

**INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES, PATNA-14**

**BILL OF QUANTITY-01**

SHORT URGENT TENDER NOTICE NO.- Engg./07/CW/Tender/2020-21

<b>Sl. No.</b>	<b>Name of the Work :-</b>	<b>Annual Maintenance Contract (AMC) of Fire Extinguishers, Fire Alarm, Smoke Detector, Glow Sign Board &amp; Fire Hydrant System for different Hospital Building at IGIMS, Patna</b>
<b>1</b>	<b>Estimated Cost (In Rs.) :-</b>	<b>Rs. 11,08,442/-</b>
<b>2</b>	<b>Earnest Money (In Rs.) :-</b>	<b>Rs. 22,200/-</b>
<b>3</b>	<b>Cost of B.O.Q. (In Rs.) :-</b>	<b>Rs. 2,500/-</b>
<b>4</b>	<b>Time of completion :- ( In Days)</b>	<b>365 Days</b>
<b>5</b>	<b>Date, time &amp; place for submission of Complete tender-</b>	<b>As Per NIT</b>
<b>6</b>	<b>Date and time for opening of tender-(Technical Bid)-</b>	<b>As Per NIT</b>
<b>7</b>	<b>Date &amp; Time for opening of Price Bid of Technically Suitable bidders.</b>	<b>As Per NIT</b>

