



C09-M-105/RAC-105

3043

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2017

DME—FIRST YEAR EXAMINATION

WORKSHOP TECHNOLOGY

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 metal forming?
2. State the difference between marking gauge and mortise gauge.
3. Sketch the figure of hack-saw and indicate the parts in it.
4. Name any six operations performed in smithy.
5. What are the different types of metals used in sheet metal work?
6. State the characteristics of good moulding sand.
7. Name at least six defects that occur in sand casting.
8. What do you understand by the term 'investment casting'?

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9. What are the materials that are commonly used in the manufacture of drills?
10. State at least three advantages of cold working.

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. With the help of a neat sketch, explain the salient features of a wooden jack plane. 5+5=10
12. (a) State the difference between tap and die with an example in each case. 4
- (b) Sketch the figure of twist drill and label the parts. 4+2=6
13. Explain the working principle of a drop hammer with a neat sketch. 5+5=10
14. (a) What is a stake? 2
- (b) Briefly explain the functions of any four types of stakes used in sheet metal work with suitable sketches. 2×4=8
15. With the aid of a neat sketch, explain the process of hot chamber diecasting. 6+4=10
16. Explain any two operations that are performed on a drilling machine with suitable sketches. 5×2=10
17. Draw a neat sketch of a vertical bandsaw and label the parts. 5+5=10
18. (a) State at least three advantages and three disadvantages of hot working over cold working. 5
- (b) Explain the principle of indirect extrusion. 5
