

## **Amendment No.3**

**Date: 15.06.2018**

**Subject: Amendment no. 3 to the Tender Enquiry Document**

**Ref: (i) Tender Enquiry No.: HLL/PCD/PMSSY/AIIMS-II/28/18-19 dated 10.05.2018**

The technical specifications for Sch.01, (RFx No. 3000002854), DRF - Digital Flat Panel Fluoroscopy cum Radiography System is revised / amended as below:

### **Section VII** **Technical Specifications**

#### **Schedule: 1**

#### **DRF - Digital Flat Panel Fluoroscopy Cum Radiography System**

- I. High powered X-Ray unit with digital flat panel for various fluoroscopy and radiography examinations for the department of Radio-diagnosis.
- II. The system shall consist of two X-Ray tubes and two detectors respectively,
- III. The system configuration shall be as follows: Over-couch X-ray Tube with an integrated two-in-one flat panel Detector suitable for Radiology and Fluoroscopy procedures and another ceiling suspended X-ray tube with another flat panel wireless Radiography Detector with Bucky Wall Stand.
- IV. Any two components out of three (X-Ray Tube, X-ray generator and Flat panel detector) should be from the same principal manufacturer of the main (complete) system.
- V. The unit should be completely integrated system (integrated X-ray generator and image acquisition control console) having the following specifications:

#### **1. GENERAL**

- a. X-Ray unit with microprocessor controlled high frequency X-Ray generator with power output of 80KW or more capable of delivering 1000mA.
- b. Microprocessor controlled high frequency X-ray generator with power output of at least 80 KW. It should be able to deliver 800 mA at 100 kV.
- c. Exposure kV range should be 40-150kV.
- d. System should have facility for pulsed fluoroscopy
- e. Generator should have minimum exposure time of at least 1 ms.
- f. System should have multiple user defined programs (Vendor defined programs )
- g. There should be provision for automatic exposure control (AEC).

#### **2. TABLE**

- a. Floor mounted table with scratch resistant table top preferably carbon fibre or equivalent radiolucent material.
- b. System should have motor driven longitudinal, vertical and horizontal/transverse table top movements or Imaging chain movements. Please specify the range of movements.
- c. Table should have angulations from longitudinal to head down positions.(Vertical+90 degrees to Trendelenbrug-90 degrees)
- d. Table should support patient weight upto 180kg without any restriction of table movement.

- e. System should have well designed foot switch for releasing fluoroscopy and acquisition
- f. System should have provision for collision protection
- g. Table should have integrated bucky unit for flat panel general radiography and Fluoroscopy
- h. Intercom system must be available to communicate with patients.
- i. Min table height should be **65cm or less.**
- j. Remote controlled compression cone.

### **3. X RAY TUBE #1 : FLUOROSCOPY**

- a. X ray tube for fluoroscopy should be mounted in an Over-Couch position.
- b. X-Ray tube rating should be compatible with X-ray generator output.
- c. The X-Ray tube should have dual focal spots.
- d. Small focal spot power rating should be minimum 30 kW
- e. Large focal spot power rating should be minimum 60 kW
- f. Size of focal spots should be specified.
- g. Anode heat storage capacity should be 600 KHU or more.
- h. Should have electromagnetic lock.

### **4. DETECTOR SYSTEM #1: FLUOROSCOPY**

- a. Digital flat panel detector, using Caesium Iodide or Amorphous silicon detector with TFT Converter.
- b. Detector dimension must be at least 42cm x 42cm or more.
- c. Image matrix size 2k X 2K pixels or more.
- d. Pixel size should be 200 micron or less.
- e. Should allow centred /de-centred collimation.

### **5. DIRECT DIGITAL IMAGING SYSTEM FOR FLUOROSCOPY**

- a. Field of view of at least 42cm X 42cm or more
- b. Collimator should be automatic and remote controlled.
- c. System should have real-time optimization techniques to maintain constant brightness at the lowest allowable dose to the patient.
- d. Should have Cine loop facility and last image hold facility during fluoroscopy.
- e. Acquisition matrix should of at least 1024X1024 at minimum 14 bit rate.
- f. Digital fluoro system in standard continuous fluoroscopic operating mode from single image display to serial exposures with varying frame rates of minimum 6 fps and in pulsed fluoroscopy mode , it should be at least 15 frames per second.

