

B.TECH. DEGREE EXAMINATION, MAY 2014**Sixth Semester**

Branch : Automobile Engineering / Mechanical Engineering

AU 010 604 / ME 010 604 – METROLOGY AND MACHINE TOOLS (AU, MU)

(New Scheme – 2010 Admission onwards)

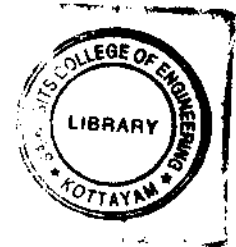
[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A*Answer all questions.**Each question carries 3 marks.*

1. Explain nomenclature of drill point.
2. What are different milling cutters?
3. Write a note on gear errors.
4. What is the effect of temperature on gauge block?
5. What is an optical square?



(5 × 3 = 15 marks)

Part B*Answer all questions.**Each question carries 5 marks.*

6. Explain : Slotting of key ways.
7. How will you estimate thermal damage due to grinding?
8. What is the principle of Gear shaping? Explain.
9. Sketch and explain a Sine bar.
10. How will you compare surface finish in different machining processes? Discuss.

(5 × 5 = 25 marks)

Part C*Answer all questions.**Each full question carries 12 marks.*

11. With neat sketch, explain a quick return motion mechanism.

*Or***Turn over**

12. Explain Counter sinking and trepanning.
13. Explain the operations to be performed in a machining center.

Or

14. Discuss the methods for truing and dressing of grinding wheels.
15. Explain different types of gear hobbing machines.

Or

16. Discuss the principle and working of all gear milling machines.
17. Discuss, with neat sketches :
 - (a) Precision level ; and
 - (b) Clinometer.

(6 + 6 = 12 marks)

Or

18. Discuss all the principles of achieving accuracy. Explain all types of errors.
19. How will you measure squareness? Explain.

Or

20. Explain the principle, working and applications of a Talyrand.

[5 × 12 = 60 marks]

