B.E. Mechanical Engineering (Model Curriculum) Semester-V

HSMC3012 - Production Technology

P. Pages : 2 **GUG/W/23/14067**

Time : Three Hours * 7 6 5 4 * Max. Marks : 80

Notes : 1. All questions carry equal marks.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Illustrate your answers wherever necessary with the help of neat sketches.
5. Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.

1. a) Discuss in detail: **8**
i) Rolling
ii) Extrusion

b) Explain open die forging operation with neat sketch and state its applications. **8**

OR

2. a) Classify Metal Forming operation. Explain upsetting operation. **8**

b) State and explain various stages in cup drawing operation with neat sketch. Enlist various defects found during deep drawing operation. **8**

3. a) State the purpose of using cutting fluids. State different cutting fluids with applications. **8**

b) How a chip is formed in metal cutting. Explain different types of chips. **8**

OR

4. a) Enlist and explain the temperature measurement techniques in machining. **8**

b) State the sources of heat generation during metal cutting operation and state the effects of this heat on the process of metal cutting. **8**

5. a) State and explain various methods used for cutting external and internal threads. **8**

b) Explain different types of threads. **8**

OR

6. a) Explain with a neat sketch of gear planning process. **8**

b) What are the different gear finishing operations? Explain any one in detail. **8**

7. a) How the plant are related to type of production system. **8**

b) State and explain the functions of production, planning and control. **8**

OR

8.	a)	What is sales forecasting? Explain three mathematical methods used to decide the sales forecast.	**8**
	b)	Define breakeven point. Explain with suitable graph, how the profit can be enhanced by break even analysis.	**8**
9.	a)	Explain economics of tool selection.	**8**
	b)	What is inventory control? Explain economic batch quantity.	**8**

OR

10.	a)	Discuss machine tool replacement.	**8**
	b)	Explain return on investment.	**8**

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