<b>Sl. No.</b>	<b>Item Description</b>	<b>Unit</b>	<b>Qty.</b>	<b>Rate quoted by bidder</b>	<b>Amount ( RS)</b>
<b>Non Schedule Items</b>					
<b>PART-A ( AMC)</b>					
<b>1</b>	<b>ABC dry powder stored pressure squeeze grip Type Fire Extinguisher, ISI Mark (IS:15683), operating temperature (+5)° C to (+55)° C for Class 2A &amp; 21B type of Fire filled with MAP ABC Powder. Complete in all respect. Capacity – 6 Kg.</b>	<b>Each</b>	<b>146.00</b>		<b>-</b>
<b>2</b>	<b>ABC Clean Agent store pressure squeeze grip Type Fire Extinguisher, filled with NAF P-IV, Complete in all respect. Capacity – 2 Kg.</b>	<b>Each</b>	<b>24.00</b>		<b>-</b>
<b>3</b>	<b>CO<sub>2</sub> stored pressure squeeze grip Type Fire Extinguisher, ISI Mark (IS:15683), operating temperature (-30)° to (55)° C for Class 13B type of Fire, fitted with 1 Mtr. Hose &amp; PVC Horn, Complete in all respect. Capacity – 4.5 Kg.</b>	<b>Each</b>	<b>68.00</b>		<b>-</b>
<b>4</b>	<b>CO<sub>2</sub> stored pressure wheel Type vale Fire Extinguisher, ISI Mark (IS 2878), fitted with 1 Mtr. Hose, Horn &amp; Trolley Handle, Complete in all respect. Capacity – 6.5 Kg.</b>	<b>Each</b>	<b>15.00</b>		<b>-</b>
<b>5</b>	<b>Water CO<sub>2</sub> Type Fire Extinguisher, ISI Mark (IS:13385), Mounted on Trolley Wheel Complete with G.M. Cap Hose, Gas Cartridge 300 Gms, Complete in all respect. Capacity – 50 Ltrs.</b>	<b>Each</b>	<b>14.00</b>		<b>-</b>
<b>6</b>	<b>Mechanical Foam (AFFF) Type Fire Extinguisher, ISI Mark (IS:13386), Mounted on Trolley Wheel, Complete with 300 Gms Gas Cartridge, ISI Mark (IS:4947) and IS Mark Refill (IS:4989) Part-II. Complete in all respect. Capacity – 50 Ltrs.</b>	<b>Each</b>	<b>3.00</b>		<b>-</b>
<b>7</b>	<b>Fire Bucket, Capacity – 9 Ltr.</b>	<b>Each</b>	<b>20.00</b>		<b>-</b>
<b>8</b>	<b>M.S. Fire Bucket Stand with G.I. sheet stand shade (Four bucket hanging facility in each stand)</b>	<b>Each</b>	<b>5.00</b>		<b>-</b>
<b>9</b>	<b>Conventional automatic Fixed cum rate of rise temperature type Heat Detector, 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink-Green" in stand by and "Study-Red" in alarm complete in all respect with base as required, EN / LPCB listed / approved</b>	<b>Each</b>	<b>28.00</b>		<b>-</b>
<b>10</b>	<b>Conventional automatic Optical / Photoelectric type Smoke Detectors of photo-optic sensing chamber, 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink-Green" in stand by and "Study-Red" in alarm complete in all respect with base as required, EN / LP</b>	<b>Each</b>	<b>732.00</b>		<b>-</b>
<b>11</b>	<b>Providing, fixing, testing and commissioning of response indicators with dual LED suitable for operation on 12/24 volts D.C., sheet steel / Polymer housing suitable for surface/recess mounting including making connections with wires complete in all respect</b>	<b>Each</b>	<b>390.00</b>		<b>-</b>
<b>12</b>	<b>Addressable type Manual Call Points as per specifications. The manual call point should have an indicator which should "blink" in stand by condition</b>	<b>Each</b>	<b>87.00</b>		<b>-</b>
	<b>(Make : Agni Suraksha (ASES), Safeway, System Sensor or its equivalent.)</b>				
<b>13</b>	<b>Electronic Hooters housed in sheet steel / Polymer housing suitable for wall / ceiling and surface / recess mounting including making connections with wires complete in all respects and as per specifications. (Make : Agni Suraksha (ASES), Safeway, Sys</b>	<b>Each</b>	<b>72.00</b>		<b>-</b>
<b>14</b>	<b>Digitally addressable having addressable features (Capable of giving individual address of each detector) Fire Alarm Control and indicating panel, microprocessor based with RS 485 communication, pulser, timer for dual stage alarm facility complete with ind</b>				
<b>a</b>	<b>4 Zone Panel</b>	<b>Each</b>	<b>1.00</b>		<b>-</b>
<b>b</b>	<b>8 Zone Panel</b>	<b>Each</b>	<b>6.00</b>		<b>-</b>
<b>c</b>	<b>16 Zone Panel</b>	<b>Each</b>	<b>1.00</b>		<b>-</b>
<b>Fire Hydrant System</b>					
<b>1</b>	<b>AMC of M.S. Pipe including all fittings like coupling, bends, elbows, offsets, blind flanges, plugs, tees, flanges, etc. welding joints (all type) as required, supports, cutting holes and chases in brick or RCC walls or floors, with painting and making good complete. Pipes should be welded joint (all type), Pipes conforming to I.S.:1239</b>				
<b>a</b>	<b>a. 80 mm dia.</b>	<b>Mtr.</b>	<b>12.00</b>		<b>-</b>
<b>b</b>	<b>b. 100 mm dia.</b>	<b>Mtr.</b>	<b>130.92</b>		<b>-</b>
<b>c</b>	<b>c. 150 mm dia.</b>	<b>Mtr.</b>	<b>145.01</b>		<b>-</b>

