

DREDGING CORPORATION OF INDIA LIMITED

VISAKHAPATNAM

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DUTIES AND RESPONSIBILITIES OF

FLEET PERSONNEL

(ENGINE/DECK DEPARTMENT)

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DUTIES AND RESPONSIBILITIES  
OF  
FLEET PERSONNEL  
(DECK DEPARTMENT)

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## RESPONSIBILITY & AUTHORITY

### MASTER

1. He is the administrative head and responsible for the safe and effective operation, management and optimum productivity of the Dredger.
  2. He shall ensure effective implementation of safety, security, quality health and environmental management systems in accordance with SMS Manuals.
  3. Implementing the Health, Safety and Environment policy of the Company.
  4. Setting a good example for subordinates by following established safety rules and motivating the crew in the execution of the policy.
  5. Assigning roles to Deck officers, Petty Officers and Crew with respect to the SMS. Ensuring each crew member receives an initial orientation, covering company safety policy, emergency procedures, access and egress, fire fighting, job hazards and information on hazardous materials before beginning work and documenting the same.
  6. Ensuring that each crew member is competent to perform a task / job by imparting a pre-job training.
  7. Ensuring that all SMS documentation including the controlled copy of SMS Manuals is kept updated and maintained as per company procedure.
  8. Taking necessary action for rectifying non-conformities, preventing accidents and hazardous situations and reporting the same to the Company. Carrying out a preliminary investigation of all accidents and report the findings to the company management.
  9. Identifying the training needs of onboard personnel and intimating the same to DP through 'SCM' minutes. Ensuring training to each crew member on use of required personal protective equipment.
  10. Reviewing on-board contingency plans and shipboard procedures and reporting the deficiencies to the Designated Person (DP).
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11. Reviewing the Company's SMS as per Section 1.6 of SOM and reporting the deficiencies and suggesting the changes to Designated Person.
  12. Reviewing all the risks to his ship, personnel and the environment and the safeguards established as to their assessment is still valid; suggesting suitable modifications to the risk assessment and their management in place.
  13. Carrying out safety drills and exercises on board vessels as per guidelines.
  14. Completing periodic inspection of health and safety checks of the vessel accompanied by experts in related areas.
  15. Ensuring planned preventive maintenance is carried out on time.
  16. Ensuring the statutory requirements, with regards to safe manning, are fulfilled. Master shall maintain record of certificates, endorsements, dispensation, medical fitness, training and competence of the seafarers engaged on board his ship.
  17. He shall personally verify the validity of the Certificates of Competency of all Officers on reporting and shall keep the Certificates under his safe custody.
  18. Implementing Company's Drug and Alcohol Policy.
  19. Ensuring health, housekeeping, welfare and discipline on board vessels.
  20. Ensuring that all documentation that is designated as "controlled" is kept updated maintained as per company procedure.
  21. Liaison with the client representative on board in operational matters,
  22. He shall update the status of ships certificates, prepare for surveys in consultation with Technical superintendent. Close all NCs and observations raised during audits
  23. Update of major defects and notify the same to concerned technical dept.
  24. Prepare list of major jobs/surveys to be completed in dry docking. Indent necessary spares required during dry docking and for operation of the vessel
  25. Update the inventory (deck) and raise SCR
  26. Forwarding monthly crew attendance and OT details for payment
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27. Ensuring that all records, relevant to the SMS, are made available on board the vessel as per Checklist DOC -- 002. Handing over and Taking over of command of the Dredger by a Master shall be as per Checklist DOC—003
28. Overall In-charge of the vessel and having overriding authority as far as safety of the vessel & crew is concerned.
29. Shall look-after the welfare of the crew and ensure all the grievances raised by the crew are resolved amicably in compliance with MLC'2006.
30. He is responsible for maintaining discipline and morale onboard the vessel.
31. He shall ensure to follow and implement onboard the rules / regulations and procedures laid down by the corporation.
32. He shall ensure for the sea-worthiness of the vessel and take all appropriate measures to keep the vessel sea-worthy all the time.
33. Master is responsible for day to day production and also for timely completion of assigned task / project in line with the contracts concluded with the clients.

