

MODEL QUESTION PAPER

BASIC MECHANICAL ENGINEERING

Time: 2.30 hours

Marks : 90

PART A

Choose the correct answer

15×1=15

1. The person who manufactures different parts is
a) Supervisor b) Machinist c) Manager d) Proprietor
2. First Aid is
a) A manufacturing process.
b) Safety regarding operators.
c) Immediate treatment given at the spot of accidents.
d) Breakdown of machines.
3. Angular lines are drawn and measured with
a) Divider b) Protractor c) Compasses d) Tee square
4. Top view is obtained on
a) Vertical plane b) Horizontal plane c) Profile plane d) Auxiliary plane
5. This function helps in aligning the lines by
a) OSNAP b) RIGHTALIGN c) ORTHO d) XALIGN
6. The least count of a vernier caliper is
a) 0.01 mm b) 0.02 mm c) 0.001 mm d) 0.1 m
7. Anvil and thimble are found in this measuring instrument
a) Vernier Caliper b) Vernier Height Gauge
c) Micrometer d) Combination Set
8. Which material has brittleness property?
a) Steel b) Copper c) Cast Iron d) Aluminium
9. The Atomic Number of Aluminium is
a) 10 b) 12 c) 13 d) 15
10. The purpose of tempering is
a) to improve corrosion resistance. b) to increase the hardness of the metal.
c) to decrease the brittleness. d) to improve machinability.

11. The washer is generally specified by its
a) Outer Diameter b) Hole Diameter c) Thickness d) Mean Diameter
12. keys are made of
a) Tungsten b) Steel c) Cast Iron d) Lead
13. If the size of the shaft is smaller than the hole size, the system of fits is
a) Interference Fit b) Clearance Fit c) Driving Fit d) Push Fit
14. Power is transmitted between shafts at moderate distance by
a) Belt Drive b) Gear Drive c) Chain Drive d) Friction Drive
15. The unit current is
a) Volt b) Watt c) Ampere d) Ohm

PART B

Answer any ten questions in not exceeding four lines:

10 × 3 = 30

16. Who is Machinist?
17. Name five types of files in accordance with the “grade”.
18. What are the grade of gauges?
19. What is positive Error in Micrometer ?
20. What are the three kinds of carbon steels?
21. Define “Heat treatment”.
22. What are the types of moulding box?
23. What are the types of belt drive?
24. State ohm’s law.
25. What is third angle projection?
26. What is a sectional view?
27. What does ISO refer to?
28. Compare OSNAP and ORTHOMODE function of AutoCAD.

PART C

Answer the following questions in about a page.

5 × 5 = 25

29. Write down the types of vice, its mounting type and uses?
30. A main scale of Vernier caliper is marked in millimeter the Vernier scale
a) Divisions which is equal to 49 divisions in the main scale what is the least count of that Vernier caliper?
31. Explain the different kinds of Tool Steel.
32. Draw a simple gear and explain.
33. Compare D.C with A.C
34. What are the important dimensions of key?
35. What are the information’s to be furnished in a title block?

PART D

Answer the following questions in details.

2×10=20

36. (a). What are the safety precautions regarding operators?

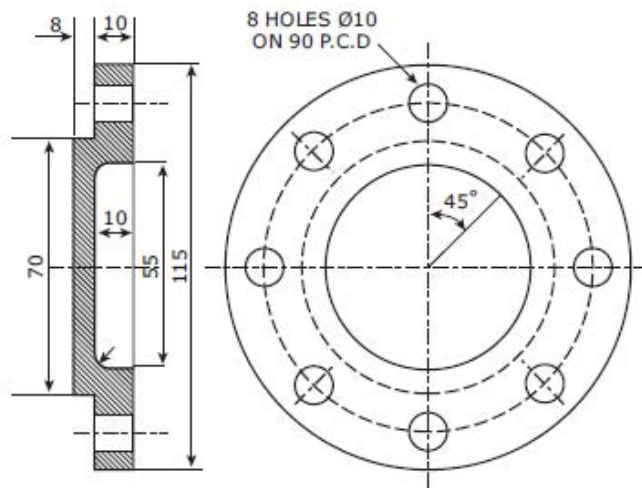
(or)

(b). Draw the Vernier Caliper and explain about it?

37. (a). Draw and explain the sintering Furnace.

(or)

38. (b).



- What is the pitch circle diameter?
- How many holes are there in the part?
- What is the outer diameter of the part?
- What is the thickness of the part?
- What is the angle between two adjacent holes?