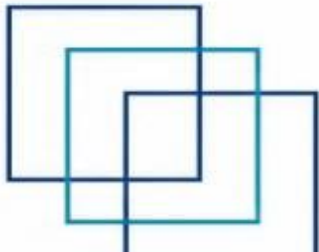




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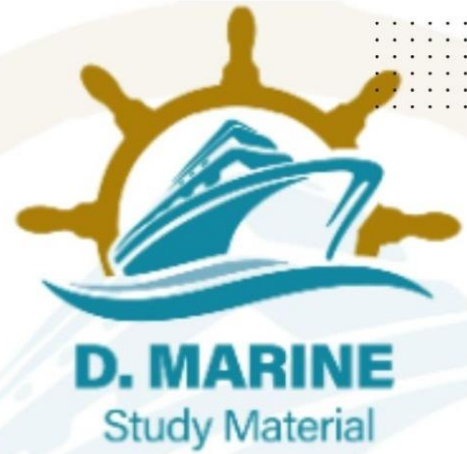
(SHIP SAFETY & ENVIRONMENTAL PROTECTION)

FOR INDIAN COMPETENCY EXAM





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JANUARY - 2026

Q1. With reference to lifeboats, describe:

- A handbrake used for lowering and state how it may be tested. (8)
- The centrifugal brake and state the method of testing. (8)
- Is there a regulation on the lowering speed of the boat? Explain in brief.

2025/APR1/Q1 **2026/JAN/Q1**

[Click Here to See the Answer](#)

Q2.a) What are the causes of an uptake fire? (6)

(b) State the conditions under which light soot fire intensifies to a high temperature fire in boiler uptake. What temperatures are produced in each case. (6)

(c) How boiler uptake fire is controlled? Why the use of soot blowers is prohibited? (8)

2023/FEB/Q5 **2024/JUL/Q2** **2024/DEC1/Q2** **2025/APR1/Q2**

2026/JAN/Q2

[Click Here to See the Answer](#)

Q3. With respect to MLC 2006; write short notes on following:

(a) Hours of Rest/Hours of Work. (5)

(b) DMLC Part 1 and DMLC Part II (5)

(c) On board complaint redressal (5)

(d) Why is MLC 2006 considered as the 'bill of rights' (5)

2023/FEB/Q7 **2024/JUL/Q3** **2024/DEC1/Q3** **2025/APR1/Q3**

2026/JAN/Q3

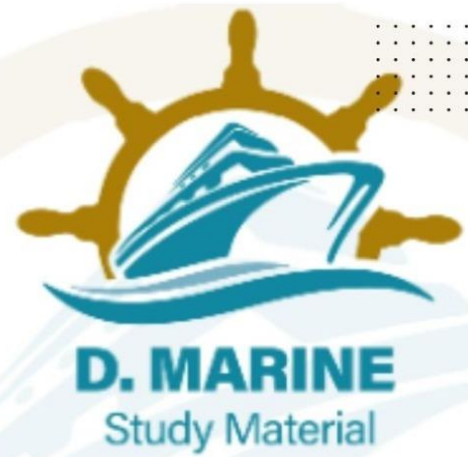
[Click Here to See the Answer](#)

Q4.a) Sketch and describe the working of a Sprinkler type, automatic fire detection and firefighting system on ships, labelling its components in the circuit. (10)

(b) What maintenance is required periodically? State the routine tests



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required? (10)

2023/FEB/Q9 **2024/JUL/Q4** **2024/DEC1/Q4** **2025/APR1/Q4**
2026/JAN/Q4

[Click Here to See the Answer](#)

Q5. Write short notes on following:

(a) Flammability diagram and its significance (10)

(b) Risk assessment: why and how it is carried out on ships with examples

2024/JUL/Q5 **2024/DEC1/Q5** **2025/APR1/Q5** **2026/JAN/Q5**

[Click Here to See the Answer](#)

Q6.a) What is ozone depletion and what are its effects? (5)

(b) Name the gases which have ozone depleting potential and how ODP is classified. (5)

(c) What actions are now in place to control the usage or accidental release of such gases? What recordkeeping is essential? (10)

2023/JAN/Q2 **2023/MAR/Q1** **2023/OCT/Q2** **2024/FEB/Q7**
2024/JUL/Q6 **2024/DEC1/Q6** **2025/APR1/Q6** **2026/JAN/Q6**

[Click Here to See the Answer](#)

Q7. State why the following equipment's require shut down during a major fire which has necessitated the evacuation of the machinery spaces:

