	Factory Fabricated Ducts	Zeco, Rollarstar, Camduct, Western Air

20.	GI Sheets	Jindal, Tata
21.	Aluminium Sheet	Hindalco, Balco, Nalco
22.	Acoustic Insulation	UP Twiga, Owens Corning, Kimmco
23.	Exhaust Propeller Blower/Fans	Kruger, Caryaire, System air

ELECTRICAL WORKS

Bidder shall be responsible for the design, installation, testing, and commissioning of the electrical system for the proposed block. Consignee will provide required three phase line from the existing substation. Approximate distance from the nearest substation is 320 m .All remain works including cabling, distribution panel, isolators, MCBs, Switches has to be done by the bidder. Bidder shall be responsible for electrical works and other cabling necessary for the efficient working of the equipment inside the proposed block. Bidder has to provide a backup of 250 KVA Diesel Generator with AMF panel for the proposed facility .Circuit breaker shall be ACB/MCCB.Panel board should be with 2 mm thick CRCA sheet manufactured by panel fabricator having valid CPRI certificate for fabricating similar type of panel. All work shall be carried out as per latest CPWD specification. Total system Gamma camera and PET/CT are to be supported with UPS with 30 minutes back up (full load)

The major power requirements

Maximum power requirement for PET/CT - 150 KVA

Maximum power requirement for Gamma Camera - 50 KVA

List of Approved makes

DG set Engine	-	Cummins / Caterpillar / Kirloskar
Alternator	-	Stamford / Kirloskar / Leroy somer / BHEL
Cables	-	Gloster / Universal / Polycab
Wires	-	Finolex / RR kabe l/ Gloster / Anchor
Switches	-	Legrand / MK / Crabtree

FIRE FIGHTING

Bidder should provide effective firefighting system. Bidder should extend fire sprinkler system from the existing system to the new block except equipment room. Equipment room should be supported with fire extinguisher. Safety clearance from the concerned authority has to be obtained by the bidder. Water should be drawn from the existing fire tank.

PLUMBING WORKS

All plumbing works associated with proper functioning of nuclear medicine department has to be carried out by the vendor. Proper drainage will be the responsibility of the vendor. Plumbing requirement for the active toilet has to be done by the bidder in accordance with the AERB norms. Water mains has to be drawn from the existing RCC building.

VENTILATION AND LIGHTING

Proper Ventilation system has to be provided for hot lab, Decontamination room, Waste room etc. Light fitting should be mirror reflector type. Light fittings should be Philips / Wipro / GE.

2.2.2 Design criteria to be specified with the proposal by the Tenderer

The design of the Tenderer shall be of international standards and should be complete in all respects as per international best practices. Detailed design including the design criteria, codes and standards and specifications of the materials to be used for the design should be submitted by the Tenderer along with his proposal. Other documents as detailed in Employer's Requirements and Sub-clause 4.2.4 of Instruction to Tenderers should be submitted along with the design.

2.2.3 Reference to the Standard Codes of Practice

2.2.3.1 All Standards, Technical Specifications and Codes of practice referred to shall be latest editions including all applicable official amendments and revisions. The Contractor shall make available at site all relevant Indian Standard Codes of practice as applicable.

2.2.3.2 Wherever Indian Standards do not cover some particular aspects of design/ construction, relevant International Standards shall be referred to. The contractor shall make available at site such standard codes of practice.

2.2.3.3 In case of discrepancy among Standard codes of practice, Technical Specifications and provisions in Employer's Requirements, the order of precedence shall be as below:

i) Provision in General Requirements of Employer's Requirements

ii) Technical Specifications in Employer's Requirements,

iii) Standard Codes of Practice.

In case of discrepancy in reference to Standard Codes of Practice, the order of precedence shall be BIS, IRC, BS, ASTM, DIN

iV) All radiation equipment installation should follow AERB requirement.

2.2.4 Dimensions

The levels, measurements and other information concerning the existing site as shown on the conceptual / layout drawings are believed to be correct, but the tenderer should verify them for himself and also examine the nature of the ground as no claim or allowance whatsoever shall be entertained on account of any errors or omissions and commissions in the levels or strata turning out different from what is shown on the drawings.

2.3 TIME SCHEDULE

The tenderer shall submit with the tender "Time Schedule" for completion of various portions of works. This schedule is to be within the overall completion period of 12 months. The detailed program in the form of a Critical Path Method (CPM) network shall include all activities starting from design to completion.

2.4 EXISTING MEDICAL FACILITIES AND UTILITIES

(i) The utilities shall be diverted with proper liaison and approval of the utility owning agencies. The utilities which cannot be diverted but require supporting, proper supporting shall be done so that they are not damaged along their branches. Precautions to be taken while handling the utilities are mentioned as under;

(ii) Utilities shall not be damaged at any cost. If due to some or the other reason, mis-happening occurs, it should be rectified immediately by the contractor at his own cost under intimation to HLL/JIPMER.

(iii) The Contractor shall take care so that the ongoing activities are not disturbed in any manner whatsoever by the activities of the Contractor during the execution of the project.

The above instructions are only indicative, other precautions which are specified from time to time by the utility owning agencies shall be followed by the successful Tenderer at all times.

3. TENDER PRICES AND SCHEDULE OF PAYMENT

3.1 TENDER PRICES

a. Unless explicitly stated otherwise in the Tender Documents, the Contract shall be for the whole Work and payment shall be based on the milestones as accepted in the Contract.

b. The design notes, calculations, specifications, dimensioned drawings and milestone schedules prepared by the tenderer in respect of technically acceptable proposal shall be for limited purpose of prima facie evaluation for determining its technical acceptability, price and construction time.

c. Irrespective of the estimated quantities and /or dimensioned details for various items of work as furnished in the design notes, calculations, specifications or outline /dimensioned drawings accompanying the tender for the work, the successful tenderer shall carry out all changes, modifications or alterations that may, during the scrutiny of the detailed designs and working drawings, or during construction be considered necessary in the opinion of the Engineer for compliance with the Employer's Requirements.

d. The Tenderer shall include in his quoted price all taxes (VAT, Service Tax), fees and other levies, payable by the tenderer under the Contract. JIPMER shall provide assistance to the Tenderer for getting custom duty exemption wherever feasible.

3.2 SCHEDULE OF MILESTONES

(1) Civil & Services works

Sl. No.	Milestone	% of construction value
1.	Submission of Detailed Design for building	2.50%
2.	On approval of detailed building design by AERB	2.50%
3.	Completion of basic structure of the building (Foundation, RCC frame & Brickwork)	50%
4.	Completion of building i/c finishing & services	40%
	Taking over	5%
	Total	**100%**

3.3 Terms and Mode of Payment for Medical Equipment and Furniture

3.3.1 Payment Terms

Payment shall be made subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner.

A) Payment for Domestic Goods Or Foreign Origin Located Within India.

Payment shall be made in Indian Rupees as specified in the contract in the following manner:

a) On delivery:

70 % payment of the contract price shall be paid on receipt of goods in good condition and upon the submission of the following documents:
(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
(ii) Consignee Receipt Certificate in original issued by the authorized representative of the consignee and HLL;
(iii) Two copies of packing list identifying contents of each package;
(iv) Inspection certificate issued by the nominated Inspection agency, if any.
(v) Insurance Certificate and documents also to be submitted for payment of LC confirming that dispatch documents has already been sent to all concerned as per the contract within 24 hours;
(vi) Certificate of origin.

b) On Acceptance:

Balance 30 % payment would be made against "Final Acceptance Certificate" of goods to be issued by the consignee and HLL subject to recoveries, if any, either on account of non-rectification of defects/deficiencies not attended by the Supplier or otherwise.

B) Payment for Imported Goods:

Payment for foreign currency portion shall be made in the currency as specified in the contract in the following manner:

a) On Shipment:

Seventy (70) % of the net CIP price of the goods shipped shall be paid through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the supplier in a bank in his country and upon submission of documents specified hereunder:

(i) Four copies of supplier□s invoice showing contract number, goods description, quantity, unit price and total amount;
(ii) Original and four copies of the negotiable clean, on-board Bill of Lading/ Airway bill , marked freight pre paid and four copies of non-negotiable Bill of Lading/Airway bill;
(iii) Four Copies of packing list identifying contents of each package;

(iv) Insurance Certificate and documents also to be submitted for payment of LC confirming that dispatch documents has already been sent to all concerned as per the contract within 24 hours;
(v) Manufacturer□s/Supplier□s warranty certificate;
(vi) Inspection certificate issued by the nominated inspection agency, if applicable as per contract;
(vii) Manufacturer□s own factory inspection report and
(viii) Certificate of origin by the chamber of commerce of the concerned country;
(ix) Certificate of origin

b) On Acceptance:

Balance payment of 30 % of net CIP price of goods would be made against „Final Acceptance Certificate□ as per to be issued by the consignees through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the Foreign Principal in a bank in his country, subject to recoveries, if any.

c) Payment of Incidental Costs till consignee site & Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) will be paid in Indian Rupees to the Indian Agent on proof of 100 % payment to the Foreign Principal / supplier.

d) Payment of Indian Agency Commission: Indian Agency commission will be paid to the manufacturer□s agent in the local currency for an amount in Indian rupees indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation / exchange variation. Payment shall be paid in Indian Rupees to the Indian Agent on proof of 100 % payment to the Foreign Principal / Supplier.

C) Payment for Annual Comprehensive Maintenance Contract Charges:

The consignee will enter into CAMC with the supplier at the rates as stipulated in the contract. The payment of CAMC will be made on six monthly basis after satisfactory completion of said period, duly certified by the consignee on receipt of bank guarantee for an amount equivalent to 2.5 % of the cost of the equipment as per contract valid till 2 months after expiry of entire CAMC period. 21.2 The supplier shall not claim any interest on payments under the contract.

21.3 Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other tax as applicable will be made from the bills payable to the Supplier at rates as notified from time to time.

21.4 Irrevocable & non – transferable LC shall be opened by the respective consignees. However, if the supplier requests specifically to open confirmed LC, the extra charges would be borne by the supplier. If LC is required to be extended and/or amended for reasons not attributable to the purchaser/consignee, the charges thereof shall be borne by the supplier.

21.5 The payment shall be made in the currency / currencies authorized in the contract.

21.6 The supplier shall send its claim for payment in writing, when contractually due, along with relevant documents etc., duly signed with date, to respective consignees.

21.7 While claiming payment, the supplier is also to certify in the bill that the payment being claimed is strictly in terms of the contract and all the obligations on the part of the supplier for claiming that payment has been fulfilled as required under the contract.

21.8 While claiming reimbursement of duties, taxes etc. (like sales tax, excise duty, custom duty) from the Purchaser/Consignee, as and if permitted under the contract, the supplier shall also certify that, in case it gets any refund out of such taxes and duties from the concerned authorities at a later date, it (the supplier) shall refund to the Purchaser/Consignee forthwith.

21.9 In case where the supplier is not in a position to submit its bill for the balance payment for want of receipted copies of Inspection Note from the consignee and the consignee has not complained about the non-receipt, shortage, or defects in the supplies made, balance amount will be paid by the paying authority without consignee□s receipt certificate after three months from the date of the preceding part payment for the goods in question, subject to the following conditions: (a) The supplier will make good any defect or deficiency that the consignee (s) may report within six months from the date of despatch of goods. (b) Delay in supplies, if any, has been regularized. (c) The contract price where it is subject to variation has been finalized. (d) The supplier furnishes the following undertakings:

"I/We, _____ certify that I/We have not received back the Inspection Note duly receipted by the consignee or any communication from the purchaser or the consignee about non-receipt, shortage or defects in the goods supplied. I/We _____ agree to make good any defect or deficiency that the consignee may report within three months from the date of receipt of this balance payment.

4. SITE INFORMATION

4.1 WORK SITE

4.1.1 The project site is located in the campus of JIPMER at Puducherry. A campus map is enclosed in the tender documents for the reference.

4.1.2 The contractor shall plan his works keeping in view restriction of approach and availability of space and time and ongoing activities at the campus which includes both academic and medical activities.

4.2 GENERAL

4.2.1 JIPMER campus is located at the western entrance of Puducherry. The 195-acre campus is situated on a hillock known as 'Gorimedu'.

4.2.2 Puducherry region is located on the coromandal coast between **11 degree 46' and 12 degree 30' of north latitude** and between **79 degree 36' and 79 degree 52' of east longitude**. Its boundary on the east is the Bay of Bengal and on the other 3 sides is Cuddalore & Villupuram districts of Tamil Nadu.

4.2.3 Main languages spoken in the region are **Tamil, Telugu and Malayalam. English and French** are other languages, which are spoken by a considerable number of people.

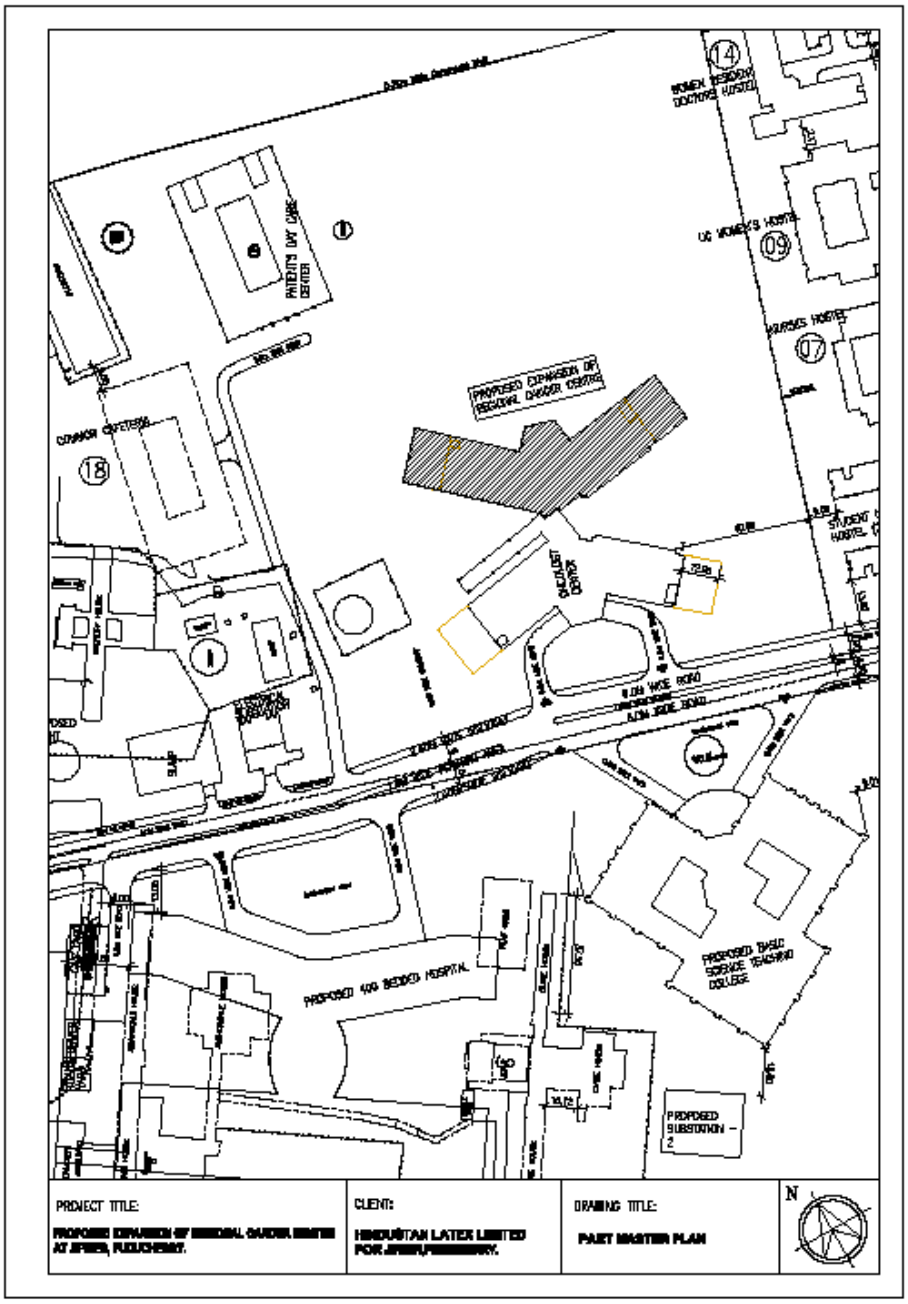
4.2.4 For the greater part of the year Puducherry is hot and humid with temperatures ranging between 26 and 38℃. The summer runs from March till July.

4.2.5 The winter starts in November and the north-east monsoon cools the days and nights with the rains it brings along. During this time the temperatures is around the 24 ℃ - 30℃.

4.2.6 The main rainy season is in November-January. Mean average annual rainfall in the area is of the order of 860 mm, a good portion of which is concentrated during November to January, which is the main rainy season. Apart from this, Pondicherry also experiences small monsoon in July-September.

4.2.7 Pondicherry falls in Seismic Zone II. In 2004 end, Puducherry was one of the areas affected by the Killer Tsunami Waves.

4.3 Site map.


PROPOSED EXPANSION OF REGIONAL CANCER CENTRE
PROPOSED 400 BEDDED HOSPITAL
PROPOSED BASIC SCIENCE TEACHING COLLEGE
PROPOSED SUBSTATION – 2
PROJECT TITLE:
CLIENT:
DRAWING TITLE:
MASTER PLAN
N

SECTION-II

INSTRUCTIONS TO TENDERERS (ITT)

1.0 GENERAL

1.1 The Proposal

JIPMER (hereinafter also referred as Employer) invites sealed tenders from applicants for

1. Supply, installation, and commissioning of the PET/CT unit and the Dual-head Gamma Camera unit in the Department of Nuclear Medicine, Regional Cancer Center, JIPMER, Puducherry.
2. Construction of building for the equipment and other associated rooms in accordance with AERB guidelines to house the above equipments and their accessories, radioisotope dose administration rooms, post administration waiting rooms, office space, patient waiting halls, etc. Construction includes civil works, electrical works, centralized air-conditioning, special flooring, split ACs backup in equipment rooms, 250 KV DG backup to the entire wing, plumbing, drainage, telephone and intercom facility, internet connections, fire safety, furnishings, and other required works for successful commissioning and usage of the above equipments

The tender papers consist of the documents as specified in Clause 1.2.5 of NIT, along with their Annexures, appendices, addenda and errata if any.

Tenderers should procure relevant standards and specifications referred from the market.

Tenders shall be prepared and submitted in accordance with the instructions given herein.

1.2 Address for Communication

Deputy Vice President (Tech)
HLL Lifecare Limited,
Infrastructure Development Division,
“Adarsh”, T.C 6/1718(1),
Vettamukku, Thirumala PO,
Thiruvananthapuram- 695 006.
Phone - 0471 2365872 / 73 / 82
TeleFax – 0471 2368144

1.3 Some essential data/requirements pertaining to this Tender along with reference to Clause Number of this Volume where full details have been given are detailed below (also refer Clause 1.2 of NIT):

a. Date and time of opening of tender (Clause 1.1.3 of NIT) is 23.01.2014, 15:30 Hrs.

b. Period for which the tender is to be kept valid (Clause 4.8), **120 days** from the last date of submission of Tender.

c. Period of commencement of work (Form A), one week of signing of the Contract Agreement.

d. Defects Liability Period (Form A) **12 months** from the date of issue of "Taking Over Certificate".

e. Period of completion (Form A) **12 Months** from the date of issue of "Letter of acceptance".

f. Validity Period for Performance Security (Form D) **6 months** from the date of expiry of "Defects Liability Period".

2.0 ELIGIBILTY REQUIREMENTS

2.1 The intending bidder should have satisfactorily designed, Supplied, Installed and commissioned similar equipment during the last seven years ending last day of the month of June 2013 and would have done.

1.1 Three similar completed works each costing not less than Rs.6.4 crores or

1.2 Two similar completed works each costing not less than Rs.9.6 crores or

1.3 One similar completed work costing not less than Rs.12.8 crores.

For this purpose, 'cost of work' shall mean gross value of the completed work including the cost of medical equipment supplied, installed and commissioned. This should be certified by an officer not below the rank of Executive Engineer / Project Manager or equivalent.

2.2 The applicant should not have incurred any loss in more than two years during the last five years ending March 2013.This should be duly certified by a Chartered Accountant.

2.3 The applicant should have a Solvency of Rs. 6.4 Crores and latest bank solvency certificate in the current financial year duly certified by his bankers shall be submitted.

2.4 The applicant should have had an average annual turnover of Rs. 4.8 Crores during the last 3 years ending 31st March 2012-2013.

2.5 The bidders should have license to supply the radioactive isotope like F-18 FDG isotope, 15 mCi Gallium-68 PET generator etc.

2.6 Applicant must not have been blacklisted or deregistered by any govt. agencies or public sector undertaking during last 7 years.

2.7 All tenders submitted shall include the following information:

2.7.1 General information of the Tenderer shall be furnished in Form T-I. Copies of original documents defining the constitution and legal status, certificate of registration and ownership, principal place of business of the company, corporation, firm or partnership shall also be required to be furnished.

2.8 The Tenderers to qualify for award of Contract shall submit a written power of attorney authorizing the signatory (ies) of the tender to submit the Tenderer.

2.9 The authorized signatory of the Tenderer shall sign each page of the tender. Power of Attorney in favor of the signatory will be required to be furnished as detailed in Clause 4.10

2.10 Cancellation or creation of a document such as Power of Attorney, Partnership deed, Constitution of firm etc., which may have bearing on the Tender/Contract shall be communicated forthwith in writing by the Tenderer to JIPMER, through HLL

2.8 Each Tenderer, or any associate will be required to confirm and declare in the tender submittal that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract. They will have to further confirm and declare in the submittal that no agency commission or any payment, which may be construed as an agency commission, has been, or will be paid and that tender price will not include any such amount.

3. TENDER DOCUMENTS

3.1. CONTENTS OF TENDER DOCUMENTS

3.1.1 The Tenderer is expected to examine carefully all the contents of the tender documents as mentioned in Sub-clause 1.1 including instructions, conditions, forms, terms, Employer's requirements and take them fully into account before submitting his

offer. Failure to comply with the requirements as detailed in these documents shall be at the Tenderers own risk. Tenders which are not responsive to the requirements of the tender documents will be rejected.

3.2 CLARIFICATION ON TENDER DOCUMENTS

3.2.1 While all efforts have been made to avoid errors in the drafting of the tender documents, the Tenderer is advised to check the same carefully. No claim on account of any errors detected in the tender documents shall be entertained.

