

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 What do you mean by heat treatment of steel? How does heat treatment effect the mechanical properties of steel? (CO1)
- Q.24 Explain the principle of centre less grinding. Write its advantages and limitations. (CO3)
- Q.25 Explain the principle and description of Abrasive Jet Machining. Also write its applications. (CO5)

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Roll No. ....

**6th Sem./Branch : Automation & Robotics**

**Subject : Manufacturing Technologies & Applications**

Time : 3 Hrs.

M.M. : 60

## SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Which property of a material refers to its resistance to permanent deformation under applied load? (CO1)
- a) Hardness                      b) Toughness
- b) Ductility                      d) Elasticity
- Q.2 Which type of cutting fluid is commonly used for aluminium machining? (CO1)
- a) Mineral oil                      b) Synthetic coolant
- c) Emulsion                      d) Straight oil
- Q.3 Which machining operation is used for creating holes in work pieces? (CO2)
- a) Turning                      b) Milling
- c) Drilling                      d) Grinding

- Q.4 In milling operations, the cutting tool rotates in which direction to remove material? (CO2)
- a) Radial                      b) Axial
- c) Tangential                d) Circumferential
- Q.5 In electroplating, the work piece act as: (CO5)
- a) Anode                      b) Cathode
- c) Neutral                    d) None of the above
- Q.6 Which machine needs jet of high temperature ionized gas? (CO5)
- a) EBM                        b) LBM
- c) EDM                       d) PAM

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Name the main constituent of high speed steel. (CO1)
- Q.8 The cutting edges of a standard twist drill are called? (CO1)
- Q.9 Conventional milling is also known as \_\_\_\_\_.(CO2)
- Q.10 What is grinding wheel? (CO3)
- Q.11 Give description of G01. (CO4)
- Q.12 Expand CNC. (CO4)

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### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Explain the physical properties of materials. (CO1)
- Q.14 What is cutting fluid? Write the functions of cutting fluids. (CO1)
- Q.15 Name various turning operations and their tools required. (CO2)
- Q.16 Write short note on gas welding technique. (CO3)
- Q.17 Explain types of tool and work holding devices of milling machine. (CO2)
- Q.18 Write short note on radial drill machine. (CO2)
- Q.19 Differentiate between resistance welding and arc welding. (CO4)
- Q.20 Explain the process of electroplating. Where it is used? (CO4)
- Q.21 What is an automatic tool changer? What are the types of automatic tool changer? (CO4)
- Q.22 What is Electric discharge machining? State its applications. (CO5)

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