### **6. X-RAY TUBE #2 : CEILING SUSPENDED**

- a. The X-Ray tube should be a Dual focus tube.
- b. Small focal spot should be 0.6 mm or less and Large focal spot should be 1.3 mm or less
- c. Anode heat storage capacity should be minimum 300 KHU.
- d. All the movements of the overhead tube suspension (3D column stand) should be motorized. It should be possible to override it manually.
- e. Built-in collision protection system.
- f. Collimator section should have automated image shuttering and cropping facility.
- g. There should be synchronous movement with auto tracking and auto positioning of the overhead tube suspension against both the vertical detector and the table detector.
- h. Horizontal and vertical tube rotation should be +/- 90°.

- i. Integrated DAP meter to monitor radiation dose with facility to transfer dose information to RIS-PACS

#### **7. VERTICAL BUCKY (WALL STAND)**

- a. Motorised, counter balanced adjustable height vertical Bucky with integrated wireless digital flat panel detector, with auto alignment with X-Ray Tube.
- b. Vertical detector system should have a travel range from minimum 26 cm to 173 cm above floor level. (Manual as well as Motorised movement).
- c. Detector unit tilt-able from  $-20^{\circ}$  to  $+90^{\circ}$ .
- d. X-ray tube automatically tracks wall Bucky height adjustments with detector tray height adjustments with detector at  $-20^{\circ}$ ,  $0^{\circ}$ ,  $90^{\circ}$  or intermediate tilt angles.
- e. Removable grid of 13 /92, with maximum Source- to-Image-Distance (SID) of 180cms for vertical bucky application.

#### **8. DETECTOR SYSTEM #2 : RADIOGRAPHY (INTEGRATED WITH VERTICAL BUCKY - WALL STAND)**

- a. Wireless Digital flat panel detector integrated into the Bucky wall stand.
- b. Detector material should be made of amorphous silicon with CsI scintillator
- c. Size of detector must be **35 cm X 42 cm or more**.
- d. Image matrix size 2k x 2k pixels or more.
- e. Pixels size should be **200  $\mu\text{m}$  or less**
- f. Image resolution should be 2.5 lps/mm or more
- g. Detector Quantum Efficiency (DQE) of detector system should be 65% or more at 0 line pairs DQE at 0lp/mm or 0.05lp/mm should be at least 65%.
- h. Grey scale resolution should be **14 bit per pixel or higher**

#### **5. IMAGE DISPLAY SYSTEM**

- a. Two sets of Dual Monochrome or Colour Medical Grade monitors of minimum 1 Megapixel resolution and minimum 19" size to be provided. (Total number of medical grade monitors: not less than 4 nos.)
- b. One set of Dual-monitors to be ceiling mounted in examination room.
- c. Another set of Dual – monitors to be provided with the acquisition console workstation.
- d. All Monitors should be Medical Grade with minimum resolution of 1 Mega pixel. Specify Make and Model and provide Details of the Monitor offered.

#### **6. CONTROL CONSOLE**

- a. All system movements of table shall be controlled by the operator at the table in the examination room and also at the console.
- b. The system should have facility for edge enhancement, positive/negative image display, windowing, contrast/brightness, vertical and horizontal image reversal, zoom functions.
- c. The system should have fast and direct access to all series, single images, in both examination (Remote controlled) and console room.
- d. System should have angle/distance measurement, image labelling and patient positioning facilities.
- e. System should have on line dosimeter on the console to display actual radiation dose.

#### **7. IMAGE STORAGE AND TRANSMISSION**

- a. Image storage capacity of at least 8,000 images in 1024 x 1024 matrix at 10 / 12 bits on the main system disk.

- b. The systems should support storage of images on compact discs/DVD.
- c. The system should be DICOM 3.0 (or higher version) ready (like send, receive, print, record on CD/DVD, acknowledge etc.) for connectivity to any network, computer/PC etc. in DICOM format.
- d. Vendor should connect this with existing LAN system and other laser cameras already existing in the department without any extra cost
- e. Easy integration and networking should be possible with existing RIS including patient work list and study completion.

