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Question Paper Code: 43702

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Third Semester

Mechanical Engineering

14UME302 – MANUFACTURING TECHNOLOGY - I

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Core print is the part of the
(a) Core (b) Pattern (c) Gate (d) Moulding tool
- A casting defect which occurs due to improper venting of sand is known as
(a) Cold shuts (b) Blow holes (c) Shift (d) Swell
- The welding process used for weld the non metal is
(a) Gas welding (b) Arc welding
(c) Ultrasonic welding (d) Resistance welding
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(a) extrusion (b) drop forging
(c) rolling (d) metal spinning

6. The connecting rods of IC engines are manufactured using the process of
- (a) Extrusion (b) Drop forging
(c) Rolling (d) Metal spinning
7. In which process the wall thickness of a drawn cup is made constant
- (a) Deep drawing (b) Ironing (c) Embossing (d) Redrawing
8. Press forging means
- (a) Repeated blow (b) Continuous squeezing
(c) Bending (d) To make a hole
9. Plasticizer used for
- (a) To improve the viscosity of polymer (b) To enhance the colour
(c) To enhance the polymerization (d) To improve strength
10. Plastic bottles are manufactured using the process of
- (a) Blow moulding (b) Injection moulding
(c) Atomizing (d) Roto moulding

PART - B (5 x 2 = 10 Marks)

11. What are the causes for the formation of blow holes in the sand casting?
12. What is the principle of Thermit welding?
13. What is cogging?
14. Give the difference between punching and blanking.
15. What is film blowing?

PART - C (5 x 16 = 80 Marks)

16. (a) Explain the steps required to carry out green sand moulding. (16)

Or

- (b) Select the suitable casting process to cast intricate components and explain it with neat sketches. (16)

17. (a) Explain the principle of thermit welding with a neat sketch. Also mention its advantages, disadvantages and applications. (16)

Or

(b) Draw and show the components of ultrasonic welding machine for lap welds and explain the working principle. (16)

18. (a) Enumerate the various hammers used for forging operations. (16)

Or

(b) Explain the cold extrusion process with examples and state its advantages. (16)

19. (a) Explain super plasticity forming and its types with neat sketch. (16)

Or

(b) Give the schematic illustration of the explosive forming process and list its applications. (16)

20. (a) Explain briefly with neat sketches, commercially used method of blow moulding for blowing of plastics bottles and mention their specific advantages. (16)

Or

(b) Choose the suitable processes for making for advertisement panel, cookies trays and packing materials of thermoplastic sheets. (16)
