385

October 2017

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B.

(2) Answer division (a) or division (b) of each question in PART-C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What is thermoset? Give examples.

2. What are the factors influencing the selection of plastics?

3. Mention the various operations performed in a shaper.

4. Mention the tool holding devices in milling.

5. What are the types of bonds used in grinding wheels?

6. What is CMM?

7. What is automatic tool changer?

8. Name the gear finishing processes.

PART – B

9. What are the advantages of foam injection moulding?

10. Compare planer and shaper.

11. What are the disadvantages of broaching machines?

12. Explain straddle milling.

13. Describe precision grinding.

14. What are the limitations of plasma arc machining?

15. Write any three comparison between CNC and NC system.

16. Explain tool-probing.

[Turn over...

PART – C

17. (a) (i) Explain the gas injection moulding process.
         (ii) What is liquid composite moulding? Briefly explain its parts.

         (Or)

     (b) With a neat sketch, explain the functioning of twin screw extruder.

18. (a) (i) Specify a planer.
         (ii) Explain any three broaching operations.

         (Or)

     (b) Sketch and explain the crank and slotted link quick return mechanism of a shaper.

19. (a) (i) Name the different types of milling machine.
         (ii) Explain the gear shaping process with a neat sketch.

         (Or)

     (b) Explain the gear hobbing process with the help of line sketch.

20. (a) (i) Explain dressing and truing of grinding wheel.
         (ii) List out the applications and limitations of electro chemical machining.

         (Or)

     (b) Explain the principle of working of a centreless grinder with a neat sketch.

21. (a) (i) What are the advantages and disadvantages of CNC system?
         (ii) List out the various tool inserts and their applications in CNC.

         (Or)

     (b) Explain how linear transducers are used to get feedback signals.

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