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6th Sem. / Automation & Robotics
Sub.: Manufacturing Technologies & Applications

Time : 3 Hrs. **M.M. : 60**

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

Q.1 Which of the following properties measures a materials's resistance to Indentation? (CO1)

a) Hardness b) Toughness

c) Brittleness d) Malleability

Q.2 Which type of cutting fluid is commonly used in high-speed machining operations? (CO1)

a) Water b) Synthetic oils

c) Petroleum based oils d) None of these

Q.3 In which machining process is a rotating cutter used to remove material from a workpiece? (CO2)

a) Turning b) Drilling

c) Milling d) Broaching

Q.4 Which of the following processes is used to produce internal threads? (CO2)

a) Boring b) Tapping

c) Facing d) Knurling

Q.5 Which non conventional machining process uses a jet of abrasive particles to remove materials? (CO4)

a) ECM b) EDM

c) AJM d) WEDM

Q.6 Which components in a CNC machine is responsible for controlling tool movement? (CO4)

a) Servo motor b) Worktable

c) Tool turret d) Chuck

SECTION-B

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

Q.7 The ability of a material to be drawn into wires without breaking is called_____. (CO1)

Q.8 _____ is a machining process that improves the dimensional accuracy and surface finish by using abrasive particles. (CO3)

Q.9 In a lathe machine, the _____ holds and rotates the workpiece. (CO2)

Q.10 The process of removing unwanted material from a metal sheet using a die and punch is called _____. (CO2)

Q.11 _____ welding is commonly used for joining thin aluminum sheets. (CO2)

Q.12 In CNC machining, the function of M-Codes is to control _____. (CO4)

SECTION-C

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

Q.13 Define machinability and list two factors affecting it. (CO1)

Q.14 What are the characteristics of a good cutting fluid? (CO1)

Q.15 Explain the working of a shaping machine. (CO2)

Q.16 What are the different types of lathe accessories? (CO2)

Q.17 Define blanking and piercing in press working operations. (CO2)

Q.18 What is the function of flux in welding? (CO2)

Q.19 Explain the process of honing and its applications. (CO3)

Q.20 Describe the working principle of wire-cut EDM. (CO4)

Q.21 What is tool offset in CNC machining? (CO4)

Q.22 How do you select a manufacturing process for a given application? (CO5)

SECTION-D

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

Q.23 Explain the different types of milling machines with diagrams. (CO2)

Q.24 Describe the principle working and applications of Electrochemical Machining (ECM). (CO4)

Q.25 Compare hot working and cold working processes with examples. (CO5)