

Amendment No. 1**Date: 27/11/2014****Sub: Amendment to Tender Enquiry Document.****Ref: NIT No.HLL/PCD/GNCTD/17/RGSSH/14-15 dated 01/11/2014**

The following changes have been incorporated in the referred NIT.

**SECTION I
NOTICE INVITING TENDERS (NIT)*****Existing:***

Tender ID	Equipment Name	Department	Qty.	Tender Fee	EMD	Date & time of Prebid meeting	Date & time of closing of online tender	Closing date & time for submission of physical Tender	Opening date & time of Tender
2014_HFWD_69204_35	Portable Reverse Osmosis Machine for Hemodialysis Machine	Nephrology	6	1,000	60,000	12-11-2014 11:00 AM	09-12-2014 06:00 PM	10-12-2014 02:00 PM	10-12-2014 02:30 PM

Amended as:

Tender ID	Equipment Name	Department	Qty.	Tender Fee	EMD	Date & time of Prebid meeting	Date & time of closing of online tender	Closing date & time for submission of physical Tender	Opening date & time of Tender
2014_HFWD_69204_35	Item Deleted	Deleted	---	----	----	---	----	----	---

**Section – VI
LIST OF REQUIREMENTS*****Existing:*****Part I**

Tender ID	Equipment Name	Department	Qty.	Warranty Period	CMC Period
2014_HFWD_69204_35	Portable Reverse Osmosis Machine for Hemodialysis Machine	Nephrology	6	5 years	5 years

Amended as:**Part I**

Tender ID	Equipment Name	Department	Qty.	Warranty Period	CMC Period
2014_HFWD_69204_35	Item Deleted	Deleted	----	----	-----

Section – VII
Technical Specification

Sl. No.1
High speed centrifuge

Existing:

1. Fixed angle rotor head, rotor speed up to 13000 rpm.

Read as:

1. Fixed angle rotor head, rotor speed up to 13000 rpm, **Tube capacity 24-36 size 5-15ml.**

Existing:

5. Digital display of speed, RCF, running time and **temperature** with quick key for short and continuous run

Read as:

5. Digital display of speed, RCF and running time with quick key for short and continuous run.

Existing:

7. Working condition 25 degree Centigrade to 50 degree centigrade.

Read as:

7. **Working conditions should be ambient temperature.**

Existing:

8. Shock and chemical resistant.

Read as:

8. Shock and chemical resistant.(**aerosol tight lid**).

Existing:

9. Equipment should be USFDA and European CE certified and approved.

Read as:

9. Centrifuge should be **European CE and/Or USFDA approved,**

Added Para: - Centrifuge must be supplied with swig & Basic rotor and 4 Buckets - 01 Set.

Sl. No. 2
Fully Automated HbA1C Analyzer

Existing:

3. The HbA1c result in 5 minutes.

Read as:

3. **The HbA1c result in <2 min/sample.**

Existing:

6. There should be presence of minimum auto sampler also.

Read as:

6. There should be presence of minimum auto sampler also. **Sample Capacity of up to 100 samples with continuous loading & STAT Facility.**

Existing:

7. Should also detect presence of Hbs or Hbc.

Read as:

7. Should also detect presence of Hbs or Hbc or HbDor HbE

Existing:

11. The analyzer should be NGSP certified to produce result equivalent to DCCT requirement.

Read as:

11. The analyzer should be NGSP certified to produce result equivalent to DCCT requirement **and System should be IVD compliant and European CE and/Or USFDA approved.**

Added Para:One number of installations & having direct presence of Manufacturer in India so that hospital will not face any service issue or shortage of service spares in future.

Sl. No. 4

FULLY AUTOMATED ELECTROLYTE ANALYZER

Existing:

8. Up gradation with Autoloader would be **preferred.**

Read as:

8. Up gradation with Autoloader.

Added Para: should be European CE and/Or USFDA approved.

Sl. No. 5

Blood Gas Analyzer

Existing:

2. System must use latest liquid calibration technology for all parameters without use of cartridge.

Read as:

2. System must use latest liquid/**gas** calibration technology for all parameters without use of cartridge

Existing:

7. Availability of separate bottles/bags for washing and calibration solutions.

Read as:

7. Availability of separate bottles/bags/ **integrated packs** for washing and calibration solutions.

Existing:

14. Should be of international standard & shall be European CE and USFDA approved.

Read as:

14. Should be of international standard & shall be **European CE/USFDA approved.**

Sl. No. 6
Fully Automated Immunoassay Analyzer

Existing:

2. Should be bench top model with fully self-contained table, PC based, touch screen and with external printer, disc or rack pattern for loading of the samples.

Read as:

2. Should be bench top/Floor model with fully self-contained table, PC based, touch screen and with external printer, disc or rack pattern for loading of the samples.

Existing:

30. The firm should provide the rate list of the consumables , reagents, QC sera, Maintenance kit and parts of the system along with the tender and the cost per test for the following parameters : Anti Tg ,Anti TPO, FT3, FT4, TSH, T3, T4, FSH, LH, Prolactin, Insulin, DHEA-S , Progesterone, Testosterone , free PSA , Total PSA , Ferreting , Vitamin B12 , Anti-HAV IgM , Anti-HBc, IgM , Anti-HBe , Anti-HCV, HBe Ag , HBsAg, Tox IgG/IgM, Rubella IgG/IgM, CMV IgG/IgM , HSV, Vitamin D3, Intact PTH,IgE . The rates should be valid for at least two years after the supply of the analyzer.

