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**Question Paper Code: 33702**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Mechanical Engineering

01UME302 - MANUFACTURING TECHNOLOGY - I

(Regulation 2013)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

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 (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Draw a neat diagram of a cupola furnace, indicate important parts and show various stages. (8)
12. Sketch the three types of Oxy-acetylene flames and state their characteristics and applications. (8)
13. Why is it not desirable to provide a blank for drop forging of such size that no flash is produced? Explain the purpose of the flash gutter. Why is it sometimes necessary to trim the flash once or even twice during drop forging? (8)

14. Describe the various methods of rubber forming. Where are these processes used. (8)
15. What are the processes used for processing of thermoplastic? Explain any one process with suitable sketches. (8)