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

Elective - III : Advanced Manufacturing Techniques

P. Pages : 2 **KNT/KW/16/7588**

Time : Three Hours * 0 2 2 6 * 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. Assume suitable data whenever necessary.

1. a) What is NTMM? Give in detail classification of NTMM Processes. **7**

b) Discuss in detail the process of High speed Grinding. **6**

OR

2. a) Explain the various parameters affecting on the selection of NTMM processes. **7**

b) Discuss in detail the economics and application of Non Traditional processes for machining. **6**

3. a) Explain in detail the process of WJM along with its applications. **7**

b) Discuss in detail the effects of NTD on MRR in case of AJM. **6**

OR

4. a) Discuss in detail the process of USM along with its advantages and applications. **7**

b) Discuss the effect of abrasive grain size and Mixing ratio on MRR in AJM. **6**

5. a) Give the source of energy and applications of ECM. Also discuss the electrochemistry of ECM. **7**

b) With the help of neat sketch explain the process of electric discharge machining. Also state its limitations. **7**

OR

6. a) Explain the process of LBM along with its advantages and applications. **7**

b) What is plasma? With the help of neat sketch explain the process of PAM. **7**

7. a) What is resistance welding? Explain in detail any one process of resistance welding. **7**

b) With the help of neat sketch explain the process of atomic hydrogen welding. **6**

OR

8.	a)	Discuss in detail the process of electron beam welding (EBW) along with its advantages and applications.	**7**
	b)	Why inert gases are used in welding? With the help of neat sketch explain the process of TIG welding.	**6**
9.	a)	What is solid phase welding? Explain the process of friction welding?	**7**
	b)	Explain the process of ultrasonic welding along with its applications and Limitations.	**6**

OR

10.	a)	Discuss in detail economics and applications of Non – Traditional processes for welding.	**7**
	b)	Differentiate between solid phase welding and Arc welding.	**6**
11.	a)	With the help of neat sketch explain the process of metal mold casting.	**7**
	b)	Discuss in detail the process of centrifugal casting.	**7**

OR

12.	a)	Explain in detail the process of evaporative pattern casting along with its applications.	**7**
	b)	With the help of neat sketch explain the process of vacuum mould casting. Give its applications.	**7**

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