(a) Settling and service tank valves. (4)

(b) Fuel transfer and supply pumps (4)

(c) Mechanical and natural ventilation (4)

(d) State how the fire is brought under control using the facilities available outside the machinery spaces. (8)

2022/OCT/Q2 **2023/MAR/Q2** **2024/JUL/Q7** **2024/DEC1/Q7**
2025/APR1/Q7 **2026/JAN/Q7**

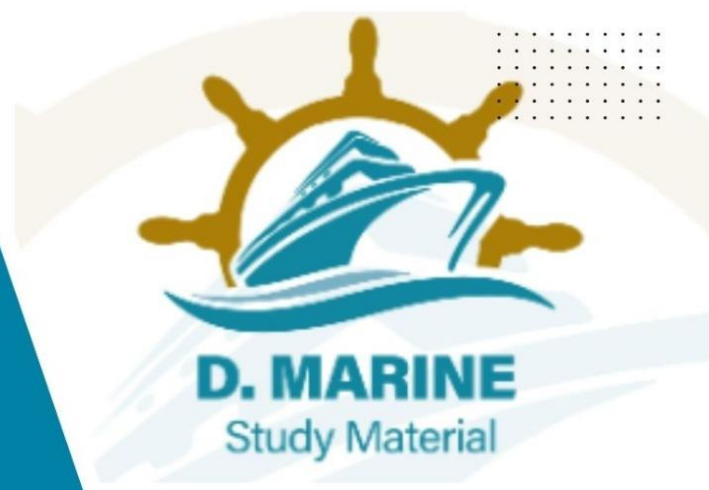
[Click Here to See the Answer](#)

Q8.a) Define enclosed space; Give examples of enclosed spaces on ships. (7)

(b) What is the procedure for an enclosed space entry, describe the same.



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(c) What type of permit is required for entry into enclosed spaces and how is it issued? What is its validity? (6)

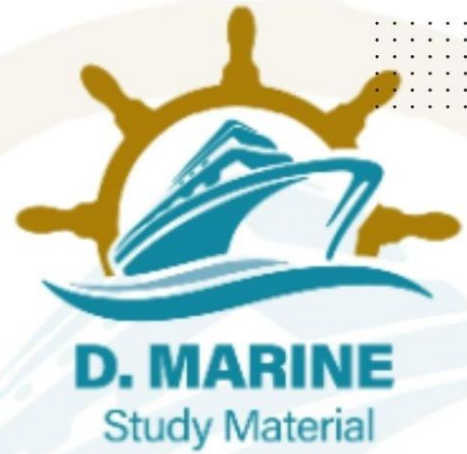
2023/JAN/Q5	2023/OCT/Q5	2023/DEC/Q3	2024/APR1/Q3
2024/MAY2/Q3	2024/JUN/Q5	2024/AUG/Q3	2024/SEP2/Q3
2025/APR2/Q3	2026/JAN/Q8		

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FEBRUARY - 2026

- Q1.a) Explain the purpose of a Hot Work permit. (6)
(b) State the different types of work permit used on ships and their utility.
(c) Prepare a checklist for issuance of Hot Work permit. (8)

2023/FEB/Q4 **2024/FEB/Q1** **2024/SEP1/Q1** **2024/DEC2/Q1**
2025/JUL/Q1 **2026/FEB/Q1**

[Click Here to See the Answer](#)

Q2. Write short notes on following:

- (a) Immersion suit (5)
(b) TPA (5)
(c) Anti-exposure suit (5)
(d) EEBD (5)

2023/FEB/Q6 **2024/FEB/Q2** **2024/DEC2/Q2** **2025/JUL/Q2**,
2026/FEB/Q2

[Click Here to See the Answer](#)

- Q3.a) Name the gases usually found inside enclosed spaces. (6)
(b) What instruments are used in detecting / checking the gases which are present? (6)
(c) What is the minimum level of oxygen required for entry into enclosed space. (2)
(d) With a simple diagram, explain the working of oxygen content meter. (6)

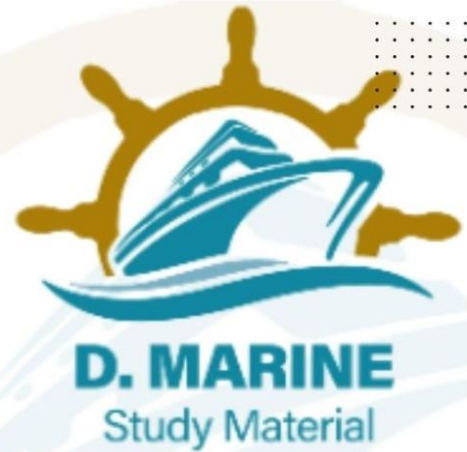
2023/JUL/Q2 **2024/FEB/Q3** **2024/DEC2/Q3** **2025/JUL/Q3**
2026/FEB/Q3

