

Ship Structure and Construction VTU CBCS Question Paper Set 2018



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CBCS Scheme

15MR44

USN

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Fourth Semester B.E. Degree Examination, Dec.2017/Jan.2018 Ship Structure & Construction

Max. Marks: 80

Time: 3 hrs.

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Define the following terms: (08 Marks)
(i) LBP (ii) LOA (iii) Displacement (iv) Dead weight (08 Marks)
b. Explain the different testing methods to find welding faults.

OR

- 2 a. With a neat sketch explain the different types of section material used in ship construction. (08 Marks)
b. What are the types of joints in welding? Explain the necessary surface preparation before carrying out welding. (08 Marks)

Module-2

- 3 a. Explain the purpose of shaft tunnel. Draw a cross section view of a shaft tunnel. (08 Marks)
b. Explain the two different types of sterns. (08 Marks)

OR

- 4 a. Write short note on: (08 Marks)
(i) Bulbous bow (ii) Tunnel bearing. (08 Marks)
b. Sketch and label: (i) Bitter end and chain locker. (ii) Hawse pipe section.

Module-3

- 5 a. Explain with a neat sketch the construction of a bulkhead. (08 Marks)
b. Sketch a hatch securing cleat. Where is hatch securing used? What is its purpose? (08 Marks)

OR

- 6 a. Sketch and explain the horizontal type sliding water tight door. (08 Marks)
b. Sketch and label oil tight hatchway. Where such type of hatch way is used. (08 Marks)

Module-4

- 7 a. What are the various conditions for assigning a freeboard to a ship? (06 Marks)
b. What are different types of launching? Explain side – launching. (06 Marks)

OR

- 8 a. What is a sea trail? How is it carried out? (06 Marks)
b. What are the types of ship according to freeboard computation? Explain the sub-division requirement according to types. (10 Marks)

Module-5

- 9 a. With a neat sketch explain the different motions of a shipboard crane. (08 Marks)
b. Sketch and describe midship section of a bulk carrier. (08 Marks)

OR

- 10 a. Explain the testing of cargo tank and cofferdam. (08 Marks)
b. Write short note on: (08 Marks)
(i) Integral tank.
(ii) Membrane tank.
(iii) Independent tank with respect to gas carrier.

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CBCS Scheme

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15MR44

Fourth Semester B.E. Degree Examination, June/July 2017 Ship Structure and Construction

Time: 3 hrs.

Max. Marks: 80

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Define the following terms with help of neat sketch:
i) Free board ii) Rise of floor iii) Tumble home iv) LOA (08 Marks)
- b. Explain the following stresses acting on a ship:
i) Hogging ii) Sagging iii) Pounding iv) Racking (08 Marks)

OR

- 2 a. Explain the process of metallic arc welding with a neat sketch. (08 Marks)
- b. With a neat sketch, explain the different types of welding faults. (08 Marks)

Module-2

- 3 a. With a neat sketch, explain the stem construction of a ship. (08 Marks)
- b. Sketch and label: i) Longitudinally framed solid floor (08 Marks)
- ii) Transversely framed bracket floor.

OR

- 4 a. What is a collision bulkhead? Under what convention the construction of it is explained. (08 Marks)
- Give the regulation for construction of collision bulkhead. (08 Marks)
- b. With the neat sketch, explain the types of Rudder. (08 Marks)

Module-3

- 5 a. Write short notes on: i) Shell plating, ii) Deck plating. (08 Marks)
- b. Sketch and explain the mid-ship section of a welded ship. (08 Marks)

OR

- 6 a. Sketch and explain the vertical type sliding water tight door. (08 Marks)
- b. Sketch the arrangement for passing cables and pipes through a water tight bulkhead. (08 Marks)

Module-4

- 7 a. Explain the different types of hatch covers used on ships, with example. (08 Marks)
- b. Sketch the load line marking on a ship indicating its dimensions. (08 Marks)

OR

- 8 a. Sketch a layout of shipyard. (08 Marks)
- b. Explain the role of surveyors in construction of a ship. (08 Marks)

Module-5

- 9 a. Write short notes on: i) Corrosion control, ii) Antifouling system. (08 Marks)
- b. Explain the process of surface preparation and painting on ship. (08 Marks)

OR

- 10 a. Explain the essential constructional differences between the following type of vessels:
i) Container ship ii) Dry bulk carrier (08 Marks)
- b. Briefly explain different type of tank system on a liquefied gas carrier. (08 Marks)

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2. Any revealing of identification, appeal to evaluate and its exposure.