

बिहार सरकार  
आपदा प्रबंधन विभाग  
(नागरिक सुरक्षा महानिदेशालय)

**निविदा आमंत्रण सूचना सं०- 1/2013-14**

1. विज्ञापनदाता:- अपर पुलिस महानिदेशक-सह अपर नागरिक सुरक्षा आयुक्त, बिहार, 59, 60/84 न्यू पुनाईचक, पटना-800023
2. निविदा प्राप्ति की तिथि एवं समय:- दिनांक 06.01.2014 (सोमवार) 11:00 बजे।
3. निविदा खोलने की तिथि एवं समय:- दिनांक 06.01.2014 (सोमवार) 11:30 बजे।
4. निविदा प्राप्ति का स्थान:- नागरिक सुरक्षा महानिदेशालय में रखी निविदा पेटी (Tender Box)।
5. क्रय किये जाने वाले उपकरणों/सामग्रियों का व्योरा:-

**(A) Audio- Visual Aids**

Sl.	Name of equipment	Pieces		Total	Place of Delivery For CDTI
		For CDTI	For MHD's		
1.	CPR Mannequin with lungs bag	1	-	1	DG's Office*

**.(B) Personal Protective Clothing And Equipment**

Sl.	Name of Equipment	Pieces		Total	Place of Delivery	
		For CDTI	For MHD's		For CDTI	For MHD's
1	Fluorescent jackets waterproof	40	24	64	DG's Office*	1/4 <sup>th</sup> at each MHD*
2	Safety helmets	40	24	64		
3	Boots hard toe, steel shank	40	24	64		
4	Heavy duty work gloves	40	24	64		
5	Water bottle with sling (Lightweight with Protective carrier element)	40	24	64		
6	Safety torches	40	24	64		
7	Face shield (Manikin)	10	24	34		
8	Nose Mask	80	80	160		
9	Ear Plug	80	120	200		
10	Knee pads cushion 1”(Make speedy or eqvt)	40	24	64		
11	Fire entry suit	02	08	10		

**(C) Rescue Equipment**

Sl.	Name of Equipment	Pieces		Total	Place of Delivery	
		For CDTI	For MHD's		For CDTI	For MHD's

1	<u>Hand tool set:</u> <ul style="list-style-type: none"> <li>• Pliers 8" (Taparia or eqvt)</li> <li>• Vise grip 10" (Taparia or eqvt)</li> <li>• Bolt cutter 14" &amp; 30"</li> <li>• Chisel for concrete ½" &amp; 1" (Taparia or eqvt)</li> <li>• Screw driver set (Taparia) complete set</li> <li>• Hacksaw 12" tubular with spare blades</li> <li>• Handsaw 600mm</li> <li>• Claw Hammer 4 Kgs</li> <li>• Sledge Hammer 7Kgs and 10 Kgs</li> <li>• Carpenter Hammer 3"</li> <li>• File flat 12"</li> <li>• Crescent wrench 8"</li> </ul>	04	04	08		
2	Combination cutter and spreader (Battery operated)	2	04	06		
3	Ramset with matching foot pump	2	04	06		
4	Hydraulic jacks 5 tons	2	08	10		
5	Pinch point pry bar 60"	4	08	12		
6	Fire axe 2 ½ feet	2	04	06		
7	Flat head axe	4	04	08		
8	Clawed Crow bar 5 feet	4	08	12		
9	Spades 10"	12	08	20		
10	Shovels 10" (D-Handle)	12	08	20		
11	Picks (Chisel and point)	12	08	20		
12	Come along 1.5 tons capacity with std. length 1.5M (Titan or eqvt)	02	04	06		
13	Set of pully blocks (single, double, triple sheaves)	06	04	10		
14	Rope manila 2" 200m rolls	02	04	06		
15	Rope manila 2" 100m rolls	02	04	06		
16	Rope Nylon 1" 100m rolls	06	04	10		
17	Camming devices (Prusik loop)	04	08	12		
18	Cribbing & wedge kit sets with containers	02	04	06		
19	Tape measures	04	04	08		
20	Telesopic ladders 20-35 feet	04	04	08		
21	Tarpaulin 4m x 4m	06	08	14		
22	Tarpaulin 6m x 6m	04	04	08		
23	Carbon-di-oxide extinguisher (CO <sub>2</sub> )-9 ltrs.	06	08	14		
24	Generator Portable 2500W kerosene fuel	04	04	08		
25	Working Lamps 50M, 6mm PVC wire	08	08	16		
26	Extension boards & cords (Cord length 25M, width 8mm)	04	04	08		
27	Megaphones (Output 16W Maxi 20W 12V battery, voice range 0.4 Km)	02	04	06		
28	Water jell blankets (8' x 6')	08	16	24		
29	Set of two blankets (disposable)	04	08	12		
30	Stretchers (Canvas folding Std size)	04	08	12		
31	Backboard long with straps (Spinal board)	02	04	06		
32	<u>Medical First Response kits with box:</u> <ul style="list-style-type: none"> <li>• Bite sticks</li> <li>• Stiff neck collars (short, regular, pediatrics, tall importated)</li> <li>• Gauzes dressing vaselline</li> <li>• Multi- trauma dressings (12" x 3")</li> <li>• Flexible splints (large/medium/small)</li> <li>• Restraints patient (1PC 8" Strap &amp; 2PC strap)</li> <li>• Bandages Kling 3" &amp; 6" (5m Roll each)</li> <li>• Bandages Triangular 40" x 40"</li> <li>• Tapes dermical cloth 1" &amp; 2"</li> <li>• Gloves Sterile Latex (Medium, large, X-large)</li> <li>• Masks (CPR)</li> </ul>	04	04	08		

DG's Office  
\*

1/4<sup>th</sup> at each MHD\*

	<ul style="list-style-type: none"> <li>• Triage ribbons of various colours</li> <li>• Masks universal size</li> <li>• Sponges sterile 4" x 4"</li> <li>• Scissors disinfectants(Paramedical)</li> <li>• Oxygen cannula- Nasal</li> <li>• Airway oral (60mm,80mm,90mm/100mm(set)</li> </ul>				
33	Oxygen Cylinders 680L(oxydose) Lightweight with accessories)	04	04	08	
34	Casualty bags Full	02	04	06	
35	Casualty bags Half	02	04	06	
36	Life jackets	12	24	36	
37	VHF Base Station with essential accessories (25watts)	02	-	02	
38	VHF Walkie Talkies 1W/5W	12	24	36	
39	Building Marking Kit	06	08	14	

\* Each MHD means Patna, Begusarai, Katihar and Purnia where Civil Defence Offices are located in the Collectorate campus. Items are to be delivered to the Civil Defence Instructor in-charge there. DG's office means the office of Director General (Civil Defence), Flat No. 59,60/84 New PunaichakBihar, Patna-800023