Read as:

30. The firm should provide the rate list of the consumables , reagents, QC sera, Maintenance kit and parts of the system along with the tender and the cost per test for the following parameters : FT3, FT4, TSH, T3, T4, FSH, LH, Prolactin, Insulin, DHEA-S , Progesterone, Testosterone , free PSA , Total PSA , Vitamin B12 , Anti-HAV IgM , Anti-HBc, IgM , Anti-HBe , Anti-HCV, HBe Ag , HBsAg, Tox IgG/IgM, Rubella IgG/IgM, CMV IgG/IgM , Vitamin D3, Intact PTH. The rates should be valid for at least two years after the supply of the analyzer.

Added Para: The System should be IVD compliant, European CE and/Or USFDA approved.

Sl. No. 7

Medium Throughput Fully Automated Random Access Biochemistry Analyzer with “STAT Facility”

Existing:

10. System should have Permanent Glass cuvettes.

Read as:

10. System should have permanent glass or **quartz or disposable** cuvette.

Existing:

11. System should have at least 13 different wavelengths between 340nm to 800 nm.

Read as:

11. System should have at least 13 different wavelengths/**Grating systems** between 340nm to 800 nm.

Existing:

15. System should have **Samples feeder:** Capacity of 150 samples positions with continuous loading.

Read as:

15. System should have Capacity of 150 samples positions with continuous loading.

Added Para: -

1. **The system should be IVD compliant, European CE and/Or USFDA approved.**
2. **Should have the option to integrate with Immunoassay analyser. System should be upgradable for future integration with Chemiluminescence to save time by not bifurcating the samples.**

Sl. No. 8
Haematology Analyzer

COMPLETE SPECIFICATIONS ARE BEING REPLACED AS FOLLOWS:

Fully automated haematology analyser-5 part Differential with Retics& NRBC

1. Should provide complete blood cell counting including 5 part WBC differential with doing Retics & NRBC enumeration.
2. Should be fully automated.
3. Must automatically enumerate Nucleated Red Blood Cells in the CBC/Diff mode and without additional reagents.
4. Should have a body fluid analysis mode with measurement of polymorphs and mononuclear cells.
5. Must analyse leucocytes through laser based scatter analysis/laser flow cytometry/cytochemical analysis. Should preferably give immature granulocyte fraction.
6. Haemoglobin method equal in accuracy to reference method.
7. Platelet counting and reticulocyte counting should be accurate with immature reticulocytes.
8. PC based data management with all scatter plots, histograms and display and in print and storage.
9. Open vial predilute and closed vial modes should be available.
10. Must have integrated bar code identification facility.
11. User defined rules & flagging limits.
12. Database capacity of atleast 20,000 sets of results and graphics.
13. Should be able to transmit results to host computer.
14. Through put should be minimum 80-100 samples/hour.
15. Linearity of PLt to be from 0.0 to 3000-5000 x 1000 cells/microliters
16. WBC linearity should 0.0 to 300-400 x 1000 cells microliters.
17. Must be able to select CBC and differential and reticulocyte testing mode.
18. Must extend analysis time for cytopenic samples (RBC, PLt and WBC).
19. Hb should be measured by cyanide free reagent.
20. There should be option to choose reticulocyte mode.
21. Should preferably be able to differentiate between smaller RBCs and Larger Platelets.
22. The supplier should have excellent service backup and atleast 5 similar machines installed in reputed hospitals/labs in Delhi.
23. Availability of spares should be for a minimum 10 years from the date of supply.

24. Should have QC feature like
 - a) Delta Checks for cumulative review.
 - b) Facility for online QC data validation.
 - c) Adequate number of files for QC to be stored.
25. Laser printer to be supplied with the instrument.
26. Should have inbuilt autoloader cum mixer with capability of loading minimum of 60 samples at any times. Should preferably have reflex sampling.
27. Should be able to provide atleast 30 different parameters.
28. Suitable online UPS with 1 hour battery backup.
29. Reagents for 5000 samples should be provided free with the equipment.
30. Should work on 200-260 volts.
31. 5 years warranty + 5 years AMC.
32. Should be European CE/US FDA approved

Sl. No. 9
Coagulation Analyzer

COMPLETE SPECIFICATIONS ARE REPLACED WITH FOLLOWING SPECIFICATIONS.

Technical specification

1. Bench top model, random access, completely walk-away system.
2. Availability of clotting, chromogenic, immunological assays.
3. Facility to check interfering substances like bilirubin, hemolysed and lipemic plasma and turbid reagent. Test should not be sensitive to lipemic, colored or hemolysed plasma sample.
4. Facility for adding deleting, re-run and redilution during the run.
5. Facility for continuous sample and reagent loading during the run.
6. Primary sample tube to be used.
7. Stat facility.
8. Minimum 40 cooled reagent positions.
9. At least 40 sample positions.
10. Bar code reader should be present.
11. Sample and reagent position detector should be inbuilt.
12. Sample and reagent volume should be detected.
13. Automatic reagent / sample dilution.
14. Throughput of > 50 tests/hour
15. Multibatch QC capacity.
16. Printer inbuilt.
17. Power 180-240 v
18. Data storage facility for atleast 500 samples

Sl. No. 12
LABORATORY CENTRIFUGE MACHINE

Existing:

Autoclavable buckets; to work on standard electrical supply configuration.

