

SENIOR Manager Master Station

Bachelor in Electrical / Electronics

Experience:

Minimum 6 years Management Experience in the field of SCADA Automation System and EMS, DMS Applications of Electrical and water networks.

Job Responsibilities:

To ensure reliability and availability of SCADA system in DEWA network.

Capable to manage, organize and plan work flow & resources related to the following activities installation, testing, commissioning and maintenance of SCADA system, database EMS and DMS applications in power networks as well as in Water . Ability to formulate objective and functional strategic plans. To be familiar with best practices in field of monitoring activities and progress. Ability to cascade managements plans/views in best practices and effective methods. Shall have knowledge in Asset management and crisis management. Capability to analyze failures, abnormalities and identify root causes, make corrective actions and take preventive measures. Must have knowledge and support the culture of safety, occupational health & environment. Ability to develop staff competencies & skills. Shall have experience in budgeting, financial planning and cost control.

Assistant Manager – Technical Support

Bachelor / Master degree in Electrical Engineering

The candidate must have minimum 10 years experience in electrical power engineering in SCADA/EMS&DMS fields and power utilities. The candidate shall be able to manage and coordinate all departmental technical activities and aspects & generate relevant reports to the department heads and ensure prompt completion and submission of departmental actions and technical reports. The candidate shall play as focal point of contact for all Technical issues with external dept./divisions.

The candidate shall be able to manage the following activities:

Ensure quality and timely submission / update of all required reports / feedback such as monthly, quarterly, yearly report, KPI, achievements and others and shall Monitor Departmental KPI's & Performance indices and provide monthly reports with recommendations for improvement .

Develop departmental policies, processes, systems/ structural programs and procedures covering the areas of activities, departmental role and responsibilities,

EMS Specialist – Generation Applications

Bachelors/Masters Degree in Electrical Engineering/Power Systems or equivalent (Minimum 10 years experience).

The candidate must have an extensive experience in Energy Management System (EMS), including EMS software applications design/implementation/commissioning, database maintenance, and EMS integration. In particular, the candidate must have an extensive experience in Generation Applications, such as: Automatic Generation Control, Economic Dispatch, Resource Scheduling, Load Forecasting ...etc.

We are seeking an EMS Specialist— Generation Applications who will be responsible for the Energy Management System requirements for administration, maintenance, and usage of the software, and databases. The work includes but is not limited to the following:

1. Coordinate and manage EMS/DTS applications Design/Engineering.
2. Coordinate and manage EMS/DTS applications commissioning.
3. Develop user-centric training programs on EMS applications for the best utilization in the DEWA transmission network.
4. Interacts with other departments regarding EMS design, quality, testing and related issues to ensure adherence to EMS and that the users expectations and requirements are met.
5. Supervise EMS database update activities.
6. Supervise the installation of the EMS software.
7. Ensure that EMS applications are kept accurate and usable.
8. Conduct daily review on the accuracy and functionality of EMS application, and carryout necessary tuning and rectification.
9. Provide support and troubleshoot for any problem faced by the users.
10. Conduct training on all EMS applications for new engineers/users, and also refreshing trainings to the users on regular basis.
11. Prepare all required reports/documents for EMS as needed.
12. Handle/maintain EMS contractual related issues.
13. Prepare specifications documents and ISO procedures.

Engineer – Remote Terminal Unit

Bachelor in Electrical / Electronics

Minimum 5 years in Substation Automation System (RTU)

Job Responsibilities:

To ensure reliability and availability of RTU system.

Should be expert in installation, testing, commissioning and maintenance of Substation Automation in 400/132/33/11Kv Substations. Execute / verify / modify RTU Factory and Site Acceptance procedures and attend to it .

Should have hands on experience in attending snags and defects related to Substation Automation.

Maintain Substation Automation (RTU) spare parts, hardware tools, software tools. configurations and

etc as per requirement. Should be familiar with substation equipment, switchgear interlock logics, protection relay logics and etc. Should have good knowledge in CTs, VTs, measuring circuits and feeder synchronizing schemes. Good knowledge in communication networks, communication protocols and master station scada system will be added advantage. Must be a computer literate.

Engineer – Energy Management Systems (EMS)

Bachelor of Science in Electrical Engineering or Power Engineering, or equivalent (Masters of Science in Electrical Engineering / Power Engineering is preferred).

