

B.Sc. (NAUTICAL SCIENCE)

Term-End Examination

December, 2014

00325

**BNA-022 : NAVIGATION IV (ADVANCED – BRIDGE
EQUIPMENT, WATCH KEEPING, METEOROLOGY
AND OCEANOGRAPHY)**

Time : 2 hours

Maximum Marks : 70

Note : All questions are compulsory. Ships weather code is allowed. Use of non-programmable scientific calculator is permitted.

SECTION A

(Bridge Equipments and Colregs)

1. Explain the basic working principle of a GPS. Also, list the various alarms of the GPS. 10

2. Explain the various modes of STEERING. Describe the procedure you will follow to change over from Hand Steering to Auto Pilot. 10

3. (a) Explain the various methods to call Master on Bridge and circumstances under which he should be called. 5
(b) Explain the watch-keeping duties at Anchor. (Enlist 10 points) 5

4. (a) Explain in your own words the requirements of Rule 8, when you are required to take avoiding action in a COLLISION SITUATION with another vessel in open sea. 5
- (b) Describe the procedures for overtaking in a NARROW CHANNEL. 5

SECTION B

(Meteorology and Oceanography)

5. Write a short note on the origin, movement and life-span of a Tropical Revolving Storm (TRS). Describe the signs of an approaching TRS. 10
6. (a) Define the following :
Dew, Fog, Mist, Haze and Spray 5
- (b) Explain "Anabatic" and "Katabatic" winds. 5
7. Decode the following weather report :
BBXX VHAN 16003 99082 10469
41593 70510 10285 20208 40088
53036 70694 84299 22242 00206
20401 327// 40808 10
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