3.2.2 A prospective Tenderer requiring any clarification of the tender documents may notify the Officer-in-charge in writing or by Tele-fax at the Officer–in-charge's mailing address indicated in Clause 1.2 of ITT. The Officer-in-charge will respond in writing to any request for clarification which he receives prior to dead line mentioned in Clause 1.1.3 of NIT. Written copies of the Officer–in-charge's response (including an explanation on the query but without identifying the source of the inquiry) will be sent to all prospective Tenderers who have received the tender documents. Only written communications/clarifications can be considered as valid.

3.3 AMENDMENT TO TENDER DOCUMENTS

3.3.1 At any time prior to the deadline for the submission of tenders, JIPMER may, for any reason, whether at its own initiative or in response to a clarification or query raised by a prospective Tenderer, modify the tender documents by an amendment.

3.3.2 The said amendment in the form of an addendum will be sent to all prospective Tenderers who have received the tender documents, on or prior to last date mentioned in Clause 1.1.3 of NIT. This communication will be in writing or by Tele-fax and the same shall be binding upon them. Prospective Tenderers should promptly acknowledge receipt thereof by Tele-fax to the Officer-in-charge.

3.3.3 In order to afford prospective Tenderers reasonable time for preparing their tenders after taking into account such amendments, JIPMER may, at his discretion, extend the deadline for the submission of tenders in accordance with Clause 1.1.3 of NIT.

4 PREPARATION OF TENDERS

4.1 BIDDERS' RESPONSIBILITY AND SITE VISIT

4.1.1 The Tenderer is solely responsible for the details of his bid and the preparation of bids. In no case shall JIPMER/HLL be responsible for any part of the tender documents submitted by him. Any Site information given in this tender document is for guidance

only. The Tenderer is advised to visit and examine the Site of Works and its surroundings at his/their cost and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a Contract.

4.1.2 The Tenderer shall be deemed to have inspected the Site and its surroundings beforehand and taken into account all relevant factors pertaining to the Site in the preparation and submission of the Tender.

4.2 DOCUMENTS COMPRISING THE TENDER

TECHNICAL PACKAGE

4.2.1 **The technical package, clearly labeled as "TECHNICAL PACKAGE", has to be submitted in two parts,** Part-I shall consist of information of applicants and Part -II is the Technical proposal.

Part –I shall comprise the followings:

i. Covering letter for the Bid

ii. Checklist for the enclosed documents in the format as appendix 1

iii. Tender Security in original in a separate sealed and duly marked "Tender Security" envelope in the format attached as Form B,

iv. Income tax clearance certificate for the last five years

v. Attested Copy of Power of Attorney (in favour of the Authorised Signatory of the Tenderer) to submit tender.

vi. Relevant Experience for the projects

- i. Length of time in business in the form attached as Form T-I
- ii. Total number of Oncology Treatment Facilities like PET / CT (along with their value) commissioned successfully during the last seven years by the Tenderer in the format attached as Form T-II.
- iii. Performance certificate from client in the Form T-VI in respect of Works above.

vii. Financial Data for the past five years

- i. Net Working Capital in the form T-V
- ii. Net cash flow in the Form T-V
- iii. Annual Turnover from hospital development and commissioning in the form T-V

The Tenderer should validate the data provided as above using suitable documentary evidence such as client certificates, audited balance sheets, annual reports etc clearly giving the reference to the evidence in front of the relevant portion.

viii. Technical and organizational capability

i. Number of Technical staff proposed for this project in the Form T-III

ii. Academic qualification of the staff in the Form T-III

iii. Experience of the proposed staff in the Form T-III

4.2.2 In addition to above, following information shall also be furnished in Part-I of technical package:

(a) An organization chart with assignment of each key staff member (identified by name), duration & timing together with clear description of the responsibilities of each key staff member within the overall work programme. The minimum level of supervision and qualification/experience of Site-staff is given under Annexure- A.

(b) The name, background and professional experience of each key staff member to be assigned to the project, with particular reference to his experience of a nature similar to that of the proposed assignment. The majority of the key staff shall be regular members of the firm for at least six months (CV format in Form T-III).

4.2.3 The tenderer shall furnish details of agency/subcontractor proposed to be hired for the Construction Work as well as those available as on date in Part I of technical package.

4.2.4 Part –II shall comprise the following:

(a) Tender documents as listed in Clause 1.2.5 of NIT

(b) **Technical Proposal**

The proposal should cover in detail the following:

i. Understanding and comprehension of the work involved.

ii. The general approach and methodology proposed for carrying out the services covered in the Scope of Work, including such detailed information as deemed relevant. Apart from above, contractor shall give details and numbers of equipment including their source, to be mobilized for the project with an assurance that equipment mobilized would be able to conduct work as per specifications in stipulated time schedule.

iii. Detailed work plan, documents mentioned in Clause 2.2.3 of NIT, master plan and design of the project containing the following

a) Space Requirements

b) Service Requirements (Area Wise), Structural Systems etc.

c) Building Plans- Sections and elevations

d) Standards and specifications being followed in the design and for materials to be used in a consolidated tabular form

e) Budgetary Cost estimates

iv. List of vendors from whom the materials are planned to be procured in a consolidated tabular form

v. The details of the concept and technology used in the design

vi. Source of medical equipments to be procured, installed and commissioned

vii. A program implementation schedule with broad list of activities, timelines and milestones (Hard and soft copy). A detailed overall work programme and a bar chart indicating the duration and timing of all major activities. Bar chart shall be made showing the activity to be performed for the project along with duration of each activity on a weekly basis.

viii. A detailed cash flow bar chart indicating the project expenses along with duration on a fortnightly basis.

ix. Proposed quality plan as per requirements of ISO: 9001:2000

4.2.5 No information relating to financial terms of services should be included in the Technical Proposal.

FINANCIAL PACKAGE

4.2.6 The financial package, clearly labeled as " FINANCIAL PACKAGE" will contain the following:

i. Form of tender and Appendix thereof (Form A).

ii. Financial Bid of the Tenderer as per Form C.

4.2.7 The financial proposal for PART A- Civil works and PART B- SITC of Equipments will be submitted in the Format prescribed in Form C. The final prices shall be entered in the Form of Tender. These prices should include all costs associated with the contract**.**

4.2.8 Documents to be submitted by the Tenderer under technical and financial packages have been described under the respective Clauses 4.2. This list of documents has been prepared mainly for the convenience of the Tenderer and any omission on the part of JIPMER shall not absolve the Tenderer of his responsibility of going through the various clauses in the Tender Documents including the specifications and to submit all the details specifically called for (or implied) in those clauses.

4.2.9 All documents issued for the purposes of tendering as described in Clause 1.1, and any amendments issued in accordance with Clause 3.3 shall be deemed as incorporated in the Tender.

4.3 TENDER PRICES

4.3.1 The Tenderer is required to quote for all the items as per tender documents.

4.3.2 The Tenderer shall quote his price in Form-C (Format for Financial Bid). The total price quoted should be final and should be for undertaking the entire project in all respects as per the RFP document.

4.3.3 The list of medical equipment with detailed specification is provided in the RFP document. The Tenderer should quote his price for the Equipment keeping in mind that the equipment to be installed should be of latest specifications.

4.3.4 Prices quoted by the Tenderer, will include all tax liabilities and the cost of insurance to this contract. There will be no variation in the Contract Price quoted by the Tenderer on any account.

4.3.5 The Tenderer shall keep the contents of his tender and rates quoted by him confidential.

4.3.6 The Tenderer shall utilize Indian labor, staff and materials to the maximum extent possible in execution of Works.

4.4 COST OF TENDERING

4.4.1 The Tenderer shall bear all costs associated with the preparation and submission of his tender and JIPMER/HLL will in no case is responsible or liable for these costs, regardless of the conduct or outcome of the tendering process.

4.5 LANGUAGE OF TENDER

All tender documents shall be in English.

4.6 CURRENCY OF THE TENDER

1. The tenderer supplying indigenous goods or already imported goods shall quote only in Indian Rupees.

2. For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP or Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only if such services are to be performed /undertaken in India. Commission for Indian Agent, if any and if payable shall be indicated in the space provided for in the price schedule and will be payable in Indian Rupees only.

3. Tenders, where prices are quoted in any other way shall be treated as non - responsive and rejected.

4.7 TENDER VALIDITY

4.7.1 The tender shall remain valid and open for acceptance for a period of 120 days from the date of opening of the tenders.

4.7.2 In exceptional circumstances, prior to expiry of the original tender validity period, JIPMER may request the Tenderers for a specified extension in the period of validity. The request and the response there to shall be made in writing or by Tele-fax. The Tenderer shall not be required or permitted to modify his tender but shall be required to extend the validity of his tender security correspondingly.

4.8 TENDER SECURITY

4.8.1 The Tenderer shall furnish, as tender security, an amount as mentioned in Clause 1.1.3 of NIT.

4.8.2 The tender security will be in the form of a Bank Guarantee from a Scheduled Commercial bank in India acceptable to the Employer. The format of the Bank Guarantee shall be generally in accordance with the sample form of tender security (Form B) included in this volume of tender documents. Other formats may be permitted subject to the prior approval of JIPMER/HLL. Bank guarantees shall be irrevocable and operative for a period not less than 30 days beyond the validity of the tender (i.e. 150 days from the last date of tender). The Tender Security shall be endorsed/pledged in favor of HLL Lifecare Limited and shall be submitted in a separate envelope super scribed “Tender security for Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at JIPMER, Puducherry".

4.8.3 Any tender not accompanied by an acceptable tender security will be summarily rejected by the JIPMER/HLL and shall be treated as non-responsive.

4.8.4 The tender securities of unsuccessful Tenderers shall be discharged/returned by JIPMER/HLL as promptly as possible as but not later than 30 days after the expiration of the period of tender validity as defined in Clause 4.8.

4.8.5 The tender security of the successful Tenderer shall be returned upon the Tenderer executing the Contract Agreement and the required performance guarantee for performance, as mentioned in Clause 8.0.

4.8.6 The tender security shall be forfeited:

a. if a Tenderer withdraws his tender during the period of tender validity, or
b. if the Tenderer does not accept the correction of his tendered price in terms of Clause 6.6, or
c. in the case of a successful Tenderer, if he fails to :

i. furnish the necessary performance guarantee for performance as per Clause 8.0 and/or

ii. enter into the Contract within the time limit specified in Clause 7.4

4.8.7 No interest will be payable by JIPMER/HLL on the tender security amount cited above.

4.9 INCOME TAX CLEARANCE

The Tenderer shall provide income tax clearance certificate for the past five years in Part 1 of the technical bid.

4.10 POWER OF ATTORNEY

Power of Attorney duly notarized and on a stamp paper of an appropriate value, issued and signed by the member authorizing the person signing the tender documents to sign documents, make corrections/ modifications and interacting with JIPMER/HLL and acting as the contact person shall be submitted along with Part 1 of the technical bid.

4.11 FORMAT AND SIGNING OF TENDERS

4.11.1 The tender documents (technical package Part 1 and 2 and financial package) shall be stamped and signed on all pages by a person duly authorized to sign the tender documents. The Tenderer shall also submit a power of attorney authorizing the person signing the documents in accordance with Clause 4.11 of the Instruction to Tenderers.

4.11.2 Entries to be filled in by the Tenderer shall be typed or written in indelible ink.

4.11.3 The complete tender shall be without alterations, overwriting, interlineations or erasures except those to accord with instructions issued by JIPMER/HLL, or as necessary to correct errors made by the Tenderer. The person or persons signing the tender shall initial all amendments/corrections.

4.11.4 All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be written below their signatures.

5 SUBMISSION OF TENDERS

5.1 SEALING AND MARKING OF TENDERS

5.1.1 The Tenderer shall follow the procedure as indicated below:

5.1.2 Each tender will be submitted in two sets one marked “Original” and the other marked “Copy” (Copy should be photocopy of ‘original’).

5.1.3 Each set containing the two packages, TECHNICAL PACKAGE and FINANCIAL PACKAGE shall be sealed in two separate envelopes clearly marked as “Original” and “Copy’. The two envelopes shall be wrapped in an outer envelope addressed to The

Deputy Vice President (T), HLL Lifecare Limited, Infrastructure Development Division, "Adarsh", TC.6/1718 (1), Vettamukku, Thirumala P.O, Thiruvananthapuram – 695 006 duly superscribing on top, tender number, name of work and time and last date for submission. The envelope should also bear the name and address of the Tenderer.

5.1.4 The contents of Technical Package and Financial Package shall be as detailed under Clause 4.2 herein.

5.1.5 No responsibility will be accepted by the JIPMER/HLL for the misplacement or premature opening of a tender, not sealed or marked as per aforesaid instructions.

5.2 SUBMISSION OF TENDERS

5.2.1 Tenders should be submitted to:

The Deputy Vice President (T),

HLL Lifecare Limited,

Infrastructure Development Division,

"Adarsh", T.C 6/1718(1), Vettamukku,

Thirumala PO, Thiruvananthapuram- 695 006

The last date for submission of completed tenders is given in Clause 1.1.3 of NIT. The JIPMER/HLL may, at their discretion, extend this date for the submission of tender by amending the Tender Documents in accordance with Clause 3.3, in which case all rights and obligations of JIPMER/HLL and the Tenderer previously subject to the original date shall thereafter be subject to the new deadline as extended. If such nominated date for submission of tender is subsequently declared as a Public Holiday, the next official working day shall be deemed as the date for submission of tender.

5.2.2 Tenders shall be submitted by hand or through registered post or courier service at the address mentioned in Sub Clause 5.2.1. JIPMER/HLL shall not take any cognizance and shall not be responsible for delay/loss in transit or non-submission of the tender in time.

5.2.3 Tenders sent telegraphically or through other means of transmission (Tele-fax etc.), which cannot be delivered in a sealed envelope shall be treated as defective, invalid and shall stand rejected.

5.3 LATE TENDERS

Any tender received in Office of the Deputy Vice President (T) after the deadline prescribed for submission of tenders in Clause 1.1.3 of NIT herein will be returned unopened to the Tenderer.

6 TENDER OPENING AND EVALUATION

6.1 TENDER OPENING

6.1.1 JIPMER/HLL will open the Tenders in the presence of Tenderers or their representatives who choose to attend on date & time as mentioned as per Clause 1.1.2 of NIT in the office of The Deputy Vice President (T), HLL Lifecare Limited, Infrastructure Development Division, "Adarsh", T.C 6/1718(1), Vettamukku, Thirumala PO, Thiruvananthapuram- 695 006. If such nominated date for opening of Tender is subsequently declared as a Public Holiday, the next official working day shall be deemed as the date of opening of the tender. The Tender of any Tenderer who has not complied with one or more of the foregoing instructions may not be considered.

6.1.2 On opening of the main Tender envelopes, it will be checked if they contain Technical & Financial Packages.

6.1.3 Technical Package of the Tender will thereafter be opened. They will be examined to see if they are complete, whether the requisite Tender security has been furnished, whether the documents are in order. If the documents do not meet the requirements of JIPMER the Tender Opening Authority will record a note accordingly and the said Tenderer's Financial Package will not be considered for further processing.

6.1.4 The Tenderers name, the presence or absence of the requisite tender security and such other details as JIPMER or his authorized representative, at his discretion, may consider appropriate will be announced at the time of tender opening.

6.1.5 The sealed financial packages of all responsive tenders will be opened on date and time to be fixed after the technical evaluation, when the rates quoted by the tenderers shall be read out.

6.2 PROCESS TO BE CONFIDENTIAL

6.2.1 Except the public opening of Tender, information relating to the examination, clarification, evaluation and comparison of tenders and recommendations concerning the award of Contract shall not be disclosed to Tenderers or other persons not officially concerned with such process.

6.2.2 Any effort by a Tenderer to influence JIPMER/HLL in the process of examination, clarification, evaluation and comparison of tenders and in decisions concerning award of contract, may result in the rejection of the Tenderer's tender.

6.3 CLARIFICATION OF TENDERS

6.3.1 Technical evaluation of technical packages submitted by Tenderers shall be undertaken based on details submitted in the technical package only. No clarification/additional information in this regard will be sought from Tenderers. Tenderer shall not be required to submit their own, additional information or material subsequent to the date of submission and such material if submitted will be disregarded. It is therefore essential that all the details are submitted by Tenderer accurately and specifically in their technical package avoiding vague answers. However, JIPMER/HLL reserves the right to ask any clarification from Tenderers for details submitted with technical package if it so desires during the technical evaluation.

6.3.2 To assist in the examination, evaluation and comparison of Financial package, JIPMER/HLL may ask Tenderers individually for clarification of their tenders, including breakdowns of prices. The request for clarification and the response shall be in writing or by Tele-fax but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm correction of arithmetical errors discovered by the Officer-in-Charge during the evaluation of tenders in accordance with Clause 6.5 herein.

6.4 DETERMINATION OF RESPONSIVENESS

6.4.1 Prior to the detailed evaluation of tenders, JIPMER/HLL will determine whether each tender is responsive to the requirements of the tender documents

6.4.2 For the purpose of this Clause, a responsive tender is one which has paid the application fees, is accompanied by the Tender Security, signed on all pages and conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation. "Deviation" may include exceptions, exclusions & qualifications. A material deviation or reservation is one which affects in any substantial way the scope, quality, performance or administration of the works to be undertaken by the Tenderer under the Contract, or which limits in any substantial way, JIPMER's rights or the Tenderers obligations under the Contract as provided for in the Tender documents and / or is of an essential condition, the rectification of which would affect unfairly the competitive position of other Tenderers presenting substantially responsive tenders at reasonable price.

6.4.3 If a tender is not substantially responsive to the requirements of the tender documents or if the construction methods proposed by the Tenderer are considered impracticable, it

will be rejected by JIPMER, and will not subsequently be permitted to be made responsive by the Tenderer by correction or withdrawal of the non-conformity or infirmity. The decision of JIPMER/HLL as to which of the tenders are not substantially responsive or have impractical / defective design or construction technology shall be final.

6.5 EVALUATION OF TENDER

6.5.1 (a) The Tenderers should submit the details as per 4.2.1 and should meet the minimum requirements as per Part-I of technical package.

(b) JIPMER will, keeping in view the contents of Clause 6.5, carry out technical assessment of submitted technical proposals to determine that the Tenderer has a full comprehension of the work of the contract. In case the Tenderer's technical submittal is found non-compliant with the requirements of the project the same is liable to be rejected. This process is to assure that only technically acceptable proposals are considered for the work.

6.5.2 The evaluation of Financial proposals by JIPMER/HLL will take into account, in addition to the tender amounts, the following factors:

a. Arithmetical errors corrected by JIPMER/HLL in accordance with Clause 6.6

b. Such other factors of administrative nature as JIPMER/HLL may consider to have a potentially significant impact on contract execution, price and payments, including the effect of items or rates that are unbalanced or unrealistically priced.

6.5.3 Offers, deviations and other factors, which are in excess of the requirements of the tender documents or otherwise and will result in the accrual of unsolicited benefits to JIPMER, shall not be taken into account in tender evaluation.

6.5.4 Price adjustment provisions applicable during the period of execution of the contract shall not be taken into account in tender evaluation.

6.5.5 Evaluation of financial offer will be based on price quoted by the Contractor for total turnkey, total equipment, CAMC for equipment. Any subsequent alteration in prices shall not be given any cognizance.

6.6 CORRECTION OF ERRORS

6.6.1 JIPMER/HLL for any arithmetical errors in computation and summation will check tenders determined to be technically acceptable during financial evaluation. Errors will be corrected by JIPMER/HLL as follows:

a. Where there is a discrepancy between amounts in figures and in words, the amount in words will govern

6.6.2 If a Tenderer does not accept the correction of errors as outlined above, his tender will be rejected and the tender security forfeited.

7 AWARD OF CONTRACT

7.1 AWARD CRITERIA

7.1.1 Subject to Clause 6.5, JIPMER/HLL will award, the Contract to the Tenderer, whose tender has been determined to be substantially responsive, complete and in accordance with the tender documents, and whose total evaluated price for undertaking the entire project detailed in Scope of work (clause 2.1 to 2.4 of NIT) and Employer's Requirements of RFP Document is the lowest.

7.1.2 If the financial bids of both parties are equal, then the bidders shall be asked to resubmit the financial bid.

7.2 EMPLOYER'S RIGHT TO ACCEPT ANY TENDER AND TO REJECT ANY OR ALL TENDERS

Notwithstanding Clause 7.1, JIPMER/HLL reserves the right to accept or reject any tender, and to annul the tender process and reject all tenders, at any time prior to award of Contract, or to divide the Contract between/amongst Tenderers without thereby incurring any liability to the affected Tenderer or Tenderers or any obligations to inform the affected Tenderer or Tenderers of the grounds for JIPMER's action.

7.3 NOTIFICATION OF AWARD

7.3.1 Prior to the expiry of the period of tender validity prescribed by the JIPMER/HLL, HLL will notify the successful Tenderer by Tele-fax or e-mail, to be confirmed in writing by registered post/ by courier, that his tender has been accepted. This letter (hereinafter and in the Conditions of Contract called 'the Letter of Acceptance') shall name the sum which JIPMER will pay to the Contractor in consideration of the execution, completion, maintenance and guarantee of the works by the Contractor as prescribed by the Contract (hereinafter and in the conditions of Contract called 'the Contract Price'). The Letter of Acceptance will be sent to the successful tenderer. No correspondence will be entertained by JIPMER/HLL from the unsuccessful Tenderers.

7.3.2 The Letter of Acceptance shall constitute a part of the contract.

7.3.3 Upon submission of Performance Security by the successful Tenderer as per clause 8.0, JIPMER/HLL will promptly notify the unsuccessful Tenderers and discharge / return their tender securities.

7.4 SIGNING OF AGREEMENT

7.4.1 JIPMER/HLL shall prepare the Agreement in the Proforma (Form E) included in this Document, duly incorporating all the terms of agreement between the two parties. Within 30 days from the date of issue of the Letter of Acceptance the successful Tenderer will be required to execute the Contract agreement. The performance guarantee should be submitted immediately after issue of letter of acceptance but not later than 30 days of issue of letter of acceptance. One copy of the Agreement duly signed by JIPMER/HLL and the Contractor through their authorized signatories will be supplied by JIPMER/HLL to the Contractor.

7.4.2 Prior to signing of the Contract Agreement, the successful Tenderer shall submit Performance Security within a period of 30 days from the date of issue of the Letter of Acceptance:

8 PERFORMANCE SECURITY

8.1.1 The successful Tenderer shall furnish to JIPMER a security in the form of a bank guarantee for an amount of 10% of the total Contract Price, in accordance with Clause 4.2 of the General Conditions of Contract. The Bank Guarantee has to be from a Scheduled Commercial bank based in India and for this purpose the Form of Performance Security (Form-D) provided in this Volume shall be used. The Performance Security shall be furnished within the time limit specified in Sub-clause 7.4.2.