### **8. ESSENTIAL CERTIFICATE(s)**

- a) Radiation safety certificate: The offered model must have a valid AERB Type Approval Certificate or AERB NOC at the time of submission of tender.
- b) All AERB related installation guidelines shall be strictly followed by the supplier. The system should be ready for approval as per AERB and ELORA or any other relevant interface at the time of installation. The supplier shall provide all support to obtain site layout approval, license for operation. All statutory QA testing of the system and leakage survey for the DRF system shall be the responsibility of the supplier throughout the warranty and CMC period. The supplier shall conduct all necessary QA tests before doing the first patient scan .Certificate of Lead equivalence of Lead glass shall be made available during system supply.
- c) Quality certification: CE (Europe) or USA FDA.

### **9. ACCESSORIES**

- i. Removable patient foot rest, shoulder supports, patient handgrips, compression band, remote controlled motorised compression cone integrated in table, arm support.
- ii. Double head pressure injector of reputed make (300 PSI) with 100 syringes & 400 tubing. The injector should have facility for manual aspiration & flushing.
- iii. DICOM Software with fast speed DVD Combo (Reader and Writer separately).
- iv. Lead glass 100x 150 cm for console room.
- v. Suitable UPS with 140KVA for complete system , workstation , imager with at least 30minutes back up.
- vi. Hand grip
- vii. Foot step
- viii. Patient fixing belts and compression device (for performing excretory urography)
- ix. Ultrasonic pest repellent
- x. Patient Trolley – **2 Nos**
- xi. Wheel chair (with cushion, back-rest and arm-rest) – **2 NOS.**
- xii. Radiation Protection Devices**
  - a) Lead free light weight aprons (vest and skirt type for extended period of use) with following specifications: **12 nos**
    - a. Made in ISO approved factory with EU ISO 9001:2000 standards
    - b. CE certification and conform to EC Council Directive EC89/686/EEC/article 11B
    - c. Handmade to Individual specification
    - d. Full protection while weighing 30% less than traditional lead aprons
    - e. Flexible two-piece design with wide skirt for ease of movement
    - f. Flexible Velcro fastenings across shoulders and torso
    - g. Both Vest &Skirt include full overlap in front, offering double protection with full protection to Front & Back.

- h. Padded shoulders to prevent forward slippage and relieve pressure on shoulders
- i. Monogram option
- b) Thyroid shields (lead free) with following specifications: **8 nos**
  - a. Made in ISO approved factory EU ISO 9001:2000 standards
  - b. CE certification and conform to EC Council Directive EC89/686/EEC/article 11B
  - c. Full protection while weighing 30% less than traditional thyroid collars
  - d. Adjustable Velcro Fastening
  - e. Soft, Stain resistant material with choice of colours and design
- c) Gonadal shields (All sizes both for male and female): **4 sets each** .
- d) Radiation protection eye wear (weight not exceeding 55 gm): **6 nos**
- e) Radiation protection fit over eye wear to fit over existing glasses and headwear (weight not exceeding 100 gm): **4 nos**
- f) Radiation protection head wear (zero lead): **6 nos**
- g) Wall mounted apron hangers(foldable): **4 nos**
- h) Adjustable and movable radiation protection shield from reputed make: **2 nos**

## **10. INSTALLATION**

### **The Turnkey Scope of Work**

- a. The Supplier should inspect the proposed site offered by the Consignee Institute in which the DRF system has to be installed and they are required to submit the plan for the complete DRF Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of DRF Centre.
- b. All supplies, fixtures will be of standard top brand make and to be pre-approved by hospital administration before installation. All turnkey work will carry 5-year warranty and will be covered in warranty & CMC both.

### **Bidders should inspect designated room for DRF in Department of Radiology before bidding.**

While preparing the plan, the following aspects have to be addressed:

1. Care should be taken to provide easy negotiation of the patient stretchers/ trolleys through corridors and doors.
2. Radiation shielding for doors, walls, windows etc. (2 mm lead lining of doors & windows & 9-inch brick wall as per AERB norms.)
3. Furniture like desk, chairs, shelves etc.
4. Patient stretcher and other furniture/ accessory to make the DRF centre functional.

