KUMARAGURU
college of technology
character is life

Register Number: ……..

B.E DEGREE EXAMINATIONS: DEC 2014

(Regulation 2009)

Third Semester

MECHANICAL ENGINNERING

MEC107**:** Manufacturing Technology - II

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The Ductile materials produce _____ during machining.
   a) continuous chips
   b) discontinuous chips
   c) continuous chips with built-up edge
   d) either (a) or (c)
2. Carbide tipped tools usually have
   a) negative rake angle
   b) positive rake angle
   c) any rake angle
   d) no rake angle
3. In a mechanical shaper, the length of stroke is increased by
   a) increasing the centre distance of bull gear and crank pin
   b) decreasing the centre distance of bull gear and crank pin
   c) increasing the length of ram
   d) decreasing the length of slot in the slotted lever
4. The type of tool used on Lathe, Shaper and Planer is
   a) single point cutting tool
   b) two point cutting tool
   c) multi point cutting tool
   d) three point cutting tool
5. Hardness of a grinding wheel is specified by
   a) BHN
   b) RHN
   c) VHN
   d) letter of alphabet
6. A process of removing metal by pushing or pulling a cutting tool is called
   a) up milling
   b) down milling
   c) broaching
   d) buffing
7. Gears can be best produced on mass production by

a) gear shaping
b) gear casting
c) gear hobbing
d) gear milling

8. In EDM the tool is made of
a) Copper
b) High Speed Steel
c) Cast Iron
d) Plain Carbon Steel

9. USM is best suited for which materials
a) soft and ductile materials
b) hard and brittle materials
c) soft and brittle materials
d) hard and ductile materials

10. In ECM process the electrolyte used is
a) kerosene
b) water
c) brain solution
d) ethenal

PART B (10 x 2 = 20 Marks)

11. Define Tool Signature?
12. List the functions of cutting fluid?
13. State the advantages of automatic lathes.
14. Name the mechanisms used in shaper?
15. What is meant by dressing and truing?
16. Define 'MRR'.
17. Name the methods used for indexing?
18. State the processes involved in gear finishing.
19. What are the advantages of EDM?
20. List the applications of LBM?

PART C (5 x 14 = 70 Marks)

21. a) What is the use of chip breaker? Discuss the various types of chips produced during metal machining process.

(OR)

b) (i) List the various forms of wear found in cutting tools with a neat Sketch? (10)
(ii) Define tool life and State the factors affecting the tool life. (4)

22. a) (i) Write down the differences between a capstan and a turret lathe. (7)
(ii) Write down differences between shaper and planer. (7)

(OR)

b) Describe the methods and equipment's used for holding workpiece on a lathe.

23. a) Briefly explain the following allied operations done by drilling machine:

(i) Reaming

(ii) Boring

(iii) Counter boring

(iv) Countersinking

(v) Spot facing

(vi) Tapping

(OR)

b) (i) Illustrate the Honing and Lapping operations with a neat sketches. (10)

(ii) List the advantages and limitations of the broaching operations. (4)

24. a) Explain the nomenclature of the milling cutter with a neat sketch.

(OR)

b) Explain gear shaping and gear hobbing operation with neat sketch.

25. a) Illustrate the AJM process with neat sketch. And also state it’s application.

(OR)

b) Explain the LBM operation with suitable sketches. State the advantages and limitations.

****