8.1.2 Failure of the successful Tenderer to lodge the required Performance Security shall constitute sufficient grounds for the annulment of the award of Contract and forfeiture of the tender security, in which event JIPMER may make the award to the next lowest evaluated Tenderer.

APPENDIX I

CHECK LIST OF DOCUMENTS TO BE SUBMITTED WITH THE TENDER

COMPILED FROM THE PROVISIONS IN THIS VOLUME

Sl. No.	Document	No. of sets to Be submitted	Reference to Clause No. of "Instructions to Tenderers"	Page no.
TECHNICAL PACKAGE part 1				
1.0	Covering letter	(Original)	4.2	
2.0	Tender security (Form B) in separate sealed envelope	(Original & Copy)	4.9	
3.0	Income tax Clearance certificate	(Original)	4.10	
4.0	Power of attorney for individuals signing on behalf of Company/Firm	(Original & Copy)	4.11	
5.0	Experience Data- Form T-I & T-VI	(Original & Copy)	4.2	
6.0	Financial Data- T-V & T-II	(Original & Copy)	4.2	
7.0	Technical and organizational Data – T-III	(Original & Copy)	4.2	
8.0	Organizational Chart	(Original & Copy)	4.2	

TECHNICAL PACKAGE part 2				
9.0	Tender documents	(Original)	4.2	
10.0	Technical Package Part- I & Part –II	(Original & Copy)	4.2	
FINANCIAL PACKAGE COMPRISING OF:				
11.0	Form of Tender and Appendix thereof (Form-A)	(Original & Copy)	4.2	
12.0	Format for Financial Bid (Form C)	(Original & Copy)	4.2	

INDEX ON

PROFORMA OF FORMS

1. **PROFORMA OF FORMS – GENERAL**

(Items (iv) & (v) applicable only for successful Tenderers)

2. **PROFORMA OF FORMS – QUALIFICATION PARTICULARS**

FORM A

FORM OF TENDER

Note : i. The Appendix forms part of the Tender

ii. Tenderers are required to fill up all the blank spaces in this form of Tender and Appendix.

Name of Work : _____(As mentioned under Clause 1.1.1 of NIT)

To,

The Deputy Vice President (T),
HLL Lifecare Limited,
Infrastructure Development Division,
"Adarsh", T.C 6/1718(1),
Vettamukku, Thirumala PO,
Thiruvananthapuram- 695 006

1. Having visited the Site and examined the General as well as Special conditions of contract, Employer's Requirements, Notice Inviting Tenders, Instructions to Tenderers, Preliminary Drawings and Addenda for the execution of above named works, we the undersigned, offer to execute and complete such works and remedy defects therein in conformity with the said Conditions of Contract, Employer's Requirements, NIT, ITT and Addenda for the sum of _____

_____

(Amount in figures and words) for **Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at JIPMER, Puducherry (the Project)**.

2. We acknowledge that the Appendix forms an integral part of the Tender.

3. We undertake, if our Tender is accepted, to commence the works within one week of signing the Contract Agreement to commence and to complete the whole of the Works comprised in the Contract within **12 months** calculated from the date of issue of the Letter of Acceptance, as indicated in the Appendix.

4. If our Tender is accepted, we will furnish a Bank Guarantee for Performance as security for the due performance of the Contract. The amount and form of such guarantee or bond will be in accordance with **Clause 4.2** of the General Conditions of the Contract and as indicated in the Appendix.

5. We have independently considered the amount shown in **Clause 9.7** of the General Conditions of Contract as liquidated damages and Penalty in **Clause 25.0** of Special Conditions of Contract and agree that they represent a fair estimate of the damages likely to be suffered by you in the event of the work not being completed in time.

FORM A

6. We agree to abide by this Tender for a minimum period of 120 days from the last date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiry of that period or any extended period mutually agreed to.

7. We declare that the submission of this Tender confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services, or any other item of work related to the award and performance of this Contract. We further confirm and declare that no agency commission or any payment, which may be construed as an agency, commission has been, or will be, paid and that the tender price does not include any such amount. We acknowledge the right of JIPMER, if it finds to the contrary, to declare our Tender to be non-compliant and if the Contract has been awarded to declare the Contract null and void.

8. We understand that you are not bound to accept the lowest or any tender you may receive.

9. If our Tender is accepted we understand that we are to be held solely responsible for the due performance of the Contract.

Dated this……day of…….**20**

Signature ……

Name…….…… in the capacity of ……..

duly authorized to sign Tenders for and on behalf of……..……

Address .....

Witness – Signature …….

Name ……..

Address ……

Occupation .....

APPENDIX TO THE FORM OF TENDER

	Condition of Contract Clause No.		
i.	Amount of Bank Guarantee as Performance Security.	**4.2** of General Conditions	10 percent of the **Total Contract Price.**
iii	Period for commencement of work from the date of signing of Contract Agreement.		**One Week**
Iv	Time for completion from the date of issue of the Letter of Acceptance	**24.0** of Special Conditions	**12 months**
v.	Amount of liquidated damages in case of extension of completion date due to delays by the Contractor	**9.7** of General Conditions	0.50% of Contract value of works for each week or part thereof. Contractor is in default, subject to maximum of 10% of Contract value
vi.	Defects Liability Period from the date of issue of "Taking-over certificate"	**12.0** of General Conditions	12 months
vii.	Period of warranty for equipment against faulty design and defective manufacture from the date of completion of period of maintenance.	**6.4** of General conditions	
	Signature of authorized signatory on behalf of Tenderer		

Date …… Name …….

Place …….. ……. Address …….

FORM B

FORM OF BANK GUARANTEE FOR TENDER SECURITY

(Ref: Clause 4.9 of "Instructions to Tenderers")

1. KNOW ALL MEN by these presents that we ……..…... (Name of Bank) having our registered office at …… (Name of country) (hereinafter called "the Bank") are bound unto HLL Lifecare Limited, ID Division,Adarsh,TC 6/1718, Vettamukku ,Thiruvananthapuram (hereinafter called "HLL") in the sum of **Rs.** ____ for which payment will and truly to be made to the said HLL, the Bank binds itself, its successors and assigns by these presents.

2. WHEREAS……(Name of Tenderer) (hereinafter called "the Tenderer") has submitted its tender dated_____for (Name of the work as mentioned under Clause 1.1.1 of NIT) hereinafter called the tender.

   AND WHEREAS the Tenderer is required to furnish a Bank Guarantee for the sum of **Rs _____(____**) as Tender Security against the Tenderer's offer as aforesaid.

   AND WHEREAS_____(Name of Bank) have, at the request of the Tenderer, agreed to give this guarantee as hereinafter contained.

3. We further agree as follows:

   a. That HLL may without affecting this guarantee grant time or other indulgence to or negotiate further with the Tenderer in regard to the conditions contained in the said tender and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between HLL and the Tenderer.

   b. That the guarantee hereinbefore contained shall not be affected by any change in the constitution of our Bank or in the constitution of the Tenderer.

   c. That any account settled between HLL and the Tenderer shall be conclusive evidence against us of the amount due hereunder and shall not be questioned by us.

   d. That this Guarantee commences from the date hereof and shall remain in force till _____(date to be filled up) (up to 150 days from the last date of submission of tender).

   e. That the expression 'the Tenderer' and 'the Bank' herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assigns.

4. THE CONDITIONS OF THIS OBLIGATION ARE**:**

a. if the Tenderer withdraws his Tender during the period of Tender validity specified in the Form of Tender, or

b. if the Tenderer does not accept the correction of his tender price in terms of Clause 6.6 of the "Instructions to Tenderers".

c. if the Tenderer having been notified of the acceptance of his tender by HLL during the period of tender validity :

i. fails or refuses to furnish the Performance Security in accordance with Clause 8.0 of the "Instructions to Tenderers" and/or

ii. fails or refuses to enter into a Contract within the time limit specified in Clause 7.4 of the "Instructions to Tenderers".

We undertake to pay to HLL upto the above amount upon receipt of his first written demand, without HLL having to substantiate his demand provided that in his demand HLL will note that the amount claimed by him is due to him owing to the occurrence of any one or more of the conditions (a), (b), (c) mentioned above, specifying the occurred condition or conditions.

Signature of …….
Authorized Official of the Bank

Signature of the witness

…….

Name of the Witness

…….

Address of the Witness

…….

Name of Official ……..

Designation ……..

Stamp/Seal
of the Bank ……

FORM-C

FORMAT FOR FINANCIAL BID

(on the letter head of the Company)

Date:

To:

The Deputy Vice President (Technical)
HLL Lifecare Limited,
Infrastructure Development Division,
"Adarsh", T.C 6/1718(1), Vettamukku,
Thirumala PO, Thiruvananthapuram- 695 006.

Sub.: Selection of a EPC Developer for Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at JIPMER, Puducherry

Dear Sir / Madam:

(i) Being duly authorized to represent and act on behalf of ……., and having reviewed and fully understood all the requirements of bid submission provided vide the RFP document dated ……. Pertaining to the Augmentation of Nuclear Medicine Department with PET- CT unit & Dual Head Gamma Camera at JIPMER, Pondicherry, we hereby provide our Financial Proposal for development and establishment of this Project on Turnkey Basis.

Total cost for undertaking the entire project detailed in Scope of work (clause 2.1 to 2.4 of NIT) and Employer's Requirements of RFP Document. (as per detailed breakup given in Page 2 of 2 Form C)	_____ Indian Rupees (in figures and words) _____Foreign currencies(in figures and words)

We agree to bind by this offer if we are the selected EPC developer for this project.

For and on behalf of :

Signature :

Name of the Person :

Designation :

Instructions:

1. No conditions should be attached.
2. In case of difference between the words and figures, words would prevail.

(Should be given in a sealed envelope).

FORM C

Page 2 of 2

Break up of Cost of Procurement, installation, testing and commissioning of various project components as per RFP document

PART A

Sl. No.	Project Component	Cost in INR
1	Civil Construction including all services like Electrical, centralized air-conditioning, special flooring, split ACs backup in equipment rooms, 250 kVA DG backup to the entire wing, plumbing, drainage, telephone and intercom facility, internet connections, fire safety, furnishings, and other required works for successful commissioning and usage of the above equipments	
2	Medical and general furniture as per list and detail specifications given in RFP (Employer's Requirements)	
TOTAL COST		

PART B

Sl. No	Project Component	Cost in INR
1	One Dual Headed Gamma Camera for JIPMER including accessories and consumables, Pondicherry as per detailed specifications given in RFP (Employer's Requirements)	
2	Positron Emission Tomography/Computed Tomography (PET/CT) Imaging System including accessories and consumables, at JIPMER, Puducherry as per detailed specifications given in RFP (Employer's Requirements)	
	TOTAL COST	

FORM C - PRICE SCHEDULE FOR PART B

PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5										
Schedule	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Price per unit (Currency)										
				FOB price at port/ airport of Lading (inclusive of Agency Commission)	Amount and Percentage of Agency Commission **	NET FOB (Excluding Agency Commission) (a-b)	Insurance and Freight	NET CIP at Port/Air port of entry (c+d)	Custom duty amount as % of net CIP(Amount with CDEC as applicable) **	Custom clearance and handling charges **	Loading/Unloading ,inland transportation, Insurance till consignee site **	Installation ,Commissioning,Supervision,Demonstration & Training at the consignee site **	Unit price on DDP basis At consignee's site	
													In Indian Rs. (b+f+g+h+i)	In Foreign currencies (e)
				(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	

Total price at Consignee's site

** (i) In Indian Rupees column 4 x (b+f+g+h+i) Rs_____(In figures and words)
(ii) In foreign currency column (4 x e)_____ (In figures and words)

_____ _____

Note: -

1. The Tenderer will be fully responsible for the safe arrival of the goods at the consignee site in good condition as per terms of DDP and INCOTERMS
2. The bidders break up of prices under various columns are for comparison of prices up to delivery of goods at consignee's site for tender evaluation.
3. The quoted price should be supported with original proforma invoice from the foreign manufacturers. The proforma invoice should indicate the percentage of agency commission included in the FOB prices. Indian Agent to be paid in Indian Currency.
4. All the components of the DDP price will be paid by the tenderer. The purchaser will make the payment of DDP price after receipt of goods at consignee's site in good condition as per payment terms in the contract.
5. The prices quoted in foreign currency in column (e) shall be converted in Rupees at the selling rate of exchange applicable on the date of tender opening .The customs duty amount so worked out as percentage of net CIP value in rupees will be taken for evaluation and comparison of tenders

Name:
Business Adress:
Signature of the Tender:

Place:
Date:

FORM C - PRICE SCHEDULE FOR PART B

PRICE SCHEDULE FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN LOCATED WITHIN INDIA

1	2	3	4	5							6
Schedule	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Price per unit (Rs.)							
				Ex - factory/ Ex - warehouse /Ex-showroom /Off - the shelf (a)	Excise Duty (if any) [%age & value] (b)	Sales Tax/ VAT(if any) [%age & value] (c)	Packing and Forwarding charges (d)	Inland Transportation, Insurance for a period including 3 months beyond date of delivery, loading/ unloading and Incidental costs till consignee's site (e)	Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site (f)	Unit Price (at Consignee Site) basis (g) =a+b+c+d+e+f	Total Price (at Consignee Site) basis (Rs.) 4 x 5(g)

Total Tender price in
Rupees: _____

Inwords:

_____

Note: -

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The charges for Annual CAMC after warranty shall be quoted separately

Name_____

Business Address_____

Place: _____ **Signature of Tenderer**_____

Date: _____ **Seal of the Tenderer**_____

C) PRICE SCHEDULE FOR ANNUAL COMPREHENSIVE MAINTENANCE CONTRACT AFTER WARRANTY PERIOD

1	2	3	4					5
Schedule No.	**BRIEF DESCRIPTION OF GOODS**	**QUANTITY. (Nos.)**	**Annual Comprehensive Maintenance Contract Cost for Each Unit year wise*.**					**Total Annual Comprehensive Maintenance Contract Cost for 5 Years [3 x (4a+4b+4c+4d+4e)]**
			1st	**2nd**	**3rd**	**4th**	**5th**	
			a	**b**	**c**	**d**	**e**	

*** After completion of Warranty period**

NOTE:- In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.

1. The cost of Comprehensive Maintenance Contract (CAMC) which includes preventive maintenance including testing & calibration as per technical/ service /operational manual, labour and spares, after satisfactory completion of Warranty period may be quoted for next 5 years on yearly basis for complete equipment and Turnkey (if any).
2. The cost of CAMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
3. Cost of CAMC will be added for Ranking/Evaluation purpose.
4. The payment of CAMC will be made as per tender conditions
5. The uptime warranty will be 98 % on 24 (hrs) X 7 (days) X 365 (days) basis or as stated in Technical Specification of the TE document.
6. All software updates should be provided free of cost during CAMC period.
7. The stipulations in Technical Specification will supersede above provisions
8. The supplier shall keep sufficient stock of spares required during Annual Comprehensive Maintenance Contract period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Name_____

Business Address_____

Place: _____ **Signature of Tenderer**_____

Date: _____ **Seal of the Tenderer**_____

C) PRICE SCHEDULE FOR ANNUAL MAINTENANCE CONTRACT AFTER WARRANTY PERIOD

1	2	3	4					5
Schedule No.	BRIEF DESCRIPTION OF GOODS	QUANTITY. (Nos.)	Annual Maintenance Contract Cost for Each Unit year wise*.					Total Annual Maintenance Contract Cost for 5 Years [3 x (4a+4b+4c+4d+4e)]
			1st	2nd	3rd	4th	5th	
			a	B	c	d	e	

* After completion of Warranty period

NOTE:- In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.

1. The cost of CAMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.

3. Bidder should quote the price of important spares and consumables worth more than 100 dollars or equivalent in the price bid

4. The payment of AMC will be made as per tender conditions

FORM-D

PAGE 1 OF 2

FORM OF PERFORMANCE SECURITY (GUARANTEE) BY BANK

(Refer Clause 8.0 of "Instructions to Tenderers")

1. This deed of Guarantee made this day of_____ between Bank of_____(hereinafter called the "Bank") of the one part, and HLL Lifecare Limited (HLL), a company incorporated under the Companies Act 1956 with Registered office at HLL Bhavan, Poojappura, Thiruvananthapuram - 695012) of the other part.
2. Whereas HLL Lifecare Limited (HLL), a company incorporated under the Companies Act 1956 with Registered office at HLL Bhavan, Poojappura, Thiruvananthapuram - 695012 has awarded the contract for ----------(Name of work as mentioned under Clause 1.1.1 of NIT) (hereinafter called the contract) to _____ (hereinafter called the Contractor).
   (Name of the Contractor)

3. AND WHEREAS the Contractor is bound by the said Contract to submit to HLL a Performance Security for a total amount of Rs._____(Amount in figures and words).
4. Now we the Undersigned_____(Name of the Bank) being fully authorized to sign and to incur obligations for and on behalf of and in the name of_____ (Full name of Bank), hereby declare that the said Bank will guarantee HLL the full amount of Rs._____ (Amount in figures and Words) as stated above.
5. After the Contractor has signed the aforementioned Contract with HLL, the Bank is obliged to pay HLL, any amount up to and inclusive of the aforementioned full amount upon written order from HLL to indemnify HLL for any liability of damage resulting from any defects or shortcomings of the Contractor or the debts he may have incurred to any parties involved in the Works under the Contract mentioned above, whether these defects or shortcomings or debts are actual or estimated or expected. The Bank will deliver the money required by HLL immediately on demand without delay without reference to the Contractor and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages or claim resulting from any defects or shortcomings or debts of the Contractor. The Bank shall pay to HLL any money so demanded notwithstanding any dispute/disputes raised by the Contractor in any suit or proceedings pending before any Court, Tribunal or Arbitrator/s relating thereto and the liability under this guarantee shall be absolute and unequivocal.
6. This Guarantee is valid till …….. (The initial period for which this Guarantee will be valid must be for at least 6-months (six months) from the anticipated expiry date of Defects Liability Period as stated in **Clause 11.0** of the "General Conditions of Contract".)

FORM D

PAGE 2 OF 2

7. At any time during the period in which this Guarantee is still valid, if HLL agrees to grant a time extension to the Contractor or if the Contractor fails to complete the Works within the time of completion as stated in the Contract, or fails to discharge himself of the liability or damages or debts as stated under Para 5, above, it is understood that the Bank will extend this Guarantee under the same conditions for the required time on demand by HLL and at the cost of the Contractor.
8. The Guarantee hereinbefore contained shall not be affected by any change in the Constitution of the Bank or of the Contractor.
9. The neglect or forbearance of HLL in enforcement of payment of any moneys, the payment whereof is intended to be hereby secured or the giving of time by HLL for the payment hereof shall in no way relieve the bank of their liability under this deed.
10. The expressions "HLL", "the Bank" and "the Contractor" hereinbefore used shall include their respective successors and assigns.

In witness whereof I/We of the bank have signed and sealed this guarantee on the ---------- day of ---------- (Month) **2013** being herewith duly authorized.

For and on behalf of

The…….Bank.

Signature of Authorized Bank official

Name : ……..

Designation : ……

Stamp/Seal of the Bank : ……..

Signed, sealed and delivered

for and on behalf of the

Bank by the above

named_____in

the presence of :

Witness 1.

Signature …….

Name ……

Address ……

Witness 2.

Signature ……

Name ……..

Address ……..
……..

FORM E

FORM OF CONTRACT AGREEMENT

(Refer Clause 7.0 of "Instructions to Tenderers")

This Agreement is made at Puducherry on the _____ day of _____ **2013** Between HLL Lifecare Limited (HLL), a company incorporated under the Companies Act 1956 with Registered office at HLL Bhavan, Poojappura, Thiruvananthapuram - 695012 hereinafter called "Client" of the one part and_____ (Name of Contractor) (Address of Contractor) _____ _____ of _____ hereinafter called "the Contractor" of the other part.

Whereas HLL for and on behalf of JIPMER (Jawaharlal Institute of Post Graduate Medical Education and Research, Puducherry) is desirous that (***Goods and Services should be provided and) certain Works should be executed, viz. ---------- (Name of work as mentioned under Clause 1.1.1) hereinafter called "the Works" and has accepted a Tender by the Contractor for the execution and completion of such works (*** as well as guarantee of such works) and the remedying of defects therein. NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

1. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
   (a) Notice Inviting Tender (NIT)
   (b) Instructions to Tenderers (ITT)(Including Annexures)
   (c) Special Conditions of Contract (SCC)
   (d) General Conditions of Contract (GCC)
   (e) Employer's requirements
   (f) Tender submitted by the Contractor.
   (i) Schedule of Milestones
   (j) Form of Tender with Appendix
   (k) Letter of acceptance (LOA)
   (l) Addendums issued, if any

3. In consideration of the payments to be made by Client to the Contractor as hereinafter mentioned, the Contractor hereby covenants with Client to execute and complete the works by **_____ and remedy any defects therein in conformity in all respects with the provisions of the Contract.

4. Client hereby covenants to pay the Contractor in consideration of the execution and completion of the works and the remedying of defects therein, the Total Contract Price of **Rs _____ being the sum stated in the letter of acceptance subject to such additions thereto or deductions there from as may be made under the provisions of the Contract at the times and in the manner prescribed by the Contract.

FORM E

5. OBLIGATION OF THE CONTRACTOR

The contractor shall ensure full compliance with tax laws of India with regard to this contract and shall be solely responsible for the same. The contractor shall submit copies of acknowledgements evidencing filing of returns every year and shall keep JIPMER/HLL fully indemnified against liability of tax, interest, penalty etc. of the contractor in respect thereof, which may arise.

IN WITNESS WHEREOF the parties hereto have caused their respective Seals to be hereunto affixed / (or have hereunto set their respective hands and seals) the day and year first above written.

For and on behalf of the Contractor	For and on behalf of HLL Lifecare Limited
Signature of the authorized official	Signature of the authorized official
Name of the official	Name of the official
Stamp/Seal of the Contractor	Stamp/Seal

SIGNED, SEALED AND DELIVERED

By the said	By the said
_____ Name	_____ Name
_____	_____
on behalf of the Contractor in the presence of:	on behalf of HLL Lifecare Limited in the presence of:
Witness _____	Witness _____
Name _____	Name _____
Address_____	Address_____
_____	_____

Note :

* To be made out by JIPMER/HLL at the time of finalisation of the Form of Agreement.
** Blanks to be filled by JIPMER/HLL at the time of finalisation of the Form of Agreement.
*** to be deleted if not applicable

FORM T-I

PAGE 1 OF 1

GENERAL INFORMATION

Notes :

(i) Attach an attested photocopy of Certificate of Registration.