### **The cost of Turnkey for the area of 1500sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose.**

Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work.

1. Civil works
2. Electrical work
3. Public health (plumbing and sanitary fittings).
4. Air Conditioning (HVAC)
5. Interior Furnishing & Furniture
6. Miscellaneous

### **Scope of work for turnkey:**

The supplier should inspect the proposed site and submit all the detailed structural and architectural drawings and BOQ for the proposed DRF Centres along with technical bid of the tender.

The DRF CENTRE shall consist of the following rooms:

1. DRF Room
2. Console room
3. Equipment room
4. Patient preparation room
5. Reporting room
6. Patient waiting area
7. Radiologist room
8. Toilet

The actual area of turnkey works done will be considered for payment, based on the site measurements and unit rate quoted by the vendor.

**Civil work**

1. Civil construction work including construction of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.
2. Concrete bed at DR equipment area if necessary.
3. Platform for unloading and shifting the DR should be provided if necessary.
4. Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
5. All the construction work to be done as per the final plan approved by the Consignee.
6. The entire complex will be made rodent/pest proof.

**Flooring**

1. 600 x 600 mm vitrified tiles with 100mm tile skirting to match in console room, lobby and patient preparation areas, Radiologist room etc.
2. 50 mm thick cement concrete flooring with **2mm** Vinyl flooring in DRF equipment / UPS room.

**Painting**

Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer on all walls except the DRF examination room , wherein the walls have to be clad with vitrified tiles from floor to false ceiling level.

**False Ceiling**

Lightweight Aluminium ceiling panels, acoustical-treated, supported on grid or finished seamless with support above ceiling. Powder coated finish (colour to be approved by Institute). Ceiling height to suit the equipment mount and clearances.

Cove lighting for the entire area of DRF examination room.

**Plumbing work**

All water pipes and fittings shall be of high density polythene of approved and standard make. The gratings shall be brass chrome plated. All plumbing accessories should be of standard make.

**Electrical work**

The supplier shall be required to specify the total load requirements for the DRF centre including the load of air conditioning , room lighting and for the accessories if any. The mains supply line will be provided by the Institute up to one point within the DRF centre . Kindly visit the site(s) for exact details.

The distribution panel shall be provided by the vendor. Few lights in each room shall be connected to the UPS to provide emergency lighting.

The electrical work shall include the following:

1. Wiring – All interior electrical wiring- with main distribution panel board, necessary MCBs, DB, joint box, switch box etc. The wires shall be of copper of different capacity as per the load and should be renowned make as listed below.
2. The Earthing for DRF system , UPS and accessories should be provided by the vendor. DRF and UPS shall be provided independent dual earthing. Kindly visit the site(s) for location of earth pit(s).

3. Switches light and power points should be of modular type and of standard make as listed below.
4. General lights – LED light fittings with minimum 500 Lux Illumination.
5. All wires used must be FRLS (Fire Retardant with low smoke) type only.
6. Music system with roof mounted speakers in the DRF room.
7. Patient address system for communication between Console room and patient waiting area.

**Air conditioning:**

1. Duct-able split air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
2. The outdoor units of AC should have grill coverings to prevent theft and damage.
3. Ventilation is required in toilet.
4. Environment specifications:
5. Humidity range: Relative humidity 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
6. Temperature ranges:  $22 \pm 2^{\circ}$  C in all areas except equipment room which shall be as per requirement of the equipment.
7. Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.

**Furniture:**

1. Revolving chairs height adjustable, medium-back with hand-rest in the Control room, Radiologist room and viewing area. – **10 NOS**
2. Chairs for patient waiting area – Three seater (chrome plated). - **10 NOS**
3. Cupboards (1900mm H x 500mm D x 1000mm W) with laminate door shutters for storage of spare parts and accessories and records as per requirement. – **3 NOS**
4. Drug trolleys for patient preparation area.- **1 NO.**
5. Patient trolley with rubber foam mattress to be kept in the patient preparation room. **1 NO.**
6. All the rooms in the complex will be signposted.
7. Sun film & ventilation blinds / curtain will be put up in all windows.
8. Tables for Workstation and Radiologist in reporting room.- **2 NOS**
9. Changing rooms should have change lockers and dressing table.
10. Dustbins (plastic with lid) to be provided as required.
11. All furniture items should be of standard make as mentioned in the table below.