क्रय किये जाने वाले items के specifications की जानकारी के लिए नागरिक सुरक्षा महानिदेशालय से कार्यालय अवधि के दौरान दूरभाष सं० 0612-2283035 पर सम्पर्क किया जा सकता है। इसे आपदा प्रबंधन विभाग, बिहार की वेबसाइट [www.disastermgmt.bih.nic.in](http://www.disastermgmt.bih.nic.in) पर भी देखा जा सकता है।

#### **TERMS AND CONDITIONS**

- 1- The tender should be submitted in two parts: (1) Technical bid and (2) Financial bid, duly sealed in two separate envelopes. If the two bids are submitted in the same envelope, then it shall be summarily rejected.
- 2- The rates shall be quoted only in the Financial bid. All charges like BST/CST/Service Tax/VAT etc. shall be clearly mentioned but net rate (in figures and words) including all taxes and duties shall also be quoted. Vague offers like "Taxes as applicable" will be summarily rejected. There should be no cutting, overwriting or correction in the rates.
- 3- All relevant papers/certificates/specifications etc. of items should be enclosed in the Technical bid. Authorised dealers / authorised suppliers of manufacturing firms will have to enclose a copy of the authorisation letter from the manufacturer.
- 4- The envelopes should be marked "Tender No. 1/2013-14 (Technical Bid) and Tender No. 1/2013-14 (Financial Bid) alongwith the name and address of the firm. The sealed envelopes containing the Technical and Financial bids should be enclosed in another sealed envelope which should be marked as "Tender No. 1/2013-14". This envelope should not bear the name and address of the firm.
- 5- Uptodate Income Tax Returns of the preceding 3 years and photocopy of PAN of the participating firm should be submitted alongwith the technical bid. I.T. Returns should have stamp and signature of the concerned Firm, whether filed manually or electronically.
- 6- The turn-over of the firm for the financial year 2012-13 should be at least double the amount of the supply order which is being issued. A copy of the profit and loss a/c of the firm for the financial year 2012-13 certified by a Chartered Accountant should be submitted alongwith the tender. If the tenderer is an authorised dealer and authorised supplier of a manufacturing firm, then the certified details of the turnover of the authorizing firm will be accepted.
- 7- If the bidder has local Corporate office/Local office/Agent/Authorised Dealer in Bihar, registered with the Commercial Taxes Department, Govt. of Bihar, Patna, the relevant details should be mentioned in the Tender.
- 8- If there is some discount in the price of any item, it should be deducted from the price itself and should not be quoted separately.

- 9- It will be the responsibility of the successful bidder to deliver the items at the places mentioned in the Tender. The rates should be quoted taking the transportation costs into account.
- 10- Firms will have to deposit a sum equivalent to ten percent of the bid amount, rounded off to the next thousand, subject to a minimum of **Rs. 10,000/-** (Ten Thousand) and a maximum of **Rs.50,000/-** (Fifty thousand) only as earnest money in the form of postal savings passbook/NSC/Bank draft duly pledged in favour of DG (Civil Defence), Bihar, Patna alongwith the quotations.
- 11- Technical bids will be opened on 06-01-2014 at 11.30 AM in the office of the undersigned. The representatives of the tenderers may remain present at the time of opening of the technical bids.
- 12- The Technical bids will be put up before the Central Purchase Committee. The date, time and venue of the Central Purchase Committee meeting for the purpose will be intimated to the tenderers in advance. The representative of the tenderers may remain present in this meeting and may have to participate in discussions with this Committee and/or be required to demonstrate the quoted product. Any more papers/documents will not be accepted after opening the tender.
- 13- Only those Tenderers whose technical bids are found successful, their Financial bids will be opened by the Central Purchase Committee in the office chamber of DG (Civil Defence), Bihar, Patna on date & time to be intimated to bidders in advance. Representatives of the tenderers may remain present at the time of opening of the Financial bids.
- 14- Successful firm will have to enter into an agreement after depositing a sum of **5%** of the total value of the stores as security money in the form of Postal Savings PassBook/NSC/Bank Guarantee duly pledged in favour of DG (Civil Defence), Bihar, Patna.
- 15- The firm should give details of itemwise after-sale service to be provided by them. .
- 16- The firm will be required to supply all the items within 30 days from the date of placing of order. However, the DG (Civil Defence), Bihar may extend this period in case of genuine difficulties/reasons put up by the firm.
- 17- Payment for the delivered items will be made after receiving OK report from the Inspection Committee.
- 18- The firm whose quotation is approved shall be issued memo of Acceptance of Tender (A/T). Purchase order shall be issued only after the firm enters into an agreement with the undersigned. Terms & Conditions of the agreement shall be intimated in the A/T.
- 19- The firm shall have to ensure Hands on Training of the Civil Defence Instructors.
- 20- DG (Civil Defence), Bihar, Patna reserves the right to reject any or all the quotations partially or fully without assigning any reason.

Dated: 09.12.2013

(Dr. Ashok Kumar Seth)  
I.P.S.  
ADG-cum-Addl. Civil Defence Comm., Bihar,  
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बिहार सरकार  
आपदा प्रबंधन विभाग  
(नागरिक सुरक्षा महानिदेशालय)

निविदा आमंत्रण सूचना संख्या 1/2013-14 के आलोक में क्रय किये जाने वाले उपकरणों/उपस्करणों का SPECIFICATION

(A) AUDIO- VISUAL AIDS

1. CPR Mannequin with lungs bag

(B) PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

1. FLUORESCENT JACKETS WATERPROOF :

i) Description:-

Fluorescent colour jacket with 50mm glass bead type reflective tape in 2 vertical and 1 horizontal band in front and back same. Front opening and v neck design.

ii) Background Fabric:-

100% polyester, 125 gsm made from bright glossy yarn, adhering to EN 471 standard. it shall have excellent colour fastness and should be uv treated.

iii) Colours:- Fluorescent reddish orange / fluorescent lime - yellow.

iv) Reflective Tapes:-

Glass bead type reflective tape, EN 471 class 2 approved, 50 mm wide, colour of the reflective tape will be silver grey.

Accessories :

i) Binding:-

Binding will be black in colour. 100% polyester fabric will be used in binding with excellent colour fastening. binding is 100% leak proof.

II) Velcro:-

Velcro shall be 25 mm wide and 50 mm in length positioned vertically for perfect fastening. the colour of the velcro will be black.

size : length : 27 inches and width 23 inches.

