Code: C-09 M-402

#### 3502

## BOARD DIPLOMA EXAMINATION, (C-09) MARCH/APRIL - 2019 DIPLOMA IN MECHANICAL ENGINEERING

#### IPLOMA IN MECHANICAL ENGINEERING MANUFACTURING TECHNOLOGY-II FOURTH SEMESTER EXAMINATION

Time: 3 Hours Total Marks: 80

#### **PART - A** $(10 \times 3 = 30 \text{ Marks})$

Note 1:Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

- 1. List any six milling operations.
- 2. State any three differences between gear forming and gear generation methods.
- 3. State the principle of gear shaving.
- 4. What are the functions of Surface coatings.
- 5. List out any six types of grinding machines.
- 6. Write any three advantages of Laser beam machining?
- 7. State different types of compression moulding of plastics.
- 8. What is 'punch' and 'die' in a press work?
- 9. What are the advantages of using Jigs and fixtures.
- 10. What is a jig boring machine and how are they classified.

### **PART - B** $(5 \times 10 = 50 \text{ Marks})$

Note 1:Answer any five questions and each question carries 10 marks

2:The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

- 11. What are the various milling attachments used and explain any one in detail?
- 12. Draw a sketch of universal milling machine and explain the function of each part.
- 13. Explain the following processes
  - a) Honing b) Lapping c) Super finishing
- 14. Explain the operation of Electrical discharge machining (EDM) with a sketch. State its advantages and disadvantages.
- 15. Explain the different stages involved in lamination of sheet in plastic with a line diagram.
- 16. Draw a sketch of milling fixture and explain its operation.
- 17. Draw a sketch of punch and die set and indicate main components. State the purpose of these components.
- 18. a. List out the various commonly used bond materials in Grinding and explain Vitrified Bond?.
  - b. Draw a line diagram of open front jig boring machine and explain.

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