



BT MRE – IV – 09 – 22

## ***B. Tech Degree IV Semester Examination in Marine Engineering, June 2009***

### **MRE 406 SEAMANSHIP AND NAVIGATION**

Time : 3 Hours

Maximum Marks : 100

(All questions carry EQUAL marks)

- I. (a) Who is the head of a vessel?  
(b) How a vessel is divided into various sectional organizations and who is responsible for each?  
(c) What are the responsibilities of 2<sup>nd</sup> Engineer, Chief Officer and a Deck Fitter?  
(d) How many Masts a 150 metre long vessel carries?  
(e) Where do you find 'Monkey Bridge' on a Vessel? What is the use of that space?
- OR**
- II. (a) What is the use of a navigational light? Draw a diagram explaining how they are exhibited for a large container vessel.  
(b) What is understood by the term Fog Signal? Explain your answer.  
(c) Briefly explain the functions of EPIRB.  
(d) What is the relevance of GMDSS?
- III. (a) How many anchors a vessel carries? Why do we need anchors?  
(b) What do you understand by the term Cable Stoppers?  
(c) Briefly explain how an anchor is prepared for letting go.  
(d) What is the use of ballasting a vessel? When it is needed?
- OR**
- IV. (a) Draw a diagram of three stranded rope and name the parts. How does it differ from a steel wire rope?  
(b) Explain the uses of reef knot, clove hitch bowline and sheet band.  
(c) What do you understand by the term Bitter End?  
(d) What is a Sea anchor?
- V. (a) Draw a rough sketch of a vessel moored along side and name the mooring lines.  
(b) What is a position line?  
(c) What is the relevance of compasses on board a vessel? How many types are used? What are they?  
(d) How can we determine the position of our vessel with a Light House?
- OR**
- VI. (a) What is the relevance of a Sextant on board? What do you understand by Constellation?  
(b) Name some of the bright stars.  
(c) What is Belt of Orion and Southern Cross?  
(d) Have you come across the term Polaris? What is its relevance?

*(Turn Over)*

- VII. (a) How are life boats stowed on a vessel?  
(b) Can a life boat be a Rescue Boat? If so how?  
(c) Why do we need life rafts on board and where are they stowed?  
(d) Where a free fall boat is stowed and why?

**OR**

- VIII. (a) What do you understand by the term 'Muster List'? Where do you find it?  
Who prepares it?  
(b) What is an Emergency Station? How is that indicated?  
(c) What is a fire alarm? How is that indicated?  
(d) Who orders abandon Ship and how?

- IX. (a) What do you understand by the term distress signals?  
(b) What are the pyrotechniques?  
(c) What is hypothermia?  
(d) Where a barometer is stowed on board and what is its utility?

**OR**

- X. (a) What is understood by the term 'Marpol'? What is its use?  
(b) What precautions are to be taken before pumping out bilges?  
(c) Define UTC and SMT.  
(d) Briefly explain actions on boarding a life raft.

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