Owing to its special working environment, DCI has 3 types of Officers with 3 different types of Certificate of Competency. An officer who holds Dredge Master Grade I or Master (FG) or Master (NCV) is designated as Dredge Master, an officer who holds Dredge Master Grade II or Mate (FG) or Mate (NCV) is designated Chief Officer and an officer who holds Dredge Mate Grade I or 2<sup>nd</sup> Mate (FG) or NWKO (NCV) is designated 2<sup>nd</sup> Officer. At times a dredger may have more than one officer who holds any of the above Certificates. To avoid confusion of duties with regard to SMS the following designations are made.

1. Senior Watch keeping Officer (SWO) -- The senior deck watch keeping officer on board among the Dredge Master / Chief Officer / 2<sup>nd</sup> Officer excluding the Master.
2. Junior Watch keeping Officer (JWO) – The junior deck watch keeping officer on board among the Dredge Master / Chief Officer / 2<sup>nd</sup> Officer.
3. Where there are three navigating officers two of them shall be designated as JWOs.

## **SENIOR WATCHKEEPING OFFICER**

The Dredge Master / Chief officer is the Senior watch keeping officer and directly responsible for the Safety of Vessel, personnel and protection of environment. The responsibilities of Chief Officer are:

1. Maintenance of deck and accommodation.
2. Maintenance and upkeep of all dredging equipment.
3. Raising of indents for stores and spares.
4. Raising work orders for workshop assistance.
5. Upkeep of Deck Spares and Stores and reporting consumption to Master and updating inventory records.
6. Training all Deck Officers, Petty officers and Crew on efficient and safe operation.
7. Planning/Execution of dredging operations and following the related safety procedures.
8. Garbage and Oil Pollution prevention responsibilities.
9. Ensuring deck officers and crew follow safe working practices as defined in company procedures.
10. Arranging watch keeping duties of deck officers, petty officers and crew in such a way that their rest hours are as per requirement.
11. He shall look after the welfare of the deck staff and responsible for cleanliness of the crew quarters. He shall accompany the Master in inspecting the accommodation spaces .
12. He shall train the cadets properly.

In addition to normal 8 hours watch keeping , above officer has to do additional 2 hours for carrying out above duties.

He shall be assisted by other deck officers, Petty Officers and Crew.

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**JUNIOR WATCHKEEPING OFFICER (Duties to be distributed among both 2<sup>nd</sup> officers by Master)**

1. He will assist the Senior Watch keeping Officer to ensure the safe and efficient operation of the ship.
  2. He will assist the Senior Watch keeping officer in forwarding monthly returns to Head Office
  3. He is the Navigating Officer and is responsible to the Master for passage planning and maintenance of charts and nautical publications.
  4. He is responsible for maintenance of decks and accommodation/galley stores/fresh water(As per MLC)
  5. He is the Medical Officer and is responsible for medical administration and stores and shall maintain records of stocks and replenish stocks periodically as per relevant Merchant shipping Medical Scales.
  6. He is responsible for the upkeep of the Radio and Electronic stores, spares and Manuals including the ALRS Manuals in the absence of the Radio Officer.
  7. He is responsible for maintenance of LSA/FFA Equipment
  8. He is responsible for maintenance and repair of Navigational and other Bridge equipment.
  9. Dredging operations and following the related safety procedures.
  10. He is responsible for the upkeep of the Radio and Electronic stores, spares and Manuals including the ALRS Manuals in the absence of the Radio Officer.
  11. He is responsible for maintenance and repair of Navigational and other Bridge equipment.
  12. Dredging operations and following the related safety procedures.
  13. He is responsible for all Fresh water , Ballast and Buoyancy tanks and ensure that all tanks are sounded and recorded once in a day.
  14. He is responsible for maintaining health, hygiene and safety onboard.
  15. He is responsible for dredging reports , calculation of lightship displacement, DLM operation etc.
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In addition to normal 8 hours watch keeping , above officer has to do additional 2 hours for carrying out above duties.