Read as:

Autoclavable buckets; to work on standard electrical supply configuration(**aerosol tight lid**).

Added Para: System should be European CE and/Or USFDA approved.

Sl. No. 13
DEEP FREEZERS -40°C

Existing:

8. It should have 5 or 6 inner shelves of stainless steel (adjustable) with inventory racks.

Read as:

8. It should have **4 or more inner shelves** stainless steel (adjustable) with inventory racks.

Existing:

14. Heavy duty hermitically sealed compressor air cooled **cascade** refrigeration system, maintains inner temperature below -40°C.

Read as:

14. Heavy duty hermitically sealed compressor air cooled refrigeration system, maintains inner temperature below -40°C.

Existing:

16. Cooled down time: Full load of plasma bag at 25°C. Maximum of 5 hours for all packs to reach below -50° C. **A full load of plasma bags to reach -20° C.**

Read as:

16. Cooled down time: Full load of plasma bag at 25°C. Maximum of 5 hours for all packs to reach **below -40° C.**

Existing:

23. Casing & door should have vacuum insulation panel with **polyurethanefoam** as per standards.

Read as:

23. Casing & door should have vacuum insulation panel as per standards.

Existing:

29. Should be USFDA and European CE approved product

Read as:

29. Should be **USFDA or European CE** approved product.

Sl. No. 14
DEEP FREEZERS -80° Celsius

Existing:

16. Cooled down time: Full load of plasma bag at 25°C. Maximum of 5 hours .for all packs to reach below – 50°C. **A full load of plasma bags to reach -20°C.**

Read as:

16. Cooled down time: Full load of plasma bag at 25°C. Maximum of 5 hours .for all packs to reach below – 50°C.

Existing:

29. Should be USFDA and European CE approved product.

Read as:

29. Should be **USFDA or European CE** approved product.

Sl. No. 17
Automated continuous blood culture monitoring system

Existing:

The culture bottles should be made of plastic.

Read as:

The culture bottles should be made of plastic/**glass**.

Sl. No. 18
AUTOMATED MYCOBACTERIUM CULTURE AND SENSITIVITY SYSTEM WITH SOFTWARE

Existing:

The unit shall be capable of operating continuously in ambient temperature of 10 -400 C and relative humidity of 15-90%.

Read as:

The unit shall be capable of operating continuously in ambient temperature.

Sl. No. 19

Microbial Identification and Antibiotic Susceptibility Testing Workstation

Maldi-Tof system

Existing:

- Should have minimum of 1 m Flight tube.

Read as:

- **The flight tube length may be more than 1M including Ion optics etc, but the effective flight path should not be less than 95 cm.**

AST system

Existing:

- System must work on colorimetric technology susceptibility testing.

Read as:

- **System must work on colorimetric/turbiditometric/redox reaction technology susceptibility testing**

Sl. No.21

Fully Automated ELISA Reader and Washer

Existing:

3. Should have wavelength range from 340 to 750nm.

Read as:

3. Should have wavelength range from **400 to 750nm.**

Existing:

11. Should have at least 6 second reading speed.

Read as:

11. Should have at least **8 second reading speed.**

Existing:

20. System should be USFDA and European CE approved

Read as:

20. System should be **IVD compliant and European CE and/or USFDA approved.**

Sl. No.22
CO2 Incubator

Existing:

- Steam jacket with internal capacity: 120 L (Approx).

Read:

- **Steam jacket/Direct Heat/Water Jacketed CO2 incubator** with internal capacity: 120 L(Approx).

Existing:

- Timer: 1 min. to 100 hours; Temperature range: +5° C to 80°C; Temp Accuracy +/-0.50C of required temp, with inbuilt Temperature Sensor.

Read as:

- Timer: 1 min. to 100 hours; **Temperature range: Ambient to 50°C.**; Temp Accuracy +/- 0.50C of required temp, with inbuilt Temperature Sensor.

Added Para: System should be European CE and/or USFDA approved

Sl. No.25
Tissue Embedding Station

Existing:

4. Paraffin collection tray 2 in numbers.

Read as:

4. **Paraffin collection tray 1 in numbers.**

Existing:

11. Sufficient Working surface of cold plate with facility to keep at least 30 blocks electrically heated forceps with Magnifier Lens.

Read as:

11. Sufficient Working surface of cold plate with facility to keep at least 30 blocks. **Electrically heated forceps (5 No) with Magnifier Lens (1 No).**

Existing:

12. Should have a magnifying lens adjustable in any position and white light illumination for specimen orientation.

Read as:

12. Should have a magnifying lens (**1 No**) adjustable in any position and white light illumination for specimen orientation.

Existing:

16. (a) Standard size cassette - 100.

Read as:

16. (a)**Standard size cassette with cover - 1000.**

Existing:

16. (c) Stainless steel of mould of different sizes-80 each

Read as:

16. (c) Stainless steel of mould of different sizes-80 each.

