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C16–M–404

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BOARD DIPLOMA EXAMINATION, (C–16)

SEPTEMBER/OCTOBER - 2020

DME—FOURTH SEMESTER EXAMINATION

PRODUCTION TECHNOLOGY—II

Time : 3 hours] [*Total Marks* : 80

PART—A 3×10=30

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. Classify the milling machines.

2. Name any six important parts of milling machine.

3. Write the various gear finishing operations.

4. State any four advantages of grinding.

5. Write the functions of organic coating.

6. State the principal of ultrasonic machining.

7. List out any four moulding methods of plastics.

8. How is a press specified?

9. Differentiate between jig and fixtures.

10. State the methods of locating holes accurately.

PART—B

10×5=50

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. Draw the diagram of horizontal milling machine and explain the function of each part. 10

12. Explain the methods of heat treatment of gears. 10

13. Explain the principles of centre less grinding with neat sketch. 10

14. Explain the electrical discharge machining with neat sketch, giving its advantages and disadvantages. 10

15. Explain the principal of blow moulding of plastics with neat sketch. 10

16. *(a)* Draw a neat sketch of progressive die and explain its uses.

(b) Explain the shear action in the cutting operations. 5+5=10

17. Explain the following clamps with diagrams : 4+3+3=10

(a) Strap clamp

(b) Cam clamp

(c) Screw clamp

18. Explain open front type jig boring machine with neat sketch. 10

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Time : 3 hours] [*Total Marks* : 80

PART—A 3×10=30

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. What is indexing? State the principle of direct indexing.

2. How a milling machine is specified?

3. What are the advantages of gears which are made up of plastic materials?

4. What are the types of grinding machines?

5. What are the principles of a super finishing?

6. List out any eight advantages of non-conventional machining.

7. List out engineering applications of plastics.

8. What is meant by power press?

9. What are the advantages of using jigs and fixtures?

10. What is a jig boring machine and how are they classified?

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

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

(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. What are the various types of milling cutter? Explain briefly any two with neat sketches.

12. Explain the operation of gear hobbing process with a neat sketch.

13. *(a)* Explain the process of electroplating with neat sketch.

(b) Describe with a neat sketch the powder method of metal spraying.

14. Describe the laser beam machining with a neat sketch. State the advantages and limitations.

15. Explain transfer moulding process with the help of neat sketch. State its advantages and disadvantages.

16. *(a)* Draw a neat sketch of progressive and explain its uses.

(b) Explain the shear action in the cutting operation.

17. Explain the following sketches :

(a) Milling fixtures

(b) Boring fixtures

18. What are the different types of jig boring machine? Explain cross rail type machine with sketches.

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