



Marine Engineering Knowledge (MEK)

30 Practice Questions and Answers for STCW Exams

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Practice Set 1

Q1. Boiler is related to _____

- A) Storing Vegetables
- B) Steam Generation
- C) Steering
- D) Human waste

Correct Answer: B (Steam Generation)

Explanation: A boiler is a crucial piece of equipment onboard a ship responsible for generating steam. This steam is utilized for various purposes, including propulsion in steam-powered vessels and for heating systems.

Q2. Which of the following is bottom most part of a diesel engine?

- A) Piston
- B) Turbo charger
- C) Connecting Rod
- D) Exhaust valve

Correct Answer: C (Connecting Rod)

Explanation: The connecting rod is positioned between the piston and the crankshaft. It is the bottom-most component among the choices provided that is directly involved in transmitting the linear motion of the piston to the rotating motion of the crankshaft.

Q3. Main Engine is part of the _____ system

- A) Electrical
- B) Propulsion
- C) Bilge
- D) Ballast

Correct Answer: B (Propulsion)

Explanation: The main engine is the primary source of power for a ship's movement, providing the necessary force to turn the propeller. Therefore, it is an integral part of the propulsion system.

Q4. Domestic Fridge is related to _____.

- A) Human waste
- B) Storing Vegetables
- C) Steering
- D) Starting of Main Engine

Correct Answer: B (Storing Vegetables)

Explanation: A domestic refrigerator onboard is used for the primary purpose of storing perishable items like vegetables, ensuring



Q5. Which of the following is top most part of a diesel engine?

- A) crankcase door
- B) crank shaft
- C) cylinder head
- D) piston

Correct Answer: C (cylinder head)

Explanation: The cylinder head is the topmost component of a diesel engine cylinder, sealing the combustion chamber and housing the valves and injectors. It sits above the piston and cylinder liner.

Q6. Which of the following is lower most part of a diesel engine?

- A) exhaust valve
- B) bed plate
- C) piston
- D) turbo charger

Correct Answer: B (bed plate)

Explanation: The bed plate forms the base of the diesel engine structure, supporting the crankshaft and carrying the main engine load. It is the lowest structural part of the engine assembly.

Q7. Which of the following is within the engine room?

- A) cargo pump room
- B) purifiers room
- C) CO2 Room
- D) paint storage room

Correct Answer: B (purifiers room)

Explanation: The purifiers room (or centrifuge room) is dedicated to housing the machinery used for purifying fuel and lubricating oils, essential for the operation of the main engine and auxiliary machinery. This room is typically located within the engine room complex.

Q8. Which of the following is not within the engine room?

- A) fresh water generator
- B) fire pump
- C) fridge room
- D) refrigeration machinery

Correct Answer: C (fridge room)

Explanation: The fridge room, used for storing provisions, is typically located in the galley or on deck, not within the engine room where machinery operates. The fresh water generator, fire pump, and refrigeration machinery are all essential engine room equipment.

Q9. Which of the following is not a job of an engine room rating?

- A) assist in watchkeeping
- B) operate main engine
- C) assist in watchkeeping
- D) assist in maintenance work

Correct Answer: B (operate main engine)



Q10. Which of the following is job of an engine room rating?

- A) report to bridge about engine condition
- B) assist in maintenance work
- C) overhaul air compressor
- D) start and stop engine

Correct Answer: B (assist in maintenance work)

Explanation: An engine room rating's primary duties include assisting in watchkeeping, performing routine maintenance under supervision, and carrying out specific tasks assigned by engineers. Starting and stopping the main engine, overhauling components, or reporting directly to the bridge are generally not their responsibilities.

Q11. Sewage Treatment Plant is related to _____.

- A) Starting of Main Engine
- B) Steering
- C) Storing Vegetables
- D) Human waste

Correct Answer: D (Human waste)

Explanation: The Sewage Treatment Plant (STP) is specifically designed to process human waste generated by the crew and passengers, treating it to meet environmental discharge standards as per MARPOL regulations. It is unrelated to engine starting, steering, or food storage.