Following size to be offered:

SS Mould 15 x 15 x 5 mm pack of 12

SS Mould 24 x 24 x 5 mm pack of 12

SS Mould 24 x 30 x 5 mm pack of 12

Existing:

16. (d) Magnifying lens-1.

Read as:

16. (d) Magnifying lens-1Nos

Existing:

16. (f)Electrically heated forceps-5

Read as:

16. (f) Electrically heated forceps- 5 Nos.

Existing:

16. (g) Halogen Bulbs – 2.

Read as:

16. (g) Halogen Bulbs/ **LED lamps - 2.**

Sl. No.26

Fully Automated Tissue Processor for Histopathology Lab

Existing:

20. Suitable online UPS with maintenance free batteries.

Read as:

20. Suitable online UPS with maintenance free batteries and **30 min backup**

Existing:

21. Accessories, spares and consumable to be provided the equipment free of cost.

SS basket-1

SS tissue basket -2

Reagents vessels preferably metal with handle of minimum of 1.8 -2 Ltr; Capacity qty-11

Beaker coverQty -11

Wax baths tissue capsules with perforation- qty.2

Cassettes- nos-6000

Read as:

21. Accessories, spares and consumable to be provided the equipment free of cost.

SS tissue basket -2

Reagents vessels preferably metal with handle of minimum of 1.8 -2 Ltr; Capacity qty-11,

Beaker coverQty -11

Wax baths tissue capsules with perforation- qty.2

Item No.27
Semi-Automatic Rotary Microtome

Existing:

7. Horizontal feed of approximately 28-30mm Vertical specimen stroke approximately 70-72mm for cutting of larger tissues.

Read as:

7. Horizontal feed of approximately 28-30mm Vertical specimen stroke approximately **60-70mm** for cutting of larger tissues.

Existing:

18. A list of installations along with the certificate of satisfactory working and after sales service to be provided preferably from teaching medical colleges in NCR.

Read as:

18. A list of installations along with the certificate of satisfactory working and after sales service to be provided preferably **from teaching medical colleges/hospitals/research institutes of central and state government.**

Existing:

19. The system should be USFDA and/or European CE approved model 203 v. 50 Hz. With Indian power plugs.

Read as:

19. The system should be USFDA and/or European CE approved model **230V** 50Hz. With Indian power plugs.

Existing:

21. The system should have the capability of LIS/HIS

Read as: Deleted.

Item No.28
Fully Automated Slide Stainer for Histo Lab

Existing:

21. The system should have the capability of LIS/HIS.

Read as: Deleted.

Item No.29
Fully Automated Cryo Microtome

Existing

21. Facility of UV lamp decontamination should be available with heated sliding window.

Read as: Deleted

Existing:

29. The system should have the capability of LIS/HIS.

Read as: Deleted

Item No.30
Imported Grossing Station

Existing:

2. Made up of extruded aluminium frame so that it can protect from corrosion and should add durability & should design to distribute weight evenly

Read as: Deleted

Existing

6. Proximity Sensor control for Hot/Cold water faucet, built-in table rinse, and disposable facility should be provide.

Read as:

6. Proximity Sensor **/foot control** for Hot/Cold water faucet, built-in table rinse, and disposable facility should be provided.

Existing:

7. Unit should be supplied with Re-circulating exhaust with integral blower.

Read as:

7. Unit should be supplied with **adjustable bellows for connection to exhaust ventilation and with filters for formaldehyde fumes**

Existing:

12. Alarm for replacing filter.

Read as:

12. **Total five sets of replacement filter which are to be changed after every one year to be offered.**

Added Para: Spray hose assembly with hand control

Item No.31
Haemodialysis Machine with HDF Facility

Existing:

5. Machine should be upgradable for options like online BTM and BVM.

Read as: Deleted

Item No.32
Haemodialysis Machine

Existing:

5. Machine should be upgradable for options like online BTM and BVM.

Read as: Deleted

Existing:

14. Should have large colour TFT **touch** screen monitor and display.

Read as:

14. Should have large colour TFT screen monitor and display.

Added Para -suitable RO Plant for 500Ltrs/hour with suitable storage tank

Item No.35
Portable Reverse Osmosis machine for Haemodialysis Machine

Item Deleted

Item No.36
Portable Cardiac Sonography Machine

Existing:

8. The system should have internal hard drive for image and data storage of minimum 8 GB or more for patient studies storage. Storage of real time dynamic clips, Storage of frozen static image, DICOM format, CD/RW through PC.

Read as:

- ii. The system should have **in-built** internal hard drive for image and data storage of minimum 8 GB or more for patient studies storage. Storage of real time dynamic clips, Storage of frozen static image, DICOM format, CD/RW **if** through PC **than suitable PC/ Laptop is to be offered.**

Added Para: system should be US FDA and CE approved.

Item No.38
Digital Flat Panel Fluoroscopy with DSA

Existing Para(Page No. 90):

The X-ray tube and X-ray generator should be from the same principal manufacturer.

Read as: The X-ray tube and X-ray generator should be from the same principal manufacturer of complete system

Generator:

Existing:

- iii. It should be able to work on 1000 mA at 80 kW for Radiography and from 0.5 to 5 mA at fluoroscopy

Read as:

- iii. It should be able to work on **800 mA** at 80 kW for Radiography and from 0.5 to 5 mA at fluoroscopy

Existing:

- x. Minimum table height should be 60 cm or less.