2. **SAFETY HELMETS**

**SPECIFICATION**

- i) ISI MARKED : IS : 2925 OF 1984
- ii) SHELL MATERIAL : HIGH DENSITY POLYETHYLENE (HDPE)
- iii) ADJUSTABLE AND DETACHBLE HEAD BAND WITH NAPE STRAP MATERIAL : LOW DENSITY POLYETHYLENE (LDPE)
- iv) ADJUSTABLE CHIN STRAP : NYLON CHINSTRAP AND RACHET TYPE HEAD BAND
- v) SLOT FIX DESIGN : PROVISION FOR EASY CLIP ON ACCESSORIES LIKE FACE SHIELDS AND EAR MUFFS.
- vi) COLOUR : YELLOW

3. **BOOTS HARD TOE, STEEL SHANK**

It should give comfort, safety and performance, steel toes Shoe. Oil resistant, layered sole which should provides extreme traction, Superior cushioning.it may have Nylon lining ,Cushioned insole &Deep bar-tread outsole .

It should have Full Grain Leather uppers , Steel Shank. It should have Electrical hazard protection. Hooks & eyelets set on steel washers. Leather upper. Oil & slip resistant polyurethane outsole which should provides lasting performance while minimizing fatigue. It should be durable.

It should be built from Lightweight materials which make them easy to wear. Removable Comfort Core air flow orthotic insert. Soft leather padded collar for added comfort. Steel toe Class may be I75/C75 or better.

4. **HEAVY DUTY WORK GLOVES.**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Material:- Made of fine leather, flexible	-----
b) Application :- Capable to work with hand held machine	

c) Size :- Medium, Large and Extra Large	
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5. **WATER BOTTLE WITH SLING (LIGHTWEIGHT WITH PROTECTIVE CARRIER ELEMENT).**

- Designed to carry on the pack
- It should have Illuninite panels for improved visibility and safety
- It should have a fuel window for bladder level
- It shall have extra wide bladder port and quick connect access.
- It must have Insulated bladder compartment for keeping water cool.
- Ergonomic back panel w/ perforated foam for improved ventilation.
- Contoured shoulder straps for comfort and breath ability
- Adjustable sternum strap
- Light clip strap
- Large cargo compartment with organizer
- Magnetic clip for valve attachment
- Bungee straps for extra storage
- Adjustable to fit medium-large body types
- All the materials used in the construction of outdoor back
- Carry water bottle should be durable
- These bottles should be lightweight and made from the highest quality materials.
- It should with stand disinfections of the bottle using bleach
- The weight of the bottle should not be more than .4 lbs
- It should be provided with a pipe which can drawn water
- While the bottle or canteen is on the back.

6. **SAFETY TORCHES :**

**SPECIFICATION**

THREE CELL WATER PROOF TORCH  
 POWER SOURCE - CARBON ZINC ONLY : 3XD CELL  
 BULB/LAMP : PR-3  
 BULB/LAMP LIFE - 15 HOURS  
 LIGHT OUT PUT - 15,000 BEAM CANDLEPOWER  
 WEIGHT (WITHOUT BATTERIES) - 6 OZ (.17 Kg)  
 WATER PROOF  
 SUITABLE FOR USE IN HAZARDUOUS ATMOSPHERE  
 SPARE BULB COMPARTMENT  
 RING HANGER  
 THREE WAY SWITCH : ON - OFF - FLASH  
 ANTI - ROLL TUBE  
 OVERSIZED FACETED REFLECTOR FOR MORE LIGHT  
 UL APPROVED

7. **FACE SHIELD (MANIKIN)**

- ❑ Rectangular Barrier device used by rescuer when giving mouth-mouth/mouth –nose ventilation in patients.
- ❑ Size 7”x12” outer synthetic layer and 5”x7” central rectangular sieve like filter of non absorbent white plastic;
- ❑ The outer layer has a central hole of 1.5” diameter in the area of contact with patient mouth/nose and rescuer mouth with intervening filter layer
- ❑ Package : Single use disposable in sterile packing.

## 8. NOSE MASK

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<p><b><u>GENERAL</u></b> Nose mask shall be provided with oxygen supplied tubing fabricated from latex free material with suitable female end connection. This should have elastic strip to fix over nose. The nose mask should also be provided with exhale port on either side.</p>	

## 9. EAR PLUG

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) Material :- Made of soft eco friendly fiber material, corded  b)Provision:- With a lace or same type of other arrangement to keep units of both the ear together   c)Application :- To prevent entry of dust &amp; loud sound in the ear  <b><u>BIS Specification</u></b>  d) Material coming into contact with the body shall not cause irritation   e) It shall be resistant to skin oil, hair oil and ear wax.   f)Ear protector shall be made of material which is capable of being cleaned and sterilized.   g)Ear Plug should be elastic to the ear canal   h) Ear plug should be made so that no deleterious changes occur between –25 and + 55 degree centigrade.</p>	<b>IS -9167</b>

## 10. KNEE PADS CUSHION 1”(MAKE SPEEDY OR EQVT)

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) MATERIAL:- made of hard plastic with 1” sponge cushion inside with pair of straps for securing knee pads</p>	-----

b) Application :- To fasten on the knees to protect from injury	
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## 11. **FIRE ENTRY SUIT**

### **INTRODUCTION**

The Fire Entry Suit is meant for momentary use in flame and should be capable of protecting the wearer from ambient heat, conductive heat and radiant heat.

### **CONSTRUCTION OF FABRIC**

It should be made by the texturised. Silica glass yarn that are twice as strong as steel wire of same diameter.

### **HEAT/FLAME RESISTANCE CAPACITY**

The Fire Entry Suit shall be capable of withstanding at least ambient heat of 800 degree Celsius, Radiant heat of 1600 degree Celsius and total flame of 1000 degree Celsius.

### **HOOD**

Designed to be used with air mask. Inner drape flame seals. Under arm adjustment straps. Built – in –shell for structural support. Hard cap with ratchet headgear with adequate thermal protection and should provide view in fire station. Speedy clip for hard copy support. Hardened aluminum window frame with adequate thermal protection and should provide clear view in fire situation

### **COAT**

Designed to be worn with breathing apparatus.

### **PANT**

High waist design 2-inch wide adjustable suspenders. Adjustable straps on leg bottoms.

### **BOOTS**

Designed to fit over work shoes. Rear entry with overlap snap closure and adjustable take up straps. Insulated wire reinforced sole for flame resistant

### **APPROVAL**

For the fabric used for the suit shall have one or more of following approvals.