The Candidate must have a minimum of 3 years experience for expatriates, and 1 years experience for UAE nationals, in Energy Management Systems (EMS). The candidate shall be responsible for the Energy Management System requirements for administration, maintenance, usage of the software, and databases update. The candidate must have working knowledge of State Estimator (SE), Economic Dispatch (ED), Automatic Generation Control (AGC), Short-Term Load Forecasting, as well as other EMS applications. The work includes but is not limited to the following: Review the equipment/circuit parameter provided by the contractor, Supervise the installation of the EMS modifications/updates, Keep the EMS applications usable, Provide support and troubleshoot for any problem faced by the users, and Conduct training on all EMS applications.

Engineer- Distribution Management System (DMS)

Bachelor Degree in Electrical Engineering/Power Systems or equivalent (Min 3 years experience for expatriates and 1 year experience for UAE nationals)

The candidate shall have experience in Distribution Management System (DMS) and/or Dispatcher Training Simulator (DTS). The candidate shall have experience in DMS applications, such as: State Estimator, Distributions System Power Flow, Distribution Short Circuit Calculation, Contingency Analysis ...etc.

The Candidate shall review the equipment/circuit parameter provided by the contractor and supervise software installation and/or database update of the DMS and DTS. The candidate shall work to keep the DMS applications functional, accurate and usable. The candidate will conduct daily review on the accuracy and functionality of DMS applications, and carryout necessary tuning and rectifications. The candidate shall prepare and conduct training sessions on all DMS applications for new engineer, and refresh the training to users on regular basis. The candidate shall be able to prepare all required reports/documents related to DMS as needed.

Asst. Engineer – SCMS

Bachelor Degree in Electrical / Electronics

Experience: Minimum 3 years in Substation Automation System (SCMS) & Troubleshooting skills. To ensure reliability and availability of SCMS system. Should be expert in installation, testing, commissioning and maintenance of Substation Automation in 400/132/33/11Kv Substations. Execute / verify / modify SCMS Factory and Site Acceptance procedures and attend to it . Should have hands on experience in attending snags and defects related to Substation Automation. Maintain Substation Automation (SCMS) spare parts, hardware tools, software tools. configurations and etc as per requirement. Should be familiar with substation equipment, switchgear interlock logics, protection relay logics and etc. Should have good knowledge in CTs, VTs, measuring circuits and feeder synchronizing schemes. Good knowledge in communication networks, communication protocols and master station SCADA system will be an added advantage. Must be a computer literate.

Sr. Technicians – RTU

Diploma in Electrical / Electronics

Experience:

Minimum 5 years in Substation Automation System (RTU / SCMS) & Troubleshooting skills

Job Responsibilities:

Experience in commissioning activities, full understanding of all basic electrical and electronics concepts and practical implementation in substation's equipments. Experience in Installation, Testing, Commissioning, upgrading and trouble shooting of RTU / SCMS. Skill in wiring, soldering and replacing electronics components will add an advantage.

Basic computer knowledge is a must. Should be familiar with MS OFFICE

Manager - SCADA Services & Network Support

Bachelor in IT

Minimum 5 years Management Experience in the field of SCADA Services & Network Support of Electrical and water networks.

Job Responsibilities:

To ensure reliability and availability of SCADA system in DEWA network.

Capable to manage, organize and plan work flow & resources related to the following activities installation, testing, commissioning and maintenance of Network Security, User Support, Services and Development in power networks as well as in Water . Candidate shall have hands on experience in the field of IT network and software development in field of SCADA. Ability to formulate objective and functional strategic plans. To be familiar with best practices in field of monitoring activities and progress. Ability to cascade managements plans/views in best practices and effective methods. Shall have

knowledge in Asset management and crisis management. Capability to analyze failures, abnormalities and identify root causes, make corrective actions and take preventive measures. Must have knowledge and support the culture of safety, occupational health & environment. Ability to develop staff competencies & skills. Shall have experience in budgeting, financial planning and cost control.

Electrician/Technician

Trade Certificate in Electrical / Secondary School Certificate, 3/4 years experience in maintenance associated with any of the following equipment in a utility or manufacturing company. Gas Insulated switchgears /Transformers/ Air compressors/ Transmission OHL & Cables (Oil filled / XLPE / Pilot) / Electrical Civil works related to substations.