Read as:

- x. Minimum table height should **be range between 50-90 cm**

Existing:

Para 3 (ix): Image storage capacity of at least 100000 images in 1024 x 1024 matrix at 10-12 bits on main system disk

Read as:

Image storage capacity of at least 50,000 images internal and 50,000 external to be provided in 1024X1024 matrix at 10-12 bits

Existing:

Para 8 (v): System should have on line dosimeter on the console to display actual radiation dose

Read as: Deleted

Existing:

Para 8 (vi): Two personal dosimeters to be provided with immediate reading of radiation dose and time spent in fluoroscopy

Read as: Deleted

Existing:

Para 11 (vii): Suitable UPS with complete backup for the computer system for at least 30 minutes

Read as: Suitable UPS for complete system with 30Min backup

Existing:

Para 14 (i): All site approval, layout approval and registration of equipment from AERB shall be the responsibility of the supplier. Following commissioning, permission to operate should also be the responsibility of the supplier. Hospital will provide all documentary support

Read as: Bidder should assist the user for getting site AERB type approval and Hospital will provide all documentary support

Existing:

Para 15 (viii): The vendor has to station one application specialist and service engineer at site for a period necessary to familiarize the medical and technical staff to the machine protocols and enable them to achieve fast and efficient service..

Read as: The vendor has to station one application specialist and service engineer at site for a period of **30 days** necessary to familiarize the medical and technical staff to the machine protocols and enable them to achieve fast and efficient service.

Added - Turnkey for Digital Radiography.

Turnkey works as per details mentioned below

TURNKEY SPECIFICATIONS:

General:

- 1. The FLUROSCOPY unit isto be installed on turnkey basis.**
- The vendor must take full responsibility for site preparation including civil, electrical, air-conditioning and fire safety work of the earmarked area, in consultation with the RGSSH.
- The vendor must visit & assess the site before submitting their quote for the turnkey works and submit the certificate along with tender that the site is suitable for installation of equipment.
- The vendor shall provide an accurate architectural and structural layout plan for housing the equipment. Logical workflow and safety norm should be adhered to. The layout plan should be made in consultation with the Director of the hospital.
- The site works will be done as per approved plan to make it a homorganiccomplex.
- During construction, minor modifications can be permitted by the Users/ Administrators of thehospital for more efficient utilization of space and resources.
- The total area for the FLUROSCOPY UNIT is mentioned as under:-

FLUROSCOPY MACHINE WITH CONSOLE = Approx. 8000 x 4600 MM.

The FLUROSCOPY Complex will comprise of various rooms like FLUROSCOPY Examination room, console room, reporting room, conference room, changing room, Recovery room, technician's room, electrical equipment and UPS room and any other required room for FLUROSCOPY facility.

8. All the material used for all turnkey work shall be of reputed make only and shall be got approved by the department prior to utilization.

A. CIVIL WORKS:

1. In the radiation areas all walls, doors, windows etc. to be Lead lined, to comply with there commendations of AERB / BARC for radiation safety.
2. Flooring Examination Room – Antistatic rolled PVC flooring.
Other Rooms - Anti-static Vitrified Tiles with Digital Prints.
3. Walls Finishing - Exam Rooms & Waiting Area
 - a. Lacquered glass pasted on ply with wooden framework.
 - b. 8' x 4' Backlit artificial acrylic surface on one main wall with cloud/ stone finish.
 - c. Toilets & Pantry - Glazed Ceramic Tiles up to false ceiling.
 - d. Other Areas - Vitreous Ceramic Tiles up to false ceiling.
4. False Ceiling Exam Room – Gypsum Board with Designer Cove Lighting
Other Rooms – Aluminium Metal Panel Grid false ceiling.
5. Floor trenches with block board covers finished with matching flooring to be provided for the cables in catheterization and Equipment rooms.
6. Plumbing & Sanitary - Complete plumbing & sanitary works to be provided for the Toilets, Pantry & Scrub Stations with all accessories (like basins, geysers, taps, WC etc.)
7. Medical Gases connection points to be provided in the radiology complex by the hospital. The same needs to be coordinated during the turnkey works.
8. All doors, windows, partitions, onsite furniture to be provided with high quality wood work or block boards with high gloss laminates. All these should have adequate locking mechanisms supplied with all accessories.
9. All the rooms in the complex will be signposted with stainless steel plates.
10. Sun-film and Venetian blinds be provided in all windows.
11. All the doors should be provided with the necessary fitting with hydraulic type door closures (Dorma make).
12. The main entrance gate at both ends to be provided of un-breakable toughened glass with additional metal grill doors for security.
13. The entrances to the Radiology Complex to be felt padded at the junction of both doors to avoid dust and provide insulation.
14. Suitably located, attached and common toilets to be provided.
15. Active and passive room shielding for magnetic, fringe field should be provided as per requirement of the equipment.
16. Flooring in all the areas will be non-slippery vitreous ceramic tiles.
17. In the toilets, glazed tiles will be used for Dado up to the ceiling. .
18. The Walls, glazed/ceramics tiles will be used for Dado up to the ceiling.
19. Floor trenches with block board covers will be provided for the cables.
20. The entrances to the FLUROSCOPY Complex to be felt padded at the junction of both doors to avoid dust and provide insulation.