[Click Here to See the Answer](#)

- Q4.a) What is a Fire control plan (F.C.P) and what information does it provide? (5)
(b) State 5 nos. graphic symbols shown in the plan and state the language in which the plan is drafted. (5)
(c) Mention the locations at which the FCP is displayed? (5)



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(d) How does the FCP aid the shore fire fighting team?

2024/FEB/Q4, 2024/DEC2/Q4, 2025/JUL/Q4, 2026/FEB/Q4

[Click Here to See the Answer](#)

Q5. Write short notes on following with respect to lifeboats:

- (a) Marking on lifeboat (5)
- (b) Davit limit switches (5)
- (c) Centrifugal brakes (5)
- (d) Safeties provided on lifeboat (5)

2025/JUL/Q5, 2026/FEB/Q5

[Click Here to See the Answer](#)

Q6.a) Explain the function of IMO as one of UN specialized agencies. (6)

(b) Briefly explain the structure of IMO including the main committees. (7)

(c) Explain the process of adopting a convention at IMO (7)

2023/JUL/Q7, 2024/FEB/Q6, 2024/DEC2/Q6, 2025/JUL/Q6

2026/FEB/Q6

[Click Here to See the Answer](#)

Q7.a) Sketch and explain the operation of the Quick Closing Valve? (10)

(b) What do you understand by the Emergency Shutdown System? Explain the operation in an emergency. (10)

2024/FEB/Q8, 2024/DEC2/Q7, 2025/JUL/Q7, 2026/FEB/Q7

[Click Here to See the Answer](#)

Q8. Using a simple sketch, describe the fire main of a ship with which you are familiar. Include in your answer:

- (a) The number and type of pumps (5)
- (b) Pipe materials (5)
- (c) Reasons for the drain valve (5)
- (d) Location of the international shore coupling (5)

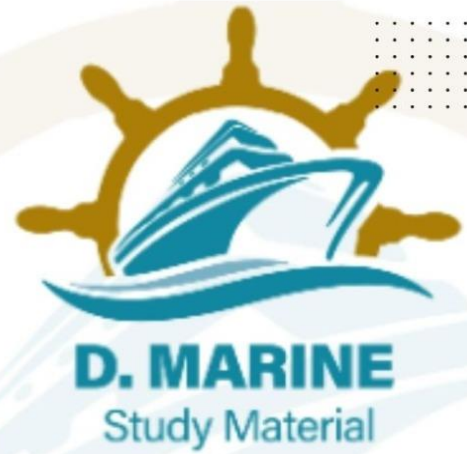
2022/OCT/Q6, 2023/MAR/Q6, 2024/FEB/Q9, 2024/DEC2/Q8,

2025/JUL/Q8, 2026/FEB/Q8

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MARCH - 2026

Q1.i) Why is it necessary to treat ballast water, prior to its discharge? (8)
ii) Explain the difference between ballast water exchange and ballast water treatment. Name the standards used in each case. (12)

2023/JUN/Q1 **2024/SEP2/Q1** **2025/JUN/Q1** **2026/MAR/Q1**

[Click Here to See the Answer](#)

Q2.a) What are the different types of garbages that are generated on board as per Marpol Annex V, and what are the provisions for dealing with them? (10)

b) State the requirements for maintaining Garbage management plan and Garbage Record Book, Name the entries to be made in garbage record book. (10)

2024/SEP2/Q2 **2025/JUN/Q2** **2025/DEC/Q6** **2026/MAR/Q2**

[Click Here to See the Answer](#)

Q3.a) Draw a simple sketch of the Inert Gas (IG) System, and explain the basic functional requirements of the IG System (10)

b) What are the regulations defining the fire pump requirement for a cargo vessel as per the SOLAS convention? Write short notes on isolating valve and relief valve in fire main line. (10)

2025/JUN/Q3 **2026/MAR/Q3**

[Click Here to See the Answer](#)

Q4.a) List out the markings on a Life raft and Lifeboat. (6)

b) What is the significance of a Fire Control Plan? Explain at least five key fire safety elements that feature in the Fire Control Plan. (8)

