GOVERNMENT OF GUJARAT

LUKHDHIRJI ENGINEERING COLLEGE, MORBI

Mechanical Engineering Department

Basics of Mechanical Engineering-3110006-Question Bank

1. Give the classification of boilers.
2. Sketch and explain Lancashire boiler.
3. Sketch and explain Babcock and Wilcox boiler.
4. Define boiler mountings and boiler accessories.
5. Name the boiler mountings and mention its functions.
6. Name the boiler accessories and mention its functions.
7. Explain with the help of a Temperature-Enthalpy diagram the formation of steam from water at 0˚ Celsius.
8. Define wet steam, saturated steam and superheated steam.
9. Define specific volume, enthalpy and internal energy for wet, saturated and superheated steam.
10. What is an IC engine? Classify IC engines based on different criteria.
11. Draw the neat labeled sketch of an IC engine and explain the functions of all the parts.
12. With a neat sketch explain the working of 4 stroke petrol engine with the help of a p-v diagram.
13. With a neat sketch explain the working of 4 stroke diesel engine with the help of a p-v diagram.
14. With a neat sketch explain the working of 2 stroke petrol engine with the help of a p-v diagram.
15. Differentiate between 4 stroke and 2 stroke IC engines.
16. Differentiate between petrol and diesel engines.
17. What is refrigerant? State the most widely used refrigerant.
18. With neat sketch explain vapour compression refrigeration cycle.
19. Explain with neat sketch split air conditioner. State its advantages.
20. Define air-conditioning. Classify the air conditioning system in detail.
21. Couplings, clutches and brake
22. Explain flange coupling with neat sketch
23. What are the different types of couplings? Explain the centrifugal clutch.
24. What is coupling? Explain internal expanding shoe brake with a neat sketch?
25. Draw and explain internal expanding brake.

26. Distinguish between a coupling and a clutch.
27. Explain Oldham's coupling with neat sketch.
28. With simple sketch explain working of disc clutch.
29. Differentiate between clutch and brake.
30. Differentiate brake and clutch. Explain Band brake.
31. Explain centrifugal clutch.
32. Explain with neat sketch worm and worm wheel.
33. What are bearings?
34. Explain types of belt drive.
35. What is belt drive? Describe briefly types of belt drives.
36. What are Bearings and how they are classified?
37. Sketch and describe helical and bevel gear and state applications of each.
38. What are different elements to transfer motion and power? Explain any one with neat sketch.
39. What is brake? Describe an internal expanding shoe brake with a neat sketch and state its applications
40. Differentiate: (i) Belt drive, chain drive and gear drive (ii) Brake and Clutch
41. What are belt drives? List various belt drives and explain cross belt drive.
42. Write short note on: Type of belt drive.
43. What is a ferrous metal? Give some examples.
44. What is a non-ferrous metal? Give some examples.
45. Give the classification of ferrous metals.
46. List out the properties and applications of Wrought iron.
47. Mention the properties and applications of pig iron.
48. How is cast iron classified?
49. List out the properties and applications of Gray cast iron.
50. Give the properties and applications of Stainless steel.
51. List the different types of Cast Iron and explain their properties.
52. What is a Composite Material and how is it classified?