### **SAFETY OFFICER**

The Master shall appoint a Certified Officer as the Ship's Safety Officer, who shall be responsible for the following:

1. Programming and recording all safety and anti-pollution exercises and drills and maintaining of records.
2. Identifying and addressing training needs of onboard crew members and advice Master in matters pertaining to work procedures being followed by the crew members.
3. Ensuring Familiarisation for ship staff signing on is being carried out and maintaining records on the same.
4. Investigating non-conformities and applying corrective actions as instructed by Master.
5. Ensuring adequate resources for maintaining deck side safety and anti-pollution equipment in a complete state of readiness.

### **SECRETARIAL AND STORES OFFICER (SSO) /PO(STORES)**

He shall report to the Master and CEO and is responsible for,

1. Minuting Safety Committee Meetings and filing of the same.
  2. Ensuring that all returns pertaining to SMS are made in time and records are maintained.
  3. Verification of Medical certificates of newly joining staff and arranging with Project office for periodical Medical Examination of ships staff as necessary.
  4. Verification and Collection of Certificate of competency and CDC's of reporting personnel and maintaining record of the same.
  5. Carry out Pre-Joining Briefing of all personnel joining on board except Master and CEO as per TRG – 001. Ensuring newly reporting personnel are
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issued appropriate checklists (BR – 001, ER – 001, TRG – 002 etc) and the record on the same are maintained.

6. Documentation of the vessel when in distress.
7. Accounting of all spares and stores inventory of deck and Engineering Departments and maintaining records for receipt, transfer and consumption of the same and making periodic returns to the Head office as and when required.
8. Cleanliness and hygiene of mess, galley, stores and living spaces.
9. Maintenance and upkeep of Linen stores and Welfare items.

### **TUBE OPERATORS**

The responsibilities of Tube Operators are:

1. Main responsibility is operation of suction pipes with maximum possible efficiency and maintenance of suction tube/ Jet pipe Drag head in good order
  2. They should lubricate all dredging equipment like gantries/ winches/ Dredging wire with assistance of Seamen.
  3. They assist Chief Officer and 2<sup>nd</sup> Officers in day to day maintenance of the vessel.
  4. They assist Chief Officer and 2<sup>nd</sup> Officers in raising defect lists for repairs and indents for spares and stores.
  5. They assist Chief Officer and 2<sup>nd</sup> Officers in preparing the dredger for surveys and audits.
  6. They assist Chief Officer and 2<sup>nd</sup> Officer in preparation of all dredging reports and other related SMS,ISM, ISO and ISPS returns
  7. They should perform the duties allocated by Master or Chief Officer during operation, maintenance and dry docks.
  8. All JOs/ PODs to attend Mooring station while proceeding for along side Operation of crane as and when required.
  9. Operation of the suction tubes , dumping the dredged material, attending the stations when the vessel is proceeding alongside berth and casting-off from the berth.
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DUTIES AND RESPONSIBILITIES

OF

FLEET PERSONNEL

(ENGINE DEPARTMENT)

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## CHIEF ENGINEER OFFICER (CEO)

The Chief Engineer is the Head of Engineering department and is responsible for the Administration and Supervision for safe management and economical operation of the machinery on board the dredger.

