KUMARAGURU college of technology
character is life

Register Number: ……..

B.E DEGREE EXAMINATIONS: JUNE 2015

(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. Which of the following pattern is used to produce a number of castings?
   a) loose piece pattern b) split pattern
   c) gatted pattern d) match plate pattern
2. Distortion allowance is not provided in the following shape of casting.
   a) U b) T
   c) C d) O
3. Which of the following joint have high corrosion resistance?
   a) Welding joint b) Riveted joint
   c) Bolted joint d) Butt joint
4. The metals having good weldability, in descending order are
   a) cast steel, iron, carbon steel, cast iron b) carbon steel, iron, cast steel, cast iron
   c) iron, carbon steel, cast steel, cast iron d) cast iron, iron, carbon steel, cast steel
5. The plastic deformation of metal takes place when the stress induced in the metal, due to the applied forces, reached the
   a) Yield point b) Proportional limit
   c) Fatigue strength d) Ultimate strength
6. The following are true for rolling, except
   a) the greater the coefficient of friction more the possible reduction b) grains are elongated in the direction of rolling
   c) after crossing the stress zone the grain starts refining d) velocity of metal at exit is same as that at the entry
7. Under what thickness are sheet metal calling plates?
   a) 1.00mm b) 1.5 mm
   c) 3.00 mm d) 5.00 m

8. In sheet metal work, the cutting force on the tool can be reduced by

a) grinding the cutting edges sharp
b) increasing the hardness of the tool
c) providing shear on tool
d) increasing the hardness of die

9. Cutting Tool is _____in lathe

a) Moved
b) Static
c) Not Necessary
d) All of These

10. Lathe Dogs are _____devices

a) Gold
b) Cast Metal
c) Silver
d) Alloy

PART B (10 x 2 = 20 Marks)

11. List any four types of pattern materials used in casting.
12. Explain core making.
13. What is the need of filler and flux materials?
14. Explain the soldering process.
15. What is the process carried out in cold working of metals?
16. Define tube piercing.
17. Discuss the advantage of drawing operations.
18. Write notes on metal spinning.
19. Discuss the usage of work holding devices.
20. What is a spindle automat?

PART C (5 x 14 = 70 Marks)

21. a) In detail explain the sand casting process with neat sketch.

(OR)

b) Explain the shell casting process and Centrifugal casting process

22. a) Briefly explain the working principle of arc welding process and its advantages.

(OR)

b) (i) Explain the working principle of Electron beam welding. (10)

(ii) Explain the brazing process (4)

23. a) Explain the open and closed die forging with neat sketch.

(OR)

b) Explain briefly the working principle of extrusion process and its types.

24. a) Briefly explain the typical shearing operations with neat sketch.

(OR)

b) (i) Write brief notes on (i) Hydro forming. (7)

(ii) Explosive forming. (7)

25. a) Explain in detail about the types of operations carried out in Lathe.

(OR)

b) Discuss the work holding and supporting devices with suitable drawing.

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