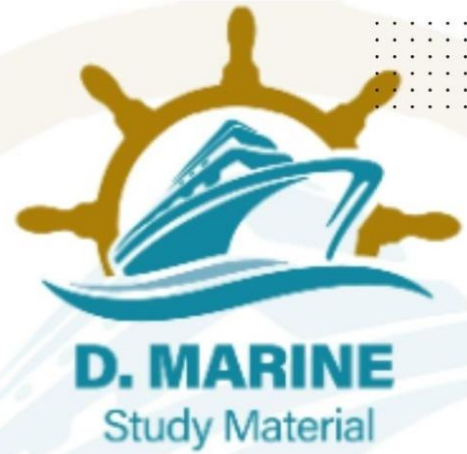
c) Write short note on SART. How is it tested during a drill? (6)

2025/JUN/Q4 **2026/MAR/Q4**

[Click Here to See the Answer](#)



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- Q5.i) Name the types of portable fire extinguishers used on board ships. (5)
ii) State the use of the named type of extinguishers for extinguishing the concerned type of fire. (5)
iii) Sketch and describe a mechanical foam type of extinguisher, naming the components and material used to generate foam. (10)

2023/JUN/Q6 **2024/SEP2/Q9** **2025/JUN/Q5** **2026/MAR/Q5**

[Click Here to See the Answer](#)

Q6. With respect to gravity lifeboat davits: Describe and state the purpose of: (20)

- i) Centrifugal brakes
ii) Deadman's Handle
iii) Limit switches on Davits
iv) Onload release gear

2023/MAY2/Q7 **2023/JUN/Q9** **2024/SEP2/Q6** **2025/JUN/Q6**
2026/MAR/Q6

[Click Here to See the Answer](#)

Q7.a) State the causes of scavenge fire in a two-stroke engine and explain how the possibility of such an occurrence can be reduced. (10)

b) If a scavenge fire does occur what action should be taken? Discuss the use of CO₂ and dry powder for extinguishing such a fire and describe a fixed installation for applying one of these chemicals (10)

2022/AUG/Q2 **2022/SEP/Q3** **2022/DEC/Q2** **2023/APR/Q1**
2023/DEC/Q7 **2024/APR1/Q7** **2024/MAR/Q7** **2024/MAY1/Q9**
2024/SEP2/Q7 **2024/OCT/Q9** **2025/JAN1/Q6** **2025/FEB/Q3**
2025/JUN/Q7 **2025/OCT/Q6** **2026/MAR/Q7**

[Click Here to See the Answer](#)

Q8.a) What are the permit to work system on a ship? Name at least three permit to work system used and their significance. (8)

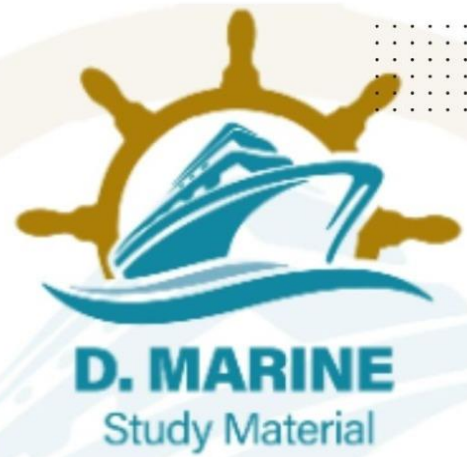
b) Prepare a checklist for making a man-entry into a tank which had previously carried fuel oil. (12)

2025/JUN/Q8 **2026/MAR/Q8**

[Click Here to See the Answer](#)



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APRIL - 2026

- Q1. (a) What are the short-term measures devised by IMO for controlling the emission of Green House gases (5)
(b) State the measures and how they will take effect. What size of ships are these rules applicable to? (5)
(c) What documents will be required to be carried on board under the new regulations? (5)
(d) What is SEEMP Part III? State its contents (5)

2024/JAN/Q2 **2024/SEP1/Q2** **2025/JAN2/Q1** **2025/AUG/Q1**
2026/APR/Q1

[Click Here to See the Answer](#)

- Q2. (a) Name and describe in detail any three mandatory IMO Codes. Explain their significant features. (10)
(b) What do you understand by the term 'Protocol to a convention' Give examples. (10)

2024/JAN/Q5 **2024/SEP1/Q5** **2025/JAN2/Q2** **2025/AUG/Q2**
2026/APR/Q2

[Click Here to See the Answer](#)

