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**Question Paper Code: 41372**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2016

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. Cast iron and steel pipes are produced by
  - (a) Slush casting
  - (b) Investment casting
  - (c) True centrifugal casting
  - (d) Die casting
2. A casting defect which occurs due to improper venting of sand is known as
  - (a) Cold shuts
  - (b) Blow holes
  - (c) Shift
  - (d) Swell
3. Oxidizing flame is preferred for welding of
  - (a) cast irons
  - (b) copper and copper alloys
  - (c) stainless steels
  - (d) iron and steel alloys
4. In which welding process the electrical energy for welding is stored in capacitor
  - (a) percussion welding
  - (b) resistance-seam welding
  - (c) high frequency resistance welding
  - (d) flash welding
5. The connecting rods of IC engines are manufactured using the process of
  - (a) extrusion
  - (b) drop forging
  - (c) rolling
  - (d) metal spinning

6. In \_\_\_\_\_ rolling, the tube and internal mandrel undergo a reciprocating motion; the rolls are specially shaped and are rotated continuously
- (a) shape rolling (b) ring rolling  
(c) pilger rolling (d) temper rolling
7. Operation of bending a partially cut hole on one side is called
- (a) nibbling (b) slitting (c) spiral (d) lancing
8. In which process the wall thickness of a drawn cup is made constant
- (a) deep drawing (b) ironing (c) embossing (d) redrawing
9. Plastic bottles are manufactured using the process of
- (a) blow moulding (b) injection moulding  
(c) atomizing (d) Roto moulding
10. The melting temperature of fluorocarbon is
- (a) 256°C (b) 950°C (c) 186°C (d) 327°C

PART - B (5 x 2 = 10 Marks)

11. What are core prints?
12. What does brazing differ from braze welding?
13. What is cogging?
14. Define minimum bend radius.
15. Name the types of compression moulds.

PART - C (5 x 16 = 80 Marks)

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

Or

- (b) Describe the various designs of squeeze heads used for mould making with sketches. (16)
17. (a) Illustrate the equipment set up and functioning of gas tungsten-arc welding process. (16)

Or

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

18. (a) How are seamless pipes made? Explain with illustrative sketches. (16)

Or

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

19. (a) Review the characteristics of sheet metals. (16)

Or

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

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

Or

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

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