1. Ensuring all new Engineering department officers and crew are familiarised with relevant SMS procedures
  2. Efficient operation and maintenance of all plant and equipment associated with safety and anti-pollution as defined by statutory legislation and Company procedures.
  3. He shall ensure that the non-conformities or deficiencies relating to the Engine dept. during audit / inspections are closed
  4. In consultation with Master he shall identify the training needs of personnel on-board.
  5. He shall ensure planned and preventive maintenance of Engine room, pump room and other machinery is carried out as per schedule.
  6. He shall maintain records of all routines and unscheduled maintenance in accordance with Manufacturers requirements and company procedures.
  7. Ensure statutory and class surveys are carried out on all plant and equipment as covered by survey requirements within due time.
  8. Maintain stand-by of plant and systems in a complete state of readiness to meet any emergency requirements by testing all standby systems periodically.
  9. He is In-Charge of indenting bunkers/bunkering operation, bunker transfer and consumption of bunkers.
  10. He shall prepare major pending defects and Inform to Concerned Tech Supt.
  11. He shall prepare Dry dock defects.
  12. He shall prepare a list of Engine side equipment that requires calibration and ensure it is timely done.
  13. He shall maintain list of minimum spares required on board.
  14. He shall ensure inventory control of Engine side items, in consultation with Master.
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15. He shall ensure Oil record Book and Engine Log book are accurate and up to date.
16. Ensuring that the statutory and class surveys are carried out on all plant and equipment covered by such survey requirements in due time.
17. Assigning engineer officers, petty officers or crew, specific roles with respect to the engineering department's responsibilities under the SMS.
18. Assigning Machinists to the deck department whenever their services are required by the Master for technical assistance under the SMS.
19. Regular inspections of all plant and equipment.
20. Ensuring that critical spares are indented well in time and that inventory records are kept updated by recording receipts and consumption promptly.
21. Arranging watch keeping duties of Engine staff in such a way that their rest hours are as per requirement.
22. Handing over and Taking over of machinery of the Dredger by a Chief Engineer shall be as per Checklist DOC -- 004.
23. CEO is having authority to take any technical decision including setting up of priorities and allocations of resources as long as they do not impact the vessel's overall performance and safety.
24. CEO shall ensure that there is no oil pollution onboard and keep all the bilges clean & free from oil deposits.

## **2<sup>ND</sup> ENGINEER OFFICER**

He is directly responsible to the Chief Engineer.

1. He is responsible for day to day working of the Engine room department
  2. 2<sup>nd</sup> Engineer will keep 0700 hrs to 1500 hrs watch or 0400 hrs to 0800 hrs and 1600 hrs to 2000 hrs watch as per availability of watch keeping engineers.
  3. He is responsible for day to day working of the engine room department.
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4. Responsible for carrying out all routine, long term and preventive maintenance in Engine room, Pump room and other machinery in accordance with CEO requirement and ISM Code.
5. He should allocate duties to other engineers and engine room staff in day to day basis for daily maintenance, repairs and overhaul. All the above should be entered in the work book and should be presented to CEO on daily basis or weekly basis as required.
6. To discuss and bring to the notice of CEO all things pertaining to operation and maintenance aspects on daily basis.
7. Responsible for preservation of cleanliness, upkeep and maintenance of the structure of the engine room, pump room and other machinery spares, besides efficient operation of the main engine.
8. Responsible for maintenance of stores, spares, defect lists, indents and record of instruments and tools.
9. Maintenance of Engine log book with entries on consumption of fuel oil, lubricating oil and stores.
10. Responsible for the maintenance, up keeping and record of planned maintenance schedules on the following machinery:
  - i) Maintenance of safety equipment, engine room remote and automatic closing devices including water tight doors and alarms.
  - ii) Steering gear machinery.
  - iii) Main engine work, 3<sup>rd</sup> engineer will assist in crank case work.
  - iv) Air conditioning and refrigeration plant.
  - v) Hydraulic equipment.
  - vi) Deck machinery such as suction tube winches, windlass and mooring winches, deck crane etc.
  - vii) All pumps and oily water separator.
11. While proceeding on leave transfer, handing over report incorporating the details of the main engine, list of tools, instruments and registers or ledgers

of planned maintenance schedule for the above mentioned machinery to be prepared and handed over to the incoming 2<sup>nd</sup> engineer. Also to ensure that the other engineers' records are up to date for the benefit of incoming 2<sup>nd</sup> engineer.

12. He shall supervise the safety along with the Chief Officer for ensuring safe working conditions on board and ensure that all work particularly related to Engine department activities are performed in a safe manner
13. Responsible in deciding job priorities, allocation of staff depending on the job requirement and expertise.
14. He shall ensure that CEO's instructions are effectively implemented by E/R staff.
15. In addition to normal 8 hours watch keeping , above officer has to do additional 2 hours for carrying out above duties.