1. Names of the firm: …….
2. Legal Status of the Firm: Individual/Association/Joint Venture/Consortium
3. Registered Address, telephone, Tele-fax.

   …… …….

   …… ……..

   …… ……..
4. Contact Person and His Designation and address, email address

   ……

   ……

   ……
5. Number of years in Medical Equipment Business
6. Number of Medical Equipment Installation Projects commissioned on turnkey basis during the last seven years with details
7. Names and Addresses of Associated Companies to be involved in the Project and whether Parent / subsidiary/ others.
8. If the company is subsidiary, what involvement, if any, will the Parent Company have in the Project?
9. State the Quality System followed in the Company. Does the company have an ISO 9001 certificate or it follows an internal quality system.

FORM T-II

NUMBER OF ONCOLOGY TREATMENT FACILITIES COMPLETED IN LAST SEVEN YEARS

Applicant's Name: …… ……

Number of projects of value as per eligibility criteria or more developed and/or installations commissioned in last seven years

Sl. No.	Name and location of the Project	Name and address of the Client	Project Value *		Completed in Year	Whether Specialty/ Super Specialty/ Other Hospital	Alone/Joint Venture/ Consortium if in a joint venture or consortium state the percentage participation	Details and documentary evidence on page number
			Construction	Equipment				
1								
2								
3								
4								
5								
6								

*- VALUE OF THE SERVICES PROVIDED BY THE BIDDER ONLY SHALL BE PROVIDED

FORM T-III

PAGE 1 OF 2

KEY PERSONNEL PROPOSED FOR THE PROJECT

(Refer Clause 4.2)

Sl. No.	Sector	Minimum number required	Number of proposed personnel	Education	Proposed Designation	Total Years of Experience	Relevant Experience in years	Details in Annexure on page no.
1.	Project Manager	1						
2.	Construction Manager-Civil*	1						
3.	Construction Manager-E&M* services	1						
4.	Structural Engineer*	1						
5.	Architect*	1						
6.	Procurement Specialist	1						
7.	Quality Assurance Manager**	1						
8.	Medical physicist cum RSO*	1						
9.	Bio-medical Engineer *	1						
10.	Safety Officer**	1						
11.	Site Supervisor-Civil**	1						
12.	Site Supervisor- E&M**	1						

Note :

1) ***** These personnel may not be posted at site, however their services should be available for the project whenever required by the Project Engineer/HLL.
2) ** These personnel are required only for the construction phase
3) A summary of the qualification and work experience of each key staff, to be attached.
4) The minimum level of supervision and qualification/experience of site-staff is given under **Annexure – A.**
5) **CVs** to be submitted for all the proposed personnel in the format provided

Form T-III

CVS OF KEY STAFF

Name of the Staff		
Designation		
Name of the firm presently employed		
Years with the firm		
Proposed position		
Details of task assigned		
Man- Months budgeted for the task assigned		
Key Qualifications		
Education		
Employment Record		
Name of the Firm	**Position Held**	**Years of Employment**

FORM T-IV

PAGE 1 OF 2

FINANCIAL DATA – HOSPITAL WORK

(Refer Clause 4.2)

Total value of Medical equipment Installation Projects/ Turnkey Projects done during the last five financial years (For each member in case of Group):

S.No.	Description	Year 2007-08 (Rs.in Crore)	Year 2008-09 (Rs.in Crore)	Year 2009-10 (Rs.in Crore)	Year 2010-11 (Rs.in Crore)	Year 2011-12 (Rs.in Crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Total value of Projects					

- Attach attested copies of the Audited Financial Statements of the last five financial years as Annexures. **Financial Values to be given in Crores of Rupees.**

FORM T-IV

PAGE 2 OF 2

FINANCIAL DATA

(Refer Clause 4.2)

List of all Ongoing Contracts

Name of the applicant (constituent member in case of Group)	Total number of works in hand	Number of contracts of each type			Number for which applicant went in for		Number of contracts in which date of completion given in the original has already burst	**Total value of balance works yet to be done in Rupee equivalent in Crores		
		A. Procurement only	B. Procurement & Installation	C. On Turnkey Basis	Arbitration	Litigation		2012-13	2013-14	2014-15

Applicant (each member of the group) should provide information on their current commitments or all contracts that have been awarded or for which a letter of intent or acceptance has been received or for contracts approaching completion but for which a completion certificate is yet to be issued.

** This figure should also include the year-wise break-up of part value of works to be executed in these three years period even if completion of such works spills over beyond these three years period.

FORM T-V

FINANCIAL DATA FOR ASSESSMENT OF NET WORTH ETC.

YEAR	2012-13	2011-12	2010-11	2009-10	2008-09
Net Working Capital					
Net Cash Flow					
Annual Turnover					
Profit /Loss					

Attach documentary evidence in support of the data clearly marking the relevant portion.

FORM T-VI

PAGE 1 OF 1

PERFORMANCE REPORT OF WORKS (On Clients' Letter Head)

1. **Name of work/ Project and location**
2. **Agreement No.**
3. **Contract Value**
4. **Estimated Cost**
    a. **Construction**
    b. **Equipment**
5. **Tendered Cost**
    a. **Construction**
    b. **Equipment**
6. **Date of Start**
7. **Date of Completion**
    a. **Stipulated Date of Completion**
    b. **Actual Date of Completion**
8. **Amount of Compensation levied for delayed completion if any**
9. **Performance report**

a. **Quality of work**	**Very Good/ Good/ Fair/ Poor**
b. **Financial soundness**	**Very Good/ Good/ Fair/ Poor**
c. **Technical Proficiency**	**Very Good/ Good/ Fair/ Poor**
d. **Resourcefulness**	**Very Good/ Good/ Fair/ Poor**
e. **General behaviour**	**Very Good/ Good/ Fair/ Poor**

Date: **Authorised Signatory (with stamp)**

Annexure –A

DESIRED SITE ORGANISATION STRUCTURE

MINIMUM LEVEL OF SUPERVISION AND QUALIFICATION / EXPERIENCE OF KEY STAFF IS AS FOLLOWS:

S.No.	DESIGNATION	QUALIFICATION	EXPERIENCE LEVEL
1.	Project Manager (Team Leader)	Engineering/Management Graduate with knowledge of MS Project/ Primavera	Minimum 5 years as Project Manager of similar hospital works and Minimum total experience 15 yrs.
2	Construction Manager	Graduate in Civil Engineering/ Electrical/ Mechanical Engineering with knowledge of MS Project/ Primavera	Minimum 5 years of experience as construction manager. Minimum Total experience of 10 years
3	Quality Assurance (QA)-Manager	Graduate in Civil Engg. & Post Graduate Diploma in Quality Assurance	Minimum 5 yrs. in QA (field) and out of which one year as In-Charge. Minimum total experience 10 years.
4.	Safety Officer	Degree in any discipline with a Diploma in safety engineering/ Construction safety or a degree in safety engineering	Minimum 5 yrs. In safety (field) and out of which one year as In-Charge. Minimum total experience 10 years.
5.	Site supervisor a. Civil engineer b. Electrical & Mechanical Engineer	Graduation/Diploma in concerned Disciplines	Minimum site supervision experience Graduate – 2 years, Diploma Holders – 5 years
6.	Biomedical Engineer	Graduate/Post Graduate in concerned discipline.	Minimum 5 years of relevant experience

SECTION III

SPECIAL CONDITIONS OF CONTRACT

Sl. No.	Reference to GCC Clause No.	Clause
1.	Name of the Work	Name of the Work shall be as per Clause 1.1.1 of NIT
2.	1.4 Law and Language	The Contractor shall keep a suitably qualified person at the Site who is fluent in local language and is able to interact with local people. In addition to this, any document, which is in any language other than English, shall be translated to English and certified. The Contractor shall familiarize himself with the local laws and administration of Puducherry and comply by them.
3.	2.1 Right of Access to Site	The Employer shall give right of access of Site to the Contractor within 15 days of the signing of the Contract Agreement.
		The Contractor, after obtaining any necessary consent from any relevant authority, shall submit to the Engineer, proposals showing the layout of pedestrian routes, lighting, signs, and guarding any road opening or traffic diversion which may be required in connection with the execution of the Works and which the Contractor intends to construct. Any consent given by the Engineer to such proposals shall not relieve the Contractor of any obligation under the Contract or absolve the Contractor from any liability for or arising from such proposals or the implementation thereof.
4.	4.1 Contractor's General Obligations	The Contractor's proposals for erection of all ancillary and temporary works shall be in conformity with the proposals submitted along with the tender and modifications thereto as approved by the Engineer. The Contractor shall submit drawings, supporting design calculations which were called for by the Engineer and other relevant details of all such works to the Engineer for approval at least one month before he desires to commence such works. Approval by the

		Engineer of any such proposal shall not relieve the Contractor of his responsibility for the adequacy of such works. No extra payment will be made for complying with the provisions of this clause and the cost of the work under this element shall be deemed to be included in the Bill of Quantities
		This submittal shall be made minimum one month before the Works are to be carried out to give the Engineer and the Employer reasonable time to examine the drawings or other documents, to prepare comments and for any changes to be accommodated by the Contractor.
		The installation shall be in conformity with the Bye-laws, Regulations and Standards of the local authorities concerned in so far as these become applicable to the installation. But if these Specifications and Drawings call for a highest standard of materials and / or workmanship than those required by any of the above Regulations and Standards then these Specifications and Drawings shall take precedence over the said Regulations and Standards. However, if the Drawings or Specifications require something which violates the Bye-Laws and Regulations, then the Bye-Laws and Regulations shall govern the requirement of this installation.
5.	4.2 Performance Security	The Contractor shall submit a performance security equal to 10% of Contract value within 30 days of issue of LOA. The Performance Security should be submitted in the form of a Bank Guarantee from a scheduled commercial bank in India in the format supplied for bank guarantees in the Contract.
6.	4.6 Setting out	The contractor shall survey and fix the alignment, set out the buildings maintaining vertical & horizontal clearances and keeping in view important site references and obligatory locations in consultation with Engineer. GTS bench mark, temporary bench marks and three control points on all straights & other details shall be handed over by the Engineer. The Contractor shall establish at his cost, at suitable points, additional reference lines and bench marks as may be necessary. The Contractor shall remain responsible for the sufficiency and accuracy of all his

		benchmarks and reference lines. He shall take precautions to see that lines, points and bench marks fixed by the Engineer are not disturbed by his work and shall make good any damage thereto.
7.	4.7 Safety Procedures	The Contractor shall not disturb the ongoing activities of the Institute. He shall take care that his activities do not result in any kind of accidents, spread of any infection etc in the campus. At the same time he shall as well ensure that his personnel are safe and do not get any infection from the hospital activities.
		The Contractor shall provide a First Aid Base at his principal Works Area/ Construction Depot, suitable medical facilities for Workmen's Camps, suitable and sufficient first aid boxes at worksites for the Contractor's workforce and his Sub-Contractors' workforce as further described in the Employer's Requirements. The Contractor shall provide and maintain all necessary temporary fire protection and fire fighting facilities on the Site during the construction of the Works in accordance with the statutory regulations and as required by the Engineer. The Contractor shall ensure that all gases, fuels and other dangerous Materials and goods are stored and handled in a safe manner and in accordance with the statutory regulations and as required by the Engineer. The obligations and requirements for safety and industrial health under this Contract are entirely without prejudice to, and do not derogate from, the Contractor's statutory obligations, with respect to safety and industrial health.
8.	4.9 Site Data	The responsibility of Contractor under sub-clause 4.10 of General Conditions of Contract is full and final and no claim by the Contractor for additional payment or extension of time shall be allowed on the ground of any misunderstanding or misapprehension by the contractor or that incorrect or insufficient information was given to the Contractor or that he failed to obtain correct and sufficient information.
9.	4.12 Right of Way and facilities	The Employer shall provide right of way to the Contractor within its land for the purpose of executing the Contract.
10.	4.13 Avoidance of	The Contractor shall maintain a safe environment for

	Interference	patients, personnel and public. The Contractor shall ensure that his employees do not leave the Site at any time without the permission of the Engineer. The Contractor shall ensure that the vehicles, machines and equipments, which he uses, are safe and do not cause any harm to patients, students or personnel.
11.	4.13 Avoidance of Interference Quiet Operation and vibration isolation	All equipment shall operate under all conditions of load without any sound or Vibration, which is objectionable and beyond the limits specified by the relevant laws. In case of rotating machinery sound or vibration noticeable outside the room in which it is installed or annoyingly noticeable inside its own room shall be considered objectionable. The Contractor at his own expense shall correct such conditions.
		Existing roads and other public roads may be used by the Contractor at his risk and cost to carry out construction activities, with prior approval of the competent authority. The Contractor's heavy construction traffic or tracked equipment shall not travel on any public road or bridge, unless the Contractor has made arrangements with the authority concerned and has obtained the approval of the Engineer to such arrangements. The Contractor shall include in his price the cost of strengthening any such public road or bridge if he considers it would be necessary The Contractor shall repair any damage to the road or bear the cost thereof due to movement of contractor's plants and equipment, vehicles etc. to the specifications and satisfaction of road authorities as well as of Engineer. The Contractor shall plan transportation of construction materials to work site in accordance with traffic regulations enforced by local traffic authorities from time to time and in such a way that road accidents are avoided and minimum in convenience is caused. No claim whatsoever shall be entertained on this account. The transportation of certain equipments and materials and launching may not be possible during day and may have to be carried out within time schedule specified by traffic police.

		The Contractor must note that the Works are to be executed in a working hospital. Hence no part of his works shall interfere or damage or cause harm to the existing activities of the institute. The Contractor shall ensure that the noise levels are not high and do not disturb the patients inside the hospital and academic activities. Proper barricading shall be provided to ensure the safety of works and public.
12.	4.16 Contractor's Equipment	For any imported equipments or part thereof offered by the Contractor, he will have to make his own arrangements for import formalities and procurement of equipments without involving the Employer in any way for any clearance certificates /licenses /assistances.
		The Employer may assist (but is not obligated to) the Contractor, where required, in obtaining clearance through the Customs for Constructional Plant, Materials and other things required for the Works.
		The contractor shall obtain all permits / licenses and pay for any and all fees required for the inspection, approval and commissioning of their installation.
13.	4.17 Protection of Environment	The Contractor shall not cut or destroy any tree in the campus to the maximum extend possible. In case any tree is to be cut he shall obtain prior permission from the engineer and shall plant equal number of saplings or adhere to the requirements of the prevailing Environmental laws which ever is more stringent. The Contractor shall use all means to minimize the effluents from his construction work and transportation activity or any other activity in the course of the Project.
14.	4.19 Employer's Equipments	The Employer shall supply no material, tools, plant and equipment. The Contractor has to arrange all tools, plant, equipment as well as construction materials required for the work.
15.	4.22 Contractor's Operations on Site	All construction debris shall be removed from site daily or as they accumulate. All surface and sub-soil drains at the site shall be maintained in a clean, sound and satisfactory state of performance.
16.	4.23 Fossils, Discoveries and Items of Value	The Contractor must note that the project may involve some items of demolition. If during such works, the

		Contractor finds any items of Salvage Value, which can be sold, he shall indicate the same in the monthly progress report submitted to the Employer and sell it off only after the approval from the Employer. The payments shall be adjusted accordingly as per the decision of the Engineer.
17.	5.1 General Design Obligations **Provisions for infection Control**	The contractor shall submit his preliminary design and make a walk through presentation to the Employer within 21 days from the date of issue of letter of acceptance as mentioned in Clause 1.3 of Instructions to Tenderers. If the Engineer has reasonable cause for being dissatisfied with the Contractor's drawings or documents the Engineer shall, within a period of 21 days from the date of submittal, require the Contractor in writing to make such amendments thereto as the Engineer may consider necessary. The Contractor shall make and be bound by such amendments at no additional expense to the Employer and shall resubmit the amended drawings or documents for the Engineer's approval for the execution of Works within next 21 days. No extension of time or extra payment shall be given to the Contractor to comply with the above.
		Should it be found at any time after notification of consent that the relevant drawings or documents do not comply with the Contract or do not agree with drawings or documents in relation to which the Engineer has previously notified his consent, the Contractor shall, at his own expense, make such alterations or additions as, in the opinion of the Engineer, are necessary to remedy such non-compliance or non-agreement and shall submit all such varied or amended drawings or documents for the consent of the Engineer.
18.	5.2 Contractor's Documents	The Contractor shall submit the following in addition to the documents stated in the contract, with his design: i. Detailed drawings including the structural drawings, architectural drawings, component drawing etc. ii. Consolidated statement in a tabular form for the Standards and Specifications being followed in the design and for materials to be used iii. List of vendors from whom the materials

		are proposed to be procured iv. Tests required to be carried out in the contract v. Outline safety plan for the site and an outline quality plan
		The Contractor shall include in his design, in additions to space and operational needs, considerations of provisions for infection control, life safety, and protection of affected person during construction and the progress of the Project as detailed out in Employer's Requirements.
		The Contractor shall also include in his design provision of landscaping, parking and setting things back into the shape as the original as said in Employer's Requirements
		The Contractor shall satisfy himself that the Design Data, in the case of submissions up to and including the proposed Design, comply with the Employer's Requirements and is in accordance with, and incorporates the Contractor's Technical Proposals. In the case of submissions subsequent to the proposed Design, the Design Data shall be in accordance with Employer's Requirements and the accepted Design.
19.	5.5 Training	The Contractor shall arrange training sessions for the Employer's Personnel for using the machinery and equipments especially the equipments which are of latest technology.
		The Contractor shall submit to the Engineer-in-charge a draft copy of comprehensive operating instructions maintenance schedule and log sheets for all systems and equipment included in this contract. This shall be supplementary to manufacturer's operating and maintenance manuals. Upon approval of the draft, the contractor shall submit four (4) complete bound sets of printed operating instructions and maintenance manuals. The contractor shall also train the institute personnel, to operate the plant and carry out routine checks, during the period of installation and testing. Under special conditions, if, found necessary, the contractor shall also train the said personnel at the no extra cost

		(for Indigenous origin equipment only).
20.	6.0 Medical Equipments	The Contractor shall submit split up price for each Equipment as well as total price. No deviations shall be permitted in this price for any reason. However where so required in the detailed specifications, breakup of prices and or prices for optional sub-components shall be annexed to the Price Bid.
		The Contractor shall bear all charges for the order, purchase, transport, supply erection and commissioning of the Equipments including taxes, duties etc wherever applicable and the same shall be deemed to have been included in his Contract price. The Employer, wherever feasible, may at his discretion, assist the Contractor in getting the approvals for import.
21.	7.2 rates of wages for labour	The Contractor must familiarize himself and comply with relevant labour laws like Minimum Wages Act, 1948 and Contract Labour (Regulation and Abolition) Act, 1970 etc. No extra payment whatsoever shall be made to the Contractor to comply with the rules and laws.
22.	7.5 Working Hours	No works shall be carried out in the nights except as permitted by the Engineer under exceptional circumstances. Lighting and Fire Protection: Where night working is permitted by the Engineer to facilitate the Contractor's Work operations, temporary lighting equipment as per approved layout shall be provided, installed, maintained for the duration of the contract and removed after completion of work by and at the expense of the Contractor. No extra payment will be made to the Contractor for the provision of temporary lighting and fire prevention measures.
23.	7.6 facilities for staff and labour	The Contractor shall provide at his own expense, all necessary accommodation and the welfare facilities for his staff and labour. This includes good practices like provision of temporary crèche (Bal Mandir) where 50 or more women are employed at a time. The Contractor at his cost shall maintain all accommodation in a clean and sanitary condition.
		The Contractor shall prepare and submit compliance reports of adherence to labour laws as and when

		desired by the Engineer.
24.	9.2 Time for Completion	Time for Completion of the entire project is 12 months from the date of issue of Letter of Acceptance.
25.	9.3 Program	Activities in the initial works programme would be arranged as per the Works Break Down Structure (WBS) of the work developed by the contractor in consultation with and approved by the Engineer. The Contractor will prepare Construction Programme based on Computerized CPM network using the Precedence Diagramming Method within 30 days of award for approval as 'Baseline Programme' The base line program shall clearly reflect interface and access dates for other civil/ system-wide contracts. After the work has started, the Contractor shall deliver in the first week of every month to the Engineer an update of the Construction Programme showing changes, if any, in planning or progress scheduling and reflecting the progress of all the activities of the network and the project status as at the end of previous month. If the Contractor falls behind the approved Construction Programme by more than one month, he shall, within fourteen days of the date of such information, submit for approval, a revision of the construction programme showing the proposed measures, including augmentation of plant, labour and material resources to complete the works on time. Whenever the Contractor proposes to change the construction programme he shall immediately advise the Engineer in writing and, if the Engineer considers the change a major one, the Contractor shall submit a revised programme for approval. **Detailed Network Plan (Works Programme)** Detailed Network Plan shall be prepared by the Contractor for each and every activity within the same time frame and in the same sequence as indicated in

		the master network plan. Activity at this level shall not be more than 15 days duration, except for summary items like procurement/ mobilization etc. The Contractor shall select a PC-based broad planning and control software on which the two networks shall be implemented. Software selected shall be Microsoft Project, Version-2002 (MSP-2002) or higher version. If any other compatible software is used, approval of the Engineer will be required. The Contractor shall supply one original licensed copy of the software selected along with the Baseline program network and detailed network plan free of cost and load it on the PC system of the Engineer so that uniform monitoring of the project is done and any slippages are identified well in time and corrective action taken. The Engineer's monitoring team will have access to all the data/information of the Contractor, required for the assessment of the progress and monitoring. If necessary, the monitoring team will visit the Vendor/Contractor's works in order to assess the status of critical activities. The Employer or the Engineer will hold periodic Project Status Review Meetings. The Contractor shall depute his Engineers/Managers at appropriate level as decided by the Engineer to attend the Review Meetings. The Contractor shall provide additional inputs whenever the PERT-CPM diagram indicates a possible slippage in the completion schedule. Such additional inputs may require supplementing of equipment, personnel, work in excess of the normal work per day, and work in excess of the normal work per week or other resources. Provisions under Sub-Clause 8.7 of General Conditions of Contract will be applicable in cases of delays due to Contractor.
	Penalty	Should there be any delay in the achieving any milestone of the project, the Contractor shall be liable to pay penalty for the delay to an extent of Rs. 50,000

		per day to the Employer. This penalty shall be in addition to liquidated damages if any, which shall be incurred if the performance of the Contract is delayed. This penalty shall not relieve the contractor from his obligation to complete the Works or from any other of his obligations and liabilities under the Contract. The Contractor shall co-ordinate his programme to the extent feasible with the programmes of other contractors to be engaged at the Site or in the vicinity of the Site as furnished by the Engineer so that the project can be completed in time as per the overall programme.
	Work Plan	The contractor shall also submit with his program of works, a detailed work plan which states clearly the manner in which the Contractor intends to carry out the work including the equipments proposed for executing the work and the place and time for use of heavy equipments.
26.	10.0 Tests on Completion	The Contractor shall in addition to the tests instructed by the Engineer, carry out the tests on Completion for the equipments installed in the different departments of the hospital after Substantial Completion of the Project as per the Manuals.
27.	10.1 Contractor's Obligations	Substantial Completion: for the purpose of the Contract, Substantial Completion of the Project is achieved when all the construction work has been completed and all the medical equipments have been procured and installed.
		On achieving Substantial Completion of the project, the Contractor shall give notice to the Engineer of achieving Substantial Completion and that the tests on completion may be carried out.
28.	12.0 Defects Liability Period	Defects Liability Period for the purpose of the Contract shall be in accordance with Clause 1.3 of Instruction to Tenders.
29.	14.0 Variations	For the purpose of the Contract, the Contractor shall procure and commission medical equipments as per specifications attached in this tender document or higher specifications at the time of procurement.