Sl. No.	Item Description	Unit	Qty.	Rate quoted by bidder	Amount (RS)
2	AMC of S. S. <b>Landing Valve (hydrant valve)</b> conforming to IS:5290 with 63 mm dia instantaneous female coupling on the outlet blank cap and chain necessary companion flanges, nuts, bolts, washer and gasket complete as per specification. (ISI marked), Single Outlet.	Nos.	20.00		-
3	AMC of <b>First aid fire hose reel</b> wall mounting swinging type fitted with 20 mm dia x 30 m long high pressure hose with PVC shut-off nozzle conforming to IS:884-1969	Nos.	20.00		-
4	AMC of 63 mm dia 15 mtr. Long <b>Rubberized fabric lined hose (RRL)</b> including G.M. male and female instantaneous type coupling, machine wound with copper wire complete in all respects. Hose shall confirm to IS:636 Type A (ISI marked)	Nos.	40.00		-
5	AMC of standard short size S. S. <b>Short Branch Pipe</b> with nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia Male coupling. (ISI marked)	Nos.	20.00		-
6	AMC of <b>Fire hose cabinet</b> fabricated from M.S. Sheet with single or double front door and locking arrangement. Red painted including suitable supports to place 900 mm above ground level, approximately size 30" x 24" x 10" (to house two length of canvas hose with couplings & branch pipe for external / internal hydrants)	nos	20.00		-
7	AMC of cast iron dual plate wafer type <b>Non return valves</b> of PN. 1.0 including nuts, bolts. 1.5 mm thick compressed asbestos gasket including matching flanges etc. complete.				
a	80 mm dia.	Nos.	2.00		-
b	100 mm dia.	Nos.	3.00		-
c	150 mm dia.	Nos.	2.00		-
8	AMC of C.I. <b>Butter fly valves</b> PN 1.0 complete with bolts, nuts 1.5 mm thick compressed asbestos gasket companion flange etc. complete.				
a	80 mm dia.	Nos.	2.00		-
b	100 mm dia.	Nos.	3.00		-
c	150 mm dia.	Nos.	2.00		-
9	AMC of resilient rubber lined single arch vibration eliminators suitable for raw water up to 45°C temperature, working pressure 8.8 kg/cm <sup>2</sup> and test pressure of 14 kg./cm <sup>2</sup> for :-.				
a	80 mm dia.	Nos.	1.00		-
b	100 mm dia.	Nos.	1.00		-
10	AMC of C. I. <b>Two way Fire brigade inlet</b> breaching head as per IS:904 specification tested for 20 kg/cm <sup>2</sup> with 63 mm dia instantaneous type inlet and 150 / 100 mm dia flanged outlet with built-in check valve for Fire brigade connection to fire risers including companion flanges, including nuts, bolts & washers etc.	Nos.	2.00		-
11	AMC of dial type <b>Pressure gauge</b> IPS 100, with isolation cock and copper pipe at hydrant point	Nos.	21.00		-
12	AMC of dial type <b>Pressure gauge and pressure switch</b> IPS 200, with isolation cock and copper pipe at hydrant station and hydrant point	Set	1.00		-
13	Providing & fixing M.S. 150 mm dia. Air cushion tank with air release valve, complete in all respect.	Nos.	1.00		-
14	AMC of heavy duty PVC insulated, PVC Armored aluminum conductor cable including necessary support clamps and connection lugs complete in all respects.				
a	a) Power Cable 4 core x 25 Sqmm	Mtr.	129.80		-
15	Terrace Pump : Supplying and fixing 'Krioskar' make horizontal end suction Pump, Model : DB - 50/16 with Bronze Impeller, S. S. Shaft head, 3 Phase 415 Volt TEFC AC Motor, Mechanical Seal coupling & Base plate AVM Pads				
a	a. Capacity : 900 L.P.M.	Nos.	1.00		-
	b. Head : 35 Mtr.				
	c. HP : 12.5 HP				
	d. RPM : 2900				
16	AMC of dust & vermin proof cubicle type Motor control panel fabricated form powder coated 18 SWG MS sheet complete with incoming main MCCBs, fully taped aluminum bus bar, volt meter, rotary selector switch for reading voltage between phases. Amp. Meter with selector, 3 phase indication light, 3 phase preventions of suitable, auto / manual off selector, color coded internal wiring form main to bus bar, complete in all respect.				
a	Panel for Terrace Fire Pump	Nos.	1.00		-
17	AMC of of PVC Water Tank of Capacity – 2000 Ltr., complete in all respect.	Nos.	12.00		-
18	AMC of of G.I. Tata pipe for filling water in PVC Water Tank, complete in all respect :-				
A	50 mm dia.	Mtr.	13.20		-
B	40 mm dia.	Mtr.	33.00		-
19	AMC of gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
a	40 mm nominal bore	each	1.00		-
b	50 mm nominal bore	each	1.00		-
20	AMC of ball valve (brass) of approved quality,				