21. False ceiling in all the areas will comprise of metal suspension system, performance fire proof aluminium panels with integrated acoustic lining.
22. Piped in anaesthesia gases/central oxygen supply will be provided by the Hospital. However, integration & co-ordination will be their responsibility
- 23. All fluorescent lights and smoke detectors to be accommodated/ integrated in the false ceiling.**
- 24. All the rooms in the complex will be signposted. Sun-film and Venetian blinds be put in all windows.**

LIST OF APPROVED MAKES / BRANDS: - (CIVIL WORK)

S#	DESCRIPTION	MAKES/BRANDS
1.	Ready mix concrete	L & T CONCRETE / J.K. LAKSHMI / ULTRATECH / KWIK MIX
2.	Grey cement 43 grade (OPC / PPC)	ACC / L & T / GUJRAT AMBUJA / VIKRAM / BIRLA / JK CEMENT / SHREE
3.	White cement	BIRLA WHITE / JK WHITE
4.	Reinforcement steel	SAIL / TISCO / RINL / IISCO
5.	Flush door shutters	CENTURY / KITPLY / NATIONAL / ANCHOR
6.	PVC door shutter	RAJSHREE / SINTEX PLAST / DURO PLAST
7.	Ply / commercial board	CENTURY / KITPLY / NATIONAL / ANCHOR
8.	Prelaminated board	ANCHOR / NOVAPAN / CPL GLUNZ / KITLAM
9.	Sunmica	FORMICA / KITMICA / DECOLAM
10.	Pressed steel frame / steel windows	SAN HARVIC, STEELMAN INDUSTRIES, PD INDUSTRIES, MEATL WINDOWS, CHANDNI INDUSTRIES, GANPATI UDYOG (RAJPURA)
11.	Aluminium / door fittings	ARGENT / CLASSIC / UNIVERSAL
12.	Mortise lock	GODREJ / HARRISON / PLAZA
13.	Door closure (Hydraulic)	UNIVERSAL / RITZ / EVEREST
14.	Helical and double action spring	RITZ / HERYKA / AVON
15.	Adjustable friction window stay	EARL BIHARI PVT. LTD. (EBCO) OR ANY OTHER BIS APPROVED PRODUCT
16.	Wall tiles	JOHNSON / SOMANI PILKINGSTON / ORIENT / KAJARIA / SUNHEART
17.	Ceramic Floor Tiles, Vitrified Tiles	KAJARIA / JOHNSON / NITCO / SUNHEART
18.	Precast Concrete Tiles (Terrazo / plain / chequered), Paver Blocks, PCC Kerbs & Channels.	NTC (PKL) / PAVING STONE / NITCO
19.	Vinyl flooring	TUSKAR / WONDER FLOOR / LG / ARMSTRONG
20.	Wooden flooring	ARMSTRONG / PERGO
21.	Float glass	MODIGUARD / TRIVENI / SAINT GOBIN / ATUL

22.	Paint (Synthetic Enamel / Plastic emulsion / Anti Fungal)	GOODLASS NEROLAC / ASIAN / BERGER / ICI
23.	Oil bound distemper	GOODLASS NEROLAC / ASIAN / BERSGER / ICI
24.	Wood & steel primer	GOODLASS NEROLAC / ASIAN / BERSGER / ICI
25.	Water proofing compound	CICO / PIDILITE / ROFEE / DR. BECK / DURASEAL
26.	Aluminium sections	INDALCO / HINDALCO / JINDAL
27.	Tile adhesive	PIDILITE / SIKA / FOSROC / BAL ENDURA
28.	Glass mosaic tiles	PIXEL GLASS / CORAL / ITALIA / BISAZZA / PALLADIO
29.	False ceiling: Mineral Fibre Gypsum Wooden Metallic	USG / ARMSTRONG / DAIKEN / DEXUNE GYPSBOARD / SAINT GOBAIN / LAFARGE / ARMGYP KITPLY / ANCHOR / ARMSTRONG WOODWORKS LLYOD / ARMSTRONG / LUXLON / DEXUNE
30.	Silicon paint	PIDILITE / CICO / ROFF / CHOKSI
31.	Wall putty	JK / BIRLA / ASIAN
32.	Dash / anchor fasteners	HILTI / FISCHER
33.	Nuts / bolts & screws	GKW / ATUL
34.	Backer rod	SUPREME OR ANY OTHER BIS APPROVED PRODUCT
35.	Sealant	BASF INDIA / SIKA / FOSROC
36.	RCC pipe & Collars	ISI MARKED OR ANY OTHER BIS APPROVED PRODUCT
37.	G.S. Sheet (Corrugated)	TATA / SAIL / NIPPON

B. PLUMBING WORKS:-

1. Plumbing works has to be carried out as per the site requirement.
2. The waste pipes and accessories should be of centrifugally cast iron of ISI make and the connection of existing main hole in the public health shaft should be done.
3. All water pipes should be galvanized iron of Tata / Jindal make and fitting should be of SUW /UF /UNIK make.
4. The grafting should be of brass chrome plated.
5. All C.P fitting shall be of Jaguar or higher makes.
6. Taps above washbasin, soap dispensers should be with provided with sensors.

