

[03 – 2115]

II/IV B.E. DEGREE EXAMINATION.

First Semester

Mechanical Engineering

MANUFACTURING TECHNOLOGY – I

(Effective from the admitted batch of 2006–2007)

Time : Three hours

Maximum : 70 marks

Question No. 1 is compulsory.

Answer any FOUR from the remaining.

All questions carry equal marks.

1. Answer all the questions (7 × 2 = 14)
 - (a) What are the different ingredients of core sand?
 - (b) What are the limitations of friction welding process?
 - (c) What is the difference between compression moulding and transfer moulding?
 - (d) Write a short note on wire drawing.
 - (e) List any four pattern making materials.

- (f) Define-Hot extrusion and cold extrusion.
- (g) What are causes of defects in rolling?
2. (a) List out various pattern allowances. Discuss any four. (7)
- (b) Enumerate with neat sketches various steps involved in making investment casting. (7)
3. (a) What are the specific advantages of match plate patterns? Explain how they are used for making mould. (7)
- (b) Briefly explain the working principle of the plasma arc welding process and mention their applications. (7)
4. (a) Explain the various steps involved in shell moulding process with sketches. (7)
- (b) Distinguish between compound and progressive die. (7)
5. (a) Describe the deep drawings operations with suitable examples. (7)
- (b) What are the different types of patterns used for casting? And sketch the sweep and segmental patterns. (7)

6. (a) Explain in detail the Gas Metal Arc Welding(GMAW) process with neat sketches. (7)
- (b) Define resistance welding and briefly discuss the variables influence the same. (7)
7. (a) Compare blanking and piercing operations along with neat sketches. (7)
- (b) Which type of casting method is used for making precision parts? Explain with neat sketch. (7)
8. (a) How neutral, oxidizing, and reducing flames are obtained in welding torch? Draw their sketches. (7)
- (b) How are forging processes classified? Explain with sketches the various forging processes. (7)
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