Listed by underwriter laboratories UL 214

U.S. Coast Guard spec No. 164 009

U.S. Military Spec. MIL-C-0020079 H  
 U.S. Military Spec. MIL- 1 24244C  
 Meets or exceeds BPPA Spec. No. 701.  
 UL 723 FLAME SPREAD: 0 Smoke density :0 Fuel contributed :0

**(C) RESCUE EQUIPMENT**

**1. Hand tool Set:-**

- Pliers 8”(Taparia or eqvt)

<b>Qualitative Requirements</b>	<b>BIS Code no</b>
a) Size : Length 8”  b)Material: made of forged steel with insulated handle  c) Teeth/cutting edge: One jaw having cutting edge & other have teeth  <b><u>BIS Specifications</u></b>  d) The pliers should have insulated handle. The insulating material shall be PVC or any other suitable material.  e) The insulation shall cover the whole of the handle and insulating material shall adhere firmly to the handle  f) The pliers shall pass various tests described in IS 2615	IS-3650

- Vise grip 10” (Taparia or eqvt)

<b>Qualitative Requirements</b>	<b>BIS Code no</b>
a) size : Length 10”  b)Material: made of forged steel  c)Teeth : On both jaws	-----

- Bolt cutter 14” & 30”

<b>Qualitative Requirements</b>	<b>BIS Code no</b>
a) Size : Length 14” b) Cutting jaws: made of high tensile solid alloy steel, specially head treated with center cut heads.	-----

c) Handle: With sufficient grip of rubber fro a length of 6 to 8 inches d) Application: Suitable for cutting hard material viz bolt, iron rod of 8 to 10 mm diameter	
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<b>Qualitative Requirements</b>	<b>BIS Code no</b>
a) Size: Length 30" b) cutting jaws: made of high tensile solid alloy steel, specially heat treated with center cut head c)Handle: With sufficient grip of rubber fro a length of 6 to 8 inches d) Application: Suitable for cutting hard material viz. bolt, iron rod of 10 to 14 mm diameter	-----

➤ Chisel for concrete ½”&1”(Taparia or eqvt)

<b>Qualitative Requirements (Width ½”)</b>	<b>BIS Code no</b>
a) Size : Length 6”, width ½” b) material : made of hardened alloy iron, specially heat treated c)Application: Suitable for chiseling of concrete & brick  <b><u>BIS Specifications.</u></b> d) Chisels shall be made of suitable quality carbon or alloy steels meeting the hardness & other requirements. e)Cutting edge hardness- 550 to 650 HV f) head hardness-345 to 450 HV g) The chisel head shall be heat treated to achieve the hardness given above h) The chisels shall be forged to shape in one piece from hexagonal’, octagonal, square or round bars. i) The body & the ground portion of the chisels shall be given a suitable anti corrosive treatment	IS-402

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) size: Length 8” , width 1”	IS-402

<p>b) material: made of hardened alloy iron, specially heat treated</p> <p>c)Application: Suitable for chiseling of concrete &amp; brick</p> <p><b><u>BIS Specifications</u></b></p> <p>d) Chisels shall be made of suitable quality carbon or alloy steels meeting the hardness &amp; other requirements.</p> <p>e)Cutting edge hardness-550 to 650 HV</p> <p>f) head hardness-345 to 450 HV</p> <p>g)The chisel head shall be heat treated to achieve the hardness given above.</p> <p>h)The chisels shall be forged to shape in one piece from hexagonal, octagonal, square or round bars.</p> <p>i) The body &amp; the ground portion of the chisels shall be given a suitable anti corrosive treatment</p>	
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➤ Screw driver set (Taparia) complete set

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) Size: One complete set of eight sizes of bits</p> <p>b)Type: Flat tip/square tip including star shaped screw driver</p> <p>c)Handle: Insulated handle tested at 3000 volts</p> <p><b><u>BIS Specifications</u></b></p> <p>d) The blades shall be made from suitable steel which is heat treated</p> <p>e)Plastic handle shall be solid and made of cellulose acetate.</p> <p>f) The ferrules shall be made of steel conforming to IS 513</p>	<p>IS-844 (PART-I)</p>

➤ Hacksaw 12” tubular with spare blades

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) Size : Adjustable length 250 mm to 300 mm with handle</p> <p>b)Blade Type: High speed steel blade, size 300 mm x 12.5 mm x 0.63 mm</p>	<p>IS-5169</p>

<p>c) Body: Tubular frame body</p> <p>d) Provision: for tightening &amp; loosening of blades</p> <p><b><u>BIS Specification</u></b></p> <p>Hack Saw frame</p> <p>e) Type : Open grip adjustable flat hacksaw frame</p> <p>f) Nominal size: 250-300 mm.</p> <p>g) Impact test: Dropped on a concret floor from a height of 3 meters</p>	
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➤ Handsaw 600mm

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) Size : Length 600 mm with wooden/ plastic handle</p> <p>b) Shape: Trapezium shape, width at one end 125 mm &amp; 45 mm on the other</p> <p>c) Thickness : 0.80 mm</p> <p>d) Cutting edge: It should be straight</p> <p>e) Material: Blade made of hardened &amp; tempered spring steel strips</p>	-----`

➤ Claw Hammer 4 Kgs

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) Weight : 1 Ibs</p> <p>b) Type: Nagore type</p> <p>c) Size : Width 4"</p> <p>d) Provision: ¾" head dia at one side of hammer &amp; claw on the other side to remove nail</p> <p>e) Handle : Wooden handle</p> <p><b><u>BIS Specifications</u></b></p> <p>f) Striking face harness : 46 to 58 HRC</p> <p>g) Hammer shall be cleanly forged &amp; free from flaws, seams, &amp; other forging defects.</p> <p>h) The claw hammer shall be made of steel conforming to designation T-55 of IS-1570</p> <p>i) The handle shall confirm to IS-4953 &amp; shall be shaped before fitting to suit the eye of the hammer.</p>	IS-6546

➤ Sledge Hammer 7Kgs and 10 Kgs

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Weight : 7 KG b) Provision : Iron head c) Handle : Wooden handle` d) Application: To break concrete & drive stacks <b><u>BIS Specification</u></b> e) The hammer heads shall be made from fully killed forging quality steel. f) The hammer heads shall be hardened & tempered on the striking faces & peins only. g) The striking face shall have harness between 46 to 58 HRC h) The hammer heads shall be cleanly forged in one piece.	IS-841

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Weight : 10 KG b) Provision: Iron head c) Handle : Wooden handle d) Application: To break concrete & drive stacks <b><u>BIS Specifications</u></b> e) The hammer heads shall be made from fully killed forging quality steel. f) The hammer heads shall be hardened & tempered on the striking faces & peins only. g) The striking face shall have hardness between 46 to 58 HRC. h) The hammer heads shall be cleanly forged in one piece.	IS-841

➤ Carpenter Hammer 3”

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Weight : 1 lbs b) size: Width 3”, 3/4” head diameter c) Application : To drive nails d) Material & Handle : Made of tempered steel with Wooden handle <b><u>BIS Specification</u></b> e) The hammer heads shall be made from fully killed forging quality steel.	Is-841

