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Question Paper Code: 54703

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fourth Semester

Mechanical Engineering

15UME403 – MANUFACTURING TECHNOLOGY – II

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. A taper tap has CO1- R
 - (a) Its end tapered for about three or four threads
 - (b) Its end tapered for about eight or ten threads
 - (c) Full threads for the whole of its length
 - (d) None of the above

2. In metal cutting operation, maximum heat (i.e. 80-85%) is generated in CO1- R
 - (a) The shear zone
 - (b) The chip-tool interface zone
 - (c) The tool-work interface zone
 - (d) None of the above

3. The binding material used in cemented carbide tools is CO2- R
 - (a) 250°C
 - (b) 350°C
 - (c) 500°C
 - (d) 900°C

4. Work piece is hold in CO2- R
 - (a) Chuck
 - (b) Tail stock
 - (c) Carriage
 - (d) Head stock

5. A drill mainly used in drilling brass, copper or softer materials, is CO3- R
 - (a) Flat drill
 - (b) Straight fluted drill
 - (c) Parallel shank twist drill
 - (d) Tapered shank twist drill

6. The cutting tool in a milling machine is mounted on CO3- R
 - (a) Spindle
 - (b) Arbor
 - (c) Column
 - (d) Knee

7. The process of removing metal by a cutter which is rotated in the same direction of travel of workpiece, is called CO4- R
- (a) Up milling (b) Down milling (c) Face milling (d) End milling
8. In Super finishing operation CO4- R
- (a) The work rotates, the abrasive block reciprocates
 (b) The abrasive block rotates, the work reciprocates
 (c) Both abrasive block and work rotates
 (d) Both abrasive block and work reciprocates
9. Part-programming mistakes can be avoided in CO5- R
- (a) NC (Numerical Control) machine tool (c) Both a. and b.
 (b) CNC (Computer Numerical Control) machine tool (d) None of the above
10. Gear finishing operation is called CO5- R
- (a) Shaping (b) Milling (c) Hobbing (d) Burnishing

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Describe in detail about the types of chips produced in metal cutting process. CO1- U (8)
12. Explain With a neat sketch, explain the components of a lathe. CO2- U (8)
13. With a schematic illustration, explain the working principle of a vertical spindle milling machine in detail CO3- U (8)
14. Explain with a neat sketch the following grinding operations in detail. CO4- U (8)
15. Explain The Construction and working principle of CNC. CO5-U (8)