

Model Question Paper
Branch: Mechanical Engineering
Production Engineering [ME 010 803]

Time: 3 hrs

Maximum marks: 100

Part A

Answer all questions (3x5 marks)

1. Differentiate two dimensional and three dimensional cutting.
2. List the factors that affect machinability.
3. What are the applications of Diamond turn mechanism?
4. Effect of fibre length on composites?
5. What are the process parameters of EDM?

Part B

Answer all questions (5x5 marks)

6. What are the conditions which will favour the formation of continuous chips?
7. What are the functions and properties of cutting fluids? Explain.
8. Explain MRAFF process
9. What are the imperfections in ceramics?
10. What are the different processes in rapid prototyping

Part C

Each question carries 12 marks

11. With the help of figures explain the nomenclature of single point cutting tool.

Or

12. What is merchant circle? Explain its uses.
13. Explain the type of tool materials and discuss their applications

Or

14. Discuss Taylor's relationship for cutting speed - tool life. What are the factors affecting tool life and how can it be improved? What is the effect of cold working in machinability?
15. What are the design considerations in powder metallurgy? Also discuss the powder properties of powder used in powder metallurgy

Or

16. Explain the manufacturing of powder metallurgy components with the help of a flow chart.
17. Classify ceramic materials. Discuss the steps of processing of ceramics

Or

18. Discuss about AmXp, AmBmXp type crystal structures
19. With a neat sketch explain Electrochemical machining process? List the major process parameters and applications.

Or

20. Explain

- I. Liga process
- II. Fused deposition modelling
- III. Abrasive water jet machining