<p>f)The hammer heads shall be hardened &amp; tempered on the striking faces &amp; peins only.</p> <p>g)The striking face shall have hardness between 46 to 58 HRC.</p> <p>h) The hammer heads shall be cleanly forged in one piece.</p>	
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➤ File flat 12”

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a)Type: Flat file, double cut, rough</p> <p>b) Size : Length 12”</p> <p>c) Handle: Wooden handle</p> <p>d)Material: High speed steel</p> <p>e)Application: To sharpen tools &amp; to smooth rough edges</p> <p><b><u>BIS Specification</u></b></p> <p>f) Wooden handle Material- The handles for rasps/engineers files/engineers scrapers shall be manufactured from any of the timbers specified for class V handles.</p> <p>g)The material should be of designation 118n T 3 as per IS 3748</p> <p>h)The hardness of cutting portion of the file shall be 745 HV</p> <p>i) flat file shall be of rectangular cross section, parallel for 2/3 file length and then tapering towards the point in with width and parallel or slightly tapering in thickness</p>	<p>IS-1931 &amp; IS 2895</p>

➤ Crescent wrench 8”

**2. COMBINATION CUTTER AND SPREADER (BATTERY OPERATED)**

**3. RAMSET WITH MATCHING FOOT PUMP**

**4. HYDRAULIC JACKS 5 TONS**

**5. PINCH POINT PRY BAR 60”**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a)Size : Length 5.5. feet, diameter/thickness 1” b)Material: Made of tempered steel c) Application: To align, adjust, move & pry <b><u>BIS Specification</u></b> d) The bars shall be heat treated to obtain a minimum hardness value of 320 HV. e) The material shall be suitable quality steel such as wrought steel f) The bars shall be forged clean & in one piece.	IS-704

**6. FIRE AXE 2 ½ FEET**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Size : 12” with 2.5 feet long rod b)Weight: 5 kg c)Handle: Fully Insulated handle tested at 2500 volts  <b><u>BIS Specifications</u></b> d) Axe heads shall be made of suitable grade of tool steel. (As per IS 3748) e)The Weight of hand & felling axes shall be 1 Kg & 2 Kg respectively with tolerance of + 7.5 % & -2.5%(As per IS 703) f) hardness-550 to 650 HV at a point 13 mm from cutting edge(As per IS 703) g)Mechanical test-Axe head shall be fitted with handles & tested by striking 12 blows against a heavy block of hard timber.	IS-703

**7. FLAT HEAD AXE**

**8. CLAWED CROW BAR 5 FEET”**

**9. SPADES 10”**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
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<ul style="list-style-type: none"> <li>a) Size : Length 12”, width 10”, of rectangular shape</li> <li>b) Material: made of wrought iron</li> <li>c) Handle: Provision of wooden handle to be incorporated</li> <li>d) Application: Suitable for various types of earth work</li> <li>e) <b><u>BIS Specifications</u></b></li> <li>f) The shovel blade shall be made of suitable quality sheet steel as such T-50, T-55.</li> <li>g) Each blade shall be made in one piece without any welded or riveted joint.</li> <li>h) Shovels to be supplied with handles complete.</li> <li>i) The blades shall be well formed &amp; cleanly made.</li> <li>j) The blades shall be free from scams, splits, cracks.</li> </ul>	IS-274
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**10. SHOVELS 10” (D-HANDLE)**

**11. PICKS(CHISEL AND POINT)**

**12. COME ALONG 1.5 TONS CAPACITY WITH STD. LENGTH 1.5M(TITAN OR EQVT)**

		<p>Capacity - 1.5 ton/ 2 ton  Used for Lifting , lowering and pulling the load.  Chain length – not less than 3 meter  Anchor hooks on both sides of the chain  Handle length 2 to 3’  Three positions for working of come along should be clearly marked at travel lever as lift, lower and neutral.  With built in safety and free spool Facility.</p>
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**13. SET OF PULLY BLOCKS (SINGLE, DOUBLE, TRIPLE SHEAVES)**

**14 & 15 ROPE MANILEA 2” 200M & 100M ROLLS**

Qualitative Requirements	BIS Code No.
Rope Manila of size 20 to 25 mm and made from Hessian Fabric with 3 strands laid in s or z pattern.	

**16. ROPE NYLON 1” 100M ROLLS**

Qualitative Requirements	BIS Code No.

. It should be made up of 3 strands, adequate abrasion resistance with following specifications:-

Size (Dia-mm)	Breaking strength
10 mm	Should be more than 1500 lbs
12 mm	Should be more than 2000 lbs
14 mm	Should be more than 3000 lbs
16 mm	Should be more than 3500 lbs

**17. CAMMING DEVICES (PRUSIK LOOP)**

**18. CRIBBING & WEDGE KIT SETS WITH CONTAINERS**

**19. TAPE MEASURES**

**20. TELESOPIC LADDERS 20-35 FEET**

**21. TARPAULIN 4mX 4m**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a)Size:- 4 meter x 4 meter</p> <p>b)Material:- Made of water proof canvas cloth, its edges should be secured by stitching a strip of similar cloth or otherwise of 1” width along the periphery of Tarpaulin.</p> <p>c) Color:- Green/Navy blue</p> <p><b><u>BIS Specification</u></b></p> <p>1. Basic fabric : shall be made from cotton duck or cotton canvas.</p> <p>2. Common proofing shall be prepared with the ingredients consisting essentially of paraffin wax, a suitable pigment and aluminum stearate.</p> <p>3. Resistance to microbial attack- The Material shall be rendered resistant to microbial attack treating with suitable rot- proofing agent.</p> <p>4. Sweating test- The common proofed canvas/duck shall not stain the blotting paper when tested as prescribed.</p> <p>Braking strength not less than 90 % of specified value prescribed for the basic fabric. (As per IS: 2089 –197 page No.-4&amp;5)</p>	2089

**22. TARPAULIN 6mX 6m**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
<p>a) Size :- 6 meter x 6 meter</p> <p>b) Material:- made of water proof canvas cloth, its edges should be secured by stitching a strip of similar cloth or otherwise of 1” width along the periphery of Tarpaulin.</p> <p>c) Color :- Green/Navy blue</p> <p><b><u>BIS Specification</u></b></p> <ol style="list-style-type: none"> <li>1. Basic fabric : shall be made from cotton duck or cotton canvas.</li> <li>2. Common proofing shall be prepared with the ingredients consisting essentially of paraffin wax, a suitable pigment and aluminum stearate.</li> <li>3. Resistance to microbial attack- The Material shall be rendered resistant to microbial attack treating with suitable rot-proofing agent.</li> <li>4. Sweating test- The common proofed canvas/duck shall not stain the blotting paper when tested as prescribed.</li> </ol> <p>Breaking strength not less than 90 % of specified value prescribed for the basic fabric. (As per IS: 2089-1977 Page No.-4&amp;5)</p>	IS-2089

