



C20-M/RAC-106

7054

BOARD DIPLOMA EXAMINATION, (C-20)

SEPTEMBER/OCTOBER—2021

DME - FIRST YEAR EXAMINATION

WORKSHOP TECHNOLOGY

Time : 3 hours ]

[ Total Marks : 80

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**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 the uses of (a) spoke shave and (b) router plane.
2. Draw the neat sketch of a Rasp file and label the parts.
3. What are the advantages and disadvantages of forging?
4. Distinguish between drilling and reaming.
5. Draw a neat sketch of a twist drill and label the parts.
6. List any six hand moulding tools used in foundry shop.
7. What is the purpose of core?
8. List out any six different patterns used in foundry.
9. What is cold working? List out any two cold working processes.
10. What are the advantages of cold working over hot working process?

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**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) (i) Draw a neat sketch of metal jack plane and name its parts.  
(ii) Write the specific use of trying plane and smoothing plane.

**OR**

- (b) Explain the working principle of vernier height gauge with a neat sketch.

- 12.** (a) Explain any four forging operations with suitable diagrams.

**OR**

- (b) Explain any four snips used in sheet metal with neat sketches.

- 13.** (a) Explain any four operations performed on a drilling machine.

**OR**

- (b) Draw and explain the radial drilling machine with a neat sketch.

- 14.** (a) Explain about investment casting and state its advantages and disadvantages.

**OR**

- (b) Explain any four pattern allowances in detail.

- 15.** (a) Describe the following hot working processes with neat sketch.  
(i) Hot piercing, (ii) Hot rolling

**OR**

- (b) Describe the following cold working processes with neat sketch :  
(i) Cold extrusion, (ii) Cold heading

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## PART—C

10×1=10

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

- 16.** (a) Draw and explain four types of seams.  
(b) Draw and explain the combination set.

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