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Reg. No....................................

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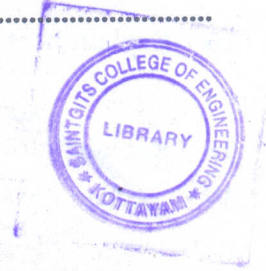
B.TECH. DEGREE EXAMINATION, NOVEMBER 2014

Eighth Semester

Branch : Mechanical Engineering/Automobile Engineering

PRODUCTION ENGINEERING (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. Distinguish orthogonal and oblique cutting.

2. Explain nature of sliding friction.

3. What are the factors affecting machinability ?

4. Write a note on economics of machining.

5. What are the properties of machine powder ?

6. Explain sintering.

7. Explain the properties of smart materials.

8. Write a note on grass ceramics.

9. Explain the application of LIGA.

10. Write a note on EDM.

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. With a neat sketch explain the geometry of a single point cutting tool.

Or

12. Discuss the mechanism of chip formation. Explain various types of chips formed during metal cutting.

13. Explain the composition properties and applications of Carbon steel. HSS and ceramics.

Or

14. Explain type properties and functions of cutting fluids.

Turn over

15. Explain heat surface and impregnation treatments.

Or

16. Explain various steps in powder metallurgy process.

17. Explain physical and mechanical properties of ceramics. List out its applications.

Or

18. Explain properties and applications of super alloy and shape memory alloys.

19. Explain rapid prototyping and stereo lithography.

Or

20. Explain USM and ECM.

(5 × 12 = 60 marks)