



Name :

Roll No. :

Invigilator's Signature :

CS / BNS / SEM-4 / BNS-405 / 2013

2013

SHIP OPERATION TECHNOLOGY-II

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct answers for the following : $10 \times 1 = 10$
- i) Bilge soundings indicate
 - a) the amount of condensation in the hold
 - b) whether the cargo is leaking or not
 - c) whether the vessel is taking on water
 - d) all of these.
 - ii) Publication referred for Search and Rescue is
 - a) IAMSAR
 - b) COSWP
 - c) ISM
 - d) ISPS.
 - iii) As per SOLAS requirement, a 'Rescue boat' should have a length of
 - a) 2.8 metres – 8.5 metres
 - b) 3.8 metres – 8.5 metres
 - c) 3.5 metres – 8.5 metres
 - d) 4.0 metres – 8.5 metres.



- iv) IMDG Code is updated every
 - a) one year
 - b) two years
 - c) three years
 - d) none of these.
- v) As per IMDG Code Dangerous Goods are divided in
 - a) 8 classes
 - b) 7 classes
 - c) 6 classes
 - d) 9 classes.
- vi) Carriage of chemicals in bulk is covered by regulations
 - a) SOLAS Chapter VII and MARPOL Annex II
 - b) SOLAS Chapter VI and MARPOL Annex I
 - c) SOLAS Chapter V and MARPOL Annex II
 - d) SOLAS Chapter VII and MARPOL Annex I.
- vii) Type D Anchor Shackle is used to
 - a) connect bitter end
 - b) connect the anchor to the anchor chain
 - c) connect the anchor to the mooring buoy
 - d) connect the anchor to a tug while towing.
- viii) As for Cargo gear a competent person means
 - a) an individual qualified to perform Occupational Safety and Health Administration
 - b) an individual qualified to perform gear certification function with respect to vessels' cargo handling gear
 - c) any individual appointed by the Shipping company to perform gear certification functions with respect to vessels' cargo handling gear
 - d) any individual appointed by the Ships' Agent to perform gear certification functions with respect to vessels' cargo handling gear.



- ix) As per SOLAS requirement total number of Fire hoses to be carried on board depends on the
- type of the vessel
 - GRT of the vessel
 - dead weight of the vessel
 - length of the vessel.
- x) Additional life saving craft to be carried on ships where
- length of the vessel is more than 100 metres
 - length of the vessel is more than 150 metres
 - length of the vessel is more than 200 metres
 - none of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

- Enumerate the powers of Dock Safety Inspectors.
- Explain working principle of Infrared flame detector. State the various locations in ship where this detector is used.
- What markings appear on a container ? What does the code APLU 4310 stand for ?
- What are the uses of EMS and MFAG while carrying dangerous goods ?
- A beam 4 metre in length and weighing 5 tonnes is to be lifted by a two legged sling made of 6×24 wire. A weight of 2 tonnes is placed on the beam 0.5 metres from the centre. What should be the minimum size of wire used to make the sling ?
- What is IMO number ? What is the difference between IMO and official number ?



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

8. a) Enumerate various type of paints with their uses. Also state the significance of anti-fouling paint. Is anti-fouling paint environment friendly ? $5 + 2 + 1$
b) How will you prepare the surface exposed to weather for painting ? 7
9. a) Prepare a ship's muster list having complement of 22 crew and 3 family members. 7
b) As an officer-in-charge of a survival craft how do you manage the crew and personnel in the survival craft after abandoning the ship ? 8
10. With the help of neat sketches write notes on any *three* of the following : 3×5
 - a) Standing moor
 - b) Turning circle
 - c) Effects of shallows
 - d) Disadvantages of mooring.
11. a) What all preparations you will take on tanker vessel before entering dry dock ? 9
b) With a neat sketch describe the uses of shoring in dry dock. 6
12. a) Describe the contents of the Code of Safe Practice for Cargo Stowage and Security. 7
b) Explain various infrastructures built or provided in ports for loading and unloading containers, bulk solids and bulk liquids. 8
13. What checks and tests are carried on GMDSS equipment in the following intervals ? 3×5
 - a) Daily
 - b) Weekly
 - c) Monthly.