

B.Sc. (NAUTICAL SCIENCE)

00135 Term-End Examination

December, 2014

**BNA-023 : CARGO HANDLING, STOWAGE AND
SEAMANSHIP – II**

Time : 2 hours

Maximum Marks : 70

*Note : All questions are **compulsory**. Use of
non-programmable scientific calculator is allowed.*

1. Answer the following questions in brief: $10 \times 2 = 20$
- (a) What is the meaning of "Topping off" of a cargo tank ?
 - (b) What is an oxygen analyser ?
 - (c) What is a submersible pump ?
 - (d) What are cell guides in a container ship ?
 - (e) What is a high cube container ?
 - (f) What are the hazards associated with high density bulk cargoes ?
 - (g) What are the different types of paint brushes ?
 - (h) What is a reefer cargo manifest ?
 - (i) What is a cargo securing manual ?
 - (j) What is a loading plan ?

2. Write short notes on the following : 10
- (i) Hydrocarbon Content (HC) detector
 - (ii) Oil record book
3. Describe the procedure to change over from dirty cargo (e.g. coal) to clean cargo (e.g. grain) on a bulk carrier. 10
4. Explain any two methods to check the water-tightness of a cargo hold. 10
5. Explain the safety precautions you will observe while 10
- (i) rigging the gangway,
 - (ii) working aloft.
6. The dimensions of a cargo hold are length 12·5 m, breadth 9 m and depth 6·3 m. Load density of the tank top in the cargo hold is 6·5 t/m². What is the maximum amount of cargo, if stowage factor (SF) is 0·95 m³/t, that can be loaded if the broken stowage is 7% ? 10
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