**23. CARBON-DI-OXIDE EXTINGUISHER(CO<sub>2</sub>)-9 LTRS.**

**24. GENERATOR PORTABLE 2500W KEROSENE FUEL**

<b>S.No.</b>	<b>Qualitative Requirement</b>	<b>BIS Code No.</b>
a)	Rated out put - 2100-2300 watt	IS-2646 & IS 2635
b)	Maximum Out put 2400-2600 watt	
c)	Fuel : kerosene/Petrol	
d)	Rated current : 10.5 amp	
e)	Over load protector : for AC & DC Earthing	
f)	Other provision : Provision for battery charging, pull manual start facility	
g)	Rated voltage : 220 Volts	
h)	Rated frequency :- 50 Hertz	
i)	DC Out put : Only for charging 12 volts automotive batteries ,Maximum charging out 8.3 amp	
j)	Dimension :- (LXWXH) 605 mm x 425mm x 550mm (+20% margins)	
k)	Dry Weight : 60 to 65 kgs	

l)	Engine type : 4 stroke, 1 cylinder	
m)	Cooling system : Forced air cooling	
n)	Ignition system : transistorized coil ignition	
o)	Oil capacity : 1 to 1.5 liters	
p)	Fuel tank capacity : 12 to 15 liters	

**25 . WORKING LAMPS 50M, 6mm PVC WIRE**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Type : With bulb holder, wire mesh protection for bulb	-----
b) Handle : Fully Insulated handle to provide manual grip	
c) Cord: PVC wire of 6 mm, 50 meter length with 2/3 pin plug	

**26. EXTENSION BOARDS & CORDS (CORD LENGTH 25M, WIDTH 8mm)**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Type: With one 15 amp & two 5 amp switch socked fixed on wheel of diameter 1 feet with handle	-----
b)Handle: Insulated handle of 6” to provide manual grip	
c) Cord : PVC wire 8 mm, 25 meter length with 2//3 pin plug, with wrapping arrangement on wheel.	

**27. MEGAPHONES (OUTPUT 16W MAXI20W 12V BATTERY, VOICE RANGE 0.4 Km)**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Power output; 16 watt rated, 20 watt maximum	IS-7136
b)Voice range : 0.40 km(1 km in quiet area)	
c) power source : 12 volts DC, 8 x UM-2 CELLS	
d)Microphone: Unidirectional, with volume control & press to talk switch	
e)Dimension: Horn diameter 220 mm, length 370 mm	
f)Weight: 2 kg(approximate)	
g)Operation: Dry cell & car battery operation	
h)Body: Sturdy & light weight with inbuilt siren	
<b><u>BIS Specification</u></b>	

i) The megaphone shall be able to withstand the following climatic severities: Dry heat : + 70C Cold heat : - 10C Damp heat: 2 cycles k) Weight : No more than 2 kg. l) Harmonic distortion: should be less than 10% at 1000 Hz m) Frequency response : overall frequency response shall be within plus minus 3 db from 300 to 3000 Hz.	
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**28. WATER JELL BLANKETS(8'X 6')**

**GENERAL**

The water jel blanket is construction from 100% virgin wool and the color is off-white. It is double intercellular with Woven 2" square Pockets. Treatment – Kroy. Canisters and attached labels were tested for weathering, low temperatures resistance and ultra violet resistance. Helps to lower skin temperature and ease the pain of burns while protecting the wound from further contamination.

**TECHNICAL SPECIFICATION**

Appearance – Off- white , translucent, Odor-Characteristic, Specific Gravity- 0.988-1.046, PH-4.0-6.0 unique multi-purpose product for emergency burn care, and fire protection. Size: 8' x 6' . In its larger sizes, water Jel can be used to extinguish small fires put out flames on a victim and shield rescuers from heat and flames. It is ideal from industrial plants, on-location worksites, and restaurants emergency vehicles. The packing is as follows- blanket inner bag- extruded polyethylene; Knife cut mark on top at each side of bag. Canister -High density polyethylene.

Blanket Pouches (Foil) . A combination laminated printed web consisting of 48 gauge polyester.

**29. SET OF TWO BLANKETS (DISPOSABLE)**

**30. STRETCHERS (CANVAS FOLDING STD SIZE)**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
The Stretcher should have following features :-  a) Foldable and compact with built-in flotation.  b) Color coded patient restrain straps with double locking Quick release safety buckles and built in head restraints system.  c) Corrosion resistant stainless steel frame with	

nylon cover and case.	
d) Vertical hoisting sling.	
e) Individual replacement components.	
f) Weight should not be more than 20 Kgs.	

**31. BACKBOARD LONG WITH STRAPS (SPINAL BOARD)**

<b>Qualitative Requirements</b>	<b>BIS Code no.</b>
a) Material:- Made of Nylon fiber, closely woven, heavy duty web belt	-----
b) Provision- Dual side release buckle with male and female ends for fastening, buckles fixed at both ends.	
c) Size :- 150 Cm length of belt (2 piece), 2” wide	

**Back Board long (Spine Board)**

<b>Qualitative Requirement</b>	<b>BIS Code</b>
a) Size : 1830 mm x 420mm x 60 mm	-----
b) Weight : 5 kg	
c) Capacity : 200 Kg	
d) Material : CT and Radio Lucent, made of carbon fiber.  Having provision for strapping at suitable places And lifting the board.	
e) Accessories : 1 set(nos. of) Nylon straps not less than 3 cm width with instantaneous /quick release male and female buckles	

32. MEDICAL FIRST RESPONSE KITS WITH BOX:

Qualitative Requirements	BIS Code no.
<p>Material : Fabricated from thermo setting plastic Like bakelite of yellow/orange color</p> <p>b) Size :- 18” x 10” x 10”</p> <p>c) Shape/Arrangement:- It should have press lock arrangement for its opening. It should have handle centrally located at the top for carrying from one place to another. The inner chamber of the box should have at least 2 trays, one tray fixed at the depth of 4” from the top and the other tray at the depth of 5” from the first tray. This tray should have walls running parallel to the width. The afore said walls should be of similar material as that of tray and its depth/ height should be suitably adjusted for easy sliding. The box should open from top as well as from one of its sides.</p>	<p>-----</p>

➤ **Bite Sticks:**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Material: plastic</li> <li>▪ Length: 6 inches</li> <li>▪ Width: 0.5 to 0.75 inches</li> <li>▪ Thickness 2-3 mm at one end tapering to 05. mm at other end with Good grip</li> <li>▪ Used to removes stings from epidermis of skin</li> </ul>	

➤ **STIFF NECK COLLARS (SHORT, REGULAR, PEDIATRICS, TALL IMPORTATED)**

CERVICAL COLLAR SHORT (AS PER IS: 11569)

- Rigid cervical collar-extrication type
- Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.
- Padded chin rest for application by sweep technique.
- Colour coded and measure holes for easy identification and measurement of correct size.
- Velcro for easy fixation.
- MRI/CT Scan compatible; radio lucent
- Tracheal access opening for advanced airway procedure;
- Rear panel opening for cervical spine palpation

- Latex free and durable
- This size of finished c-collar should not be less than 4.5 cm when measurement as per prescribed procedure.