LIST OF APPROVED MAKES / BRANDS (PLUMBING WORK):-

S#	DESCRIPTION	MAKES/BRANDS
1.	Vitreous China Ware (1 st Class quality)	PARRYWARE / HINDUSTAN VITREOUS / CERA
2.	Plastic seat cover	PAARYWARE / COMMANDER / HINDWARE
3.	C.P. Fittings / Accessories	ESSCO / EBONY / JAGUAR

4.	PTMT fittings	PRAYAG / POLYTUF OR ANY OTHER BIS APPROVED PRODUCT
5.	Flush valve	JAGUAR / JAL / ESS ESS
6.	Stainless steel sink	COBRA / NEEL KANTH / AMC / NIRALI
7.	Soil waste pipes & fittings Centrifugal cast spun pipe Sand cast iron pipes Centrifugal cast spun LA pipe	NECO OR ANY OTHER BIS APPROVED PRODUCT NIF / RIF OR ANY OTHER BIS APPROVED PRODUCT ELECTRO STEEL / KESORAM
8.	GI & MS pipes	TATA / JINDAL / BST
9.	PVC water supply pipes & fittings	NOCIL / CHEMPLAST / WAVIN / SUPREME / DIZAYN / DIPLAST
10.	GI fittings (Malleable cast iron)	UF / SFW / UNIK
11.	Gun metal valve (Full way, check & globe valve)	LEADER / SANT / KILBURN
12.	Butter fly valve	CASTLE / C & R / ADVANCE / IVC / AUDCO
13.	C.I. double flanged sluice valve & check valve	IVC / KIRLOSKAR / LEADER
14.	C.I. double flanged non return valve	GEETA / KIRLOSKAR / C & R / AUDCO / CASTLE / ADVANCE
15.	Foot valve	LEADER / IVC / KIRLOSKAR
16.	C.I. Manhole cover & CI grating	RIF / ADHUNIK / BC
17.	Bib & stop cocks (Brass)	KPR / SANT / VIF
18.	Mirror glass	MODI GUARD / ATUL / GOLDEN FISH
19.	Insulation hot water pipes mineral wool)	LAPINUS OR ANY OTHER BIS APPROVED PRODUCT
20.	Bed pan sink	PAMINI OR ANY OTHER BIS APPROVED PRODUCT
21.	Elbow action surgical mixer. Taps & bed pan sink accessories	VIJAY OR ANY OTHER BIS APPROVED PRODUCT
22.	PVC tanks	DIPLAST / SINTEX / RAUNAQ
23.	Stone ware pipe & G.T.	PERFECT / CHANDIGARH CERAMICS / HIND
24.	PVC plumbing pipes/fittings	NOCIL / CHEMPLAST / WAVIN / SUPREME / DIAZYN / DIPLAST
25.	Ferrules	DHAWAN SANITARY UDYOG (PRIMA) OR ANT OTHER BIS APPROVED PRODUCT

C. ELECTRICAL WORK:

1. A suitable Mains Power panel to be provided for the entire complex. The main input cable shall be provided by the hospital to the Electrical room.
2. Adequate safety measures will be incorporated in the electrical power supply system.
3. The use of earth leakage circuit breakers will be required. Switches, interlock devices and warning light / existing light is to be taken into the planning.
4. Dedicated isolated Earthing stations (at least 12 Nos.) to be provided for the complex.
5. The entire complex to be lit by reputed make (Philips, GE, Osram, Havells) light fixtures.

6. Dimmer controlled incandescent light fixtures are to be provided in the examination rooms and console rooms.
7. All the electric wiring (copper), switches, sockets, plugs, MCBs etc are to be Havells, Romex, Polycab wire PVC insulated, Finolex, TP-Link AV200 and as per ISI standards.
8. Different parts of the complex to have separate wiring for light and power circuit through MCBs of suitable capacity.
9. EPABX wiring (IP Phone LAN based) to be provided for the Radiology complex.
10. Fiber Optic cabling for data communication to be provided in the Radiology complex; and need to be hooked with hospital network.
11. Fire Safety: A Fire Alarm system of reputed make to be provided in the entire Radiology complex. The system to be hooked with the Hospital Fire Alarm system.
12. Suitable number of hand-held fire extinguishers to be provided.
13. Closed circuit cameras (CCTV system) to be installed in the Radiology.
14. A music system with speakers to be provided in the Radiology complex.
15. Switch & socket (modular type) should be MK/North West/ Mosaic (Legrand).
16. Energy efficient Fluorescent light fittings should be provided of Philip/Wipro/GE/ Bajaj.
17. General lights should be of mirror optic reflector type of Philips/ Wipro / GE/Cromptom make.
18. Exit signboard, Emergency lights to be provided (Legrand/ Philips make).
19. Power cables should be of copper: Havell's / Poly cab/ CCI/RR cables.
20. Main electrical panel make: EMCO / International Switch Gears / Bharat Electrical.
21. Dimmer controlled incandescent light fixtures are to be provided in the examination rooms and console room.
22. All the computers along with peripherals light points, fire alarm system, EPABX and view boxes to be supplied with the UPS power.
23. The following information needs to be provided to the hospital:-
 - a. Electrical load requirement of the equipment.
 - b. Electrical load requirement of air-conditioning plant.
 - c. General electrical loads and complete wiring diagram.
 - d. Two sets of plan drawing and panel drawing.
24. In FLUROSCOPY Complex, all required equipments and accessories are to be connected to the supplied UPS. Centralized UPS is available. Firm to give local details. One point supply should be provided.
25. Dimmer controlled incandescent light fixtures are to be provided in the Magnet room and console room.
26. All the electric Wiring (copper), switches, sockets, plugs, MCBs etc are to be reputed make of rated capacity. Separate DB to be provided for light and power.
27. Different parts of the complex will have separate wiring for light and power circuit through MCBs of suitable capacity.
28. Adequate safety measures will be incorporated in the electrical power supply system.
29. Dedicated isolated earthing is to be provided for the equipments.
30. Audio call bell with intercom and remote locking/unlocking facility provided at the main door of the Complex.
31. Fire Safety measure: a fire alarm system of reputed make with smoke detectors, the above and suitable fire extinguishers to be provided.
32. Closed circuit cameras to be installed in the FLUROSCOPY complex and a parallel feed has to provided in the concerned Doctors room with DVR and storage facility for 15 days.
33. The firms shall be required to specify the total load requirements for the entire equipments the air-conditioning units, room lighting and for the accessories if any. The load will be

