

TDM 33 - Engineering Metrology

387

REG. NO

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
 2. Answer any ONE question from each unit in PART-B (3 marks each)
 3. Answer any ONE question from each unit in PART-C (10 marks each)
 4. The question paper contains TWO Pages

PART-A (1x10=10)

1. What is Readability?
2. What is meant by Angle Plates?
3. Define effective diameter.
4. What are various methods for the measurement of tooth thickness of a gear?
5. Define circularity.
6. Define surface roughness.
7. What is the principle of working of an optical comparator?
8. What is meant by Interferometry?
9. Write any one type of CMM?
10. What is meant by Feeler microscope?

PART-B (3x5=15)

UNIT-I

11. What is the difference between accuracy and precision?
12. Write the possible sources of error in micrometers.

UNIT-II

13. What is Angle Dekkor?
14. Explain briefly about Master Gear.

UNIT-III

15. What are the test for checking rotation?
16. What are the methods of measuring surface finish?

UNIT-IV

17. What are the various types of comparator?
18. Write any three condition for Interference.

UNIT-V

19. Mention the advantages of co-ordinate measuring machine.
20. Briefly explain computers in metrology.

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PART-C (10x5=50)

UNIT-I

21. Briefly explain Thread micrometer.
22. Briefly explain vernier height gauge.

UNIT-II

23. Explain with a neat sketch the optical Bevel protractor.
24. Explain with a neat sketch the Auto Collimator.

UNIT-III

25. Explain briefly the measurement of parallelism.
26. Explain with a neat sketch the representation of surface finish as per Bureau of Indian Standards.

UNIT-IV

27. Explain with a neat sketch the working of an Electrical comparator.
28. What is meant by Interferometers? And explain the optical flat briefly.

UNIT-V

29. Explain briefly any one type of co-ordinate measuring machine.
30. Briefly explain Laser Telemetric system.
