

B.Sc. (NAUTICAL SCIENCE)**Term-End Examination****June, 2008****BNA-031 : SHIP SAFETY AND SECURITY***Time : 3 hours**Maximum Marks : 70*

Note : Answer any **three** questions from Section A and any **four** questions from Section B. All questions carry equal marks.

SECTION A**(Watch-Keeping Procedures)**

1. (a) What action is necessary at sea by the officer on watch on the onset of rough weather ?
(b) What adjustments does an auto-pilot need under different sea conditions ?
2. Enumerate at least ten important items of the check list when your vessel is due to arrive in a port.

3. (a) State the precautions you would take when navigating in the vicinity of a traffic separation scheme.
- (b) Write a short note on Automated Mutual Assistance Vessel Rescue System (AMVER).
4. What information does a pilot need to know before he commences handling your vessel during a river passage ?

OR

What actions are required to be taken by the navigational watch-keeping officer if the vessel has run aground ?

SECTION B
(Safety & Security)

5. (a) What are the objectives of the ISM Code ?
- (b) ISM Code requires a Safety Management System (SMS) to be established by the shipping company. Name some of the functional requirements which are included in the SMS.
6. Write short notes on :
- (a) Ship Security Assessment
- (b) Ship Security Plan
- (c) Near misses
- (d) Main elements of the risk assessment process
7. (a) Describe various methods by which physical search of explosives may be carried out on board a ship.
- (b) Describe the different security levels established under ISPS Code.
8. Why is a written system like 'Permit to work system' necessary ? State salient features of an effective Permit to work system. When is a Permit rendered invalid ?

9. (a) Describe the checks to be carried out prior to starting work aloft.
- (b) Name any five important IMO Conventions and state the purpose of these conventions.
10. State precautions which are required to be taken against fire and explosion before permission is given for welding or flame cutting.