

B.E. / B.Tech. Mechanical Engineering (Model Curriculum) Semester-VI  
**PCCME307 / MANU TECH1 - Manufacturing Technology**

P. Pages : 2

Time : Three Hours



**GUG/S/25/14075**

Max. Marks : 80

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- Notes :
1. All questions Carry equal marks/marks as indicated.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Diagrams and Chemical equation should be given wherever necessary.
  5. Illustrate your answers wherever necessary with the help of neat sketches.
  6. Discuss the reaction, Mechanism wherever necessary.
  7. 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) Define 'Forging'. Enlist their types according to different criteria and explain any one in detail. 8
- b) What are the characteristics required for the selection of die material. Give a block dimension for a 'single impression die'. 8

**OR**

2. a) Explain the 'forging die design' aspect in detail with the help of suitable figure. 8
- b) Write short notes on following 8
- i) Skew rolling
- ii) Die maintenance
3. a) With the help of suitable figure, explain the design of 'compound die' in press working operation. 8
- b) Write short notes on following: 8
- i) Blanking operation
- ii) Spinning operation

**OR**

4. a) Classify the 'types of presses' according to different criteria's. 8
- b) Write short notes on following: 8
- i) Mechanics of chip formation.
- ii) Flank wear and crater wear.
5. a) What is Jigs? Explain any one types of Jig with suitable sketch. 8

- b) Write short notes on following: 8
- i) Clamping and clamping devices.
  - ii) Drilling bushes.

**OR**

6. a) What is 'fixtures'? Explain 'milling fixture' in detail with the help of suitable figure. 8
- b) Write short notes on following 8
- i) Welding fixture.
  - ii) Standard parts used for jig design.
7. a) With the help of neat sketch, explain gear tooth profile terminology. 8
- b) What are 'comparators'? Explain the need and basic features of comparator. 8

**OR**

8. a) Differentiate between following: 8
- i) Interchangeability and selective assembly.
  - ii) Shaft basis system and hole basis system.
- b) Explain 'pneumatic type of comparator' in detail with neat sketch. 8
9. a) Explain control charts for variable and attributes. 8
- b) Write short notes on following: 8
- i) Quality of design
  - ii) Quality audit

**OR**

10. a) Explain the basic concept of 'TQM' in detail. 8
- b) Write short notes on following: 8
- i) ISO9000
  - ii) BIS14000 series

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