

P P SAVANI UNIVERSITY

Third Semester of B. Tech. Examination

Nov-Dec 2021

SEME2030 Non-Cutting Manufacturing Processes

17.12.2021, Friday

Time: 09:00 a.m. To 11:30 a.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

- Q - 1 Sketch and name any five defects in the casting. [05]
- Q - 2 (a) Define pattern. List different type of pattern and explain any one with neat sketch. [05]
- Q - 2 (b) List out material commonly used for pattern & explain wood and metal material with advantages and disadvantages. [05]

OR

- Q - 2 (a) List essential property of moulding sand. State effect of any three property on Casting. [05]
- Q - 2 (b) What is core and core print & what is its purpose. Explain any two cores with neat sketch. [05]
- Q - 3 (a) What is gating system? What is its function? State any two gate with its advantage and disadvantage. [05]
- Q - 3 (b) It is easy to withdraw the pattern having taper shape. Justify the statement with suitable sketch. [05]

OR

- Q - 3 (a) Write short note Slush Casting. [05]
- Q - 3 (b) Explain with neat sketch Centrifugal Casting. [05]
- Q - 4 Write short note on Investment Casting. [05]

SECTION - II

- Q - 1 What is the role of electrode coatings in shielded metal arc? [05]
- Q - 2 (a) Differentiate between Reverse Polarity and Straight Polarity of DC Welding. [05]
- Q - 2 (b) Describe types of welding joints and explain any two in brief. [05]

OR

- Q - 2 (a) Explain Plasma Arc welding [05]
- Q - 2 (b) What are the differences between TIG and MIG welding processes? [05]
- Q - 3 (a) Describe the Electro Slag welding. [05]
- Q - 3 (b) Explain with neat sketch Forward & Backward method of Welding. [05]

OR

- Q - 3 (a) What is laser beam welding process? Explain the steps involved in the process and state its application. [05]
- Q - 3 (b) A Explain why a flux or a gas shielding is not used in resistance spot welding. - Clarify the statement. [05]
- Q - 4 Explain the working principle of Resistance welding. Differentiate between Spot and Seam Welding processes. [05]