		The Contractor shall be deemed to have considered the above fact while quoting the price of his equipments. No claims shall be entertained on the above basis.
		The Contractor shall get the source of Medical Equipments approved by the Engineer before placing the supply order. The contractor shall keep the above facts in view while submitting the price of the Equipments along with his tender.
30.	15 Contract Price and Payments	The Contract price shall be a lump sum price mentioned in the Letter of Acceptance. The Contractor shall not be paid any charges towards any taxes or duties etc. All taxes, duties levies and other charges shall be deemed to have been included in the Contract price. Interim payments shall be made on achievement of milestones and shall be according to a pre-decided schedule of payments approved by the Engineer. The Employer reserves the right to conduct any post payment audit, which he considers appropriate.
	Post Payment Audit	The Employer reserves to himself the right to carry out a post payment audit and/or technical examination of the Works and the Final payment including all supporting vouchers, etc., and to make a claim on the Contractor for the refund of any excess amount paid to him, if as a result of such examination, any overpayment to him is discovered to have been made in respect of any work done or alleged to have been done by the Contractor, under the Contract. If any under payment is discovered, the Employer shall pay the same to the Contractor. Such payments or recoveries shall not carry any interest.
31.	6.6 Maintenance of Medical Equipments and 12.0 Maintenance during Defects Liability Period	**a. <u>Complaints</u> :** The contractor shall receive calls for any and all problems experienced in the operation of the system and Equipments under this contract attend to these within 24 hours of receiving the complaints and shall take steps to immediately correct any deficiencies that may exist. **b. <u>Repairs</u> :** All equipment shall be immediately serviced and repaired based on the Employer's Requirements. Since the period of Mechanical Maintenance runs for one year concurrently with the defects liability period, all replacement part and labor shall be supplied promptly free-of-charge to the Institutes.

		c. <u>Preventive maintenance</u>: The Contractor shall carry out all preventive maintenance plans for the equipment and all other electromechanical installations under the Contract as per the standards of the industry and good engineering practices. The format shall be mutually agreed upon award of the contract.
32.	15.0 Contract Price and Payment	The Contractor must submit his income tax, VAT clearance etc before the payment is released from the Employer. He shall also submit copies of the Expenditure sheet for the various expenses he has made towards the achievement of a milestone.
		The interim payments shall be released only on a pre-decided schedule of payments based on milestones and approved by the Engineer.
		The Contractor is required to pay all taxes, levies etc for the Works and shall be deemed to have included the same in his Contract Price.

<u>SECTION IV</u>

EMPLOYER'S REQUIREMENTS

1. Introduction to the project

Jawaharlal Institute of Post Graduate Medical Education and Research, Puducherry, intends to augment Nuclear Medicine Department with PET – CT unit and Dual Head Gamma Camera in its campus.

The project shall be carried out on turnkey basis, where the selected OEM or its authorized dealer shall be responsible for all aspects of the augmentation project including procurement, installation and commissioning of medical equipments, and the planning, design and construction of the associated building, in accordance with the Employer's Requirements.

The Project has an estimated total cost of approximately Rs. 17 crores. The Project is scheduled to be completed within a period of 12 months from the date of award.

2. Scope of Work

Scope of Work

The turnkey works includes the following:

1. Supply, installation and commissioning of the PET/CT unit and the Dual head Gamma Camera unit in the Department of Nuclear medicine, Regional Cancer Center, JIPMER, Puducherry.
2. Construction of building for the equipment and other associated rooms in accordance with AERB guidelines to house the above equipment and their accessories, radioisotopes dose administration rooms, post administration waiting rooms, office space, patient waiting halls etc. Construction includes civil works, electrical works, centralized air conditioning, special floor, split ACs backup in equipment rooms,250 kV DG backup to the entire wing, plumbing, drainage, telephone and intercom facility, internet connections, Fire safety furnishings and other required works for successful commissioning and usage of the above equipment.
3. The area available for the construction is approximately 790 Square meters.
4. Getting approvals from AERB for layouts.

A rough layout indicating the required rooms is enclosed in the Annexure A for reference. However the bidder has to make the final drawing in consultation with JIPMER for sending to AERB for their assessments.

The project is broadly divided into three segments

2.1 PART I: Supply, Installation, Testing and Commissioning of One Dual Headed Gamma Camera

This involves the following activities.

- Supply, Installation and commissioning of a latest technology **latest model** dual headed variable angle SPECT system for commissioning including accessories & CAMC by the company
- Certification by the Vendor that the space is adequate for the installation of the quoted systems should be attached after visiting the department.
- The radiation equipment offered against this tender shall duly conform to the prescribed international/national standards and norms of radiation safety. AERB type approval certificate /NOC should be attached.
- Any options or added facilities not indicated in the specifications may also be given. Any improved modifications or updated versions of the system can be included in the quotations.

2.2 PART II: Supply, Installation, Testing and Commissioning of Positron Emission Tomography/Computed Tomography (PET/CT) Imaging System

Primary vendor quote for the supply, installation and commissioning of

(A) A state-of-the-art 128-slice PET/CT, and

Site Preparation: Designing, planning and constructions on turn-key basis, adhering to all the prescribed AERB safety guidelines and local regulations.

- Installing and commissioning of the PET/CT equipment and its accessories.
- Getting approvals from the local and national regulatory authorities including AERB approval for using the facility for patient care purposes.
- AERB approval for full commissioning of the equipment.

- **Certification**: Type Approval Certificate / No objection certificate from AERB Mumbai for the equipment should be available. It is the responsibility of the vendor to obtain AERB certificates. Also it is the responsibility of the vendor to do all the quality assurance tests on the equipment and the report should be given to JIPMER. Manufactures test data certifying compliance with specified performance requirements and with requirements of the contract document should be also given to JIPMER.
- All equipment, accessories, other ancillary equipment needed, warranty, turnkey and accessories under turnkey should be part of tender. The turnkey part and the supply FDG and Gallium-68 generator with their accessories for 5 years should be quoted separately. However, the final bid evaluation will be done based on the final prices of all the above parts.
- All the Application, Operating and Service manuals in duplicates should be provided by the vendor at the time of handing over the machine. At least one of these manual sets to be provided in computer readable format, preferably as Word for Windows format document.
- Supply of F-18 FDG isotope on site to be quoted separately along with this bid on yearly basis for 5 years and the payment will be made quarterly. **The customer has all the discretion power to continue or discontinue the procurement of F-18 FDG after 1 year during the 5 year contract.**
- Supply of one 15 mCi Gallium-68 PET generator and other chemicals used for labeling of peptides (DOTATATE & Similar molecules) for the 1st year after installation of facility and annual supply of same for next 4 years is also quoted separately on yearly basis. The contract for supply of Gallium-68 generator and other chemical necessary accessory components for DOTATATE/DOTANOC labeling is reviewed and renewed every year and the payment of which will be made on annual basis.

- **Upgradeability:** The quoted price should include software (including licenses) and hardware upgrades to be provided free of cost for eight years (during warranty period and CAMC period).

  Any options or added facilities not indicated in the specifications may also be given. Any improved modifications or updated versions of the system can be included in the quotations.

2.3 PART III – Augmentation of RCC Block to accommodate Nuclear Medicine Facility

Providing the infrastructure facility for the installation of PET – CT and Dual Headed Gamma Camera. Construction includes civil works, electrical works, centralized air-conditioning, special flooring, split ACs backup in equipment rooms, 250 KVA DG backup to the entire wing, plumbing, drainage, telephone and intercom facility, internet connections, fire safety, furnishings, and other required works for successful commissioning and usage of the above equipment.

Furnishing existing RCC block and the Nuclear medicine Department with medical and general furniture etc.

2.4 The scope of work consists Project planning, design, construction, procurement, installation, testing and commissioning of equipments, and integrated commissioning of the Nuclear Medicine Department in Regional Cancer Centre. Necessary building work is to be designed and executed as per relevant codes, Technical Specifications, conceptual / layout drawings and AERB regulations.

The work shall, inter-alia, include the following:

a. The construction design shall be appropriate to the type of equipment to be installed and shall conform to AERB regulations.

b. Approval of Atomic Energy Regulatory Board shall be obtained for the design, construction and installation of equipment.

c. Detailed design engineering including architectural design and construction documents, structural engineering, electrical engineering, centralized air-conditioning with humidity control and adequate filters to take care of humidity and

other polluting materials like carbon and sulphur, special flooring, split ACs backup in equipment rooms, 100 s- 250 kV DG backup to the entire wing, plumbing, drainage, telephone and intercom facility, internet connections, fire safety, furnishings, waste management and other required works for successful commissioning and usage of the above equipments.

d. Site clearance and dismantling of obstructions etc., before commencement of work

e. Getting approvals / permissions / permits of the statutory / local / governmental agencies

f. Building construction and installation of all services including air-conditioning and full DG back up for making all the building services fully and functionally operative.

g. Procurement, installation, testing and commissioning of medical equipment as per specifications provided.

h. Procurement and installation of furniture and fixtures including internal and external signage

i. All aspects of quality assurance, including testing of medical equipments and other components of the work

j. Project Management to ensure completion of Project as per the specified timelines

k. Submission of the completion (i.e. 'as-built') drawings and other related documents. A soft copy in Auto CAD or other similar softwares shall also be submitted.

l. Clearance of site before Handing over of the facilities after fulfilling all the obligations under "Employer's Requirement"

m. Making good any defect (if any) in Defects Liability Period

3. REQUIREMENTS OF VARIOUS EQUIPMENT

3.1 PART I: Supply Installation Testing and Commissioning of Dual headed SPECT gamma camera system

Technical Specifications of Dual headed SPECT gamma camera system:

1. General

Latest technology dual head SPECT gamma camera system for installation and commissioning on turnkey project basis

i. System should be capable of performing all Planar, Dynamic, SPECT, Gated Cardiac SPECT, WB SPECT and Whole Body imaging applications.
ii. System should be supplied along with image fusion software and hardware.
iii. All the Application, Operating and Service manuals in duplicates should be provided by the vendor at the time of handing over the machine. At least one of these manual sets to be provided in computer readable format, preferably as MS Word for Windows format document.

2. Gantry

i. Unobstructed wide open gantry with clockwise and anticlockwise movement.
ii. Should be capable of variable angle including 90^{o} and 180^{o} detector configuration for SPECT, Horizontal and Vertical upright for static views.
iii. Gantry should have emergency stop buttons.
iv. Gantry motion controlled by remote control handset and via user defined programs
v. Persistence scope (LCD Color Display) mounted on the gantry or wall for continuous display of patient position and gantry parameters

3. Detectors

i. Two digital detectors capable of variable angle configuration for unlimited flexibility.
ii. Large field of view and rectangular detectors having UFOV of at least 530 x 380 mm.
iii. Crystal thickness should be 9.5 mm (3/8”).
iv. Number of PMTs should be 55 or more per detector with 1 ADC per PMT (True digital detector).
v. The detectors should be equipped with automatic body countering (ABC).
vi. System should have facility for automatic correction for energy, linearity and uniformity.
vii. Automatic Quality control capability
viii. Performance parameters should conform NEMA NU 1 – 2007 standards or the latest specifications prevailing at the time of supply of equipment and clearly mentioned with literature support

4. Collimators

Following high precision Collimators with collision sensors to do all clinically possible examinations along with proper storage carts and easy changing.

i. Low Energy High Resolution (LEHR) - One Pair
ii. High Energy General Purpose (HEGP) - One pair
iii. Pinhole Collimator with different apertures - One (quote as optional)

5. Patient Table:

i. Single universal table for all studies i.e., Planar, SPECT, Whole body imaging
ii. Table top should be composed of low attenuation material, preferably, carbon fiber with attenuation not more than 10% at 140 keV.
iii. Table should be covered with mattress pad and straps
iv. Table should be able to withstand at least 180 Kg of body weight
v. Whole body imaging covering should not be less than 190 cm.
vi. Table should move to home position automatically
vii. Table should have facility for lowering the height to facilitate easy patient transfer and should be movable to permit imaging for sitting, standing, and stretcher/wheel chair patients. Lower range of vertical motion should be 50 cm
viii. Pediatric pallet, adjustable head positioning pallets, injection arm rest, Cardiac arm rest, leg support, Velcro straps for patient restraint & support

6 Acquisition Workstation

i. One Acquisition station independent of main processing unit capable of data acquisition in static, dynamic, list, multi-gated, whole body scanning, SPECT and Gated SPECT.
ii. High performance PC of latest specifications with multi-tasking operating system. It should have a minimum of 4 GB RAM, 2.8 GHz or more processor speed, 1 TB or more SCSI hard drive and high resolution (1024 x 1024 or more) antiglare flat panel square LCD monitor of minimum of 22" size. It should also have CD and DVD combo drive preferably with writer facility
iii. Latest special software and hardware option that allows half dose and half acquisition time in SPECT including cardiac SPECT and planar images should be offered as a standard features.
iv. Image acquisition and data display should be from 64 x 64 matrix up to 256 x 1024 matrix.
v. Acquisition termination by preset time, preset count with ability to manually pause, resume and stop all types of acquisitions

vi. Pre-defined acquisition protocols as well as facility for user to configure customized protocols.

vii. Simultaneous acquisition facility for multiple isotope or multiple energies.

viii. Zoom and rotate features

ix. On line live display of acquired data and imaging parameters during acquisition

x. Cinematic display of dynamic, MUGA & all multi frame studies

xi. Should provide system compatible ECG Gating Device with all leads and cables for MUGA / Gated Data acquisition. There should be ECG and R-to-R Histogram display during acquisition. Indicate frames per R-R interval and maximum frame rate capability

xii. Acquisition software should include camera quality control activities including Center of rotation (COR) correction, Uniformity correction maps, Energy, Sensitivity and Linearity maps, Daily /Weekly QC including Gantry calibration, Energy spectrum histogram (PHA) display, QC for Whole Body Acquisition, QC for Balancing sensitivity of both Detector heads.

xiii. Acquisition console should allow universal networking via DICOM ready to both local and wide area networks. It should also be connected to network laser color printer

7 Processing Workstation

i. Three processing workstations of high performance, latest specifications **multitasking multimodality** (loaded with all application softwares) with full DICOM readiness for image transfer print etc. One remote access workstation should also be supplied for lecture theatre.

ii. Workstation should support functions like SPECT, and SPECT image reconstruction, attenuation correction, film documentation, and other Nuclear Medicine protocols for organ specific quantitation.

iii. Minimum of 8 GB RAM, 2.8 GHz or more processor speed and minimum 500 GB SCSI hard drive logically divided into 3-4 partitions

iv. Antiglare high resolution (1024 x 1024 or more) flat panel square LCD monitor of minimum of 21”size.

v. The graphical user inter-face (GUI) should be identical to that of the acquisition unit

vi. Predefined and user configurable protocols for standard studies for rapid recall.

vii. There should be provision for data transfer to external storage device (CD/DVD/External Hard Disk) for mass data storage and achieving. Both processed data (reports etc) as

well as raw (acquired images) should be amenable to such data transfer and storage. CD/DVD archiving facility should be available on main console.

viii. Facility to import, exports, and fuse CT/PET/SPECT images from the other workstations in the PET/CT facility.

8 Clinical Applications Software:

i. All standard SPECT, Whole body imaging and Planar such as general static, dynamic clinical applications packages including Display Analysis software, 3-D volume rendering display with Maximum intensity projection (MIP), Cine review capability, curve generation and time activity curve, and image manipulation tools.

ii. Filtered back projection & Iterative reconstruction, PSF based reconstruction algorithm software for SPECT studies (equivalent or better reconstruction, 3D OSEM).

iii. The image profile curve should be possible in all the acquired images with a possibility to draw FWHM of the profile curve.

iv. Image subtraction & addition software should be available for all types of images

v. Image output format should include JPEG, TIFF, AVI and multimedia reporting tool with self-executable CD creation software.

vi. Complete Renal processing software including Transplant Evaluation, Package for GFR, ERPF, Renal Extraction Fraction, De-convolution analysis

vii. Thyroid Uptake and Thyroid Volume

viii. Technetium - Thallium / MIBI subtraction for Parathyroid Scintigraphy

ix. Hepatic Extraction Fraction and Gall Bladder Ejection Fraction

x. Condensed dynamic image program for esophageal transit studies and gastric emptying software.

xi. Lung Perfusion & Ventilation, Left to Right Lung Ratio

xii. Bone Static, Three Phase and SPECT with 3-D Display

xiii. 3-D bone reconstruction program

xiv. Whole body SPECT processing software

xv. Complete Cardiac package including First Pass EF and Cardiac Shunt quantification studies, Gated equilibrium, MUGA SPECT, Myocardial Perfusion (Planar and SPECT including Bulls eye), Emory Cardiac Toolbox, and gated SPECT tomography.

xvi. Dedicated licensed cardiac software – 3.05 suite / latest version of Emory Cardiac Toolbox including optional software OR QGS/QPS/QBS for Gated cardiac SPECT quantification. Companion tool for phase analysis should also be included.

xvii. Brain, both planar and SPECT with choice of different filters.

xviii. Advanced licensed Neuro software –NeuroGam or equivalent

xix. Brain quantification program for rCBF calculation.

xx. Image output format should include JPEG, TIFF, AVI and multimedia reporting tool with self-executable CD/DVD creation software.

xxi. QC software package (NEMA NIU 1 2007 or the latest protocol) with documentation.

xxii. Any latest special software or hardware to enhance the planar and SPECT images quality and to complete the study in minimum time should be offered as a standard features. Provide specific details on the offered package

xxiii. The acquisition and processing workstations should be HIS/RIS/PACS compatible.

9 Accessories and QC Utility*

i. System compatible indigenous online UPS with maintenance free batteries for whole system with 30 min back up time. The cardiac stress room electric points and few ordinary lights will also need to be connected through this UPS. One extra set of battery to be supplied with no extra cost, as and when required.

i. One Co-57 flood source of at least 10 mCi strength for rectangular field of the size adequate for the camera, whenever ordered by the department.

ii. Imported dose calibrator, one number (Capintec-CRC 55 TW or equivalent) including Moly assay canister, with calibration sources for all energies (low, medium and high) and a compatible printer.

iii. Four Quadrant Bar Phantom for rectangular detector of size not less than the UFOV of the detector

iv. One high resolution network Laser Color Paper printer compatible with the processing work station (MS Windows) with 5 sets of all cartridges to be provided every year during the warranty and CAMC period.

v. PC based 12 lead ECG monitor having at least 17” color monitor and compatible TMT system. TMT and ECG monitor should be from the reputed manufacturer. 50 boxes of ECG paper for the quoted ECG monitor also to be supplied and a printer attached.

vi. One vital sign monitor (Standard make)

vii. Two single syringe infusion pumps for pharmacological stress (Annexure A)

viii. One digital GM based survey - cum - contamination meters (standard make)

ix. One Defibrillator (standard make)

x. Two lead lined waste bins (3 mm lead - Technitium)

xi. One decontamination kit

xii. Long handled Tongs and Forceps- Five each

xiii. Syringe Needle Destroyer – Three

xiv. 40 interlocking painted lead bricks and 8 painted Lead corners

xv. 12" sized L-Bench with lead glass for ^{99m}Tc radio-pharmacy work

xvi. Fume hood of standard manufacturer should be installed in radio-pharmacy (Annexure b).

xvii. Three stainless steel syringe carriers having lead lining of minimum 4 mm thickness,

xviii. Two X-ray LCD illuminators for minimum 2 films view

xix. One Crash cart trolley in the cardiac stress lab (Annexure b)

***Cost of all the listed accessories should be provided separately as per General Conditions 1.4.**

10. WARRANTY:

i. Equipment is to be installed as per AERB regulations. Qualified personnel from the company should install and commission the camera.

ii. **Warranty** of the equipment including crystal and all accessories should be for 5 **YEARS** after the satisfactory testing, commissioning and handing over of the system. Warranty will include all the accessories as well as electronic / electrical consumables /cables / leads etc and third party items.

iii. Rates for next FIVE **YEARS** comprehensive annual maintenance contract (CAMC) after the expiry of warranty with 95% uptime as per the tender terms. CAMC will include the crystal, batteries of the UPS, Air-conditioning units. All the accessories supplied with the main equipment as well as electronic / electrical consumables /cables / leads etc. will also be part of the CAMC. Service, repair and maintenance of all third party items will be the sole responsibility of the primary vendor. Bidder should quote the AMC price for five years on yearly basis.

iv. The price quoted for the equipment, turnkey works, warranty and CAMC should include all expenses including the customs duty, customs clearances, insurance, freight, clearance charges, and also all expenses towards the maintenance and repairs of the entire gamma camera unit including spare-parts, electrical and electronic items, computer systems, air-conditioning, cooling systems, networking, etc. JIPMER will not be held responsible for payment under any head other than CAMC payments during this period and necessary documents required from time to time.

v. The acceptance tests for the verification of different performance parameters of the system will be carried out by us with the help of the company service engineers. The acceptance of the installation shall be subject to satisfactory handing over of the system to the department and certificate to this effect to be issued by the college/university.

vi. Onsite training by trained engineer and application specialist should be provided for at least 2 weeks period.

