

B.E. / B.Tech. Mechanical Engineering (Model Curriculum) Semester-V
HSMC3012 / PROTECH1 - Production Technology

P. Pages : 1

Time : Three Hours



GUG/S/25/14067

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. Attempt Q 1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.

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| 1. | a) | Explain the drawing operation. | 8 |
| | b) | Explain the effect of variables on meal-forming processes. | 8 |
| 2. | a) | Explain open die forging operation with a neat sketch and state its applications. | 8 |
| | b) | Classify Metal Forming operation. Explain the upsetting operation. | 8 |
| 3. | a) | What are the various sources of heat generation in the machining process? Explain. | 8 |
| | b) | Explain the temperature measurement techniques in machining. | 8 |
| 4. | a) | Classify cutting fluid. State functions and characteristics of cutting fluids. | 8 |
| | b) | How a chip is formed in metal cutting. Explain different types of chips. | 8 |
| 5. | a) | State and explain various methods used for cutting external and internal threads. | 8 |
| | b) | Explain different types of threads. | 8 |
| 6. | a) | Discuss briefly the specification of screw thread with a neat sketch. | 8 |
| | b) | State the different gear finishing operations. Explain any one in detail. | 8 |
| 7. | a) | Explain the phases of production, planning, and control. | 8 |
| | b) | What do you understand by sales forecasting? State the different methods involved in it? | 8 |
| 8. | a) | Explain the breakeven analysis with a neat sketch. | 8 |
| | b) | Define inventory control. Explain various methods in short. | 8 |
| 9. | a) | Write a short note on return on investment. | 8 |
| | b) | Discuss minimum cost analysis. | 8 |
| 10. | a) | Explain Economic batch quantity. | 8 |
| | b) | Discuss the mathematical analysis for economical equipment selection. | 8 |