**Miscellaneous:**

1. Reporting room should have LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14"x17" size. – **2 NOS**
2. Cabling of Network (LAN) connectivity for camera system, console system, workstation and computers etc
4. Dry chemical power type fire extinguisher of 5kgs capacity, with initial filling in brand new cylinder with power coated finish, high pressure CO2 gas cartridge, discharge hose, wall mounting bracket etc. complete, confirming t IS:2171 of approved make & complete as directed by EIC.- **2 NOS.**

**LIST OF ITEMS AND SUGGESTED MANUFACTURERS.**

1. FLOORING VITRIFIED TILES -Somany, Kajaria , H&R Johnson, RAK india, Marbonite , Granamite
2. PAINT - Dulux, Asian Paints , Nerolac
3. PLUMBING - Kohler, Jaguar , Grohe , Roca
4. SANITARY ITEMS - CERA, Hindware, Parryware

5. ELECTRICAL
6. CABLES - Finolex, Havells ,V-Guard
7. SWITCHES - Legrand, L&T, Crabtree , Roma
8. DISTRIBUTION BOX , MCB - Legrand, L&T, Siemens, Havels
9. LIGHT FITTINGS - Philips / Crompton / Kesselec-Schreder / Wipro.
10. AIR CONDINTIONING - Daikin, Hitachi, Blue Star, Voltas,
11. FURNITURE - Hermen Miller , Godrej , Featherlite

**11. OPTIONAL ITEMS – PRICE TO BE QUOTED SEPARATELY.(Price of optional items will not be considered for ranking purpose)**

**A. DIGITAL SUBTRACTION ANGIOGRAPHY (DSA) upgrade of the main DRF system ( if DSA is available with the quoted model , the bidder may quote the cost of upgrading the DRF system to DSA capability)**

Fully loaded online DSA with following features: Online DSA with re-masking, pixel shift, landmark peak opacification and roadmap. The DRF system should be configured to display DSA image on the existing exam room monitor as well as the existing monitor in Console room.

**B. Dry Chemistry Imager:**

Multiport, multiple films (14"x17", 11"x14" and 8" x 10") Dry Chemistry Imager with resolution of 500 DPI or more, DICOM ready and online. At least three size film trays should be active.

**C. Anaesthesia Machine with Integrated Monitor & Ventilator**

All the components like anaesthesia ventilator, vaporiser and patient monitor should be from same manufacturer. The model should be European CE or US FDA approved.

**I. Anaesthesia Machine:**

1. Should have pipelines attachment for oxygen, nitrous oxide and compressed air.
2. Should have yoke assembly for oxygen and nitrous oxide with pin index system.
3. Durable main switch to put the machine in the on or off position.
4. There should be digital control and display for oxygen & electronic gas mixing.
5. Should have safety features like :
6. Should provide 25% or more of oxygen when an anaesthetic gaseous mixture is in used.
7. Should be provided with "pneumatic/ electronic" hypoxic guard.
8. Should have extra flow meters for oxygen only.
9. Should have oxygen flush with a flow rate of more than 35L/min.
10. It should have alternate O2 supply mode in case electronic gas mixture failure
11. Should be able to hold two seletatec vaporizers (Isoflurane, Sevoflurane & Desflurane) simultaneously. Vapourizers should be maintenance free. Cost of vaporizers to be quoted separately. The anesthesia machine should provide desflurane compensation.
12. Co2 absorber system with the following features:-
13. Single/Double canister
14. Autoclavable
15. Canister capacity of 0.8 kg or more.



16. It should be possible to bypass the canister if removed during clinical cases to change sodalime.
17. APL valve assembly and Bag mount should be conveniently placed.
18. Independent port for open circuit.
19. Should be provided with one or more drawers.
20. Machine should have a good quality handle and castors to move the machine with locking system.

