

**Faculty of Engineering & Technology**  
**Fourth Semester B.E. (Mechanical Engineering) (C.B.S.)**  
**Examination**  
**MACHINING PROCESSES**

Time—Three Hours]

[Maximum Marks—80

**INSTRUCTIONS TO CANDIDATES**

- (1) All questions carry marks as indicated.
  - (2) Solve **SIX** questions as follows :  
Que. No. 1 **OR** Que. No. 2  
Que. No. 3 **OR** Que. No. 4  
Que. No. 5 **OR** Que. No. 6  
Que. No. 7 **OR** Que. No. 8  
Que. No. 9 **OR** Que. No. 10  
Que. No. 11 **OR** Que. No. 12
  - (3) Due credit will be given to neatness and adequate dimensions.
  - (4) Illustrate the answers with necessary figures/ drawings wherever necessary.
  - (5) Use of Non-programmable calculator is permitted.
  - (6) Assume suitable data wherever necessary.
1. (a) Draw a neat sketch of single point cutting tool and describe its various angles.

7

- (b) Explain the mechanism of chip formation with neat sketch. 6

OR

2. (a) What are various cutting tool materials ? Discuss their properties. 7
- (b) Discuss the properties of cutting fluids. 'An effective coolant uplift the tool life and surface finish.' Discuss. 6
3. (a) Draw a labelled sketch of centre lathe. Discuss its major parts. 7
- (b) Differentiate Capstan and Turret Lathe. 6

OR

4. (a) What are the various methods of Taper Turning ? Explain. 7
- (b) Discuss Lathe Machine specifications in detail. 6
5. (a) Explain with the help of neat sketch working principle of planer. 7
- (b) Explain with the help of diagram the principle of quick return mechanism. 7

OR

6. (a) Explain construction and working principle of slotter machine, with neat sketch. 7

Contd.

(b) Explain with neat sketch hydraulic drives in shaper.

7

7. (a) Explain column and knee type Milling Machine with neat sketch.

7

(b) What are the main attachment used on a Milling Machine ?

6

**OR**

8. (a) What is Indexing ? What are various types of Indexing ? Explain.

7

(b) Explain the utility of special purpose milling machine. Discuss profile milling machine.

6

9. (a) Explain with neat sketch external and internal centreless grinding.

7

(b) Explain 'Grit', 'Grade' and structure of a grinding wheel.

6

**OR**

10. (a) What are various superfinishing operations ? Explain Honing and Lapping.

7

(b) Explain with neat sketch the process of galvanizing and electroplating.

6

11. (a) Explain with neat sketch planer type horizontal boring machines.

7

Contd.

- (b) What are various types of Drilling Machines ? Explain Radial Drilling Machine with neat sketch. 7

**OR**

12. (a) Explain the process Broaching. Explain with sketch pull types broaching machine. 7
- (b) What is Reaming ? State various types of reamers. 3
- (c) Explain Jig boring machine. 4