- Q3. (a) With respect ISPS code, define the levels of security and explain what action needs to be taken in each case (8)
(b) What is SSP and state its purpose? Name the essential points that the SSP must address (8)
(c) Explain the term 'Declaration of security'. (4)

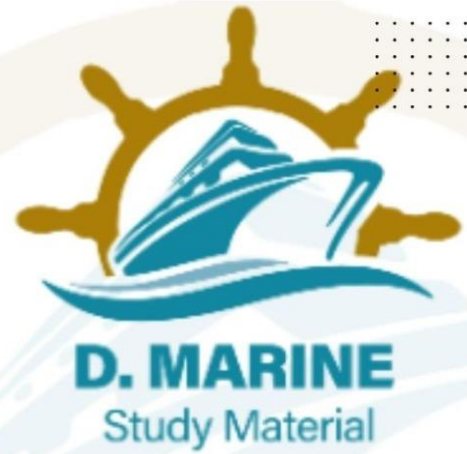
2024/JAN/Q6 **2024/SEP1/Q6** **2025/JAN2/Q3** **2025/AUG/Q3**
2026/APR/Q3

[Click Here to See the Answer](#)

- Q4. (a) List the items which are contained in the training manual pertaining to life saving appliances. (5)



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(b) Describe the frequency of abandon ship drills and fire drills and how they should be conducted. (5)

(c) State the regulation regarding the maintenance of lifeboat falls. (5)

(d) List the LSA to be carried by all ships. (5)

2022/AUG/Q7 2023/APR/Q9 2024/JAN/Q7 2024/SEP1/Q7

2025/JAN2/Q4 2025/AUG/Q4 2026/APR/Q4

[Click Here to See the Answer](#)

Q5. Write short notes on the following:

(a) SOPEP (5)

(b) MARPOL Annex IV discharge criteria (5)

(c) SEEMP (5)

(d) Nox Technical File

2025/JAN2/Q5 2025/AUG/Q5 2026/APR/Q5

[Click Here to See the Answer](#)

Q6. (a) With reference to the cargo tanks of oil tankers: State

(i) The purpose of the pressure vacuum valve (5)

(ii) The dangers of venting during loading via open tank hatches (5)

(b) (i) Sketch a high velocity vent (5)

(ii) Describe the operation of this vent and state why such a device is used.

2024/JAN/Q8 2024/SEP1/Q8 2025/JAN2/Q6 2025/AUG/Q6

2026/APR/Q6

[Click Here to See the Answer](#)

Q7. (a) State with reasons the essential requirements for unattended machinery spaces (8)

(b) With reference to a periodically unattended machinery space of a dry cargo vessel discuss the requirements for:

(i) Protection against flooding (6)

(ii) Control of propulsion machinery from the navigating bridge (6)

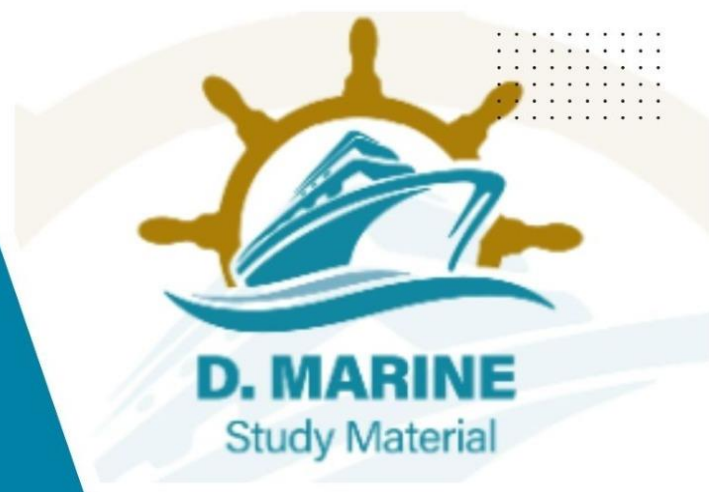
2023/JAN/Q6 2024/MAY1/Q3 2024/SEP1/Q9 2024/OCT/Q3

2025/JAN2/Q7 2025/AUG/Q7 2026/APR/Q7

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- Q8. (a) Draw and explain a Fixed Foam Fire Fighting system (12)
(b) What is the proportion ratio of both high expansion and low expansion Foam Fire Fighting system? (4)
(c) What Periodic test are carried out to ensure the readiness of the fixed foam fire fighting system? (4)

2025/JAN2/Q8 **2025/AUG/Q8** **2026/APR/Q8**

[Click Here to See the Answer](#)