3.2 Part II – Supply Installation Testing and Commissioning of Positron Emission Tomography/ Computed Tomography (PET/CT) Imaging System

Technical Specifications of Positron Emission Tomography/Computed Tomography (PET/CT) Imaging System

1. General:

a. **Nomenclature of standard equipment:** A high–resolution state-of-the-art positron Emission Tomography Scanner integrated with 64 rows of solid state detectors with the capability of 128 slice CT generation.

b. Introductory year should be latest.

c. **Expected functions of standard equipment:** Advanced positron Emission Tomography with integrated multi-slice CT studies for comprehensive Oncology, Cardiac, Respiratory, Abdominal, Neuro Studies including brain perfusion, general vascular and whole body imaging applications with optimal radiation dose efficiency. The system should be state of the art with fast acquisition speeds for imaging with good temporal resolution. The equipment will be complete with Patient Table, control and evaluation Unit, Computer system, **latest user software** and network module. ***The system should be installed on a Turn Key basis or in the space provided by the institution where it is to be installed according to the onsite feasibility.***

2. PET Hardware

i. Gantry should have integrated PET & CT hardware.

ii. Ring diameter should be 70 cm or more.

iii. The patient gantry aperture should be ≥ 70 cm and uniform for both PET and CT.

iv. Entire range of rotation times for full 360 degree with a minimum time of 0.4 or less.

v. Laser alignment lights to define both internal and external scan planes, operate over full range of gantry and perpendicular relationship of coronal and axial lights.
vi. Controls located on all four sides. / Two each sides.
vii. Should have ECG gating and respiratory Gating with supporting hardware.
viii. The PET scanner should employ non-hygroscopic high light yield (≥ 80%) and low decay time scintillator material like LYSO or LSO crystals for detecting 511 KeV gamma photons in coincidence with Time of Flight (TOF) technology.
ix. The crystal thickness should be 20mm or more to give the system sensitivity of more than or equal to 5 CPS/KBq standard (without TOF)
x. The system should have the capability of acquiring PET and CT images and fusion capabilities of both PET & CT images without moving the patients.
xi. System should have dynamic PET acquisition capability to acquire PET image independent of CT.
xii. Standard Carbon-fibre table top on the PET-CT gantry with patient's load bearing capacity of 180kg or more with ± 1 mm positional accuracy with indexed patients positioning system.
xiii. Axial Field of view should be 16 cm or more.
xiv. The transverse field of view should be ≥ 50 cm
xv. The scanner must have low power laser lines orthogonally mounted on the gantry for patient alignment and auto-contouring. The laser should be mounted in such a way that the patient can be positioned form either side of the gantry and the patient bed.
xvi. Efficient Gantry cooling system for continuous running of the machine with tilt angle ± 30 degree desired.

3. Performance Specifications:

a) All specifications must comply with NEMA Standards Publication NU2-2007 or latest performance measurements without altering instrument parameters. QC Software to measure these parameters must be available in the system.
b) Axial spatial resolution at 1 cm from the central axis of the gantry should be ≤ 6 mm
c) System efficiency: sensitivity must be ≥ 5 cps/KBq at 350 KeV
d) System Energy Resolution should be ≤ 12.0 %
e) 3-D scatter Fraction should be ≤ 36%
f) Uniformity should be ≤ 2% variation. The coefficients of variations of Volume should be ≤ 5 % and System should be ≤ 1%.
g) During image reconstruction system should use *Time-of-flight algorithms*, when required for better lesion detectability.
h) System should be capable of reconstructing images at the rate of 20 to 40 images/ sec by using HD technology.
i) Attenuation correction should be CT based. Protocol/Algorithm for attenuation correction should be independent of metal/mA/IV contrast related artifacts

4. CT Hardware:

The system should be the latest available slip-ring technology with 64 rows of solid state detectors, allowing full rotation with multi-slice scanning of 128 slices per rotation with true isotropic volume acquisition.

I. X-RAY GENERATOR

Should be high frequency inverter type with power output of 70KW or more to support sustained and continuous X-ray generation.

II. **X-RAY TUBE**:

a) High performance CT X-ray tube is essential for uninterrupted long spirals.
b) Anode heat storage capacity of 6.0 MHU or more, Tube Voltage between 80-140 kV, Tube Current of 20-600 or more mA.
c) Filter and beam limiting devices and other specific features to reduce radiation dose to the patient (with separate adult and pediatric modes)
d) Specify the focal spot size and number according to IEC recommendations.
e) Automatic selection of focal spots should be possible.

III. Rotation time should be ≤ 0.4 sec

IV. Image slice width should be from ≤ 1 mm to 10 mm.

V. High contrast spatial resolution should be at 0% MTF 20 lp/cm,10% MTF 15 lp/cm and 50% MTF10 lp/cm. .(Specify actual resolution).

VI. Low contrast spatial resolution 3 mm at 0.3%at 2 rads. Noise 0.3% at 2.5 rads.(Specify actual resolution).

VII. Pitch factor (volume pitch) should be variable between 0.4 to 1.75 and should be freely selectable. Give details of all pitch selections.

VIII. Standard Rotation times should be 0.4 to 2 sec for 360 degree. Specify the minimum and maximum with the range of pitch. Combinations of pitch slice thickness and spiral length should be easily selected by the user. The system should optimize the radiation dose and resolution for each selection.

IX. Bolus triggered spiral acquisition should be possible.

X. Single continuous spiral acquisition time “spiral on time” should be 100 seconds or less

XI. Gated cardiac and dynamic PET & CT imaging acquisition capability shall be provided. 4-D respiratory gating should be upgradable.

XII. Facility for reconstruction of PET and CT images and immediate display of images in 1024 x 1024 matrix parallel to acquisition in spiral mode in 512 x 512 or higher matrix.

XIV. Patient Bed:

a) Precision bed should be made of low attenuation carbon fiber and minimum sag of the patient table top.
b) A separate flat carbon fiber table top with indexing should be provided for radiotherapy treatment planning.
c) It should be able to bear 200 kg or more patient weight.
d) The horizontal motion of the patient bed must be electrically motorized and computer controlled with an independent operator control option as well. Operator controls accessible from both sides of the patient must be provided for both horizontal and vertical movements.
e) The horizontal travel of the bed should enable the full length scanning of a patient in one scan acquisition. Full body horizontal length should be ≥ 190 cm and vertical travel from 60 to 90 cm.
f) A Digital readout of the horizontal and vertical position of the bed must exist and must be located near the aperture controls for the bed to provide ease in positioning
g) Pediatric support, headrest, armrests, knee-leg support are to be provided (Med-tec or its equivalent).

XV. Computer system:

(a) Latest high end reconstruction tools for pre and post processing of PET-CT data at main console. Facility of DVD & CD writing and image transferring with additional work station system.

(b) LCD display monitor of at least 19 inch or more (diagonal) or more at all work stations.

(c) Latest windows based DICOM compatible software to be provided for acquisition and processing. Latest and upgradeable software and hardware with all licenses (and upgrades for ten years) for all Oncology, Quantitative Cardiology including bolus tracking, CTA, coronary tree, plaque analysis, calcium scoring, bone mineral densitometry, myocardial perfusion quantification, coronary flow reserve and Quantitative Neurology including perfusion application should be provided.

(d) Seamless connectivity to the existing server should be established for exporting the DICOM images and 4D Gated images from PET/CT to the RT planning systems for radiotherapy planning.

(e) Connectivity with other DICOM enabled imaging modalities should be possible. This includes connectivity with PACS and HIS (HL7 compliant systems).

(f) Computer Aided Detection (CAD) for lung nodule identification and growth rate calculation.

(g) CT Fluoroscopy with monitor near gantry. Stereotactic software for localizing lesions in x, y, z planes compatible with third party Stereotactic frame.

(h) Contouring facility for gross tumor volume and clinical target volume. Image and Radiotherapy structure transfer through network in DICOM to treatment planning system in Radiotherapy department.

(i) Specialized Software: Specialized Quantification software for Brain & cardiac studies (Quantification of Cerebral perfusion/cerebral blood flow and flow reserve, Quantification of metabolic parameters. Quantification of myocardial perfusion and flow reserve). Myocardial perfusion study software with ECG gated studies, wall motion and wall thickening abnormality analysis/quantification with bulls eye map display.

(j) The system should have a data editing facility for data acquired due to irregular heartbeat.

XVI. Image storage server and processor

a. Hardware should be high speed state of art processor with storage space not less than 3 terabyte or more storage, 4 GB RAM, with automatic archival systems & High speed volume rendering graphics card with minimum 2 GB RAM.

b. The server should have either proprietary or reputed software (e.g. Terra Recon or equivalent), capable of advanced 3D processing and high end applications.

c. Archiving: Image archiving system of ≥ 4 TB capacity capable of maintaining database of patients and images. Automatic Digital archiving of Data/studies on CD-R, CD-RW, DVD-R, DVD-RW along with compatible drives and 1000 CD-RW and 1000 DVD-RW to be provided.

d. Latest anti-virus software should be loaded in the server for its protection and for protection of all client systems. The antivirus should be updated regularly for the next 10 years.

e. A backup server facility should be available for retrieving the data when the main server crashes due to any reasons.

XVII. Image transfer/networking

- DICOM send/receive with hospital PACS and with RTP server.
- Query/retrieve
- Basic print
- HIS/RIS work list

Post-Processing: Should be available in all workstations with all following applications

- 2-D, 3D including image zoom and pan, image manipulations, including averaging, reversal of gray-scale value, and mirroring; image filter functions, including advanced smooth algorithm and advanced bone removal algorithm.

- Multi planar reconstruction of secondary views, with viewing perspectives in all planes.
- Spatial alignment and visualization of two different data sets of one patient generated on different modalities or with different acquisition times.
  Thinking System TM or similar latest reporting software – so as to enable comparison with older studies simultaneously: - PET CT processing and archiving software with all licenses and upgrades for a period of 10 years.

XVIII. Acquisition protocols:

a) Acquisition Modes: Acquisition in 3D modes must include Static, Whole Body, Dynamic and Gated acquisition provisions. 3D whole Body acquisition protocols with prospective 3-D reconstruction algorithm. Iterative reconstruction technique should also be available.
b) Acquisition Protocols: The acquisition program should support pre-programmed scan protocols with acquisition and reconstruction parameters and patient information with simple, dynamic editing of parameters. These parameters would include all information necessary to acquire data on the PET scanner (e.g. scan duration, patient information, frame/list mode, bed motion), as well as information necessary for reconstruction.
c) Whole body Acquisition: Multi bed acquisitions (e.g. for the purpose of whole body oncology studies) should advance the bed from one position to the next Automatically
d) Dynamic Frame and List Mode Acquisition: The acquisition setup software must support multi-frame acquisitions of different (arbitrary) frame duration's with no loss of data between frames.
e) Automatic Acquisition Start: The option to start an acquisition automatically must be provided.
f) Reconstruction Start: Image reconstruction should simultaneously start for the acquired images while acquisition is still in process.
g) Reconstruction Time: mention time
h) Pixel Size: The user should have the capability to specify the pixel size for reconstruction. The reconstruction program should support reconstruction in image sizes of at least 128x128 or higher.
i) ECG gating and respiratory gating should be part of the offer and are to be provided with necessary software.

XIX. Work stations:

S.No	Purpose of Work station	Qty
1	Acquisition	1
2	Common Processing Multimodality for Oncology, Cardiology and Neurology	5
3	RT Planning	1

4	**Viewing Station with 60" LED monitor**	**1**
5	**LCD projector – ceiling mounted**	**1**

(a) In each of these 5 workstations all licenses (permanent site licenses) should be available for the aforesaid applications.
(b) Operator control functions: registration scheduling; protocol selection; reconstruction; standard evaluation applications; 3D display, Virtual Scopy including advanced colonoscopy, MPR, CMPR reconstruction during acquisition. Image fusion facility should also be incorporated on all workstations.
(c) Latest Emory Cardiac Toolbox PET – SPECT software.
(d) Computer aided diagnosis software for neurological applications with quantification ability (SISCOM or equivalent software)
(e) Provision to make DICOM/PDF/JPEG/AVI/MPEG digital output.
(f) Fusion software for CT/PET/SPECT/ MRI fusion and provision for multiple phases in 3D demonstration and treatment planning system.
(g) PET DICOM 3.0 or higher version must be implemented. It should have the ability to import MR/CT DICOM Data.
(h) Minimum size: minimum 19 inch or more diagonal LCD display for all work stations.
(i) Superior quality furniture to be provided for all work stations – minimum of five chairs and one table with shelves for each work station.
(j) Lead glass window: One clear transparent 100 x 120 cm with adequate lead equivalence (as per AERB requirements) each separating the PET/CT and SPECT/CT scanner and the common console (total two in number).
(k) Accessory steel cabinets for storage – 2 nos.

XX. ACCESSORIES*:

1. **4D compliant for Respiratory gating device for RT planning**: The department of radiotherapy has Varian Clinac iX linear accelerator system in the same wing. Hence, the supplied system must be ready for non-invasive video based system using an infrared tracking camera and a reflective marker to accommodate both breath hold and free breathing pattern of patients breathing cycle (both prospective and re-prospective modes). It is the responsibility of the PET/CT vendor for the successful integration of 4D€ gated images with the Varian network system (for transfer of the same to the server of the RT planning system server). It is the responsibility of the PET/CT vendor to give all the necessary hardware and softwares including required licenses for smooth integration of 4D gating of the PET/CT with RTP system and this should include license for PET/ SUV based contouring software in eclipse RTP.

2. **FILM PRINTER:** One Dry chemistry DICOM printer with flexible formatting and software controlled operational capabilities with networking – latest model at the time of supply. Printing of films of 14"x 17", 10"x12" & 10"x8" size in a resolution of 600 or more dpi. 2 nos. packs of films of the above sized to be supplied.

***Cost of all the listed accessories should be provided separately as per General Conditions 1.4.**

XXI. List of components & consumables to be supplied with the PET/CT unit (to include in the bid):

a. Fume Hood for PET Radio pharmacy.
b. Lead Shielded Waste containers for PET Radiopharmaceutical waste – 3 nos.
c. Shielded L bench with Lead glass for handling PET isotopes (imported) – 02 nos.
d. 40 Lead bricks and 8 lead corners for F-18 handling
e. Syringe carriers for PET radiopharmaceuticals – 4 numbers (5 mm lead)
f. Isotope dose calibrator (capintec or equivalent) with compatible sticker maker – 1 number
g. Pocket dosimeter – Gamma & Beta (digital) -04 nos.
h. Area zone monitor – 2 numbers
i. Portable radiation survey meter (digital) -02 nos.
j. Contamination monitors (digital) Fluke or its equivalent - 02 nos.
k. Tungsten shielded syringe holder - Four each for 2 ml, and 5 ml
l. Two latest edition PET.CT atlas for interpretation of PET/CT.
m. LCD TV (32 inch) – one (to be installed in the waiting hall)
n. Laser FAX/Copier/Scanner/Printer Scanning & Copier system and connection to institution – 1 no.
o. Colour laser printer – 1 no.
p. 4 nos. of Computer Systems.
q. **Pressure injector**: Digitally controlled CT injection system (latest model – dual head) with Pedestal head mount, remote monitor and VRC, syringe heater.
r. **Anesthesia Equipment** – Vital sign monitor, (ECG, SPO2, & NIBP etc.), Defibrillator, suction apparatus on trolley.
s. **Germanium 68 pin source for the calibration of the system to be replaced as and when required for the period of warranty of 5 years.**
t. ET ACR Quality phantom & Quality control sets as required.

8. PET RADIOPHARMACY SUPPLY *:

Bid should include supply of F18 FDG dose for 15 patients (10mCi/patient at door step) per consignment for 225 days per annum for 5 years. Delivery will be as and when required in batches of 15 patients dose.

Bid should include supply of F-18 FDG up to site basis. The price for this should be quoted yearly basis separately for 5 years and the payment will be made

quarterly. **The customer has all the discretion powers to continue or discontinue the import of F-18 FDG after 1 year during the 5 year contract.**

a. Supply of one 15 mCi (555 MBq) Semi-automated Gallium-68 PET generator and other chemicals used for labeling of peptides (DOTATATE & Similar molecules) for 1st year after installation of facility and annual supply of same for next 4 years is also quoted separately on yearly basis. The contract for supply of Gallium-68 generator and other chemical necessary accessory components for DOTATATE/DOTANOC labeling is reviewed and renewed every year and the payment of which will be made on annual basis.

b. Consumables for ^{68}Ga-peptide synthesis: For 6 months (4 elutions per month)

S.N.	Name of the chemical	Quantity	Requirement
1.	Metal free water	1 litre	3 bottles
2.	Acetone	500ml	6 bottles
3.	Extra pure HCl	500ml	3 bottles
4.	Ethanol	500ml	6 bottles
5.	Ligand	1 mg	12-15 vials
6.	Strata-XC	100/ pack	2 pks
7.	RP C-18 or as per requirement	10/pack	10pks
8.	0.22 um filter	100/pack	1 box

c. Any other necessary accessories required for the peptide synthesis should also be included in the list.

5. OPTIONAL ACCESSORIES: (TO BE QUOTED SEPARATELY)*

Robotic arm for CT guided interventions with facility to fuse CT and PET images and planning software for trajectory planning.

***Cost of all the listed accessories should be provided separately as per General Conditions 1.4.**

6. WARRANTY:

(a) **Five Years** Comprehensive on-site warranty for the PET-CT and all its accessories, including X-ray tube, CT detectors and PET detectors, crystal and radioactive sources, workstations, servers and computer systems (including bidder's own brand and 3rd party systems), vacuum and non-vacuum parts of both local and imported items should be quoted. Pro-rata warranty is not acceptable.

(b) After the expiry of 5 year warranty period, **five Years** On-site Comprehensive annual Maintenance contract (CAMC) that include both labor plus spare parts inclusive of CT tube, should be quoted year-wise in INR by the manufacturers.

(c) The peripherals / workstations / servers / accessories, electronic / electrical consumables (leads, probes, batteries etc.), calibration sources, air-conditioning AHU units, DG sets and batteries of UPS will also form part of the warranty and CAMC. Service, repair and maintenance of **all third party** items will be the sole responsibility of primary vendor.

(d) The price quoted for the equipment, turnkey works, warranty and CAMC should include all expenses including the customs duty, customs clearances, insurance, freight, clearance charges, and also all expenses towards the maintenance and repairs of the entire PET-CT unit including spare-parts, electrical and electronic items, computer systems, air-conditioning, cooling systems, networking, etc. JIPMER will not be held responsible for payment under any head other than CAMC payments during this 5 year period and necessary documents required from time to time.

(e) Maintenance contract from the local agents is also not acceptable.

(f) During warranty period and CAMC period, the vendor shall give in the form of Bank guarantee, an uptime guarantee of 95%. A penalty of Rs.20, 000/- per day will be charged after the expiry of 95% uptime warranty. If the machine lies non-functional for a period of more than one week continuously, the same penalty (at the rate of Rs.20,000/- per day) will be imposed even if 95% uptime clause is met with. Any bid without agreeing to this uptime warranty and penalty clauses will be summarily rejected.

(g) Availability of adequate spares and accessories for the next 10 years should be ensured by the vendor.

(h) Warranty, guarantee and service are considered as part of the bid specification. The contractor shall provide complete and specific details of maintenance operations performed under service contracts.

7. Training

Two weeks onsite & two weeks off site training for two Doctors and two technicians in a well-equipped and reputed center in India.

1. GENERAL CONDITIONS & REQUIREMENTS

In the above specifications wherever the word 'shall' is mentioned, it is taken in the meaning that the required feature / facility / procedure / specification / standard is mandatory.

1.1. All claims regarding meeting of the specifications shall be duly supported by appropriate, latest technical catalogues / brochures from the manufacturer. Simply stating that the equipment meets the specifications is not sufficient and any such quotations will be summarily rejected. Computer printed documents or laser printouts will not be accepted as technical catalogues / brochures.

1.2. During the warranty period, software upgrades shall be provided free of cost wherever applicable.

1.3. The vendors shall submit a compliance statement point wise in regard to the specifications asked for in the tender. It will be responsibility of the vendors to go through all the tender requirements carefully and accordingly address each and every point about their compliance. The compliance statement shall preferably be made in an Excel worksheet or any other tabular format for easy evaluation. A softcopy of the submitted (signed) compliance statement must be provided on a CD.

1.4. The Supplier/Vendor should post a field service engineer based at Pondicherry for 24x7 equipment manitainence. The Engineer should be authorized by the vendor and respective training certificate of the engineer should be submitted at the time of commissioning

3.3 PART III Augmentation of Nuclear Medicine Department in RCC Block

3.3.1. The existing Regional Cancer Centre block shall be horizontally extended as shown in the part master plan in the RFP. The built up area shall be nearly 790 sqm. A tentative plan of the extension is given in Annexure 1 for generic guidance. Provision for the following shall be made.

1. Satellite console room
2. Gamma camera
3. PET – CT
4. Post admin and dose admin room for PET – CT.
5. Admin room for Gamma camera
6. Room for Physicist cum server, Technologist etc.
7. AHU room
8. Extension of existing gas manifold system to PET – CT & Dual head gamma camera.

i) The building shall be designed according to AERB regulations & standards. The tentative layout indicating wall dimensions are provided in Annexure II for guidance. However the developer shall be responsible for the adequacy of the design.

ii) The bidder shall provide for all the required services to meet the requirements of NBC, NEC and AERB. The costing shall include all services that are required to make it fully functional.

iii) The building shall be fully air-conditioned and provided with full DG back up.

iv) The project shall be designed according to international best practices and constructed at par with the international standards and equipped with the internationally accepted latest equipment at the time of commissioning.

v) The design should be fit for the purpose intended and there should be scope for further vertical extension of three upper floors that may be planned in the future for the facility. The developer is encouraged to use innovative design components and latest technology available for the purpose of the project.

vi) Adequate parking for cars & two wheelers shall be provided.

vii) Safety and security

a. Attention should be given to balancing readily accessible and visible external access points to the facility with the ability to control and secure all access points in the event of an emergency. Factors such as adequate exterior lighting in parking lots and entry points to the facility, and appropriate reception/security services are essential to ensuring a safe environment.

b. Since the strict control of access to a medical facility is neither possible nor appropriate, safety within the facility should also be addressed through the design of circulation paths and functional relationships.

c. Provisions for securing the personal belongings of staff, visitors, and patients/residents should be addressed.

d. The physical environment should be designed to support the overall safety and security policies and protocols of the institution. Safety and security monitoring, when provided, should respect patient privacy and dignity.

viii) **Finishes**

a. The selection of a color palette should be based upon many factors, including the building population, anticipated behavior in the space, time of encounter and level of stress. The color palette selected should be suitable and appropriate for the specific environment, taking into account the specific activities conducted in that environment.

b. Finishes and color palettes should respond to the geographic location of the health care facility, taking into account climate and light, regional responses to color, and the cultural characteristics of the community served.

c. The effect on patients/residents/staff/visitors of materials, colors, textures, and patterns shall be considered in the overall planning and design of the facility. Maintenance and performance shall be considered when selecting these items.

ix) Documents to be submitted with design

The BIDDER shall submit with his design all the documents and the references used in the design. The BIDDER shall also submit desired number of copies of the following:

a. Detailed drawings including the structural drawings, architectural drawings, component drawing etc.

b. Standards and specifications being followed in the design and for materials to be used in a consolidated tender form

c. In case a sub-contractor is proposed to be hired for the construction, details thereof.

d. List of vendors from whom the materials are planned to be procured

e. Tests to be carried out

f. Site safety plan

g. Quality plan as per ISO: 2001:2008

h. Design data

i. Requirements for any foundation, structure, plants or services etc which the contractor feels shall be accessed in order to proceed with the projects in accordance with the design.

