

7261

BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

DME - THIRD SEMESTER EXAMINATION

PRODUCTION TECHNOLOGY—I

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. Write three differences between four-jaw chuck and three-jaw chuck.
2. Write three differences between capstan lathe and turret lathe.
3. List out different tool holding devices used in engine lathe.
4. State the working principle of a shaper.
5. Write three differences between shaper.
6. List out operations performed.
7. What are the methods of application of cutting fluids?
8. What are the functions of cutting fluids?
9. Write the three advantages and three limitations of welding.
10. Write three applications of ultrasonic welding.

*

PART—B

8×5=40

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Draw a line diagram of engine lathe and write the function of its parts. 4+4

(OR)

- (b) List various lathe operations and explain any three with diagram. 8

12. (a) Explain the principle of Whitworth quick return mechanism of slotter with a neat sketch. 4+4

(OR)

- (b) Draw a neat sketch of shaper and explain its constructional details. 4+4

13. (a) Write the working principle of vertical type broaching machine with a neat sketch. 2+3+3

(OR)

- (b) List three types of broaching tech, materials used for broaching tools and write the advantages of broaching. 3+3+2

14. (a) Explain the principle of MIG welding operation with a neat sketch. 4+4

(OR)

- (b) Explain the principle of atomic hydrogen welding with a neat sketch. 4+4

15. (a) List the types of oxyacetylene flames and explain each flame with a neat sketch. 2+6

(OR)

- (b) Describe the procedure for submerged arc welding with a neat sketch. 4+4

*

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Explain with a neat sketch how the quick return motion on a planer is obtained with open and cross belt drives. 5+5

★★★

*

*