Specialist – Protection (Testing & Commissioning)

B.E (Electrical Engineering)

Approximate 10-15 years experience including experience in a world known power utility in a similar position.

Shall be able to deliver a high level of technical expertise to the utility specializing in power system protection testing and commissioning of transmission protection systems up to 400kV. Shall have advanced knowledge of protection scheme functionality on all types of transmission system protection including busbars, feeders, transformers and reactors. Shall be able to provide technical leadership over all field testing techniques and develop detailed testing procedures for each protection scheme in the system. Advanced working knowledge of protection relays, test equipment, associated software and demonstrated ability to develop detailed test plans for testing numerical relay performance and functionality. Advanced knowledge of fault finding and troubleshooting of protection systems and the ability to implement corrective action. Advanced disturbance and fault analysis capability and the ability to perform fault investigations. Deliver training to protection engineers on advanced testing procedures and techniques in order to ensure optimum test practices are followed. Shall have overall responsibility to ensure that testing techniques are implemented and maintained at the highest standards.

Software Coordinator (Process and Automation Designer)

Bachelor Degree in Computer Engineering

Approximate 5 years experience in relevant field with background in IT.

Shall be able to review existing processes and identify departmental requirements in collaboration with section managers. Shall have the ability to effectively and clearly communicate automation requirements to the development team. Shall develop and design blueprint and prepare associated communication documents. Shall analyze and review software developed to meet departmental requirements and identify system drawbacks/ limitations. Shall proactively coordinate with software team and submit recommendations for upgrades/ changes. Shall deliver timely progress reports and proposals. Shall exhibit strong orientation towards results. Shall be technically competent with different software programs. Must be able to learn and adapt to new technologies. Shall possess good interpersonal, communication and coordination skills.

Specialist – Transmission Protection Relay

B.E (Electrical/ Electronic Engineering)

Approximate 5 - 10 years experience with a manufacturer or power utility in a similar position. Shall have experience in advanced testing, development and analysis of protection relays. Shall have excellent capability in performing detailed laboratory testing of relay logic and scheme applications to diagnose any performance deficiencies or configuration modifications required. Shall possess advanced knowledge of the various types of protection schemes and applications for Transmission and Distribution systems. Shall have excellent ability to prepare detailed test plans for testing numerical multifunction relays, detailed test reports and associated documentation with conclusive results and recommendations. Should be capable to provide training to others on protection applications theory and subsequent relay testing techniques. Shall have good understanding of power system theory, short circuit studies and setting calculations, good analytical capability for fault investigations and root cause analysis and work independently to achieve assigned tasks and objectives. Should have good command over technical report writing. Good computer & communication skills.

Assistant Manager - Relay Technical Support

B.E (Electrical/ Electronic Engineering)

Approximate 5 - 10 years experience with a manufacturer or power utility in a similar position. Shall have high level experience in protection commissioning, relay testing, settings and protection system applications on transmission systems up to 400kV. Shall demonstrate In depth understanding of power system protection theory and applications. Shall have advanced knowledge of protection system testing requirements and methods to ensure correct functionality. Shall have good experience in advanced testing, development and analysis of protection relays is essential. Shall have advanced knowledge of the various types of protection schemes and applications for Transmission and Distribution systems. Shall be able to prepare detailed test plans for testing protection systems on site and in the laboratory. Shall be responsible to prepare detailed test reports and associated documentation with conclusive results and recommendations. Shall possess ability to produce on site work procedure and method statement for testing and modification of protection systems in live substations. Shall supervise and provide training to others on protection applications theory and subsequent relay testing techniques. Good understanding of power system theory, short circuit studies and setting calculations is essential. Shall have good analytical capability for fault investigations and root cause analysis. Shall be able to work independently to achieve assigned tasks and objectives. Should have good command over technical report writing. Good computer & communication skills.

Manager - Real Time Operation

Bachelor Degree in Electrical Engineering (Min. 10 years experience)

Candidate should have at least 12 to 15 years experience in power utility. Should have an excellent knowledge in the operation of 400/132kV substations and in generating stations, commissioning activities of 400/132kV equipment, coordinating with various power stations for preparing shutdown/synchronization plan of generating units, mode of operations of generating units including

AGC operation and EMS application. Good knowledge and experience in interconnected systems, Interchange Operational Procedures, Power Purchase Agreement, Trading Code among different LDC's or Authorities. Adequate experience in preparing operational procedure is also required. The candidate should have experience in preparing transmission operation related reports, system abnormality reports, ISO procedures, knowledge of safety rules, excellent verbal, technical report writing and good managerial skills.

