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

Advanced Production Processes

P. Pages : 2 **KNT/KW/16/7340**

Time : Three Hours * 0 6 7 0 * 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. Diagrams and chemical equations should be given wherever necessary.
9. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain in details of water jet machine (WJM) process with neat sketch. Also give its advantages and disadvantages and application. **6**

b) Explain Laser Beam Machining (LBM) with neat sketch. Explain its applications, advantages and limitations. **7**

OR

2. a) Explain the mechanism of Abrasive Jet Machining (AJM) with neat sketch. Also state advantages disadvantages and applications. **6**

b) Explain with neat sketch Electro Discharge Machining (EDM). What are its applications? Also give Advantages and Limitations of these process. **7**

3. a) Explain Oxyacetylene gas welding (OAGW) with neat sketch. What are its advantages, disadvantages and applications? **6**

b) Explain Atomic Hydrogen welding with neat sketch. Also state its advantages limitations and applications. **7**

OR

4. a) With neat sketch explain Tungstem Inert Gas (TIG) Are welding. What are the various materials weldable by this process? Which inert gas is used in this process? **6**

b) Discuss Electron Beam welding (EBW) with neat sketch. Also give its advantages and disadvantages along with its applications. **7**

5. a) Explain in brief main parts of Turret Lathe. How it differs from Capstan Lathe? **7**

b) Explain the various types of explosive forming in High Energy Rate Forming. **7**

OR

6.	a)	With neat sketch explain Bar feeding mechanism of Capstan Lathe?	**7**
	b)	Explain machining centre and its various types.	**7**
7.	a)	Draw a neat sketch to show details of a cutting die set. Explain 'Press Terminology' and its various element.	**7**
	b)	Explain the process of Deep Drawing with its application. Also explain Drawability and number of stages required.	**7**

OR

8.	a)	Explain the following die acting operations	**7**
		i) Blanking	
		ii) Hitting	
		iii) Lancing	
		iv) Perforating	
	b)	Describe the classification of press.	**7**
9.	a)	Explain the difference between Jig and Fixtures with neat sketch.	**6**
	b)	Explain 3 – 2 – 1 principle or six point location principle in case of Jigs & fixtures, with neat sketch. Also comment why it is widely processed.	**7**

OR

10	a)	List various types of Locators commonly used and explain with neat sketch.	**6**
	b)	Classify fixtures. Explain drilling jig with neat sketch.	**7**
11.	a)	Explain principle of superfinishing process with its application.	**6**
	b)	Differentiate between polishing and Buffing process with its application.	**7**

OR

12.	a)	Explain lapping process with neat sketch. Also give its application.	**6**
	b)	Explain Honing process with neat sketch. Also give its applications.	**7**

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