Sl. No.	Item Description	Unit	Qty.	Rate quoted by bidder	Amount (RS)
	High or low pressure, with plastic floats complete :				
a	25 mm nominal bore	each	10.00		-
<b>Advance Cardiac Centre</b>					
<b>SUBHEAD-V (B) : FIRE FIGHTING WORKS (NON-SCHEDULED ITEMS)</b>					
NOTE : Contractor shall obtain, from the local fire authority, completion certificate with respect to his work as required for occupation of the building without any extra cost.					
1	<b>TERRACE LEVEL - FIRE PUMP</b>				
i	AMC of INSTALLED , storing, handling, shifting, installation, testing and commissioning, supervision of testing of electric driven terrace pump suitable for automatic operation of horizontal end section centrifugal type synchronous speed of 2900 rpm TEFC confirm Capacity 450 LPM at 3.5 Kg./Cm2 delivery pressure for fire hydrant network.				
2	. installation, testing and commissioning of following integrated, cubicle type, dead front, extensible, sheet steel control panel. The panel shall be suitable for 440 volts, 50 cycles, 4 wire supply The following components and accessories shall be mounted with in each control panel. One no 60 amps TP incoming MCCB with the following: i 0-500 volts 96 x96 square mm voltmeter with selector switch and control fuses- 1 SET ii 0-100 amps 96 x96 square mm ammeter with CT's and selector switch- 1 SET Phase indicating lamp with toggle switches. Indication lamps for ON/OFF/TRIP status Outgoing Feeders / Starters as below: 60 ATP MCCB with star / delta as starter suitable for 15 HP motor for Downcomer Pump - 1 Set				
	Provision in control panel to connect flow switch for automatic operation of roof fire pumps.	Set	1.00		-
2.1	AMC of resilient rubber lined single arch vibration eliminators suitable for raw water up to 45 deg. C temperature, working pressure 8.8 Kg/cm2 and test pressure 14 Kg/cm2 for :-				
2.1.1	150 mm dia	Each	2.00		-
3	AMC of fire brigade inlet connection (fire department connection) consisting of 4 Nos. 63 mm dia instantaneous inlet arranged on a 50 mm dia header, 1 No. 150 mm diameter sluice valve. 1 No. 150mm dia. Non-return	set	1.00		-
4	Supply, installation, testing, trial run and commissioning of hydrants all complete as required and as approved Internal hydrants / landing valves generally as specified and all complete with: 63mm dia single outlet landing valve IS marked with suitable size bolts, nuts, washers and gaskets. Landing valve shall be as per IS code. First aid hose reel with 25 mm dia, 30 m long rubber hose, ball valve, piping, nozzle and pressure quage as per IS code. 63mm reinforced rubber hoses (RRL) with male and female SS coupling, IS marked- 15 m. as per IS code. standard short size SS branch pipe with nozzle of 20mm nominal bor outlet with instantaneous type 63 mm dia coupling complete as per IS code.	Each	2.00		-
5	AMC of hydrants all complete as required and as approved (at roof level). Internal hydrants/landing valves generally as specified and all complete with: 63mm dia single outlet landing valve IS marked with suitable size bolts, nuts, washers and gaskets. Landing valve shall be as per IS code. 63mm reinforced rubber hoses (RRL) with male and female SS coupling, IS marked- 15 m as per IS code. standard short size SS branch pipe with nozzle of 20mm nominal bor outlet with instantaneous type 63 mm dia coupling complete as per IS code.	Each	2.00		-
5.1	AMC for, fabrication & laying heavy grade IS marked black mild steel piping complete with all fittings, pipe supports, clamps etc. as approved with weleded jointing for external hydrant system. These pipes shall be provided with 2mm thick weather proof trea				
	100 nominal bore	Meter	25.00		-
5.4	AMC of Butterfly Valves with mating flanges generally as specified all complete.				
a)	150 nominal bore	Each	1.00		-
6	AMC for laying cast iron non-return valve IS marked with flanges genertally as specified complete.				
a)	150 nominal bore	Each	1.00		-
7	AMC of C.I. flanged single air valves size 25mm with 25mm SS isolation valve etc. all complete.	Each	2.00		-
8	AMC of heavy grade (Class C) IS marked black mild steel piping complete with all forged fittings, pipe supports, clamps, painting etc. as approved with threaded and welded jointing for Wet Riser System.				
a)	Note: a. Threaded joint upto 50mm diameter pipe.				
b)	Welded joint above 50mm diameter pipe.				
8.1	150 mm nominal bore (Class C)	Rm	5.00		-
8.2	100 mm nominal bore (Class C)	Rm	165.00		-
8.3	80 mm nominal bore (Class C)	Rm	18.50		-
<b>SUBHEAD-VI(B) : PORTABLE FIRE EXTINGUISHERS &amp; EXIT SIGNAGES WORKS (NON-SCHEDULED ITEMS)</b>					

