

GOVT. POLYTECHNIC MAYURBHANJ, TIKARPADA
DISCIPLINE: METALLURGICAL ENGG.
SUBJECT-EME

Question bank- 3RD Semester

2 marks questions

1. How are loads classified?
2. Define kinematic link with example?
3. Define heat and its units?
4. State 1st law of thermodynamics?
5. State the definition and classification of steam turbine?
6. Define latent heat?
7. Define steam?
8. What is meant by bearing?
9. What is function of a dynamometer?
10. Define mechanical efficiency?
11. What is the function of CAM and CAM follower?
12. Define cantilever beam with examples?
13. Define link with examples?
14. Define fire tube boiler with examples?
15. Define 'tonne's of refrigeration?
16. Define stroke length of an I.C engine?
17. Define wet stream?
18. What is the shear force and bending moment diagram?

5 marks questions

1. Describe breakdown and preventive maintenance?
2. State types of refrigerants and explain their properties?
3. Explain the function of fly wheel and governor?
4. Differentiate between two stroke and four stroke engine?
5. Define and function of bearing. Describe roller bearing with neat sketch?
6. Explain Otto cycle with the help of p-v and t-s diagram and derive efficiency?
7. What are the advantages of rope drive, chain drive and write down their uses?
8. How are kinematic pairs classified?
9. What are the advantages of rope drive over chain drive?
10. Compare two stroke and four stroke I.C engine?
11. Define refrigerant and state their properties?
12. Differentiate between reaction turbine and impulse turbine?
13. Describe in brief CNC milling operation?
14. Describe the concept of air conditioning?

10 marks questions

1. A rigid tank containing 10kg of water at 90°C. If 8kg of water is in the liquid form and the rest is in the vapour state, determine ;
 - a) The pressure in the tank
 - b) The dryness fraction of mixture
 - c) The volume of the tank
2. Define belt drive, determine the length of open belt drive?
3. With the help of a neat diagram, explain simple vapour compression refrigeration cycle?
4. Write short note on (Any two)
 - a) Simple brakes
 - b) Lathe machine tool
 - c) I.C engine
5. What is the isothermal process? Derive the expression of work done during isothermal process?
6. What is the function of lathe machine? Define different operation of lathe machine?
7. What are the different types of loads acting on a beam? Differentiate between a point load and uniformly distributed load with diagram?
8. With neat sketch describe the quick return mechanism?
9. Explain the simple vapour compression refrigeration system with neat sketch?
10. Draw the shear force and bending moment diagram of the cantilever beam as shown in the figure.

