

B.E. Mechanical Engineering (Model Curriculum) Semester-VI
PCCME307 - Manufacturing Technology

P. Pages : 2

Time : Three Hours



GUG/W/23/14075

Max. Marks : 80

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- 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. Diagrams and Chemical equation should be given wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.
 6. 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) Enlist different types of forging machines used in industries. Explain any two in detail. **8**
- b) Explain the 'forging die-design' aspects in detail. **8**

OR

2. a) Which characteristics are required for the selection of die material? Explain with suitable example. Give a die block dimension for a single impression die. **8**
- b) Explain Precision forging and HERF forging in detail. **8**
3. a) With the help of neat sketch, explain the design of 'progressive die'. **8**
- b) Write short note on : **8**
- i) Piercing operation
 - ii) Springback effect in bending

OR

4. a) What are the different dies used in press working operations ? Explain any two in detail. **8**
- b) Explain different types of single point cutting tools. **8**
5. a) Draw and discuss the standard parts used for jig design. **8**
- b) With neat sketch, explain the power operated clamping device. **8**

OR

6. a) With the help of neat sketch, explain 'milling fixture'. **8**
- b) What are the essential requirements of clamps and clamping devices? List different types of clamps used in design of Jigs. **8**

7. a) With the help of neat sketch, explain Taylor's principle for design of limit gauges. **8**
- b) What do you mean 'Interchangeability'? Explain the advantages of 'jigs and fixtures'? **8**

OR

8. a) What are 'Comparators'? Explain the need and basic features of comparator. **8**
- b) With the help of neat sketch, explain 'Gear Tooth profile' terminology. **8**
9. a) Define TQM. Briefly explain the six basic concepts of TQM. **8**
- b) Write short note on following : **8**
- i) ISO 9000
- ii) BIS 14000 series

OR

10. a) Explain control charts for variables and attributes. **8**
- b) Define 'Quality'. What are the obstacles associated with the implementation of TQM? **8**
