

B.Sc. (NAUTICAL SCIENCE)

Term-End Examination

December, 2014

00345

BNA-024 : SHIP OPERATIONS

Time : 2 hours

Maximum Marks : 70

Note : *Questions no. 1, 2 and 6 are compulsory. Attempt any 3 from the remaining questions. M.V. Hindship table and non-programmable scientific calculator are permitted.*

1. On a ship of $W = 8000$ t, KG 7.0 m, KM 7.5 m, 100 tonnes of cargo is loaded on the upper deck (KG 9.2 m), 2 m to port of the centre line. Find final GM and list. 10

2. M.V. Hindship floating in Condition No. 5, discharges the entire cargo from No. 1. T.D. and No. 5 Poop deck and refrigerated cargo spaces. No. 4 DB Tank (C) is filled with water ballast. FSC in final condition is 0.0895 m. Calculate her GM (fluid). 10

3. Draw a transversely framed DB tank and label at least five parts. 10

4. Explain the different areas specified as per GMDSS requirements. 10

 5. What are the conditions in which oily water mixture from cargo tanks of an oil tanker may be discharged as per MARPOL ? 10

 6. Define panting and pounding. Sketch one compartment of ship where extra strengthening is required to withstand stresses due to panting and pounding. 20

 7. What is the purpose of boiler on a ship ? Differentiate between water tube boiler and smoke tube boiler. 10
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