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Code No. : 31403 S

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (Mech. Engg.) III Year I-Semester Supplementary Examinations, May/June-2017

Manufacturing Processes

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. State the colour coding of patterns.
2. What are core, core prints and chaplets?
3. A rough flat cavity appeared in the casting. Analyse the defect and suggest the remedies.
4. What are merits and demerits of die casting over sand casting process?
5. What are the applications of friction welding process?
6. Oxidising flame is used for brasses to prevent dezincification, how it prevents dezincification?
7. How is projection welding different from spot welding? What is the advantage of projection welding over spot welding?
8. What is weldability? State various parameters on which weldability depends on.
9. What is the advantage of backward extrusion over forward extrusion? How are these two processes different?
10. Discuss blanking operation.

Part-B (5 × 10 = 50 Marks)

(All bits carry equal marks)

11. a) State and explain various materials used for pattern manufacturing along with their merits and demerits.
b) State and explain about the required properties of moulding sand.
12. a) Explain the hot chamber die casting process with a neat sketch. State its merits and demerits over cold chamber process.
b) What are various inspection methods to find the fine surface defects of the casting that are not visible to naked eye? Explain about them in detail.
13. a) Explain about the Friction welding process along with its merits and demerits.
b) Compare TIG and MIG welding processes? Explain MIG welding process with a neat sketch.
14. a) Explain Thermit welding process with a neat sketch.
b) What is LASER? Explain the Laser beam welding process with the equipment details? Compare it with Electron beam Welding process.
15. a) Explain about the process of hydrostatic extrusion with a neat sketch.
b) Explain about Electro hydraulic forming with a neat sketch.
16. Explain the following briefly
 - a) Pattern allowances
 - b) Thermo forming process with a neat sketch. State its applications.
17. Write short notes on any *two* of the following:
 - a) Plasma Arc Welding
 - b) Resistance Butt Welding
 - c) Spinning.