Sl. No.	Item Description	Unit	Qty.	Rate quoted by bidder	Amount ( RS)
1	AMC of portable fire Extinguishers as described below:				
1.1	4.5 kg carbon dioxide extinguisher, IS marked, with high pressure discharge tube, horn, control valve, CCE approved cylinder	Each	8.00		-
1.2	6 kg Mono ammonium phosphate (ABC) type cartridge operated extinguishers	Each	6.00		-
1.3	2 kg Mono ammonium phosphate (ABC) type cartridge operated extinguishers	Each	4.00		-
	<b>SUBHEAD-VI-FIRE ALARM SYSTEM</b>				
1	AMC of microprocessor based Networkable Analogue Addressable upto 200 nodes 4 Loop with 4 loop card Fire Alarm Control Panel with 640 character LCD Display, the Panel Should be equipped with sufficient nos. of loop	Nos	1.00		-
2	AMC of Analogue Addressable Heat sensor having removable high performance chamber with Twin fire LED's allow 360 degree veiwimg, lock mechanism ( sensor to base), Variable sestivity, Electronically addressed, appr	Nos	1.00		-
3	AMC of electronically Addressable multi sensor detector with microprocessor in head and including the base with LED etc. as required. (CEASE FIRE Cat no-CF-ACA-E)	Nos	235.00		-
4	AMC of Analogue Addressable Loop powered Wall Sounder providing 8 Volume levels & 51 Tones with a maximum o/p of upto 102 dB(A) with low current consumption, can be fitted on Isolator Type Base which is fully comp	Nos	2.00		-
5	AMC of Analogue Addressable Manual Call Point ESP Analogue Addressable Protocol having status LED for Alarming & standby mode,Electronically addressed, approved by LPCB. (CEASE FIRE CAT NO- CF-HCP-E)	Nos	2.00		-
7	AMC of Analogue Addressable Response Indicator, approved by LPCB.	Nos	1.00		-
34	AMC of ABC Clean Agent store pressure squeeze grip type fire exisingusher filled with NAF P-IV, complete in all respect	Each	40.00		-
	<b>Sub Total Amount Part (A)</b>				
	<b>PART-B</b>				
1	Refilling of ABC dry powder stored pressure squeeze grip Type Fire Extinguisher, ISI Mark (IS:15683), operating temperature (+5)° C to (+55)° C for Class 2A & 21B type of Fire filled with MAP ABC Powder, Complete in all respect, Capacity – 6 Kg.	each	25.00		-
2	Refilling of CO2 stored pressure squeeze grip Type Fire Extinguisher, ISI Mark (IS:15683), operating temperature (-30)° to (55)° C for Class 13B type of Fire, fitted with 1 Mtr. Hose & PVC Horn, Complete in all respect, Capacity – 4.5 Kg.	each	68.00		-
3	Refilling of CO2 stored pressure wheel Type vaele Fire Extinguisher, ISI Mark (IS 2878), fitted with 1 Mtr. Hose, Horn & Trolley Handle, Complete in all respect, Capacity – 6.5 Kg.	each	15.00		-
4	Refilling of Water CO2 Type Fire Extinguisher, ISI Mark (IS:13385), Mounted on Trolley Wheel Complete with G.M. Cap Hose, Gas Cartridge 300 Gms, Complete in all respect, Capacity – 50 Ltrs.	each	14.00		-
5	Refilling of Mechanical Foam (AFFF) Type Fire Extinguisher, ISI Mark (IS:13386), Mounted on Trolley Wheel, Complete with 300 Gms Gas Cartridge, ISI Mark (IS:4947) and IS Mark Refill (IS:4989) Part-II, Complete in all respect, Capacity – 50 Ltrs.	each	3.00		-
6	Refilling of ABC Clean Agent store pressure squeeze grip type fire exisingusher filled with NAF P-IV, complete in all respect	Each	10.00		-
	<b>PART-C</b>				
	<b>Providing and Fixing of fire Extinguishers Accessories</b>				
	<b>Rate :-</b>				
1	Safety Lock for fire extinguishers	each	120.00		-
2	Discharge horn for CO2 fire extinguishers	each	8.00		-
3	Discharge pipe for CO2 fire extinguishers	each	8.00		-
4	Discharge pipe for ABC dry powder fire extinguishers	each	15.00		-
5	Wall Bracket for portable fire extinguishers	each	25.00		-
6	Trolley for CO2 fire extinguishers	each	3.00		-
7	Trolley for Water CO2 & Mechanical Foam 50 Ltrs. Capacity fire extinguishers	each	3.00		-
8	Discharge pipe for Water CO2 & Mechanical Foam 50 Ltrs. Capacity fire extinguishers	each	4.00		-
9	Squeeze grip valve for ABC & Clean Agent fire extinguishers	each	20.00		-
10	Valve for CO2 fire extinguishers	each	8.00		-
11	Smoke Detector & Fire Alarm System Rate :-				
12	Conventional automatic Optical / Photoelectric type Smoke Detectors of photo-optic sensing chamber, 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink-Green" in stand by and "Study-Red" in alarm complete in all respect with base as required, EN / LPCB listed / approved. (Make : System Sensor)	each	10.00		-
13	Conventional automatic Fixed cum rate of rise temperature type Heat Detector, 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink-Green" in stand by and "Study-Red" in alarm complete in all respect with base as required, EN / LPCB listed / approved (Make : System Sensor)	each	2.00		-
14	Addressable type <b>Manual Call Points</b> as per specifications. The manual call point should have an indicator, which should "blink" in stand by <b>condition</b> .				

