

- Q.24 Define work holding device with sketches?  
 Q.25 Describe the two methods of milling machine.  
 Q.26 Explain the effect of cutting parameters namely speed, feed and depth of cut on machining time.  
 Q.27 Explain various job holding devices used on a milling machine.  
 Q.28 Describe the working of a Universal Dividing Head.  
 Q.29 Explain the principle of drilling?  
 Q.30 Describe the spot facing and counter sinking operations performed on a drilling machine.  
 Q.31 Classify the boring machines.  
 Q.32 Explain working principle of shaper and slotter.  
 Q.33 Enlist different types of planer alongwith their application.  
 Q.34 Explain the difference between cutting fluid and lubricant.  
 Q.35 Enlist common methods of lubrication of machine tools.

#### **Section-D**

**Note:** Long answer questions. Attempt any two question out of three Questions. (2x10=20)

- Q.36 Draw the geometry of single point cutting tools and write about its important parts in details.  
 Q.37 Draw the block diagram of horizontal shaper and write about its important parts in details.  
 Q.38 Write the functions and properties of a cutting fluid.

No. of Printed Pages : 4  
Roll No.....

202454/122454

#### **5th Sem / Mechatronics** **Sub : Manufacturing Processes**

**Time : 3 Hrs.**

**M.M. : 100**

#### **SECTION-A**

**Note:** Multiple Choice Questions. All Questions are compulsory. (10x1=10)

- Q.1 Which of the following attachments can be used with centre lathe.  
 a) Grinding                            b) Milling  
 c) Copying                            d) All of the above  
 Q.2 A process of enlarging a hole which is already in an object is known as:  
 a) Boring                            b) Drilling  
 c) Knurling                        d) Honing  
 Q.3 Cutting tools removes the metal work piece in the form of \_\_\_\_\_.  
 a) Blocks                            b) Chips  
 c) Powder                            d) Option A & C  
 Q.4 Milling cutter is a \_\_\_\_\_.  
 a) Single point Cutting Tools  
 b) Multi point Cutting Tool  
 c) Single bit Cutting Tool  
 d) None of the above  
 Q.5 Gang milling is \_\_\_\_\_.

- a) Process of cutting gears  
 b) Process in which two more cutter are used simultaneously.  
 c) Milling process for generating hexagonal surface  
 d) None of the above
- Q.6** Counter sinking is also similar to \_\_\_\_\_, except that the additional machining being done on a hole is conical to accommodate the counter sunk machine screw head.
- a) Form turning      b) Spinning  
 c) Counter boring    d) Hole milling
- Q.7** Which machine is similar to a vertical axis milling machine with the table closer to the floor and built heavy, rigid and accurate construction.
- a) Lathe              b) Down Milling  
 c) Drilling            d) Jig Boring
- Q.8** Reaming is a \_\_\_\_\_ operation done to provide close tolerance holes.
- a) Powdering          b) Finishing  
 c) Polishing           d) Grinding
- Q.9** Cutting fluid reduces the effect of \_\_\_\_\_ during cutting operation
- a) Temperature        b) Heat  
 c) Current             d) Climate conditions
- Q.10** Graphite is a type of \_\_\_\_\_ lubricant.
- a) Solid                b) Semi-solid  
 c) Liquid              d) None of the above

### Section-B

- Note:** Objective/Completion type questions. All questions are compulsory. (10x1=10)
- Q.11 Turret lathe is \_\_\_\_\_ type lathe.
- Q.12 Angle plates, collets and mandrels are \_\_\_\_\_ of lathe.
- Q.13 Reaming is a \_\_\_\_\_ operation.
- Q.14 The clapper box in a shaper helps to perform the return stock. (True/False))
- Q.15 The \_\_\_\_\_ stroke in a shaper is called idle stroke.
- Q.16 The cutting tool used in a milling machine is known as \_\_\_\_\_.
- Q.17 Form milling operation is used to machine surfaces of irregular shapes. (True/False)
- Q.18 the planner is especially adopted to \_\_\_\_\_ work piece.
- Q.19 Coolant and lubricants \_\_\_\_\_ the tool life.
- Q.20 Cutting fluid is used to produce \_\_\_\_\_ and \_\_\_\_\_.

### Section-C

- Note:** Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)
- Q.21 Enlist various types of single point cutting tools? Write down important uses of any three of them.
- Q.22 What do you understand by tool signature?
- Q.23 Explain the principle of turning?