The Contractor shall submit to the Employer and the Engineer all Design Data, together with the relevant Design Certificates certified by the Contractor. In the event that a re-submission of Design Data is required, such re-submission shall be made as soon as practicable after the receipt of the relevant statement of objections. All submissions of Design Data shall include 6 copies.

x) Hygiene requirement during construction-Infection Control

The Contractor shall provide an Infection Control Risk Assessment (ICRA). An ICRA is a determination of the potential risk of transmission of various biological agents in the facility. Based on the ICRA, the Contractor shall also provide necessary protection to be incorporated in the program and Infection Control Risk Mitigation Recommendations (ICRMR), which will describe the specific methods to be used and by which transmission will be avoided during the course of the construction. The Contractor shall also provide monitoring of the effectiveness of the applied ICRMR during the course of the project.

The ICRA shall be conducted by a panel with expertise in infection control, risk management, facility design, construction and construction phasing, ventilation, safety, and epidemiology. The panel shall provide updated documentation of the risk assessment together with updated Mitigation Recommendations throughout planning, design, construction, and commissioning. The ICRA shall address, but not be limited to, the following:

- **Design.** Building design features shall be addressed when developing the ICRA.
    - Number, location, and type of airborne infection isolation and protective environment rooms.
    - Location(s) of special ventilation and filtration such as emergency department waiting and intake areas.
    - Air handling and ventilation needs in surgical services, airborne infection isolation and protective environment rooms, laboratories, local exhaust systems for hazardous agents, and other special areas.
    - Water systems to limit *Legionella* sp. and waterborne opportunistic pathogens.
    - Finishes and surfaces.

- **Construction.** Building and site areas anticipated to be affected by construction shall be addressed when developing the ICRA.
    - The impact of disrupting essential services to patients and employees.
    - Determination of the specific hazards and protection levels for each.
    - Location of patients by susceptibility to infection and definition of risks to each.
    - Impact of potential outages or emergencies and protection of patients during planned or unplanned outages, movement of debris, traffic flow, cleanup, and testing and certification.
    - Assessment of external as well as internal construction activities.
    - Location of known hazards.
    - Soil condition should be confirmed prior to designing the structure.

- **Infection control risk mitigation recommendations.** The ICRMR shall be prepared by the ICRA panel and shall address, but not be limited to, the following:

- Patient placement and relocation.
- Standards for barriers and other protective measures required to protect adjacent areas and susceptible patients from airborne contaminants.
- Temporary provisions or phasing for construction or modification of heating, ventilating, air conditioning, and water supply systems.
- Protection from demolition
- Measures to be taken to train hospital staff, visitors, and construction personnel.
- Designer should take care of all radiation hazards (Ref to AREB norms)

The Contractor shall ensure that construction-related requirements of the ICRMR, as well as ICRA-generated design requirements, are incorporated into the project requirements.

The Engineer shall inspect the initial installation and provide continuous monitoring of the effectiveness of the infection control measures during the entire course of the project. This monitoring may be conducted by in house infection control and safety staff or by independent outside consultants. In either instance, provisions for monitoring shall include written procedures for emergency suspension of work and protective measures indicating the responsibilities and limitations of each party (owner, designer, constructor, and monitor).

xi) Maintenance and Training requirements for systems, machines and equipment

- The Contractor shall maintain all systems, machines and equipment during the defects liability period. The developer shall see to it that all the warranty and guaranty cards are properly filled and duly submitted to the Employer along with their maintenance manuals.
- The Contractor shall train the staff of the Employer for the new systems, machines and equipment procured for the hospital. The minimum training period for the hospital staff should be 3 months which can be varied by the Employer.
- The Contractor shall make arrangements for demonstrations before trial run and at the time of commissioning of the systems and equipment.
- Operation and Maintenance Manual shall be supplied to the Employer for the new equipment and latest machinery.
- These manuals shall contain in sufficient details, the procedures for operation and the maintenance schedule for the medical and other equipment such as air conditioning etc.

xii) Periodical Progress review

Periodical review of the progress of the project shall be carried out in every 21 days and at any time desired by the Employer. For this purpose the Contractor shall prepare and submit the progress reports as stated in the Contract.

The contractor shall keep at site a latest copy of the following:

a. Contractor's Documents that shall include but not limited to the technical documents as follows:
b. Construction Drawings Detailed including any modifications etc.
c. List of Codes, standards and specifications being followed.
d. Documents required to satisfy all regulatory approvals,

e. A complete set of "as-built" records of the execution of the Works, showing the exact as-built locations, sizes and details of the work as executed.
f. Any other document which the Engineer instructs from time to time
g. Design documents as mentioned above.
h. Operation and Maintenance Manuals
i. Records of Contractor's Personnel, Labor and Equipment
j. Charts, detailed descriptions of progress, including, each stage of design, procurement, manufacture, delivery, construction, erection, testing, commissioning and trial operation;
k. Cash Flow Analysis of the past and estimate for the balance work on a fortnight basis.
l. Photographs showing the status of manufacture and of progress on the Site;
m. For the manufacture of each main item of Plant and Materials, the name of the manufacturer, location, percentage progress, and the actual or expected dates of:
n. commencement of manufacture,
o. Contractor's inspections,
p. tests, and
q. shipment and arrival at the Site;
r. Copies of quality assurance documents, test results and certificates of Materials
s. List of Variations, notices given under Sub-Clause 2.4 (Employer's Claims) and notices given under Sub-Clause 20.1 (Contractor's Claims);
t. Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations;

xiii) Quality Control

The Contractor must ensure that the works conform to the quality standards and to the satisfaction of the Employer. The contractor shall submit his quality plan in accordance with the above

The works, plant and materials shall be subject to tests from time to time as per best practices in the industry. Wherever mentioned in the Contract, the tests must be carried out at the Contractor's expense. The materials shall be procured from reputed vendors approved by the Engineer. The Contractor must also supply samples to the Engineer for his approval and also carry out the tests as and when required by the Engineer.

The following furniture (both medical and general) room wise distribution as provided in Annexure A shall be supplied. The vendor shall propose the specification for approval of JIPMER.

The items to be quoted under medical and general furniture should be manufactured by the standard medical & general manufacturers and samples of the items should be submitted to the appropriate committee to be constituted by JIPMER for approval and supply.

Annexure A – Accessory Specification

A	VITAL SIGN MONITOR
1	**Technical Specification**
1.1	Should have monitoring parameters like ECG, respiration,NIBP,SpO2 and Temperature
1.2	Monitor should have audible and visual alarms capability.
1.3	Should have TFT/LCD display size of atleast 9inch.
1.4	Should have 5 lead ECG measurement option.
1.5	Should include hemodynamics calculations and vital sign and graphic trends. Trends should be automatically stored for at least 24 hours in at least one-minute intervals.
1.6	Numeric monitored data trend shall be viewable and recordable in a patient chart type format in at least 1, 5, 15, 60 minutes intervals
1.7	Should have convenient handle for carrying the same
1.8	Digital and 4 waves / traces display
1.9	Should be able to fix with bed/trolley
1.10	Should have battery backup for minimum 1 hour.
1.11	Power Supply: 230 VAC, 50Hz fitted with Indian plug
2	**System Configuration Accessories, spares and consumables**
2.1	ECG Cable with leads - 1 Set
2.2	Gel - 1 Bottle
2.3	SpO2 probe - Reusable (Adult) - 1 no
2.4	SpO2 probe - Reusable (Pediatric) - 1 no
2.5	NIBP reusable Cuff of three sizes (Adult, Pediatric & Neonatal) - 1 each.
2.6	Temperature probe - 1 no
3	**Standards, Safety and Training**
3.1	Manufacturer should have ISO certification
3.2	The quoted model should be /FDA/CE/BIS approved.
4	**Documentation**
4.1	User/Technical manual in English should be supplied.
4.3	Warranty & CAMC as per tender terms.
B	**LARYNGOSCOPE**
1	**Technical Specification**
1.1	Should supply 4 different size standard blades and one handle for adult and pediatric separately and one short stubby handle.
1.2	Should be stainless steel matt finish
1.3	Should provide curved blades for both adult and pediatric
1.4	An extra-large blade should be supplied along with each scope
1.5	Should be provided with battery

1.6	Should provide spare bulb - 6 Nos
C	**NEEDLE DESTROYER**
1	**Technical Specification**
1.1	Should be lightweight, portable and compact
1.2	Housing should be moulded type, shock proof and made of ABS Plastic/Stainless Steel 304 Grade
1.3	Should provide a removable discharge tray made for easy disposal of syringe hubs.
1.4	Should have the provision to burn the needle & to cut the syringe tips.
1.5	Should have a High Carbon Steel Cutter to cut syringes.
1.6	Should be able to destroy needles of type up to 18G
1.7	Should be able to destroy minimum of 5 injection needles on continuous operation.
1.8	Should have a Heavy Duty Transformer and works on 220-240 Vac/50 Hz electric supply.
1.9	Should have a Power On/Off switch and an indication
1.10	Should be properly insulated for the protection from electrical hazard.
1.11	Should provide with 5 Nos fuse of adequate rating
D	**AMBU BAG**
1	**Technical Specifications**
1.1	Should be made up of high grade silicon material
1.2	Should be portable, light weight, easy to use
1.3	Should be sterilizable
1.4	Should be supplied with complete tubing set, face mask nose piece, air bag of compatible size
E	**STETHOSCOPE**
1	**Technical Specifications**
1.1	Should be Littman or equivalent
1.2	Should have single lumen binaural.
1.3	Should be of soft sealing ear tip type
1.4	Color should be black or gray
1.5	Approximate length should be 70 cm.
1.6	Chest piece should be of machined, stainless steel, two sided type
1.7	Total weight should be less than 200 gms
1.8	Manufacturer should have ISO certification and copy of the same should be submitted along with the technical bid.
2	**Documentation**
2.1	User manual
F	**SPHYGMOMANOMETER - MERCURY TYPE**
1	**Technical Specifications**
1.1	Should be mercury type sphygmomanometer

1.2	Maximum error tolerance should be +/ - 3mmHg
1.3	Should be 99.99 % pure Mercury
1.4	Should have precision air release valve
1.5	Should have micro filter for long life
1.6	The desk mercurial sphygmomanometer should have aluminium painted case with self-locking with adult nylon cuff with velcro tape and metal D ring.
1.7	Should have metal face plate with easy to read scale upto 300mmHg (bore size 5mm)
1.8	Should have graduated glass scale with inside diameter of 3.5mm and a clear reading scale
1.9	Should have mercury lock to secure mercury during storage, transport or maintenance
1.10	Special seal should be there against mercury contamination
1.11	Fold down cover should have spring lock mechanism
1.12	Should have large storage compartment for cuff & Rubber bulb
1.13	Air release at closed tap should be 4 mm/Hg/Minute.
1.14	Scale should be graduated 2 mmHg by 2mmHg, with bigger notches graduated every 10 units.
1.15	Should have cleaning device for glass tube
2	**System configuration, accessories, spares and consumables**
2.1	Bladder
2.2	Bulb
2.3	Release valve
3	**Standards, safety and Training**
3.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
3.2	Warranty as per tender terms.
3.3	Calibration/Acceptance test certificate from the factory required.
4	**Documentation**
4.1	User Manual in English
G	**X RAY VIEWING BOX (2 IN 1)**
1	**Technical Specifications**
1.1	Should be Two in One type (For two films size 14”X 17” each) with separate compartments & individual switching on should be possible.
1.2	It should have acrylic make white sheet with two big fluorescent circular tubes
1.3	Wattage at least - 32 and second small fluorescent circular tube wattage at least-22
1.4	With electronic ballasts for instant switching on.
1.5	It should have concealed film holding device with Cord & Plug.

1.6	The view box should be made of shock proof good quality material
H	**ECG MACHINE - 12 CHANNEL**
1	**Technical Specifications**
1.1	The ECG machine should be able to acquire all 12 Leads simultaneously and interpret them.
1.2	Should have the capability to integrate with HIS and transfer the data through LAN / Wireless LAN to any other monitoring room / doctor's desk. Should be HL-7 compatible for transmitting and receiving data to/fro LAN/HIS
1.3	Should acquire simultaneous 12 lead ECG for both adult and pediatric patients
1.4	Should have real time color display of ECG waveforms with signal quality indication for each lead
1.5	Should have artifact, AC, and low & high pass frequency filters.
1.6	Should have a storage memory of at least 100 ECGs with easy transfer by optional modem and data card.
1.7	Should have full screen preview of ECG report for quality assessment checks prior to print.
1.8	Should have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients
1.9	Should have alphanumeric keyboard for patient data entry.(virtual or hard keys)
1.10	Should have High resolution (200 dpi x500dpi on 25 mm/sec speed) digital array A4 size printer.
1.11	Should have report formats of 3 x4; 6 x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements, 1 minute of continuous waveform data for 1 selected lead.
1.12	The recorder should have DC/AC auto exchange and run minimum of 4 hours on fully charged battery.
1.13	Should display ECG on LCD/TFT Display of 640x480 pixel resolution.
1.14	Should have USB Support (optional) for Storage on external portable memories.
1.15	Should be provided with terminal for a good earth connection to preclude electrical disturbances while recording.
1.16	Power input to be 220-240VAC, 50Hz fitted with Indian plug and rechargeable battery.
2	**System Configuration Accessories, spares and consumables**
2.1	Patient Cable -02
2.2	Chest Electrodes Adult-(set of six) -02 sets.
2.3	Chest Electrodes Pediatric-(set of six) -02 sets
2.4	Limb Electrodes(set of 4)- 02 sets

2.5	Thermal Paper A4 Size for 500 patients
2.7	Grounding cable
3	**Standards, Safety and Training**
3.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
3.2	The quoted model should have FDA/CE/BIS certificate and copy of the same should be enclosed along with the technical bid.
3.3	Training should be provided for users and biomedical engineers
4	**Documentation**
4.1	User/Technical/Maintenance manual to be supplied in English
4.2	Certificate of calibration and inspection from factory.
4.3	Warranty & CAMC as per tender terms.
I	**SYRINGE PUMP**
1	**Technical Specifications**
1.1	The syringe pump should be programmable, user friendly, safe to use and should have battery backup and comprehensive alarm system. This should be able to integrate in the HIS
1.2	Flow rate should be programmable from 0.1 to 999.9 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option. Should save last infusion rate even when the AC power is switched OFF.
1.3	Bolus rate should be programmable to 999.9 ml/hr or more with infused volume display. Reminder audio after every 0.5 ml delivered bolus. Should save last Bolus rate even when the AC power is switched OFF.
1.4	Display of Drug Name with a provision of memorizing more than 25 names by the operator
1.5	Keep Vein Open (KVO) must be available 1.0 ml/hr or set rate if lower than 1.0 ml. User should have choice to disable KVO whenever desired.
1.6	Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg
1.7	Must Work on commonly available ISI/CE/FDA APPROVED/CERTIFIED 20, 50/60 ml Syringes with accuracy of minimum of +/-2% or better.
1.8	Should have automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.
1.9	Anti-bolus system to reduce pressure on sudden release of occlusion
1.10	Should have comprehensive alarm package including: Occlusion limit exceed alarm, Near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm, KVO rate flow, Low battery pre-alarm and alarm, AC power failure, Drive disengaged and preventive main

1.11	Rechargeable Battery having at least 5~6 hour backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred
2	**System configuration Accessories, spares and consumables**
2.1	System as specified
2.2	Mounting device/ Docking Station for two or four pumps as per requirement so as to enable to power up to 2-4 pumps with one power cord when mounted on IV pole.– 01
3	**Power Supply**
3.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
4	**Standards, Safety and Training**
4.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
4.2	The quoted model should have FDA/CE/BIS certificate and copy of the same should be enclosed along with the technical bid.
5	**Documentation**
5.1	Two numbers of Complete User/Technical/Maintenance manuals to be supplied in English.
5.2	Certificate of calibration and inspection from factory.
5.3	Warranty & CAMC as per tender terms.
J	**DEFIBRILLATOR MONITOR**
1	**Technical Specifications**
1.1	Defibrillator should be Bi- Phasic, light weight and latest model
1.2	Should monitor vital parameters and display them.
1.3	Should print the ECG on thermal recorders.
1.4	Should work on manual and automated external defibrillation **(AED)** mode. Should have manual selection up to 360 J.
1.5	Should be capable of doing synchronized & asynchronized cardioversion.
1.6	Can be operated from mains as well as battery.
1.7	Should have defibrillator testing facility.
1.8	Should have noninvasive pacing facility.
1.9	Should be a low energy biphasic defibrillator monitor with recorder, having capability to arrest all arrhythmia within a maximum energy of 360 Joules
1.10	Should monitor ECG through paddles, pads and monitoring electrodes and defibrillate through pads and paddles.
1.11	Should have automatic lead switching to see patient ECG through paddles or leads.

1.12	Should measure and compensate for chest impedance for a range of 25 to 200 ohms
1.13	Should have a built in strip printer/ thermal recorder
1.14	Should have charging time of less than 5 seconds for maximum energy. Charging indicator should be present.
1.15	Should have bright display for viewing messages and ECG waveform for 4 seconds
1.16	Should have external & internal paddles with paddles contact indicator – for good paddle contact.
1.17	Single Adult and pediatric paddles should be available.
1.18	Should have event summary facility for recording and printing at least 250 events and 50 waveforms
1.19	Should have a battery capable of usage for at least 90minutes or 30 discharges.
1.20	Should be capable of printing Reports on Event summary, configuration, self-test, battery capacity etc
1.21	Should have facility for self-test/check before usage and set up function
1.22	Should be capable of delivering energy in increments of 1-2 joules up to 30J and increments of maximum 50J thereafter.
1.23	Power input to be 220-240VAC, 50Hz Indian plug.
2	**System Configuration Accessories, spares and consumables**
2.1	Patient ECG Cables-02
2.2	ECG Rolls-05
2.3	ECG electrodes-01 set
2.4	Gel bottle - 2 Nos
3	**Standards, Safety and Training**
3.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
3.2	The quoted model should have FDA/CE/BIS certificate and copy of the same should be enclosed along with the technical bid.
4	**Documentation**
4.1	Two numbers of complete User/Technical/Maintenance manuals to be supplied in English.
4.2	Certificate of calibration and inspection from factory.
4.3	Warranty & CAMC as per tender terms.
K	**ANAESTHESIA MACHINE**
	Description of Function
1.1	Anesthesia Machine should be able to use for delivering anesthesia agents to the patients during surgery.

2	**Operational Requirements**
2.1	Anesthesia machine complete and integrated with two gas delivery system; Circle absorber system; Precision vaporizer for isoflurane &Sevoflurane; Anaesthesia ventilator.
2.2	Essential accessories to make the system complete and compatible with the existing system of gas outlets.
2.3	Should be based on two gas system
	Technical Specifications
	Anesthesia gas delivery system.
1	Should have provision for delivery of oxygen and nitrous oxide
2	Should have independent attachments for connecting central gas supply and pin indexed cylinders. Should have provision for attaching 1 cylinder each for O2 and N2O (Total 2 cylinders).
3	Flow Meter – Cascade type of flow meter – 2 for O2, 2 for N2O a
4	Oxygen and Nitrous oxide should be linked either mechanically or pneumatically to ensure a minimum of 25% oxygen delivery at all times to avoid delivery of hypoxic mixture.
5	Should have audio-visual oxygen Failure warning System with Nitrous oxide cut off.
6	Should have back bar which is ISO pin type to attach vaporizer easily.
7	Should be supplied with necessary reusable and disposable breathing circuits (Bains, Jackson-Rees and closed circuit etc.,)
8	Should have top shelf to keep monitors and a tabletop to keep anesthetic drugs, equipment etc.
9	The machine should possess battery backup for electrical components
10	Castor wheels should be durable and moisture resistant & Smooth.
11	The Anesthesia machine frame should be made of rust proof material/Stainless steel.
12	Silicone cushion high quality, adult and Pediatrics face mask of four different sizes –2 each size
3.2	**Standard Circle Absorber System**
1	Should have adjustable pressure limiting valve, breathing circuit pressure measuring device.
2	Should have a bag/ventilator selecting valve integrated onto the absorber.
3	Should be suitable to use low flow techniques
4	Facility to attach oxygen sensor.
5	Should have CO2 absorbent chamber canister
3.3	**Precision Vaporizers (Temperature, pressure and flow compensated) for Halothane, Isoflurane and Sevoflurane.**
1	Should be easy to mount and dismount from the back bar.

