



B.Tech III Year I Semester Supplementary Examinations, June/July 2023
METROLOGY AND MACHINE TOOLS
(MECHANICAL ENGINEERING)

Maximum Marks: 70

Date: 28.06.2023 Duration: 3 hours

- Note: 1. This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Write single point cutting tool.
- 2 What are the elements of cutting process?
- 3 What is drilling & boring?
- 4 Mention working principle of drilling.
- 5 Write working principle of milling machine.
- 6 Mention specification of milling machine.
- 7 What are types of fits?
- 8 Write about the Bevel protractor.
- 9 Write the importance of surface roughness?
- 10 What is Coordinate measuring machine?

Part-B

Answer All the following questions.

(10M X 5=50Marks)

- 11 Mention various Machining parameters in brief. 10
- OR
- 12 What is a chip? Explain its formation, chip Types and chip breakers 10
- 13 Explain briefly about quick return motion mechanism and types of mechanisms used in shaper 10
- OR
- 14 Explain shaper machine briefly. Working principle, its specifications, and operations performed on shaper. 10
- 15 What is a MILLING? Mention types of Milling machine and its working principle, specifications and classifications of milling machines. 10
- OR
- 16 Briefly discuss about work holding and supporting devices of milling machine. 10
- 17 Describe principal features of the Indian standard system of limits and fits for plain work. 10
- OR
- 18 Explain Hole basis system and shaft basis system. 10
- 19 What are the types and applications of CMM? 10
- OR
- 20 Explain the Roughness parameters and Roughness profiles. 10