

OMTC



admin@omtcindia.com



[+ 91 93566 26422 / 88307 34595](tel:+919356626422)



www.omtcindia.com



VIP 56, IRC Village, Nayapalli, Bhubaneswar, Odisha, India. Pin-751015

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Note:

- 1) IAMI EK Question papers covered from 2017-2024.
- 2) The content included in this file is only for reference purposes and not for commercial gain.



1. SHIP NOMENCLATURE**FEB 2024/OCT 2021/AUG 2020/DEC 2019/OCT 2018/FEB 2018**

Q 9) Explain the meaning and purpose of EACH of the following ship terms:

- (a) Bilge keel. (4)
- (b) Freeing port. (4)
- (c) Longitudinal. (4)
- (d) Frame. (4)

MAY 2023/MAR 2018

Q 9) Explain the meaning and purpose of EACH of the following ship terms:

- (a) Keel. (4)
- (b) Beam (structural member). (4)
- (c) Girder. (4)
- (d) Frame. (4)

OCT 2023

Q 9) With reference to the ship's structural arrangements, explain, with the aid of a sketch, EACH of the following terms:

- (a) Sheer. (4)
- (b) Flare. (4)
- (c) Camber. (4)
- (d) Tumblehome. (4)



NOV 2023/DEC 2023/MAY 2021/JULY 2019/JULY 2018

Q 9) Explain the meaning and purpose of EACH of the following ship terms:

- (a) Hawse pipe. (4)
- (b) Chain Stopper. (4)
- (c) Fairlead. (4)
- (d) Bollard. (4)

OCT 2020/MAY 2018/JULY 2017

Q 9) Explain the meaning and purpose of EACH of the following ship terms:

- (a) Transverse watertight bulkhead. (4)
- (b) Bilge keel. (4)
- (c) Shear strake. (4)
- (d) Cofferdam. (4)



2. STABILITY

FEB 2023/MAY 2021/AUG 2020/JULY 2018/FEB 2017/OCT 2023

- Q 8) Explain, with reference to stability, why, when the vessel has full bunkers, fuel stored in higher tanks, such as wing tanks, is generally used before fuel stored in lower tanks, such as double bottom tanks. (16)

MAR 2023/JULY 2021/MAY 2019/DEC 2017/MAY 2017

- Q 8) Describe, with the aid of a sketch, the structural features of the bow that impart structural strength. (16)

MAY 2023

- Q 8) With reference to the accumulation of water on the open decks of ships:
- (a) Explain the importance of ensuring that there is no accumulation of water. (6)
- (b) Explain, with the aid of sketches, how it is prevented. (4)

FEB 2020/DEC 2018/OCT 2018

- Q 8)
- (a) Describe, with the aid of a sketch, a freeing port. (8)
- (b) Explain how freeing-ports assist in maintaining the stability of a ship. (8)



JULY 2022/MAY 2018

Q 8)

- (a) State the measurement that gives an indication of a ship's stability. (2)
- (b) Explain the meaning of the measurement stated in (a). (2)
- (c) Explain how the measurement given in (a) indicates EACH of the following:
 - (i) Stable stability. (4)
 - (ii) Unstable stability. (4)
 - (iii) Neutral stability. (4)

OCT 2022/OCT 2019/FEB 2019/FEB 2018

- Q 8) With reference to transferring large quantities of fuel from low tanks, such as double-bottom storage tanks, to higher-wing bunker tanks.
- (a) Explain the possible effects on the stability of the vessel. (8)
 - (b) State the important checks to be made before and during the fuel transfer operation. (8)

DEC 2022/DEC 2021/JULY 2019

Q 8)

- (a) Explain the term free surface effect. (8)
- (b) Explain why free surface effect is important in ro-ro ferries and other ships having large enclosed deck areas. (8)



3. CONSTRUCTION & DESIGN**FEB 2023/OCT 2022/DEC 2021/OCT 2019/DEC 2018/OCT 2017/MAY 2017**

- Q 9) Describe, with the aid of a sketch, the structural features of the bow which impart structural strength. (16)

FEB 2024/DEC 2019/OCT 2017/MAR 2017

- Q 9) With reference to lubricating oil or fuel oil tanks that have ventilators on the vessel's main weather deck, explain EACH of the following:
- (a) The purpose of the ventilation. (4)
 - (b) How ingress of sea water in bad weather is prevented. (4)
 - (c) How the risk of fire entering the ventilator is reduced. (4)
 - (d) How the risk of pollution is reduced. (4)

MAR 2023/DEC 2020/MAY 2019

- Q 9)
- (a) Sketch and describe EACH of the following ship construction features:
 - (i) Plate floor (6)
 - (ii) Watertight bulkhead. (6)
 - (b) Explain how watertight bulkhead integrity may be tested. (4)

JULY 2022/DEC 2017-Q-9

- Q 9) With reference to forward collision bulkheads:
- (a) Describe their construction. (8)
 - (b) State their function. (4)
 - (c) State their position, giving a reason for this positioning. (4)



JULY 2017-Q-8

Q 8)

- (a) State the structural features of the bow and stern, which impart structural strength. (8)
- (b) Explain the stability implications when using water to fight a fire onboard a ship. (8)



4. LOAD LINE**NOV 2023/DEC 2023**

Q 8) With reference to Load lines and associated surveys:

- (a) In the diagram below state the name of the area 'A' (2)
- (b) State the terms associated with EACH of the load line letters shown:
 - (i) TF (1)
 - (ii) F (1)
 - (iii) T (1)
 - (iv) S (1)
 - (v) W (1)
 - (vi) WNA (1)
- (c) Outline TWO non-conformities that may be found during a load line survey with regard to EACH of the following:
 - (i) The Ship's structure. (2)
 - (ii) Watertight integrity. (2)
 - (iii) Stability. (2)
- (d) State how often a load line survey normally takes place and by whom. (2)

JULY 2021/DEC 2022/FEB 2020/FEB 2019/FEB 2017

- Q 9) Describe the inspection required of a weather deck water-tight door to ensure compliance with load line survey. (16)



OCT 2021/DEC 2020/OCT 2020/MAR 2018

Q 8)

- (a) State the main purpose of the Load Line survey. (4)
- (b) Explain the importance of EACH of the following with reference to the purpose of the Load Line survey:
 - (i) Bilge system. (8)
 - (ii) Ballast system. (4)