Q12. What is not a system

- A) Main Engine
- B) Air compressor
- C) Purifier
- D) Boiler

Correct Answer: A (Main Engine)

Explanation: The main engine is a complete functional unit that propels the ship. The boiler, purifier, and air compressor are individual systems or machines that are often part of the ship's overall engineering setup, but the main engine itself is the primary propulsion machine.

Q13. A "BOLT" has

- A) Thread at both ends
- B) Hexagonal head and threads at other end
- C) Double pitch threads
- D) Slotted head and threads at other end

Correct Answer: B (Hexagonal head and threads at other end)

Explanation: A bolt is a fastener characterized by external screw threads and typically a hexagonal head, designed to be inserted through unthreaded holes in assembled parts and secured by a nut. It is not a threaded rod or a screw with a slotted head.



- A) Blunt chisels
- B) Flat spanners
- C) Sharp objects
- D) Hammers

Correct Answer: C (Sharp objects)

Explanation: Cuts, abrasions, and lacerations are typically caused by sharp objects such as knives, burrs on metal, or broken glass. While hammers and blunt chisels can cause blunt force trauma, they are not the direct cause of cuts.

Q15. A DIE can be is used to make threads on a pipe

- A) True
- B) False

Correct Answer: A (True)

Explanation: A die is a cutting tool used to create external screw threads on pipes or rods. Therefore, it is indeed used to make threads on a pipe, typically for connections or fittings.

Q16. For lifting a heavy load, you will use

- A) Air Cylinder
- B) Chain Block
- C) Hydraulic Jack
- D) Eye bolt

Correct Answer: B (Chain Block)

Explanation: A chain block is a mechanical device used for lifting heavy loads, consisting of a chain and pulley system. While an eye bolt can be used for lifting, it's a component, and a hydraulic jack lifts by fluid pressure; a chain block is the general tool for heavy lifting.

Q17. A "STUD" has

- A) Double pitch threads
- B) Thread at both ends
- C) Threads at one end with a slot at the other end
- D) Hexagonal head and thread at the other end

Correct Answer: B (Thread at both ends)

Explanation: A stud is a threaded fastener that has threads on both ends and no head, used for connecting two components where nuts are typically threaded onto both ends. It differs from a bolt, which has a head and threads at one end for a nut.

Q18. Under STCW Code Table A-III/4, what is the mandatory requirement regarding regulatory compliance and STCW code requirements during Marine Engineering Knowledge operations?

- A) Strict compliance with approved safety procedures and flag state regulations
- B) Optional adherence based on vessel size
- C) Applicable only during drydock operations
- D) Verbal recommendation without documentation

Correct Answer: A (Strict compliance with approved safety procedures and flag state regulations)

Explanation: STCW Code Table A-III/4 mandates strict compliance with approved safety protocols for Marine Engineering Knowledge.



- A) turbo charger
- B) exhaust valve
- C) starting valve
- D) indicator valve

Correct Answer: A (turbo charger)

Explanation: A turbocharger is an exhaust gas-driven turbine that forces more air into the engine cylinders to increase power and efficiency. It is not a component directly fitted on the cylinder head itself, unlike the exhaust valve, starting valve, and indicator valve.

Q20. Regarding practical watchkeeping and logbook documentation in Marine Engineering Knowledge, what is the mandatory safety standard required under STCW Code Table A-III/4?

- A) Applicable only when vessel is anchored
- B) Non-mandatory recommendation
- C) Optional compliance based on crew discretion
- D) Full compliance with approved STCW safety procedures and SMS protocols

Correct Answer: D (Full compliance with approved STCW safety procedures and SMS protocols)

Explanation: STCW Code Section A-III/4 requires strict adherence to approved safety protocols for Marine Engineering Knowledge.

Q21. What parameter must be verified prior to authorizing enclosed space entry for regulatory compliance and STCW code requirements related to Marine Engineering Knowledge?

