OPERATIONAL PROCEDURES, BASIC HOTEL SERVICES AND SHIP CONSTRUCTION

Attempt ALL questions
Marks for each part question are shown in brackets

1.   Explain EACH of the following:

     (a)   Merchant Shipping Notices;   (4)

     (b)   Marine Guidance Notes;   (3)

     (c)   Marine Information Notes.   (3)

2.   List TEN common log entries, excluding machinery temperatures, pressures and other
     parameters.   (10)

3.   (a)   State THREE advantages of using condition monitoring as part of a planned
           maintenance system.   (3)

     (b)   State THREE examples of criteria that could be used as a basis for condition based
           maintenance.   (3)

     (c)   State FOUR reasons for keeping records of operating criteria and planned
           maintenance carried out.   (4)

4.   With reference to Annex 1 of the MARPOL convention, state EACH of the following:

     (a)   the appropriate system to be fitted on a vessel 400GRT or above;   (4)

     (b)   the documentation required, explaining why it is required;   (2)

     (c)   the information to be recorded when pumping bilges overboard through an oil water
           separator.   (4)

5.   List FIVE precautions to be observed before taking on bunkers, stating a reason for EACH
     precaution.   (10)

6.   (a)   State the THREE main stages of a Biological Sewage Treatment Plant.   (3)

     (b)   Describe the operation of a Biological Sewage Treatment Plant, explaining the
           process carried out in EACH of the stages stated in part (a).   (7)

(3)

7.   (a)   State THREE functions of air conditioning.

      (b)   With referance to air conditioning, explain EACH of the following:

(2)

          (i)   absolute humidity;

(2)

          (ii)   relative humidity;

(3)

          (iii)   dew point.

8.   Describe, with the aid of a sketch, the construction of a spirally wound membrane suitable for use in a Reverse Osmosis water making plant, identifying ALL component parts.   (10)

9.   Describe, with the aid of a sketch, the construction and operation of a *thermistor* type rate of rise heat detector.   (10)

10.   With reference to a vessel's structure, explain the meaning of EACH of the following terms:

      (a)   beam;

(2)

      (b)   frame;

(2)

      (c)   girder;

(2)

      (d)   beam knee;

(2)

      (e)   stringer.

(2)