

**AMET UNIVERSITY**

**(Under Sec. 3 of UGC Act 1956)**

**KANATHUR, CHENNAI – 603 112**

**AMET UNIVERSITY**

**B.E.(NA&OE)**

**V th Semester**

**Marine Engineering II ( NAOE 305 )**

**Question bank**

**Part A ( 2 marks each)**

**UNIT 1**

**1. What are the two types of pumps used in Marine Industry?**

**2. Name at least two types of Displacement pumps?**

**3. Name two positive displacement pumps used for ship’s Main Engine?**

 **4. Why boiler feed pumps are always multistage pumps or high pressure pumps?**

**5. Name the systems where centrifugal pumps are used on board?**

**6. Why in bilge water system reciprocating pumps are used?**

**7. Where all ejectors are used on ships?**

**8. Name different types of valves used on board the Ship.**

**9. Name the common colour code used on board the Ship for different piping.**

**10. Name the different piping system on board the Ship.**

**UNIT 2**

**1.Name four types of air compressors?**

**2.What is the normal starting air pressure for main and auxiliary engines?**

**3.What is the normal control air pressure and service air pressure?**

**4. What is tandem air compressor? What are the advantages of tandem air compressor over in line?**

**5.What are the various safety devices fitted on the compressor?**

 **6.What is a exhaust gas boiler? When exhaust gas boiler is put in to use?**

**7.Whar are the uses of boiler steam on a ship ?**

**8.Name two types of heat exchangers?**

**9.Name types of evaporators?**

**10.Name two methods of fresh water production onboard Ship.**

**UNIT 3**

**1. Name three parts of a anchor handling equipment.**

**2. Name two commonly used prime movers for anchor windlass?**

**3. What is a difference between Fairlead and a bollard?**

**4. Name four Deck equipment.**

**5.Name two dry cargo handling equipment.**

**6.Why you need IG system on board Ship?**

**7. What do you Understand about COW ?**

**8. What is Life Jacket and Life buoy?**

**9. What is Emergency fire pump?**

**10 Why emergency Generator is needed?**

**Unit 4**

**1. Name two types of steering gears commonly used on ships?**

**2. What kind of bearing metal is used in a stern tube?**

**4. What kind of sealing arrangements are there for forward and aft seal of a stern tube?**

**5. Name different type of propulsions used on ships?**

**8. Mention the shafts which are attached to the main crankshaft?**

**9. What do you understand by the term SWL written on Cranes?**

**10. What is chain block?**

**Unit5**

**1. What are the fixed fire fighting systems used on ships?**

**2. On chemical carriers what kind of fixed fire fighting system used and why?**

**3. What is COP?**

**4. What are different refrigerant systems?**

**5. What do you mean by UMS?**

**6. Name few refrigerants.**

**8. What do you mean by the term watch keeping?**

**9. Name the refrigerant suitable for Vapour absorption system.**

**10. Insulation requirement on board ship.**

**Part B ( 4 marks each)**

**UNIT 1**

1. **Give two differences between centrifugal and reciprocating pumps?**
2. **What is a Multi-stage centrifugal pump and give two places on ship where it is used?**
3. **What are ejectors? Briefly explain the principle of its working?**
4. **What are expansion bellows? Draw a simple sketch?**
5. **What are the causes of corrosion in piping?**

**UNIT 2**

1. **Where all compressed air used on ships?**
2. **What are the advantages of plate type over shell and tube type?**
3. **Why incinerators are used on ships?**
4. **What are the differences between purifier and clarifier?**
5. **Why oily water separators to be installed on ships?**

**UNIT 3**

**1.Give reasons for having mooring and anchor equipment on board a ship?**

**2.What are the different types of cargo handling gears used on ships?**

**3.what are the advantages of deck crane over derricks?**

**4.What are Maggregor hatches, and what are its advantages over conventional hatch covers ?**

**5 . Name few Life saving appliances.**

**UNIT 4**

**1. What is a hunting gear?**

**2. What maintenance will you carry out on a two ram hydraulic steering gear?**

**3. Why on medium and high speed engines reduction gears are used?**

**4. What is the purpose of thrust block on an reversible engine?**

**5. How stern tube is lubricated?**

**UNIT 5**

**1. Briefly explain the watch keeping duties of an Engineer .**

**2. What are the firefighting equipment available on board ?**

**3. What are the factors affecting Coefficient of performance of a Refrigeration system?**

**4. What are the required properties of Refrigeration Lubricating oil?**

**5. What is Secondary Refrigerant?**

**Part C ( 14 marks each)**

**UNIT 1**

**1. In shell type Heat exchangers how the expansion is taken care of? Draw a sketch and explain?**

**2. Draw a neat diagram of centrifugal pump and indicate its parts? Explain its operation.**

**3. Draw a diagram of single acting reciprocating pump and mark its parts? Explain its operation.**

**4. What is the difference between single and double pass heat exchangers, describe with sketches?**

**5. Draw simple line diagram of steam system on board the ship**

**UNIT 2**

**1.Draw a line diagram of lubricating oil system on board and mention the equipments in the diagram?**

**2.Draw a line diagram of bilge ,ballast system on board? Explain from the diagram how you can isolate different tanks?**

**3.Draw a line diagram of seawater system on board and explain their flow process?**

**4.Draw a line diagram of fuel oil system and mark all the parts in the system give brief description?**

**5.Draw a line diagram of fresh water system on board and mention all the parts, give brief description?**

**UNIT 3**

**1 . Discuss Cargo loading and discharging system of crude oil carrier.**

**2. A) Write note on Life boat. B) Write note on Life raft.**

**3. Write short note on the following A) Derik B) Crane**

 **C) Mooring D) Windlass.**

**4. Write short notes on A) Fire pump B) Emergency Fire pump**

 **C) Emergency Generator D) Emergency air compressor.**

**5. Write brief note on A) Hatch cover B) bow thruster**

 **C) Stabilizer.**

**UNIT 4**

**1.Draw a simple sketch of two ram steering gear and explain its operations?**

**2.What important jobs are carried out in a dry dock?**

**3. With simple sketch explain the Shafting arrangement of propulsion system.**

**4. Discuss about the Oil lubricated Stern tube and shaft sealing Arrangement.**

**5. Write short notes on A) Engine room crane B)Anchor**

 **C) Stabilizer D)Chain block.**

**UNIT 5**

**1.Draw a fixed fire fighting co2 system used on a ship?**

**2. Explain with a simple sketch of vapor compression system?**

**3. Discuss about the use of Importance of Refrigeration system in today’s Shipping.**

**4.Discuss about the importance of Fire fighting system onboard ship.**

**5. Discuss about the control system on UMS class Shipp?**