**COLLAR STIFF NECK REGULAR (AS PER IS: 11569)**

- Rigid cervical collar-extrication type
- Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.
- Padded chin rest for application by sweep technique.
- Colour coded and measure holes for easy identification and measurement of correct size.
- Velcro for easy fixation.
- MRI/CT Scan compatible; radio lucent
- Tracheal access opening for advanced airway procedure;
- Rear panel opening for cervical spine palpation
- Latex free and durable
- This size of finished c-collar should not be less than 6 cm when measurement as per prescribed procedure.

**COLLAR STIFF NECK (PEDIATRICS) (AS PER IS: 11569)**

- Rigid cervical collar- extrication type
- Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.
- Padded chin rest for application by sweep technique.
- Colour coded and measure holes for easy identification and measurement of correct size.
- Velcro for easy fixation.
- MRI/CT Scan compatible; radiolucent
- Tracheal access opening for advanced airway procedure;
- Rear panel opening for cervical spine palpation
- Latex free and durable.

**COLLAR STIFF NECK TALL (AS PER IS: 11569)**

- Rigid Cervical collar-extrication type
- Material: soft plastic rigid enough to avoid 70% of neck movement and lined inside with soft cushion.
- Padded chin rest for application by sweep technique.

- Colour coded and measure holes for easy identification and measurement of correct size.
- Velero for easy fixation.
- MRI/CT Scan compatible; radiolucent
- Tracheal access opening for advanced airway procedure;
- Rear panel opening for cervical spine palpation
- Latex free and durable
- This size of finished c-collar should not be less than 10 cm when measurement as per prescribed procedure.

➤ **Gauzes dressing Vaseline:**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>• Non adherent dressing U.S.P. impregnated with U.S.P. white Petrolatum</li> <li>• Size: 10 x 10 cm</li> <li>• Package: sterilized 10 pieces/pack</li> </ul>	

➤ **Multi trauma Dressing (12" x 3")**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>❑ Size: 12" x 3"</li> <li>❑ Layers: of 16 ply of good absorbent quality gauze With cotton in between</li> <li>❑ Thickness: at least of 5 cm</li> <li>❑ Package: presterilized packs of 3 pieces/pack; ready to use</li> </ul>	

➤ **FLEXIBLE SPLINT (LARGE/ MEDIUM/SMALL)**

- ❑ Material light weight , radio lucent, moldable.
- ❑ Water Proof and body fluid poof.
- ❑ Portable light weight padded flexible splints of three sizes and reusable,
- ❑ Standard and junior sets with all three sizes

- Velero strapped for easy application and removal
- **RESTRAINTS PATIENT (1PC 8” STRAP & 2PC STRAP)**
- **BANDAGES KLING 3” & 6” (5m ROLL EACH)**
- **BANDAGES TRIANGULAR 40” x 40”:**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Dimensions: 90 x 90 x 120 cm size bandage</li> <li>▪ Material: good quality calico material</li> </ul>	

- **TAPES DERMICAL CLOTH 1” & 2”**

**Tape dermical cloth: 1”**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Dimensions: 2.5 cm x 9 meter</li> <li>▪ Hypoallergenic surgical micro pore adhesive tape</li> </ul>	

**Tape dermical cloth: 2”**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Dimensions: 5 cm x 9 meter</li> <li>▪ Hypoallergenic surgical micro pore adhesive tape</li> </ul>	

- **GLOVES STERILE LATEX (MEDIUM, LARGE & X LARGE)**

**Gloves Latex – Medium:**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Size: Medium</li> <li>▪ Material: natural rubber Latex, single use disposable powder free;</li> <li>▪ Sterilized sealed packs</li> <li>▪ Should meet emergency medical glove requirements of NFPA</li> <li>▪ 1999 standard on protective clothing for emergency medical operations, 1997 edition</li> </ul>	

**Gloves Latex- Large:**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Size: Large</li> <li>▪ Material: natural rubber latex, single use disposable ; powder free;</li> <li>▪ Sterilized sealed packs</li> <li>▪ Should meet emergency medical glove requirements of NFPA</li> <li>▪ 1999 standard on protective clothing for emergency medical operations, 1997 edition.</li> </ul>	

**Gloves Latex- Extra large:**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Size : Extra Large</li> <li>▪ Material natural rubber latex, single use disposable; powder free;</li> <li>▪ Sterilized sealed packs</li> <li>▪ Should meet emergency medical glove requirement of NFPA</li> <li>▪ 1999 standard on protective clothing for emergency medical operations, 1997 edition.</li> </ul>	

➤ **MASKS (CPR) :**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Face mask with one way valve and filter</li> <li>▪ Used as physical barrier for mouth to mouth ventilation</li> <li>▪ Ventilation tube length 1-1-.25”</li> <li>▪ Pre inflated cuff for effective and good seal with transparent mask</li> <li>▪ Oxygen delivery inlet</li> <li>▪ Hard case for carrying mask and one microbial wipe.</li> </ul>	

➤ **TRIAGE RIBBONS OF VARIOUS COLOURS**

**Triage Ribbon Green:**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"><li>▪ Material: satin and color fast</li><li>▪ Width: 2.5 cm</li><li>▪ Length: 50 meters</li></ul>	

**Triage Ribbon Red:**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"><li>▪ Material: satin and color fast</li><li>▪ Width: 2.5 cm</li><li>▪ Length: 50 meters</li></ul>	

**Triage Ribbon Black:**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"><li>▪ Material: satin and color fast</li><li>▪ Width: 2:5 cm</li><li>Length 50 meter.</li></ul>	

**Triage Ribbon Yellow:**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"><li>▪ Material: satin and color fast</li><li>▪ Width: 2.5 cm</li><li>▪ Length : 50 meters</li></ul>	

➤ **Masks Universal size:**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"><li>▪ Size: Adult universal size</li><li>▪ Material: Disposable, single use</li><li>▪ layer filter face mask with nose clip;</li><li>▪ N95/HEPA Respirator type</li><li>▪ Should have 2 straps one to secure above ear level and other below</li></ul>	