Assistant Manager – Real Time Operations

Bachelor Degree in Electrical Engineering (Min 12 years Exp.)

Should have experience and knowledge in the areas of operation of 400/132kV substation and generating stations, commissioning activities of 400/132 kV equipment, mode of operations of generating units including AGC operation and EMS applications. Should be able to coordinate with various power stations for preparing shutdown/synchronization plan of generating units to comply with unit commitment. The candidate should have knowledge in preparing generation and transmission operation related reports, system abnormal report, quality procedures, and safety rules. He must have excellent verbal communication skills, technical report writing and managerial skills.

Senior Engineer – Real Time Operations (three vacancies)

Bachelor Degree in Electrical Engineering (Min. 8 years exp.)/Diploma in Eng. (Min 10 years exp.)

Experience in transmission control centres duties and activities including operations of 400/132kV substations and generating stations, commissioning activities of 400/132 kV equipments, coordination with various power stations for preparing shutdown/synchronization plans of generating units and changing modes of operations of generating units including AGC operation. Candidates should have good knowledge of EMS applications and experience in preparing transmission operation related daily reports, system abnormal reports and ISO procedures. He should have knowledge of safety rules, excellent verbal communication skills and ability to coach and supervise junior staff.

Engineer – Real Time Operations (two vacancies)

Bachelor Degree in Electrical Engineering (Min. 5 years exp.)/Diploma in Eng. (Min 8 years exp.)

Experience in transmission control centres duties and activities including operations of 400/132kV substations and generating stations, commissioning activities of 400/132 kV equipments, coordination with various power stations for preparing shutdown/synchronization plans of generating units and changing modes of operations of generating units including AGC operation. Candidates should have good knowledge of EMS applications and experience in preparing transmission operation related daily reports, system abnormal reports and ISO procedures. He should have knowledge of safety rules, excellent communication skills and be computer literate preferably with ICDL.

Engineer-Transmission Operation Studies

Bachelor Degree in Electrical Engineering.

Minimum 5 – 8 years experience in a large power utility. The candidate position will be responsible for conducting steady state and dynamic simulation for transmission and generation network. He should be team player having valuable experience in system studies and modeling using PSS/E software (such as load flow, short circuit, dynamic studies, etc.). Knowledge of MATLAB and EMTP software is preferred. He should have very good skills in technical report writing and analyzing power system bottlenecks and also providing operational measures to resolve system constraints.

Deputy Manager-Studies & Reporting

Bachelor Degree in Electrical Engineering

Minimum 10-12 Yrs experience in Power system utilities/Operations with a sound knowledge of Transmission electrical utilities and substation equipments. The job involves issue of routine and non-routine Transmission system reports to the management. Supervising/guiding team of Reporting engineers and demonstrating ability to analyze & investigate occurrences that affects the reliability and security of the transmission network will be prerequisite. The role requires excellent presentation, communication (written & verbal) and team-building skills with a thorough conceptual understanding / experience of Performance reporting, QHSE & Excellence Standards, Corporate governance framework, Auditing etc.

Engineer - Reporting

Bachelor Degree in Electrical Engineering

Minimum 8 -10 Yrs experience in Power system utilities/Operations with a sound knowledge of Transmission electrical utilities and substation equipments. The job involves issue of routine and non-routine Transmission system reports to the management. The role requires excellent presentation, communication (written & verbal) and team-building skills with a thorough conceptual understanding / experience of Performance reporting, QHSE & Excellence Standards, Corporate governance framework, Auditing etc.

Engineer – Transmission Operation Planning

Bachelor Degree in Electrical Engineering (Min 3 years exp.)/ Diploma in Engineering (Min 5 years exp.)

