KUMARAGURU
college of technology
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Register Number: …….

B.E DEGREE EXAMINATIONS: DEC 2014

(Regulation 2013)

Third Semester

MECHATRONICS ENGINEERING

U13MCT306: Manufacturing Technology

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Cope is defined as
   a) lower part of the moulding flask b) upper part of the moulding flask
   c) intermediate part of the moulding flask d) channel in the parting line
2. In shell mould castings, the shell is made up of _____.
3. In forging operation work piece is usually subjected to
   a) Compressive Stress b) Tensile Stress
   c) Shear stress d) Bending Stress
4. In blanking operation the size of the blank is dependent on the size of _____.
5. Which of the following process use single point cutting tool?
   a) Drilling b) Milling
   c) Turning d) Grinding
6. Number of taps in a tap set is _____
7. The milling cutter is mounted on
   a) a shaft b) a sleeve
   c) a mandrel d) an arbor
8. For grinding and polishing _____ substance is used abrasive
9. In thermit welding, thermit mixture consists of
   a) Iron powder and aluminium oxide b) Aluminuim powder and iron oxide
   c) Copper powder and aluminium oxide d) Aluminuim powder and copper oxide
10. Vacuum is essential requirement in _____ welding

PART B (10 x 2 = 20 Marks)

(Not more than 40 words)

11. Name any four methods used for checking the casting defects
12. Enumerate the types of pressure die casting process.
13. What do you meant by re-crystallization?
14. Classify forging operation.
15. What is the main difference between reaming and tapping?
16. Give any two specification of a standard lathe.
17. List out the operations performed on a drilling machine.
18. Categorize the abrasives.
19. Mention the different types of gas flames produced in gas welding.
20. Why the flux is needed in arc welding?

PART C (5 x 14 = 70 Marks)

(Not more than 400 words)

Q.No. 21 is Compulsory

21. Define grinding and describe in detail about the cylindrical grinding also state its advantages.

22. a) With the help of line sketch, describe the working principle of cupola furnace.

(OR)

b) Discuss the working principle of shell moulding process with suitable sketches.

23. a) Explain the extrusion process with its classification using neat sketches.

(OR)

b) Categorize the rolling mill and explain any four types in detail.

24. a) Draw the single point cutting tool nomenclature and describe it.

(OR)

b) Explain with neat sketch about the gear shaping process.

25. a) Draw the machine layout of Electron Beam Welding and state its advantages and applications

(OR)

b) (i) Differentiate between soldering and brazing. (8)

(ii) Enumerate in detail about the types of electrode used in arc welding process. (6)

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