

Register Number:

B.E DEGREE EXAMINATIONS: MAY/JUNE 2014

(Regulation 2009)

Second Semester

MEC103: MANUFACTURING TECHNOLOGY-I

(Common to AUTO & MECH)

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. _____ is an expendable mold casting process that uses a resin covered sand to form the mold.
 - a) Shell casting
 - b) Investment casting
 - c) Centrifugal casting
 - d) Precision casting
2. Patterns used in _____ may be made of wood, metal, plastics or other materials.
 - a) Sand casting
 - b) Investment casting
 - b) Shell casting
 - d) Precision casting
3. Shielded metal arc welding is sometimes called as
 - a) TIG welding
 - b) Manual metal arc welding
 - c) MIG welding
 - d) Fusion welding
4. _____ is a high-productivity welding process in which the arc is struck beneath a covering layer of granular flux.
 - a) TIG welding
 - b) Friction stir welding
 - c) Submerged arc welding
 - d) Fusion welding
5. Open die forging is also called as
 - a) Drop forging
 - b) Hot metal forming
 - c) Cold metal forming
 - d) smith forging
6. Trombone handslides are manufactured by
 - a) Rod drawing
 - b) Wire drawing
 - c) Brazing
 - d) Soldering

7. Swaging, expanding and blanking are the common methods of
 - a) Forging
 - b) Magnetic pulse forming
 - b) Foundry
 - d) Metal forming
8. Thickness of metal more than 6mm are called as plates and lesser than 6mm are called as
 - a) bars
 - b) leafs
 - c) sheets
 - d) foils
9. Mandrels are associated with
 - a) CNC lathes
 - b) Shaping machine
 - c) Milling machine
 - d) Lathe
10. Lathe bed is made of
 - a) Mild steel
 - b) Malleable iron
 - c) Wrought iron
 - d) Cast iron

PART B (10 x 2 = 20 Marks)

11. What is the purpose of sand testing?
12. Name the common pattern materials.
13. Differentiate brazing and soldering.
14. What is the purpose of electrode in welding?
15. Differentiate hot and cold working.
16. Give examples of products made from tube piercing operations.
17. What is the advantage of super plastic forming?
18. Differentiate shearing, bending and drawing operations.
19. What are the applications of a tail stock in a lathe.
20. List a few operations performed in a lathe.

PART C (5 x 14 = 70 Marks)

21. a) Explain the working principle of centrifugal casting.

(OR)

- b) i) Elaborate on the properties of moulding sand. (7)
- ii) Contrast the various types of moulding machines. (7)

22. a) Compare and contrast arc welding and gas welding operations.

(OR)

b) Enhance the principle of operation of special welding processes.

23. a) What are the characteristics of forging? Give examples of typical forging operations.

(OR)

b) Write short notes on

i) Defects in rolled parts (7)

ii) Types of rolling mills (7)

24. a) Explain the sheet metal characteristics and comment on typical shearing operations.

(OR)

b) Explain the working principle and application of special forming processes.

25. a) List and explain the various work holding and supporting devices in lathe operations.

(OR)

b) Write short notes on

i) Multi spindle automats (7)

ii) Safety precautions in turning operations (7)
