

**INDIAN MARITIME UNIVERSITY**  
**(A Central University, Govt. of India)**

B.Tech (Marine Engineering) - Semester VIII  
December 2015 End Semester Examinations

**Engine Room Management**  
Subject Code: UG11T1805

Time: 3 hrs  
Date: 5.1.2016

Max Marks: 100  
Pass Marks: 50

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**Part -A (3x10 = 30 Marks)**

**Compulsory Question**

1. a. What is 'predictive maintenance', and comment on its advantages over 'routine maintenance'?
- b. What maintenance will you carry out on a 2-stage air compressor on a weekly basis?
- c. What are 'consumable' parts of a Diesel engine? List five such parts.
- d. List five precautionary steps you will take in the Engine Room to prevent injury to personnel.
- e. What is 'critical period' of a ship during dry-docking. Why is it critical?
- f. What instructions will you give a junior engineer before he enters an enclosed space.
- g. Describe the inspections you will make in the crank case of a large propulsion engine. .
- h. Explain briefly, the actions you would take against a drunk crew member in the E.R.
- i. What precautions will you take before opening a man-hole cover of a fuel tank.
- j. State the actions to be taken when taking over E.R watch at 0000Hrs , ie midnight.

**Part - B (5 x 14 = 70 Marks)**

**Answer Any Five of the following**

2. What actions will you follow to ensure that the crank case oil of the Main Engine is in satisfactory condition at all times.
3. On what basis will you, as an engineer, determine the frequency of overhaul for the Auxiliary Diesel Engine(generators)
4. What Plan need be taken into account when ordering spare parts for the main engine. What precautions will you take to minimise wastage and/or overstocking?
5. Explain the safety aspects to be considered when taking Fuel oil bunkers on board. What steps will you initiate in the event of quality & quantity disputes?
6. Describe the actions to be taken by the Chief Engineer during the following conditions:
  - a) When the vessel is cruising past coastal waters.
  - b) When the vessel is in Anchorage.
7. What are the relevant areas of work in a Dry-Dock for a ship for:
  - i) Hull & Deck machinery    ii) Engine Room.
8. What are the wearing parts of the following machinery: a) centrifugal pumps, b) Air compressor. What operational care will you take to ensure longevity of the wearing parts ?

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