Experience in Power Utility. Shall have good knowledge of Operations involved in 400/132kV Substations and Generating Stations, knowledge about generating stations – gas turbines, steam turbines, etc.; preparation of Unit commitment, commissioning activities relating to generating stations, scheduling and coordinating of Transmission shutdown activities, preparing shutdown /contingency plans, preparation of switching programs. He/ she shall be conversant with working in MS Office environment

Deputy Manager - Coordination & Support Group

Bachelor Degree in Electrical Engineering (Min 12 years Exp.) for Expatriates and Bachelor Degree in Electrical Engineering (Min 8 years Exp.) or Diploma in Elec.Eng. (Min10 Years Expe.) for UAE Nationals. 8-10 years experience in the real time operation transmission and generation power system. Computer literacy, good command in english language and good report writing skills.

To supervise Control Room Engineers in performing their duties, assist them in emergencies and provide training.

Manager-Transmission Operation Studies

Master degree in electrical engineering with minimum 8 years experience in large power system utilities or Bachelor Degree in Electrical Engineering minimum 10 years Exp. for expatriates.

He should have professional experience in power system operations; power system planning and operational system studies. The candidate shall manage operational studies activities, conduct different types of steady state & dynamic studies, prepare power system steady state and dynamic model and shall provide proper recommendations and action plans to solve operational constrains. The candidate must have proficiency in using PSS/E steady state and dynamic modeling and simulations (such as load flow, short circuit, PV analysis, transient stability and Eigenvalue analysis). Preferably with knowledge of Python programming language and user defined model for different type of controller for generators such as AVR, PSS, Governor, etc. He should have very good knowledge and experience in using MATLAB and EMTP software. He should have professional management skills.

Understanding of IEC standards, knowledge of IEEE regulations and safety rules is preferred.

ASST. MANAGER - TRANSMISSION EQUIPMENT ASSET MANAGEMENT (FPS)

Degree/Diploma in Mechanical/Electronics/Electrical Engineering with 10/12 years experience in planning and execution of maintenance of Fire Protection System associated with 400/132kV substations. The responsibilities include but not limited to the following:

- establish asset management strategy, ensure availability of critical data, assess historical data and recommend methods for improvement etc.
- maintain reliable performance of Fire protection system in all transmission substations
- need to assess the condition of Fire protection system equipments
- execute preventive/corrective maintenance and condition monitoring activities as per established standards and procedures
- respond promptly to all emergency situations involving transmission equipments and arrange restoration without exceeding the targets
- ensure adherence to safety & environmental requirements, quality and cost effectiveness
- ensure availability of all required resources including manpower, logistics, spares etc. for maintenance.

Specialist – Protection (Design & Engineering)

Qualification: B.E (Electrical Engineering)

Approximate 10-15 years experience including experience in a world known power utility in a similar position.

Shall deliver a high level of technical expertise to the utility specializing in power system protection up to 400kV and provide guidance to the Protection team in handling of protection related matters such as advanced system analysis, short circuit studies, protection design, system development, improvement of protection principals and practices within the organization. Previous role as a protection design engineer at a senior level is essential. Develop new protection schemes and applications to deliver optimum security and dependability. Introduce and standardize protection designs, technical specifications and scope of work for all types of protection systems. Prepare and manage all documentation associated with specifications, standards, network code, protection philosophy and related equipment for the system. Review existing protection design & logic and deliver improvements in line with best industry protection practices. Provide high level expertise for transmission protection including feeder, busbar, transformer, reactor and generator protection including distance and differential protection. Introduction and advanced application of new protection relays & fault recorder equipment. Should have sound knowledge of power system theory including generation and EHV Protection applications.

Engineer – Transmission Operation Planning

Bachelor Degree in Electrical Engineering (Min 3 years exp.)/ Diploma in Engineering (Min 5 years exp.)

Experience in Power Utility. Shall have good knowledge of Operations involved in 400/132kV Substations and Generating Stations, knowledge about generating stations – gas turbines, steam turbines, etc.; preparation of Unit commitment, commissioning activities relating to generating stations, scheduling and coordinating of Transmission shutdown activities, preparing shutdown /contingency plans, preparation of switching programs. He/ she shall be conversant with working in MS Office environment.

Engineer – Protection Communication

Qualification: Bachelor Degree in Electrical/ Electronic Engineering

Approximate 5 years experience in communication field related to protection systems.

Shall have sound knowledge of various types of communication systems used in protection. Shall be able to periodically review existing communication designs in collaboration with section managers. Shall be proactively involved in identification of limitations of existing designs and clearly communicate the findings. Shall possess good troubleshooting ability. Shall have good command over technical report writing. Shall have good technical and communication skills (written and verbal).

