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**Question Paper Code: 43702**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

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)

1. In green sand moulding process, uniform ramming leads to
  - (a) Less chance of gas porosity
  - (b) Uniform flow of molten metal into the mould cavity
  - (c) Greater dimensional stability of casting
  - (d) Less sand expansion type of casting defect
  
2. Chills are used in moulds to
  - (a) Achieve directional solidification
  - (b) Increase freezing zone
  - (c) Reduce freezing zone
  - (d) Smoothen metal flow for reducing spatter
  
3. High speed electron Beam of EBW is focused on the weld spot using
  - (a) Vacuums lens
  - (b) Inert gas lens
  - (c) Optical lens
  - (d) Magnetic lens

4. TIG welding uses
- (a) Bare consumable electrode
  - (b) Non consumable electrode
  - (c) Coated consumable electrode
  - (d) Flux coated electrode
5. Recrystallisation temperature is
- (a) Melting temperature
  - (b) Above melting temperature
  - (c) Below melting temperature
  - (d) Solidification temperature
6. Blanking is one of the
- (a) Welding operations
  - (b) Forging operations
  - (c) Casting methods
  - (d) Plastic processing
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. Parison is the term used in
- (a) Injection moulding
  - (b) Shell moulding
  - (c) Compression moulding
  - (d) Blow moulding

PART - B (5 x 2 = 10 Marks)

11. What is core venting?
12. How does brazing differ from braze welding?
13. What is impact extrusion?
14. Give the difference between punching and blanking.

15. What is film blowing?

PART - C (5 x 16 = 80 Marks)

16. (a) Explain the ceramic moulding process with neat sketches. Also state its merits and demerits. (16)

Or

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

17. (a) Explain the TIG welding process. Give its application. (16)

Or

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

18. (b) 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) Describe shearing operation in a sheet metal work with a neat sketch. (16)

Or

(b) Explain super plasticity forming and its types with neat sketch. (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)