- A) Temperature check only
- B) Visual inspection through access hatch without gas testing
- C) Oxygen level at 15% with ventilation turned off
- D) Atmospheric oxygen level at 20.9% and zero toxic/flammable gas concentration

Correct Answer: D (Atmospheric oxygen level at 20.9% and zero toxic/flammable gas concentration)

Explanation: Enclosed space safety requires verified atmospheric gas testing prior to entry.

Q22. What key responsibility belongs to seafarers performing watchkeeping duties for emergency procedures and alarm protocols under Marine Engineering Knowledge?

- A) Bypassing safety trips during routine operations
- B) Leaving watchkeeping station unattended
- C) Continuous monitoring of operational parameters and immediate reporting of anomalies
- D) Operating equipment beyond design pressure limits

Correct Answer: C (Continuous monitoring of operational parameters and immediate reporting of anomalies)

Explanation: Continuous vigilance and prompt communication are core watchkeeping duties under STCW.

Q23. Which document contains detailed hazard data and emergency handling instructions for substances involved in deck and engine room operational protocols during Marine Engineering Knowledge?

- A) Ship's Cargo Manifest summary page
- B) Bill of Lading description
- C) Crew List document
- D) Safety Data Sheet (SDS) / Material Safety Data Sheet (MSDS)

Correct Answer: D (Safety Data Sheet (SDS) / Material Safety Data Sheet (MSDS))

Explanation: Safety Data Sheets provide critical hazard identification, PPE requirements, and first aid response steps.



- A) Provide high-pressure oil film to withstand heavy piston combustion loads
- B) Drive the camshaft chain
- C) Cool the engine flywheel
- D) Lubricate the turbocharger shaft

Correct Answer: A (Provide high-pressure oil film to withstand heavy piston combustion loads)

Explanation: Crosshead bearings require high-pressure oil to support oscillating combustion forces.

Q25. What component in a marine diesel engine converts reciprocating piston motion into rotary crankshaft motion?

- A) Connecting Rod
- B) Piston Rod
- C) Crosshead Guide
- D) Camshaft

Correct Answer: A (Connecting Rod)

Explanation: The connecting rod links the crosshead/piston to the crankshaft pin, converting motion.

Q26. What is the purpose of the scavenger air receiver in a two-stroke marine diesel engine?

- A) Cool jacket cooling water
- B) Collect waste exhaust carbon
- C) Store starting air at 30 bar
- D) Accumulate pressurized air from the turbocharger to scavenge exhaust gases from cylinders

Correct Answer: D (Accumulate pressurized air from the turbocharger to scavenge exhaust gases from cylinders)

Explanation: Scavenge receivers supply fresh air to clear burnt gases and recharge cylinders.

Q27. What instrument measures exhaust gas temperatures at individual cylinder outlets?

- A) Tachometer
- B) Pyrometer / Thermocouple
- C) Manometer
- D) Hydrometer

Correct Answer: B (Pyrometer / Thermocouple)

Explanation: Pyrometers monitor combustion quality and load distribution across cylinders.

Q28. What is the purpose of a crankcase explosion relief valve on a marine engine?

- A) Vent oil vapor continuously to deck
- B) Relieve internal crankcase overpressure safely and prevent flame return into engine room
- C) Allow inspection of main bearings
- D) Drain waste oil to bilge

Correct Answer: B (Relieve internal crankcase overpressure safely and prevent flame return into engine room)

Explanation: Relief valves release pressure during oil mist ignition and seal shut to stop air ingress.



- A) Fuel heater
- B) Viscosimeter
- C) Duplex mesh strainer
- D) Centrifugal Fuel Purifier / Separator

Correct Answer: D (Centrifugal Fuel Purifier / Separator)

Explanation: Centrifugal purifiers spin at high speed to separate water and heavy solids from HFO.

Q30. What is the function of the main engine thrust block?

- A) Prevent propeller shaft rotation
- B) Transfer propeller axial thrust force from the shafting to the ship's hull structure
- C) Cool stern tube bearings
- D) Support generator weight

Correct Answer: B (Transfer propeller axial thrust force from the shafting to the ship's hull structure)

Explanation: Thrust blocks absorb forward/astern propeller thrust and push the vessel's hull.