**II. Integrated ventilator of the machine should have the following features: -**

1. Should be electronically controlled.
2. Should be suitable for both paediatric, adult and new born.
3. It should have coloured screen.
4. Volume and pressure control mode of ventilations.
5. Electronic peep
6. Both SIMV and pressure support mode.
7. Tidal volume ranges from 20ml to 1200 ml or more
8. respiratory rate from 4 to 80 or more
9. I:E ratio
10. Display : Respiratory rate, peak airway pressure and PEEP
11. There should be no collection of water in the breathing system.
12. Should have independent paramagnetic oxygen sensor for FiO<sub>2</sub> monitor and flow sensor for spirometry.
13. The work station should be capable of delivery of low and minimal flow anaesthesia even at 350 ml of total fresh gas to reduce patient consumption
14. Should be able to display
15. Pressure Vs time
16. Volume /Flow Vs time
17. Should have battery backup of at least 60 minutes
18. Demonstration of the product is must for all the firm.
19. Bidder must ensure regular supply of medical grade Soda lime with rate quoted separately.

**III. Integrated Monitor should have the following:**

1. A modular configurable patient monitor
2. Should have at least 17" or more TFT colour display with up to 12 waveforms at a time
3. Should be touch screen
4. Should be able to measure the following parameters:
  - a) 3 and 5 lead ECG with electrocautery & defibrillator filter with ST Segment & arrhythmia detection with analysis,
  - b) Respiration, SpO<sub>2</sub>, temperature
  - c) NIBP, 2 IBP, ETCO<sub>2</sub>
  - d) Multi –Gas analysis with auto detection of all anaesthetic agents
  - e) Integrated BIS/entropy Monitoring.
  - f) Upgradable to cardiac output (thermodilution) monitoring.
  - g) Integrated modular NMT monitor parameter display on the main monitor
  - h) Upgradable to modular EEG monitoring
  - i) Should be able to automatically detect and calculate MAC of all anaesthetic gases.
  - j) Should be able to calculate and display FiO<sub>2</sub>.
5. Intelligent cooling system to keeps the unit running quiet during use.
6. Separate indicator lights for technical and physiological alarms.

7. Maximum BEEP tone should be loud enough to be audible from atleast a distance of 12 feet
8. Should have graded audio and visual alarms for the following parameters:
9. Blood pressure - High and Low
10. SpO2 - High and Low
11. Heart rate - High and Low
12. Respiration - High and Low
13. FiO2 - High and Low
14. Trends – Upto 48 Hours or more, trend analysis, upto 24 hours full disclosure.
15. Battery Back- up – Li-ion Battery of 1 hour or more.
16. Display of Anaesthesia ventilator data like wave forms for flow, pressure, agent and loops, and trends on patient monitors.

**IV. The anaesthesia machine should be supplied with the following accessories:**

1. ECG Cable : **2 nos.**
2. Reusable SpO2 Sensors: **2 each** for Adult, Paediatric & Neonatal.
3. NIBP Cuff: **2 each** for Adult, Paediatric & Neonatal.
4. IBP Transducers: **Disposable 10 nos.**
5. IBP Cable: **2 nos.**
6. BIS Electrode: **10 nos.**
7. ETCO2 Sample Line: **10 nos.**
8. Reusable autoclavable Breathing circuit: **2 nos. each** for Adult & Paediatric

**Note:**

**i) The schedule for submission of tenders for Sch.01, (RFx No. 3000002854), DRF - Digital Flat Panel Fluoroscopy cum Radiography System as published under Amendment No.2 is as below and remains unchanged.**

**There is no extension on due date of submission of bids. All bidders are hence requested to submit their online e-bids within the due dates.**

<b><u>Sch.01, (RFx No. 3000002854), DRF - Digital Flat Panel Fluoroscopy cum Radiography System</u></b>		
<b>Sl. No.</b>	<b>Description</b>	<b>Schedule</b>
c	Closing date & time for submission of online bids	21.06.2018, 01:00 PM
d	Closing date & time for submission of <b>tender processing fee and EMD in physical form*</b>	21.06.2018, 02:00 PM
e	Time and date of opening of online bids	21.06.2018, 02:30 PM

**ii) If EMD is submitted in the form of BG, then the validity of the BG should be at least 165 days from the date of tender opening.**

**All other terms and conditions of the tender enquiry remain unaltered.**