2	Vaporizers should have ISO pin type (Selectatec) mounting and vaporizer interlocking facility.
3	Should have a standard filling port with keyed filling device.
4	Should be designed for transport with liquid in vaporizer chamber with protection against tipping and shaking
5	Maintenance free vaporizer
3.4	**Ventilator (Integrated)**
1	Should be a bag in bottle anesthesia ventilator with standing (ascending/Piston) bellows.
2	Should be supplied with adult and pediatric bellows.
3	Should be able to set tidal volume, respiratory rate and I:E ratio
4	Ventilator should have audible alarms for ventilator failure, low oxygen supply pressure, inadequate volume delivery, disconnection alarm, and power supply failure.
5	Should have battery backup for min 30min
	Standards, Safety and Training
1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
2	The quoted model should have FDA/CE/BIS certificate and copy of the same should be enclosed along with the technical bid.
3	Certificate of calibration and inspection from factory to be supplied during delivery of the equipment.
4	Warranty & CAMC as per tender terms.
	System Configuration Accessories, spares and consumables
1	Anesthesia Gas Delivery system -01
2	Circle absorber –01
3	Ventilator –01
4	Vaporizer Savoflurane -01
5	Vaporizer Isoflurane -01
6	Accessories for above- 02 sets
7	Should be supplied with negative pressure leak test equipment
	Documentation
1	User manual -02 nos
2	Service manual in English -02 nos
3	Certificate of calibration and inspection from factory.(validation program desirable)
4	List of important spare parts and accessories with their part number and costing.
L	**STRESS TEST SYSTEM WITH TMT**
1	**Description of Function**

1.1	Exercise stress testing system should have a wide array of unique diagnostic software options to evaluate myocardial function. Automatic arrhythmia detection, ST-segment analysis, and T-wave alternans are a few examples. In conjunction with a treadmill or ergometer, these systems provide a controlled environment for the observation of the effects of increases in myocardial oxygen demand: exercise-induced systolic hypotension, exercise-induced angina, and/or the appearance of a heart murmur during exercise
2	**Operational Requirements**
2.1	System complete with PC, Software, TMT and necessary cables is required.
3	**Technical Specifications**
3.1	System should acquire and analyze 12 leads
3.2	System should be based on Windows platform with 17" color monitor having minimum resolution 1280 x 1024. 80 GB HDD, CD-RW, Mouse, UPS for analyzer.
3.3	Should have wireless patient module between patient and analyzer thus providing wireless transmission of patients ECG / remote patient preparation. The wireless module must have display for ECG waveform, electrode impedance check, low battery/ lead fail display.
3.4	Should provide standard full interpretation of Supine ECG with reasoning.
3.5	Should have display of real time 12 lead diagnostic quality ECG waveform, average complexes beat of all 12 leads with superimposed color comparison along with digital value of ST level and slope. The graph Should be displayed on recording paper.
3.6	Should have automatic detection, display, storage and review of arrhythmia, Heart Rate, Double Product and METS. It should have online HR METs and ST running trends available on the screen during exercise.
3.7	System should have ability to manual edit of J & Isoelectric point during exercise. Filters for line frequency and special filters to reduce noise and baseline artifacts without compromising the ECG frequency response.
3.8	System should have full disclosure, play back, review and storage of patient ECG raw data for unlimited numbers depending upon size of the hard disk. The unit should have the ability to readjust "J-ST" interval measurement + 1 m sec points and generate a new report from stored raw ECG data.
3.9	System should provide multiple and customizable printing formats as per user's choice on A-4 size high resolution thermal printer for online real time printings. Compatible laser printer for printing reports on plain paper also to be supplied.
3.10	System must have ECG trigger output to interface with external automatic devices.

3.11	Heavy Duty Treadmill .Noise free TREADMILL with speed ranging from 0.5 to 20 kmph and grade of 0 – 22% with suitable servo stabilizer.
3.12	Automatic Stress test Non Invasive Blood Pressure Monitor, compatible with the treadmill stress Test System for bi-directional exchange of data between the monitor and analyzer. Optional Pulse Oximetry (SpO2) integrated with NIBP Module to be quoted separately of enlarged complex and facility of dynamic lead selection for maximum ST changes.
4	**System Configuration Accessories, spares and consumables**
4.1	System as specified
4.1	All consumables required for installation and standardization of system to be given free of cost.
5	**Power Supply**
5.1	Power input to be 220-240VAC, 50Hz
5.2	Suitable Servo controlled Stabilizer/CVT
6	**Standards, Safety and Training**
6.1	Should be FDA/CE//BIS approved product copy of the same should be attached along with the technical bid.
6.2	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
6.3	Warranty & CAMC as per tender terms.
7	**Documentation**
7.1	Certificate of calibration and inspection from factory.
7.2	Two numbers of Complete User/Technical/Maintenance manuals to be supplied in English (Soft copy & Hard copy).
M	**PORTABLE SUCTION APPARATUS**
1	**Technical Specification**
1.1	Electrically operated ward suction unit.
1.2	Working voltage 230 Vac, 50 Hz Heavy duty 3 core cable of length 6m.
1.3	With diaphragm pump, non-lubricated.
1.4	Free air displacement 30 lpm.
1.5	With two suction bottles of 2 litre vacuum Range: 0-750 mmHg.
1.6	With float valve, suction tubes (PVC) 2 m long and suction tip.
1.7	Portable unit mounted on light weight trust proof frame with PVC cladding and rubber stump.
1.8	Should have lifting handle
1.9	With on/off switch indicating bulb and suction gauge.
1.10	Should have pressure adjusting nobe
2	**Documentation**
2.1	User manual -01 nos
2.2	Certificate of calibration and inspection from factory.

2.3	Warranty & CAMC as per tender terms.	
N	**COMPUTER**	
1	**Technical Specifications**	
1.1	The computer system should have the following specification:	
1.2	Branded - Intel Core i5 or better processor	
1.3	500 GB HDD,	
1.4	4 GB RAM,	
1.5	DVD RD/WR	
1.6	Serial / Parallel Ports/USB,	
1.7	17" LCD Monitor.	
1.8	Keyboard,	
1.9	USB Scroll Mouse.	
1.10	Windows latest software with genuine version	
1.11	Genuine version of suitable Antivirus software	
1.12	Quote black & white laserjet printer of reputed make	
1.13	Warranty & CAMC as per tender terms.	
O	**RADIOISOTOPE FUME HOOD**	
1	**Technical Specification**	
1.1	The fume hood should comply with the German International standard and safety requirements, the DIN 12924 NEU.	
1.2	Should be sliding window type with built-in double wall socket 220V, and water fitting with drainage basin.	
1.3	Size aprox 1200mm (W) x 820mm (D) x 2620 mm (H)	
1.4	Materials: The fume hood should be constructed of stainless steel(Type 304) .Inner chamber finished in chemical -resistant Epoxy paint and work surface covered with thick non glossy stainless steel sheet.	
	Filter : Char col filters	
1.5	Exhaust to be lead suitable distance as per safety standards.	
1.6	Warranty & CAMC as per tender terms.	
P	**CT Pressure Injector**	
I	**Operational Requirement:**	
	CT Injector-Reliable assistant to CT enhanced scan: Unique Direct Pressure Sensor detects real-time injection pressure, stop injection automatically if the pressure is abnormal, very helpful to reduce the swelling caused by vascular rupture, "Direct pressure sensor" reduce swelling, Best quality motor and key parts	
II	**Specifications**	
a	Injector Head	Dual Injector Head
b	Pressure Monitor	Real time Pressure monitor
II	**Injection Specification :**	
a	Flow Rate (Rage & Increments)	0.1 to 10ml/sec in 0.1 ml increments
b	Volume (range & Increments)	1ml to syringe capacity in 1 ml

		increments
c	Programmable Pressure limit	200ml syringe :325psi,2241 kpa
d	Scan Delay	0-300 sec in 1 sec increments
e	Pause	1-900 sec in 1 sec increments
f	Hold	Maximum 20 min
g	Syringes (Volume Capacity)	200ml
h	Maximum Number of Phases	6
i	Maximum Number of Protocols	32
III	**Power & Others Requirements :**	
a	Electrical Requirement	110 - 240 VAC , 50/60Hz with Battery backup
b	Syringe Heater Range	95 degree F +/- 9 degree or 35 degrees C +/- 5 degree
c	Head Mounting Options	Floor Pedestal with IV Pole
d	Consumables Injector Syringes & Tubings	one month consumable to be supply with the machine
e	Manuals	User & Service Manuals Hard & soft copy.
IV	**high-class CT injector with CE / FDA mark :**	
Q	**MEDICAL TABLE TOP CENTRIFUGE**	
1.1	Capacity	8 x 15 ml
1.2	Type of head	Angle
1.3	Number of tubes	8
1.4	Maximum speed (rpm)	3800 and above
1.5	Maximum RCF (g)	1400 and above
R	**MICROPIPETTE**	
1.1	Capacity	0.2 to 1000 microlitre
1.2	Compatible tips	1000 numbers
1.3	Warranty & CAMC as per tender terms.	
S	**EMERGENCY CRASH CART**	
1	**Technical specification**	
1.1	Overall dimension should be W 770mm x D 620mm x H 1160mm.	
1.2	Should be made of ABS plastic mono forming top board and pull out shelf.	
1.3	Should have PU mono forming handle.	
1.4	Should have a built in central controlled locking.	
1.5	Should be made in ABS plastic with an aluminium metal frame.	
1.6	Cart should be light, steady and scratch resistant.	
1.7	Should be equipped with a Aluminium metal mono-forming drawing board and handle set, hidden drawer fix in the middle, built in spring coil enable easy operation.	
1.8	Should be three section of drawer side.	

1.9	Should be provided with medication bin.
1.10	Should have a side reverse drawer cardiac catheter holder: revolving shelf which can hold upto 10 kg weight.
1.11	Should have strong caster.
1.12	Should be CE certified
1.13	Warranty & CAMC as per tender terms.

Annexure B

ROOM BOQ FOR NUCLEAR MEDICINE BLOCK, JIPMER		
GF 01	**RECEPTION + OPD + MAIN WAITING HALL**	
1	Reception counter desk with glass window	1
2	Revolving chairs	5
3	Perforated 3-seater patient waiting chairs	13
4	Patient waiting couch for lying down	2
5	Desktop computer	4
6	Overhead cupboard	3
7	Printer/fax/photocopier	1
8	32 inch LED TV Full HD with satellite dish connection for 5 years	1
9	UV drinking water purifier and water cooler	1
10	File storage cupboard, metallic, with sliding doors and internal lock. Size 1.8 x 0.9 x 0.45 m	2
GF 002	**PATIENT TOILET – FEMALE**	
1	Indian style closet with flush, wash basin, mirror, soap holder, and hand-held shower heads	1 each
GF 003	**PATIENT TOILET – MALE**	
1	Indian style closet with flush, wash basin, mirror, soap holder, and hand-held shower heads	1 each
GF 004	**STAFF TOILET**	
1	Western style closet, urinal, wash basin, soap stand, mirror, tap, head shower, handheld shower, bucket, mug	1 each
GF 005	**STAFF PANTRY**	
1	10 seater wood dining table set with 10 chairs	1
2	Wash basin	1
3	UV water purifier and water cooler	1
4	Utensils (Water jugs – 2, Tupperware 1 litre water bottles – 10 number, cup and saucer set – 20 numbers, thermal flask- 1 litre 1 number, thermal flask 500 ml- 1 number, plates 10 numbers, water glasses 10 numbers)	
5	Overhead cupboard	2
6	Refrigerator frost-free (165 litres)	1
GF006	**PHYSICIST & TECHNOLOGIST ROOM**	
1	Almirah	1
2	Staff chair	4
3	Small Office table	4
4	Overhead wall-mounted cupboard	4

5	Revolving Chairs	4
6	Desktop computer	1
7	X ray viewer 2 in 1	1
8	Printer	1
9	Apron hanger	5
GF 007	**STUDENTS CUM LIBRARY ROOM**	
1	Reading desks	10
2	Revolving chairs	20
3	Book shelf	2
4	Overhead cupboard	4
5	Desktop computer	1
6	Printer	1
7	Wi-fi router	1
8	5 seater sofa	1
GF 008	**STORAGE AND NURSING STATION**	
1	Storage rack	2
2	Table	1
3	Chairs	3
4	Overhead cupboard	2
GF 009	**TMT ROOM**	
1	TMT Machine	1
2	ECG Machine - 12 Channel	1
3	Defibrillator	1
4	Crash cart	1
5	Staff chair	1
GF 010	**POST ADMINISTRATION WAITING AREA FOR GAMMA CAMERA**	
1	Waiting chair-3 seater	6
2	Waste bin	1
3	Wheel chair	1
4	Trolley with stretcher	1
5	CCTV and two-way microphone and speaker system (2 cameras)	1
6	Drinking water storage drum	1
GF 011	**ACTIVE TOILET AT GAMMA CAMERA WAITING ROOM**	
1	Indian style closet with flush, wash basin, mirror, soap holder, hand-held shower heads, bucket and mug	1 each
GF012	**DOSE ADMINISTRATION ROOM FOR GAMMA CAMERA**	
1	Cot with mattress	1
2	Revolving stool with backrest	1
3	Closed storage rack	1
4	Waste bin	1

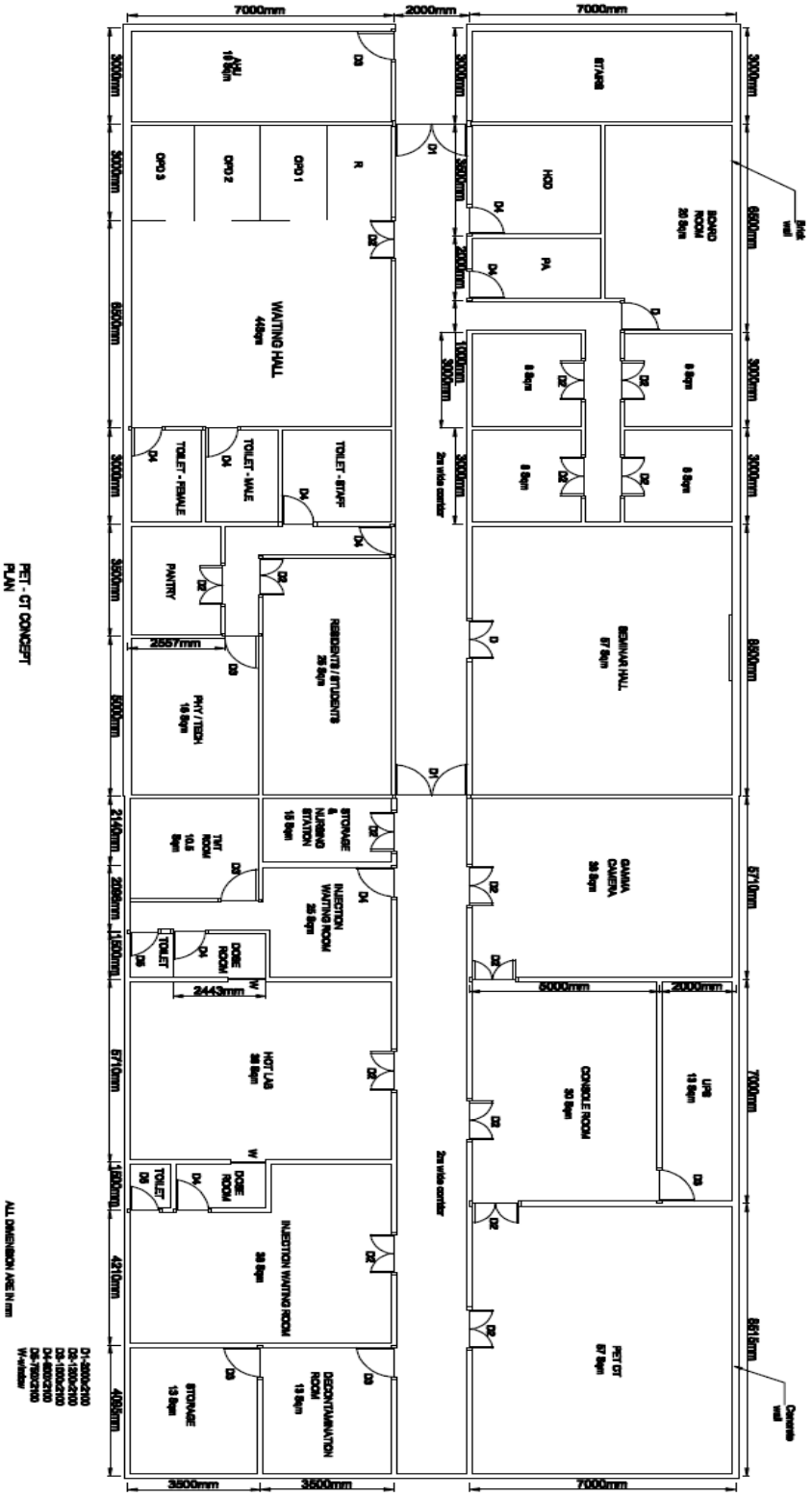
5	Injection table	1
6	Injection trolley	1
7	Lead lined waste bin (For SPECT tracers)	1
8	Needle destroyer	2
GF013	**HOT LAB/RADIO PHARMACY**	
1	Fume hood	2
2	Table and chair	1 each
3	Open Rack 4 shelves	4
4	Lead bricks	100
5	Dose calibrator	2
6	L bench with lead equivalent glass for SPECT dose dispensing	1
7	L bench with lead equivalent glass for PET dose dispensing (For FDG and Ga-68 separately	2
8	Contamination Monitor	3
9	Lead lined dustbin for PET and SPECT	2 each
10	Lead lined storage rack	1
11	Closed rack	2
12	300 litres 2-door frost-free refrigerator	2
13	Water bath rotatory shaker	1
14	Centrifuge machine	1
15	Vortex mixer	1
16	Microwave oven	1
17	Water sink with elbow or foot operated taps	2
18	Lead canister for Molybdenum breakthrough test	1
19	Micropipette	2
20	Syringe carriers	4
21	Tungsten syringe holders (2 ml and 5 ml)	8
22	Almirah	2
23	Area zone monitor	2
GF014	**DOSE ADMINISTRATION ROOM FOR PET**	
1	Patient couch with foot step	1
2	Simple storage racks	1
3	Dressing Trolley	1
4	Injection chair	1
5	Lead lined waste bin (For PET tracers)	2
6	Injection Table	2
7	Needle destroyer	1
GF 015	**ACTIVE TOILET AT PET/CT POST-INJECTION WAITING ROOM**	
1	Indian style closet with flush, wash basin, mirror, soap holder, bucket mug and hand-held shower head	1 each
GF016	**POST ADMINISTRATION WAITING AREA FOR PET-CT**	

1	Reclining chairs with foot, head and hands rest	5
2	Wheel chair	1
3	Drinking water storage drum	1
GF017	**DECONTAMINATION ROOM**	
1	Decontamination Kit, Shower, wash basin with elbow or foot operated tap, western style closet and flush	1
GF 018	**WASTE STORAGE**	
1	Lead lined waste drums (50 litres each)	4
2	Overhead cupboard	3
3	Granite shelves 18' depth along the wall	
GF019	**PET-CT**	
1	PET-CT Scanner	1
2	Pocket dosimeter	2
3	Survey meter	2
4	Pressure Injector	1
5	Vital sign monitor	1
6	Syringe Infusion Pump	2
8	**Pressure injector** : Digitally controlled CT injection system (latest model – dual syringe) with Pedestal head mount, remote monitor and VRC, syringe heater.	1
9	BP apparatus	1
10	Stethoscope	2
11	Ambu bag (adult and child)	1 each
12	Laryngoscope	2
13	Overhead cupboard	2
14	Foot step – Double	1
15	I V stand	2
16	Instrument trolley	1
17	Crash cart	1
18	Lead lined waste bin (FOR PET)	1
GF020	**CONSOLE ROOM - Common for PET and Gamma Camera**	
1	Computer desk	2
2	Staff chair	4
3	X ray/CT film 2 in 1 viewer	1
4	Overhead cupboard	2
5	Laser color printer (medical image quality)	1
6	Waste bin	1
7	Open wooden 4 rack shelf	1
8	Announcement system to call patients for scan (3 microphones, 3 sets of speakers and required audio mixer / amplifier)	1
9	CCTV and two-way microphone and speaker system (2 cameras)	1
10	60 inch LED monitor	1

GF021	**UPS**	
GF022	**GAMMA CAMERA ROOM**	
1	Gamma camera	1
2	4-Quadrant bar phantom, CT phantom for CT QC, Jaszczak phantom	1each
3	Survey meter	2
4	Anesthesia machine	1
5	Defibrillator	1
6	Vital sign monitor	1
7	Syringe Infusion Pump	1
8	Portable suction machine	1
9	BP apparatus	1
10	Stethoscope	2
11	Ambu bag (adult and child)	1 each
12	Laryngoscope	2
13	Foot step – Double	1
14	Overhead cupboard	2
15	I V stand	2
16	Injection trolley	1
17	Needle destroyer	1
18	Lead lined waste bin (for SPECT)	2
19	Co-57 flood sheet source	1
GF 023	**REVIEW CUM SEMINAR ROOM**	
1	Auditorium chairs, with foldable seat	40
2	Revolving chairs	10
4	Book shelf	2
5	Open storage rack	2
6	LCD projector-Ceiling mounted	1
7	Superior quality wireless microphone with amplifier and superior quality speakers	1
8	Projection screen	1
9	White board – dual foldable	1
10	Printer/Fax/Photocopier	1
11	Overhead cupboard	2
12	Desktop computers - reporting units	3
13	Sound proof movable partition	
14	Sound-Proof walls on all four sides	
GF024-27	**PHYSICIAN ROOMS for 4 members**	
1	Almirah	4
2	Staff chair	4
3	Office table	4

4	Overhead cupboard	4
5	Visitors chair	8
6	Desktop computer	4
7	Apron hanger	4
8	3 seater sofa	4
9	Glass top tea table	4
GF028	**BOARD ROOM**	
1	Board room / conference table (1.5 x 4 M)	1
2	Conference chairs	12
3	Wooden book shelf	2
4	52 inch LED TV	1
GF029	**BACK OFFICE**	
1	Almirah	1
2	Staff chair	1
3	Office table	1
4	Overhead cupboard	3
5	File cabinet	2
6	Desktop computer	1
7	Scanner, Printer, Copier, Fax	1
8	Visitor Chairs	2
GF030	**HOD ROOM**	
1	Almirah	1
2	Executive chair	1
3	Executive table	1
4	Overhead cupboard	2
5	Visitors chair	2
6	Desktop computer	1
7	Apron hanger	1
8	3+2 seater sofa and tea table	1 each
GF031	**AHU**	

ANNEXURE C


PET - CT CONCEPT PLAN
ALL DIMENSION ARE IN mm
D1=6000x2100
D2=1200x2100
D3=1800x2100
D4=900X2100
D5=750X2100
W=Window
7000mm
2000mm
7000mm
3000mm
3000mm
6600mm
3000mm
3000mm
3000mm
3500mm
6000mm
2146mm
2896mm
1450mm
6710mm
1450mm
4210mm
4096mm
3500mm
3500mm
7000mm
8515mm
WAITING HALL
44Sqm
OPD 1
OPD 2
OPD 3
R
HOD
PA
BOARD ROOM
20 Sqm
TOILET - FEMALE
TOILET - MALE
TOILET - STAFF
PANTRY
RECEPTN / ATTENDNTS
20 Sqm
PHY / TECH
10 Sqm
SEMINAR HALL
87 Sqm
TMT ROOM
10.5 Sqm
STORAGE & NURSING STATION
10 Sqm
INJECTION WAITING ROOM
20 Sqm
GAMMA CAMERA
20 Sqm
TOILET
DOSE ROOM
2443mm
HOT LAB
20 Sqm
CONSOLE ROOM
20 Sqm
UPS
10 Sqm
2m wide corridor
INJECTION WAITING ROOM
20 Sqm
TOILET
DOSE ROOM
STORAGE
10 Sqm
DECONTAMINATION ROOM
10 Sqm
PET CT
87 Sqm
Brick wall
Concrete wall