B.E. (Mechanical Engineering) Fourth Semester (C.B.S.)

Machining Processes

P. Pages : 2 **NJR/KS/18/4426**

Time : Three Hours * 0 7 7 2 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Explain with neat sketch tool geometry of single point cutting tool. Also discuss its nomenclature. **7**

b) Classify different tool materials. Also explain their properties. **6**

OR

2. a) Differentiate between orthogonal and oblique cutting with neat sketch. **6**

b) Explain with neat sketch Merchant's circle. Also discuss various forces. **7**

3. a) Explain with neat sketch construction of simple lathe. **7**

b) Explain Facing and step turning operation performed on Lathe. **6**

OR

4. a) Differentiate between Capstan and Turret lathe with block diagram. **6**

b) Discuss various methods used for taper turning. Explain any one in detail. **7**

5. a) Explain with neat sketch crank & slotted link mechanism of shaper. **7**

b) What are the different work holding devices used in shaper. Explain any one in detail. **7**

OR

6. a) Discuss various types of Slotting Machines. Explain any one in detail with neat sketch. **7**

b) Discuss various types of planner. Explain any one with neat sketch. **7**

7. a) Explain with neat sketch up milling and down milling. **7**

b) Explain with neat sketch plain or horizontal milling machine. **6**

OR

8.	a)	Explain with neat sketch dividing head or indexing head of milling machine.	**7**
	b)	Explain with neat sketch Helical Milling Operation.	**6**
9.	a)	Explain the method of designation for grinding wheels with suitable example.	**6**
	b)	Explain principle of working of centerless grinding. Also discuss various feeding methods.	**7**

OR

10.	a)	Explain with neat sketch various superfinishing processes.	**7**
	b)	Explain the phenomenon of dressing and glazing of Grinding wheels.	**6**
11.	a)	Explain with neat sketch universal radial drilling machine.	**7**
	b)	Explain with neat sketch the geometry of twist drill.	**7**

OR

12.	a)	Explain with neat sketch the constructional features of horizontal boring machine.	**7**
	b)	Differentiate between push and pull type of broaching operation with neat sketch.	**7**

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