Sl. No.	Item Description	Unit	Qty.	Rate quoted by bidder	Amount (RS)
15	(Make : Agni Suraksha –ASES or equivalent)	each	10.00		-
16	Electronic <b>Hooters</b> housed in sheet steel / Polymer housing suitable for wall / ceiling and surface / recess mounting including making connections with wires complete in all respects and as per specifications. (Make : Agni Suraksha -ASES)	each	6.00		-
17	Response indicators with dual LED suitable for operation on 12/24 volts D.C., sheet steel / Polymer housing suitable for surface/recess mounting including making connections with wires complete in all respects. (Make : Agni Suraksha - ASES)	each	10.00		-
18	Supply, Installation, Testing & Commissioning of 25 mm dia. PVC Conduit pipe ISI marked, complete with all fittings viz. Tees, Bends, Junction Boxes, Clamps / Supports etc. to be concealed in slabs / brick work as required or surface laid.	each	50.00		-
19	Supply, Installation, Testing & Commissioning of Solid copper, conductor, PVC insulated ISI marked twin core FRLS wire.:				-
a	2 x 1.5 sq mm	Rmt.	50.00		
b	4 x 1.5 sq mm	Rmt.	25.00		-
<b>Total Amount (Rs)</b>					-

**Quoted Rates:for schedule item**

a- .....% above

b- .....% below

**NOTE:-**

Contractors are requested to quote their rates % above / % below / at estimated rate for Schedule Items and Item wise rate for non schedule item as mention in above.

1-	Issued to		
2-	Full postal address		:-
3-	Earnest money deposited	:-	
4-	Registration No.		
5-	Time of completion		:-
	Signature of Contractor		Superintending Engineer , IGIMS