provided by the institute to the distribution panel. The distribution's panel should have switch gear of Siemens/L &T/ Schneider /Legrand makes and shall be provided by the vendor. (Any specific requirement of any kind if required shall be the responsibility of the tendering firm).

34. The electrical work will include wiring, different lights and main switch fittings. The special ceiling light will be required particularly in the equipments room, which should have long life and should not be affected by frequent on and off.
35. The electrical work shall include the following:
36. Wiring- the wires shall be of copper of different capacity as per the load Switches light and power points should be of modular type General - LED light fixture of suitable wattage to have prescribed illumination as per standards/NBC to be provided. Fittings shall be down lighter and 2"x2" as required.
37. Telephone cables should be of FINOLEX/R.R. cables.
38. Electrical load of the system to be added as per the tender/brand of the equipment
39. FAS: Photoelectric type of detectors to be provided. Small panel to be provided. Provision for integration with main panel to be provided. Make: Notifier/ Johnson/Ansul/ Honeywell.

D. Air Conditioning:-

The FLUROSCOPY complex Area is currently Air-Conditioned with the central Air conditioning plant of the building. However, suitable additional or standby air conditioning VRV/VRF type of 5 star rating and as per the requirement of the equipments for maintaining the 18 – 22 degree Celsius temperature may have to be done by company with the following specifications.

- i. He has to provide AC only for FLUROSCOPY machine, rest will be in scope of Hospital.
- ii. Cooling arrangement will be given technical details along with catalogue no. and makes and it is to be issued that machine is provided with equal stand by capacity. The chiller units shall be of air cooled type and will have automatic charge over arrangement in case of failure of one unit. Suitable alarm audio/video arrangement shall be provided for operation of AC units.
- iii. All weather AC with cooling, heating and humidity control capabilities is to be provided.
- iv. Air flow in various rooms should be adjustable to have some degree of control over temperature in different rooms of the complex.
- v. The AC units(s) should be microprocessor controlled for adequate temperature control.
- vi. The wall type split air-conditioning to be provided for standalone working in workstation room, console room, doctors room etc.
- vii. Suitable De-humidifiers to be provided in the equipment sections as required.
- viii. The total A/C capacity being offered for the complete centre to be clearly mentioned.

Make: - Hitachi, Diakin.

To maintain uniformity for all vendors, a minimum of 20 Tons of AC including standby capacity should be quoted

E. Furniture:-

1. The readymade furniture supply items should be of Godrej or Durian make.
2. Onsite wooden furniture should be customized to room requirements and made in block board with Korean laminate finishes designed in modular storage pattern.
3. The color and shades of the furniture to be approved by the user department.

E. Schedule of Furniture:-

Room Wise Furniture List (Radiology Complex).				
S#	Room's Name	Particulars of the Item	Unit	Qty
1	Examination Room	10'x2'6"x1'10" Modular storage Counter with Granite Top	No.	2
2		6'x4'x1'10" Modular Cupboard for Storage	No.	4
3		Drug / Medicine Trolley	Nos.	1
4		4'x2'X1'10" Wall mount Cupboard	Nos.	3
5	Console Room FLUROSCOPY	Workstation Table for Radiology Systems & Controls	No.	4
6		Executive Reclining Chairs with Castors	No.	8
7		4'x2'X1'10" Wall mount Cupboard	No.	2
8		Thin Film LED Viewer (2 Films)	Nos.	2

F. DEFECT LIABILITY:

1. The works to be executed shall be guaranteed for a period of 2 years from the date of commissioning against any defective material / workmanship.
2. The entire project of commissioning of the equipment & turnkey works should be completed within 6 months. Total project duration should not exceed 6 months (Turnkey and equipment installation) from the date of opening of the LC.

All other contents of the tender enquiry including terms & conditions remain unaltered.

Note:

Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of tenders.