

B.Sc. (NAUTICAL SCIENCE)

Term-End Examination

June, 2010

BNA-015: NAVIGATION-II

**(BRIDGE EQUIPMENT, WATCH KEEPING
METEOROLOGY AND OCEANOGRAPHY)**

Time : 2 hours

Maximum Marks : 70

*Note : Answer four questions from Section - I and three
questions from Section - II.*

SECTION - I

1. What is the purpose of the following controls on echo sounder ? Explain. **10**
 - (a) Range switch
 - (b) Feet/Fathoms/Metres selector switch.
 - (c) Fix marker
 - (d) Paper speed control
 - (e) Draft setting

2. Describe the principle of any type of Marine Chronometer. **10**

3. How will you prepare an oil tanker for sea as the duty officer (OOW) ? **10**

4. Define following : 10
- (a) Vessel underway
 - (b) Vessel engaged in fishing
 - (c) Vessel not under command
 - (d) Sailing vessel
 - (e) Vessel constrained by her draft.
5. (a) In Restricted visibility what action shall be avoided if the radar detects the presence of another vessel and risk of collision exists. 4
- (b) How will maintaining a look out by "Hearing" help you to avoid collision ? 6
6. Draw a neat diagram showing mast head light, side lights, stern light of a vessel with name and angles. 10

SECTION - II

7. (a) What is ozone layer in atmosphere and why is it important ? 6
(b) Explain global warming in terms of green house effect. 4
8. Define the following : 10
(a) DALR
(b) SALR
(c) Diurnal variation of atmospheric temperature.
(d) Semi - diurnal variation of atmospheric pressure.
(e) Barometric Tendency
9. Why is diurnal range of air temperature over land larger than over sea ? 10
10. (a) Why does the colour of ocean appear blue ? 5
(b) Why do aeroplanes fly in stratosphere ? 5