G 1705

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Eighth Semester

Branch : Mechanical Engineering

ME 010 802—PRODUCTION ENGINEERING (ME)

(New Scheme—2010 Admission onwards)

[Regular/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

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

1. Define performance parameters.
2. What is tool life ?
3. Distinguish solid and liquid phase sintering.
4. Define co-ordination number.
5. What is the use of laser welding ?

(5 × 3 = 15 marks)

Part B

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

6. Explain how frictions affect machining process ?
7. What are the applications of cutting fluids ?
8. Powder metallurgy is evil or essential. Explain.
9. Write a note on fiber reinforced composites.
10. What is LIGA process ?

(5 × 5 = 25 marks)

Turn over

Part C

Answer **all** *questions.*
Each question carries 12 marks

11. Explain the geometry of single cutting tool with a neat sketch.

Or

12. What are the differences between orthogonal and oblique cutting ? Explain with respecti mechanisms.

13. Explain the classification, structure, composition and properties of HSS.

Or

14. What are the tool wear mechanisms ? Explain each of them.

15. How is fine powder characterized ? What are the parameters ?

Or

16. Write a note on micro-machining. Explain different processes involved in it.

17. What are particle reinforced composites ? Explain with their properties and applications.

Or

18. How do ceramic structures differ from other materials ? Explain with the significant properties

19. Explain any *two* non-traditional machining processes.

Or

20. Explain rapid prototyping and stereolithography.

(5 × 12 = 60 mar