

(Maximum Marks: 100)

[N.B.

1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (a) or (b) in Part-B. Each question carries 14 marks.]

PART – A

1. List any three cutting tool materials.
2. Write about surface grinding.
3. Name the quick return mechanism used in planer.
4. List out the types of broaching machine.
5. What is meant by simple indexing?
6. List any three gear materials.
7. Define metal removal rate.
8. Compare ultrasonic machining with traditional abrasive machining.
9. What are the advantages of CNC machines?
10. Write about absolute and incremental positioning in CNC programming.

[Turn over...

PART - B

11. (a) Discuss about the types of chips.
(Or)
(b) Explain about radial type drilling machine with neat sketch.
12. (a) Explain about Whitworth quick return mechanism of slotter with neat sketch.
(Or)
(b) Discuss about the construction of standard shaper with neat sketch.
13. (a) Explain the operation of universal milling machine with neat sketch.
(Or)
(b) Explain about the construction of gear shaping process.
14. (a) Explain about abrasive jet machining with neat sketch. Also state its advantages and disadvantages.
(Or)
(b) Discuss about plasma arc machining with neat sketch. Also state its advantages and disadvantages.
15. (a) Explain the construction and working of machining centre.
(Or)
(b) Discuss about recirculation ball screw with neat sketch.
