

Indian Maritime University
(A Central University, Govt. of India)
End Semester Examinations – June 2023
Programme Name: B Tech (NAOE)
Semester: VI
Subject Code: UG12E2607
Subject Name: Inland Water Transportation

Date: 13.06.2023

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

General Instructions

- (i) All Sections (A, B & C) are to be attempted.
- (ii) Options, if any, are specified in respective section.

Section A

Ten MCQs/Fill in the Blanks of 01 Mark each – Choose the correct answer as applicable.

1. Which of the following materials is used in the construction of Inland Vessels?
 - a. Steel
 - b. Aluminium
 - c. FRP
 - d. All of the above
2. The anchor specifications are arrived at using
 - a. Equipment number
 - b. Froude number
 - c. Water depth
 - d. External forces
3. Which among the following is a fixed firefighting system?
 - a. Extinguishers
 - b. Sea water system
 - c. Sprinkler system
 - d. Mooring system
4. Which one of the following is applicable to inland vessels?
 - a. Contra-rotating propellers
 - b. Shrouded propellers
 - c. Water jet propellers

- d. All of the above
5. The hull form type preferred for inland vessels
 - a. Fuller form
 - b. Slender form
 - c. Chine form
 - d. Wedge form
 6. The major issue in shallow water manoeuvring in inland waterways
 - a. Squat
 - b. Speed
 - c. Locks
 - d. Bridges
 7. The waterways need a regular maintenance to avoid
 - a. Water flow
 - b. Turning
 - c. lashing
 - d. Sedimentation
 8. One way by which the waterways can used as an effective means of cargo transportation is
 - a. Network of waterways
 - b. Increase the Ship numbers
 - c. Navigational aids
 - d. Construction of Lock structures
 9. Which of the following is an intermodal means of transportation?
 - a. Sea
 - b. Road
 - c. Rail
 - d. All of the above
 10. Which one of the following is a major inland transportation system in the country
 - a. Rivers
 - b. Canals
 - c. Lakes
 - d. All of the above

Section B

Five Questions of 02 Marks each

11. How are the inland waterways classified in India?
12. Write a brief account of networking of navigable waterways in India.
13. Compare capital and maintenance dredging.
14. State the criteria for the stability of inland vessels.

15. Discuss the materials used for construction of inland vessels.

Section C

Seven Questions of 10 Marks each of which any 05 questions to be answered.

16. Explain in detail the various fire-fighting and life-saving appliance on-board an inland vessel.

17. Draw a layout plan of a mooring and anchoring arrangement.

18. Illustrate the characteristics of Inland Water Transportation in the world and detail the Indian strategy for development of inland waterways.

19. Describe the siltation and bank erosion. Also discuss disposal issues with the inland sedimentations.

20. Compare the various hull form types of Inland vessels and propose a suitable propulsion systems for efficient performance.

21. Write down the brief specification of a pusher tug and explain the operation of flotilla.

22. Explain the bank suction effects and ship cross flow for an inland vessel manoeuvres.

