

Roll No. ....

Total Pages : 4

**11154/NJ****D-25/2111****MANUFACTURING TECHNOLOGY**

Paper-204

Semester-III

Time Allowed : 3 Hours] [Maximum Marks : 50

**Note :** The candidates are required to attempt **three** questions each from Sections A and B carrying 5 marks each and the entire Section C consisting of 10 short answer type questions carrying 2 marks each.

**SECTION—A**

1. What is the purpose of Sand testing? With suitable diagram, explain permeability test performed on moulding sand. 5

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2. With suitable diagram, explain MIG welding process. State the advantages, disadvantages and applications of MIG welding process. 5
3. What is Powder metallurgy? Write in brief the basic steps of powder metallurgy. Write the advantages, limitations and applications of powder metallurgy. 5
4. Explain in detail investment casting process. State the advantages, disadvantage and product applications of investment casting process. 5
5. What are the purpose of moulding machines? Explain any two moulding machines. 5

**SECTION—B**

6. Explain the marking system of grinding wheel. Also enlist the factors which influence the selection of grinding wheel. 5
7. Differentiate between up milling and down milling process. 5

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8. What are the high energy rate forming processes?  
Enlist the high energy rate forming processes. With suitable diagram, explain any one high energy rate forming process. 5

9. What are the Plastics? Enlist basic manufacturing processes for processing of plastics. Explain any one manufacturing process for processing of plastics. 5

10. With suitable diagrams, explain the twist drill geometry. 5

### SECTION—C

11. Answer the following questions : 10×2=20

- (i) Enlist four welding defects.
- (ii) Give any two differences between a shaper and planer.
- (iii) Why quality of weld produced better in submerged arc welding?

(iv) Compare lapping and honing.

(v) Enlist four common forging defects.

(vi) With neat sketch define centrifugal casting.

(vii) Enlist the four factors responsible for electrode selection.

(viii) Write the purposes of riser in sand casting.

(ix) Differentiate between drilling, boring and reaming.

(x) With suitable diagrams differentiate between Counter boring and Counter sinking operation.