### **3<sup>RD</sup> ENGINEER OR SENIOR WATCH KEEPING ENGINEER**

1. He will keep 8-12 or 12-4 watch changing once in fortnight as required.
  2. He is responsible for safe and efficient operation of machinery during his watch, ship keeping, maintenance and dry-dock or lay-up.
  3. For purposes of maintenance, overhauls, supervision of repairs, he will carry out all works and duties allotted to him by CEO / 2<sup>nd</sup> engineer.
  4. He is responsible for maintenance, overhaul, supervise the repairs of the following machinery and maintain up to date records of the same as per PMS.
    - i) Auxiliary engines
    - ii) CPP systems, propulsion gear boxes, dredge pump gear boxes.
    - iii) To assist 2<sup>nd</sup> engineer in main engine maintenance work as required.
    - iv) Cooling water system analysis and treatment.
    - v) In addition any other machinery allocated to him by CEO / 2<sup>nd</sup> Engineer.
  5. He will maintain record of spares in regard to stock, consumption and requirement and forward the same to CEO / 2<sup>nd</sup> Engineer.
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6. When on transfer or proceeding on leave will make a handing over report for the incoming engineer with all the records, machinery condition, maintenance schedule and tools if any in his possession. Most important aspect is to hand over and explain all about PMS.
7. Any doubts or suggestions may be brought to the notice of 2<sup>nd</sup> Engineer or CEO.
8. In addition to normal 8 hours watch keeping , above officer has to do additional 2 hours for carrying out above duties.

#### **4<sup>TH</sup> ENGINEER OR JUNIOR WATCH KEEPING ENGINEER**

1. He will keep 8-12 or 12-4 watch changing once in fortnight as required.
  2. He is responsible for safe and efficient operation of machinery during his watch during his ship keeping duty during maintenance, dry dock and layup.
  3. For the purpose of maintenance, overhauls, supervision of repairs, he will carry out all works and duties allotted to him by 2<sup>nd</sup> engineer.
  4. He is responsible for maintenance, overhaul, supervise repairs and maintaining up to date records of following machineries as per Planned Maintenance System.
    - i) All purifiers
    - ii) Main and working air compressors
    - iii) All LSA and FFA items in the Engine Room
    - iv) In addition to the above, any other machinery allocated to him by CEO or 2<sup>nd</sup> Engineer.
  5. He will maintain record of spares in regard to stock, consumption and requirement and forward the same to 2<sup>nd</sup> engineer or CEO
  6. When on transfer or proceeding on leave will make a handing over report for the incoming engineer with all the records, machinery condition, maintenance schedule and tools if any in his possession. Most important aspect is to hand over and explain all about PMS.
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7. Accounting of all spares and stores inventory of deck and Engineering Departments and maintaining records for receipt, transfer and consumption of the same and making periodic returns to the Head office as and when required in case he is entrusted with ERP
8. Any doubt or suggestions may be brought to the notice of CEO / 2<sup>nd</sup> E.O.
9. In addition to normal 8 hours watch keeping , above officer has to do additional 2 hours for carrying out above duties.

### **ELECTRICAL OFFICER ( ELO )**

The responsibilities of ELO are:

1. He is responsible to CEO for proper upkeep and efficient operations of all electrical equipment and machinery & Bridge equipment
  2. He must keep day to day record of all the work of maintenance and inspection carried out in connection with the electrical equipment, machinery and lighting on-board.
  3. He is responsible for all electrical stores, spares and working instruments and tools. He shall maintain an up to date list of inventory of items under his charge showing opening and closing balance and consumption receipts.
  4. He is responsible for preparing and submitting to 2EO the requisition of stores and spares as required from time to time.
  5. He will plan all preventive maintenance items of work and discuss with 2EO for execution.
  6. Maintenance and testing of all alarm systems, electrical installations in the wheel house, galley, laundry and associated appliances.
  7. Maintenance inspection and testing of all electrical lighting on decks and accommodation / Galley systems and all electrical part of steering //Bow thrusters
  8. When he finds the need of shore assistance, same may be brought to the notice of 2<sup>nd</sup> engineer well in advance to plan and include in the defect list.
  9. Insulation report is to be prepared and sent to head office through CEO once in every quarter for all electrical motors and generators.
  10. He must also check all the alarms in coordination with 2<sup>nd</sup> engineer.
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11. At the time of handing over charge, the outgoing Electrical Officer will prepare a list of all electrical equipment, their condition, stores, spares, tools, instruments, drawings and manuals. Incoming electrical officer will check, verify and after being satisfied sign it and present the same to C/O. A copy of such report is to be sent to head office after obtaining C/O's signature.

