



C09-M-402

3502

BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2013

DME—FOURTH SEMESTER EXAMINATION

MANUFACTURING TECHNOLOGY—II

Time : 3 hours]

[Total Marks : 80

PART—A

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List out any three gear generating methods.
2. State the purpose of heat treatment of gears and mention any two methods of heat treatment.
3. What are various types of work-holding device used in milling?
4. A grinding wheel is specified as 'A 50 J 5 V'. What do A, 50 and J indicate?
5. Name the coated materials for the following :
 - (a) Galvanizing
 - (b) Parkerizing
 - (c) Tin coating
6. What are the limitations of EDM?
7. What is meant by laminated plastic?
8. List out various shaping operations used with press work.

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9. What is meant by 'press tonnage'?
10. State the applications of jig boring machine.

PART—B

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.
11. Explain the following milling operations with simple sketches :
 - (a) Slab milling
 - (b) Face milling
 - (c) End milling
 - (d) Convex milling
 12. Draw a line diagram of horizontal milling machine and explain the function of each part.
 13. Explain any surface grinding machine with the help of a sketch.
 14. (a) State the principle of ultrasonic machining with a sketch.
(b) State the principle of laser beam machining with a sketch.
 15. Explain screw-type injection moulding with a diagram and state its advantages.
 16. Draw a sketch of milling fixture and explain its operation.
 17. Explain the principles of location for prevention of six degrees of freedom.
 18. (a) List out various commonly used bond materials in grinding and explain vitrified bond.
(b) Draw a line diagram of cross-rail jig boring machine and name its parts.