Electronic Technician

Qualification: Diploma in Electrical / Electronics

Experience: Minimum 6 years in Substation Automation System (RTU/SCMS) & Troubleshooting skills. Experience in commissioning activities, full understanding of all basic electrical and electronics concepts and practical implementation in substation's equipments. Experience in Installation, Testing, Commissioning, upgrading and trouble shooting of RTU/SCMS. Skill in wiring, soldering and replacing electronics components will add an advantage. Basic computer knowledge is a must. Should be familiar with MS OFFICE.

Dy. Manager-Transmission Operation Planning

Qualification: Bachelor Degree in Electrical Engineering with Minimum 8 years

The job involves supervising and managing the planning and scheduling for various 400kV & 132kV outages in coordination with various involved parties. The candidate will be responsible for ensuring reliable & secure operation of DEWA Transmission power system, focusing on transmission maintenance activities in coordination with project outage activities, Commissioning activities and Generation activities by adopting various quality procedures and best planning/ coordination practices.

The role requires excellent presentation, communication (written & verbal) and team-building skills.

SR. MANAGER - TRANSMISSION ASSET MANAGEMENT

Msc or Bsc Degree in Electrical/Electronics Engineering with 10/15 years experience in:

1. Managing a Department/section responsible for planning and executing maintenance of Transmission lines/cables, 400/132kV Gas Insulated Switchgears, Power Transformers and other associated equipments of transmission substations in a electrical utility.
2. Implementation of Reliability Centered Maintenance (RCM)
3. The concept of Asset Management and its implementation.

The responsibilities include but not limited to the following:

- Develop departmental policy and monitor implementation of involved processes and procedures. Set objectives in line with organizational objectives, Vision and Mission
- Establish asset management strategy, ensure availability of critical data, assess historical data and recommend methods for improvement, prepare technical reports /maintenance plans etc.

MANAGER - TRANSMISSION LINE ASSET MANAGEMENT

Degree in Electrical/Electronics Engineering with 10/15 years experience in managing the functioning of a Department/section in successfully planning and executing maintenance of Transmission lines/cables, 400/132kV Gas Insulated Switchgears, Transformers and other associated equipments of transmission substations in a electrical utility. The responsibilities include but not limited to the following:

- establish asset management strategy policy PAS 55, ensure availability of critical data, assess historical data and recommend methods for improvement, prepare technical reports, maintenance plans etc
- maintain reliable performance of transmission lines/cables and equipment in all transmission substations
- plan preventive/corrective maintenance and condition monitoring activities as per Reliability centered maintenance (RCM) recommendations and procedures
- respond promptly to all emergency situations involving transmission equipments and arrange restoration without exceeding the targets
- ensure implementation of standards related to quality, safety & environmental requirements as per Integrated Management system procedures and ensure audit preparedness
- review Reliability centered maintenance process for Transmission cable assets , Improve/modify maintenance quality procedures accordingly ,submit revised Reliability centered maintenance report and Plan /Schedule of 100 % of transmission cable maintenance tasks in compliance with the asset management /Reliability centered maintenance policy.
- ensure availability of all required resources including manpower, logistics, spares etc. for maintenance

SPECIALIST - TRANSMISSION CABLE

Bachelor/Masters Degree in Electrical/Electronics Engineering, 15/20 years experience in planning and execution of maintenance of Transmission Lines. The responsibilities include but not limited to the following:

- professional knowledge about design of 400/132kV cables, joints and termination
- ensure availability of critical data, assess historical data and recommend methods for improvement
- provide technical support for turnkey contracts during specification, Engineering & site commissioning of new projects related to 400/132kV cables.
- Carry out investigations, analyze technical defects and recommend/execute preventive measures associated with routine and emergency maintenance of Transmission 400/132kV cables.
- assist to maintain reliable performance of transmission 400/132kV cables
- execute preventive/corrective maintenance and condition monitoring activities as per established standards and procedures

- respond promptly to all emergency situations involving transmission equipments and arrange restoration without exceeding the targets
- ensure implementation of standards related to quality, safety & environmental requirements as per Integrated Management system procedures and ensure audit preparedness
- conducting capability study, type test and routine inspections at manufacturer works with regards to 400/132kV cables.
- ensure availability of all required resources including manpower, logistics, spares etc. for maintenance.