12. He will make all efforts to upgrade his knowledge in respect of repairing and maintenance of the electrical equipment by going through the manuals and drawings as required.

**ASST.MNST:-**

1. Carry out duties as instructed by 2EO
2. All Asst .Mnst should be capable of carrying out welding, Gas cutting, fitting, brazing, Grinding, Drilling and machinery on board.
3. They are responsible for maintaining Welding Equipment/ Welding rods/ Gas cutting equipment
4. They should maintain the inventory of the above and other Tools . Inventory of same to be forwarded to HO on monthly basis to respective superintendent & PO.
5. They should carry out overhauling of all machinery & equipment under the supervision of 2EO/WKE/WKO as instructed by 2EO

**DTC:-**

1. Take soundings of all Tanks daily
  2. Allotting duties to Sea man in consultation with Ch.officer/Master
  3. Inventory of deck Tools/ DES/ paints to be maintained/Mooring Ropes
  4. Decks/Accommodation maintenance
  5. Operation of Crane
  6. Windlass operation while mooring and anchor.
  7. Life-boat winch operation.
  8. Providing necessary manpower assistance to E/R staff in case of breakdown as directed by Master/ Chief officer
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### Seaman/Helmsman:

1. Carry out steering duties on the bridge as per orders of officer on watch
2. SHMs including on duty SHM shall remain on board at all times when vessel casts off berth
3. Off duty SHM shall operate aft captain/winch during stations. In case of failure of steering from the bridge, off duty SHM shall man emergency steering watch
4. When alongside, he will remain continuously on gangway and inform WKO regarding any items coming on board or leaving the vessel. Shall prevent unauthorized persons from coming on board and keep anti pilferage watch
5. Hoisting of appropriate flags for bunkering, diving etc., as per officer's orders. switching on/off lights, ensuring rat guards are in position, ensuring moorings are taut and gangway is attended to prevent damage
6. When dredger is at anchor he shall take rounds on deck, prevent any boats coming close to dredger and responsible for keeping bridge clean
7. Receiving Fresh Water during maintenance
8. In addition to normal 8 hours duty above personnel to do additional 2 hours as directed by Dredge Master/Chief officer/ Duty Officer

### Ch.Cook/ 2<sup>nd</sup> Cook /GS

1. Ch.Cook/2<sup>nd</sup> Cook is responsible for maintaining good hygienic conditions of Galleys/ Provision store
2. Preparing of Food as per the menu made by on board Mess committee
3. GS responsible for Maintaining Mess rooms and Pantry / cabins
4. GS Responsible for Maintaining LINEN and its inventory

### ETC/ ERR :-

1. Assisting 2<sup>nd</sup> EO in carrying out Daily routines of Machinery/ Repairs
  2. ETC is responsible for Allotting duties to ERR's in consultation with 2EO or Duty WKE
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3. Maintenance / cleanliness of E/Room, Steering Room/ Pump Room.
4. Inventory of Tools/ DES stores ( Engine)/ Lub oils
5. Operation of Crane
6. LRR to keep good watch and assist Duty WKE
7. Take sounding as per CEO standing orders.
8. Providing necessary manpower assistance to Deck Staff in case of break downs as directed by CEO/2EO.
9. In addition to normal 8 hours above personnel to do additional 2 hours as directed by 2EO/WKE.

**Trainees:**

The Trainees have to perform duties as entrusted to them by the higher rank personnel.

The enlisted duties mentioned against each designation are only indicative and not exhaustive in nature.