
Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – June 2026
Programme Name: B Tech (Marine Engineering)
Semester: 7th
Subject Code: UG11T4707
Subject Name: Sea Trials, Dry Docking & Shipyard

Date: 16.06.2026

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. The acceptable ideal wind condition to carry out sea trial should not more than :
(a) Beaufort 2 (b) Beaufort 3 (c) Beaufort 4 (d) Beaufort 5
 2. A caisson gate is used in a : (a) Graving dock (b) Floating dock system
(c) Slipway system (d) Synchro lift system
 3. In Turning circle test , a ship's "Turning Circle " should be not more than
(a) 4.0 ship lengths (b) 4.5 ship lengths (c) 5.0 ship lengths (d) 5.5 ship lengths
 4. An anchor chain with 2 shackle in water is equivalent to :
(a) 55 m (b) 65 m (c) 75 m (d) 85m
 5. If a ship sails at 16 knots per hours in calm sea , with no current , how much distance will it travel over ground in half an hour with an opposing current of 2 knots:
(a) 5 (b) 7 (c) 10 (d) 14
 6. A ships anemometer measurers :
-

-
- (a) relative speed over water (b) relative speed over ground (c) relative heading (d) relative wind speed and direction
7. Large number of cradles are required for :
(a) Graving dock system (b) Floating dock system (c) Synchro lift system (d) Slipway system
8. The steps in a graving dock is known as : (a) Coving (b) Altar (c) Sill (d) Platform
9. Which survey does not have window period of 3 months after anniversary date : (a) Annual survey (b) Renewal survey (c) Intermediate survey (d) Periodical survey
10. For starting test of a ship with FPP type of propeller, the minimum requirement is :
(a) any 6 start manoeuvres (b) 6 Ahead manoeuvres (c) total 6 reverse or ahead start manoeuvres (d) A total 12 reverse and start manoeuvres.

Section B

Five Questions of 02 Marks each

11. Why opposite runs are required to be carried out during speed trial ?
12. What is main difference between ship log speed and ship speed over ground.
13. When a ship is sailing, what is the difference between ship's heading and ship's course ?
14. What is the difference between IBC code and BCH code ?
15. Reference to ship surveys, what is the full form of HSSC and how includes many types of surveys does it include ?

Section C

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

16. What is the significance of carrying out boiler pressure accumulation test during sea trial?
Mention the mandatory conditions under which the test is carried out for smoke tube and water tube boilers [Marks : 4 +6]
17. Draw the 5 phases of a floating dock while docking a ship, highlighting the waterline in each phase and mention which are the 2 phases which are very critical regarding stability and why ? [Marks 5+ 5]
18. Write 5 advantages and 5 disadvantages of a graving dock [Marks 5+5]
19. With the help of a diagram, explain why a "Second overshoot angle" related to Z manoeuvre test is measured during sea trial? [Marks : 5 + 5]
-

20. What is the difference between abrasive and non -abrasive dry blasting and mention their application ? Describe with simple sketch , the 3 types of wet blasting [Marks4 +6]

21. What is the full form of PSPC and which part of the ship has to be comply with PSPC regulation and what is the minimum requirement ?

Draw a simple cross section of a ship highlighting the following zones of hull: Flat bottom, Vertical bottom, Boot top, Top side. [Marks 4 + 6]

22. Explain briefly each of the 6 major milestone in a standard 'Timeline' for a ship construction event ? What is the difference between basic design and initial design drawings for ship building [Marks 6 + 4]

=====

