

Candidate's Name :

Ports and Maritime Organization
Seafarers' Examination and Documents Directorate
Exams Code: SEGK - 948

Subject : Engineering Knowledge (General)

Date: 1394.11.17

Rank : 2nd Engineer Officer

Time allowed: 3.0 hrs

(Pass mark : 60)

- Q.1) - Sketch and describe a cathodic protection system for hull corrosion prevention. (14M)**
- Q.2) - Explain safety measures to be considered when preparing for dry-docking, during dry-docking and while refloating. (12M)**
- Q.3) - For a controllable pitch propeller;**
- a) - Sketch a line diagram, label all parts, and explain its operation. (8M)**
 - b) - State the fail-safe mechanism fitted to it. (4M)**
- Q.4) - With respect to fresh water generator on board ships, explain the effect of following fluctuations;**
- a) - Inlet jacket water temperature. (4M)**
 - b) - Sea water temperature. (4M)**
 - c) - Sea water pressure. (4M)**
- Q.5) - Explain the safe procedure for bunkering onboard ship. (14M)**
- Q.6) - Explain the advantages and disadvantages, comparing characteristics of a reciprocating pump and a centrifugal pump. (12M)**
- Q.7) - Sketch a line diagram, and explain all safety features incorporated in a hydraulic, ram type steering gear and its power sources. (12M)**
- Q.8) - In metallurgical terms, explain the followings;**
- a) - Ultimate tensile stress (3M)**
 - b) - Fatigue failure (3M)**
 - c) - Elasticity (3M)**
 - d) -Yielding point (3M)**

