

G 1609

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Fourth Semester

Branch : Mechanical Engineering/Automobile Engineering

MACHINE TOOLS (M,U)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 4 marks.

1. Explain how different speeds are obtained in a Lathe spindle.
2. What are the uses of Face plate and Angle plate in a Lathe ?
3. Write a note on deep hole drilling operations.
4. How will you give the specification of a Planer ?
5. How do you classify shapers ?
6. Distinguish between Forming and Generation process.
7. What is the difference between grinding wheel dressing and truing ?
8. Explain the Spline broaching operation.
9. Discuss Point to Point CNC positioning system.
10. List *four* types of media that computers used to transfer data to a CNC machine.



(10 × 4 = 40 marks)

Part B

Answer all questions.

Each full question carries 12 marks.

11. List out the various tool holding devices used in turret lathes. Describe briefly any *two* of them.

Or

12. Explain the following operations :
 - (a) Gang drilling.
 - (b) Multiple spindle drilling operations.

Turn over

13. Explain the Crank and slotted link mechanism for the shaper ram with a sketch.

Or

14. With a sketch explain the working of a planning machine table and feed drive.

15. Write a brief note on the Grid, Grade, Structure and Bond of a grinding wheel.

Or

16. Explain the various generating process used for the manufacturing of gears.

17. Write a brief note about :

(a) Copying machines.

(b) NC tooling.

Or

18. Give a brief description about the scope and application of special purpose machine tools with examples.

19. Explain the various stages involved in the IC manufacturing and the quality issues associated with it.

Or

20. Explain the importance of CIM in the modern manufacturing industry.

(5 × 12 = 60 marks)