<ul style="list-style-type: none"> <li>▪ ear level.</li> <li>▪ Package: in packets of 50/100; sterile</li> </ul>	
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➤ **Sponges Sterile: 4” x 4”:**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"> <li>▪ Dimensions: 10 x 10 cm</li> <li>▪ Material: 12 ply, good absorbent quality</li> <li>▪ Package: packet of 4 swabs sterilized and ready to use packs</li> <li>▪ Thickness : 1 to 1.5”</li> <li>▪ Operating temperature of 0°C to 50°C and water resistance as per</li> </ul> <p>IEC 60529/en 60529 IP 44</p>	

➤ **SCISSORS DISINFECTANTS (PARAMEDICAL)**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"> <li>▪ Length 6” to 9”, width 3 mm</li> <li>▪ Stainless steel body</li> <li>▪ Plastic unsheathed finger slots.</li> </ul>	

➤ **Oxygen Cannula - Nasal**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<ul style="list-style-type: none"> <li>▪ Oxygen delivery device compatible with oxygen regulator(light weight</li> <li>▪ Material: soft transparent good quality plastic of 2-3 mm diameter</li> <li>▪ Tube length: 3 meters</li> <li>▪ Nasal prongs in closed loop which is adjustable and of ultra soft,</li> <li>▪ Non-irritant pliable plastic and about 5-10 mm in length;</li> <li>▪ Head straps(elastic and adjustable) for securing</li> <li>▪ Package: disposable sterilized individual packs</li> <li>▪ Should provide safe comfortable low flow oxygen in concentration of 24-44% with 1 to 6 litter flow per minute.</li> </ul>	

➤ **Airway Oral (60mm/80mm/90mm/100mm set)**

Qualitative Requirements	BIS Code No.
<ul style="list-style-type: none"> <li>▪ Size: set of 60 mm/ 80 mm/90 mm/100 mm</li> <li>▪ Material: good quality plastic; disposable airways</li> <li>▪ Color coded for different sizes;</li> <li>▪ In sets of above sizes in sterilized packs</li> </ul>	

**33. OXYGEN CYLINDERS 680L(OXYDOSE) LIGHTWEIGHT WITH ACCESSORIES)**

**34. CASUALTY BAGS (FULL & HALF)**

**35. CASUALTY BAGS (HALF)**

**36. LIFE JACKETS**

QUALITATIVE REQUIREMENT	BIS CODE NO
<p><b><u>GENERAL</u></b></p> <p>It should be useful in sea , in case of Floods, Safety measure for vessels &amp; Sea Mishaps. It should be chemically resistant to sea water and petroleum products. It special construction should allow quick turning time in case of being knocked unconscious. It should have Light that gets automatically activated when in contact with sea water/petroleum products. The light should have an automatic electronic water activation system and is capable to work between – 1degree to + 30 degree C.</p> <p><b><u>TECHNICAL SPECIFICATIONS</u></b></p> <p>The inner foam should be made of soft polyurethane foam. It should have high visibility orange colour fabric, which enhances visibility . the Retro-Reflective Tape should be solas approved having floatability : at least 15.5 kilos, Size : 80x 37x 10 cms approx.</p> <p><b><u>TESTING</u></b></p> <p>It should be prototype . Tested i.,e. Temperature cycling test, Drop Test, Oil Resistance Test, Fire Test, Floation Test , Strength Test. It should be 24 hr water immersion tested. It should be performance Tested.</p> <p><b><u>APPROVAL</u></b></p>	

Life Jacket & Light should be MMD approval & Stamped Individually.	
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**37. VHF BASE STATION WITH ESSENTIAL ACCESSORIES (25WATTS)**

**38. VHF WALKIE TALKIES 1W/5W**

<b>Qualitative Requirements</b>	<b>BIS Code No.</b>
<b><u>I. GENERAL</u></b>	
1. Frequency range	135 MHz is also routable with less weight
2. No. of Channels	99 Synthesized channels
3. Frequency stability	5 PPM or better for 12.5 KHz
4. Emission	11KOF3
5. Channel Spacing	12.5 KHz
6. Weight	500 Gms max. with battery
7. Duty Cycle	1:1:8 for 10 min cycle
8. Type of operation	Simplex , Semi-duplex, Press to talk with built-in speaker
9. Type of Antenna	Helical Antenna
10. Speaker Impedance	8 Ohms
11. Output impedance	50 Ohms
12. Power Supply	12V 1000 MAH rechargeable Battery pack test voltage 12.5 V DC
<b><u>II. TRANSMITTER</u></b>	
1. RF Power Output	Selectable in three levels from front panel key pad: Low : 1.0 watt + 1db - Medium : 2.0 watt + 1db - High : 5.0 watt + 1db -
2. Frequency Deviation	+ 2.5 KHz max. (for 100 % at 1 KHz) -
3. Frequency Spread	Complete frequency band coverage (degradation with in RF Power specification)

4.	Spurious and Harmonics	60 db or better	
5	Modulation Fidelity	+ 1-3 db of 6 db/Octave pre-emphasi characteristics from 300 Hz to 2550 Hz with 1 KHz as reference.	
6	Modulation distortion	Less than 5% at 1 KHz reference and + 1.5 KHz deviation.	
7	Modulation Sensitivity	- 1 to 10 mV at 1 KHz at mic input for + 1.5 KHz std Deviation	

Qualitative Requirements			BIS Code No.
<b><u>III RECEIVER</u></b>			
1.	Sensitivity	Better than 0.25 uV for 12 dB SINAD and 0.4 uV for 20 dB quieting.	
2.	Squelch Sensitivity	0.2. uV or better at threshold	
3.	Selectivity	60 dB or better at + 12.5 KHz -	
4.	Image Rejection	Better than 65 dB	
5	Audio Out Put	250 mW min. across 8 Ohms speaker with less than 5% discretion at 1KHz reference with test deviation.	
6	Audio Response	+1 -3dB of 6 dB /Octave de-emphasis characteristics from 300 Hz to 2550 Hz with 1 KHz as reference.	
7	Frequency Spread	Complete frequency band coverage.	
<b><u>IV. POWER SUPPLY</u></b>			
12 V NI Mh Battery pack of 1000 MAH			
<b><u>OTHER FEATURES</u></b>			
1.	Simple PC based programming		
2.	Transmitter Time-Out Timer		
3.	Low Battery indication		
4.	Scanning		
5.	Priority Channel		

6.	Channel skip (Hiding Facility)	
7.	Selection of power(1/2/5 watt) from front panel	
8.	Channel Busy indicator	
9.	Cloning facility	
10.	MIL 810 C.D.E.	

**39. BUILDING MARKING KIT**