

**April 2018**

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 degradation?
2. What is quick return mechanism?
3. What are the types of broaches?
4. Mention any four milling cutters.
5. What is simple indexing?
6. What is grit and grade in grinding wheels?
7. What are the advantages of CNC machines?
8. What is calendaring?

**PART – B**

9. Mention the factors influencing the selection of plastics.
10. What are the characteristics of composite manufacturing?
11. Describe any one fixtures used in planer.
12. Describe any one operation in slotter.
13. Write briefly about the straddle milling.
14. Describe about the balancing of grinding wheels.
15. Write briefly about the chemical machining.
16. Describe about the tool magazines.

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PART – C

17. (a) Explain the gas injection moulding processes with simple sketch.

(Or)

- (b) Explain the filament winding process of composite manufacturing.

18. (a) Explain the crank and slotted link quick return mechanism in a shaping machine.

(Or)

- (b) Explain the continuous broaching operation.

19. (a) Explain the differential indexing.

(Or)

- (b) Explain gear hobbing process.

20. (a) Explain the working of a tool and cutter grinder.

(Or)

- (b) Explain the construction and working of plasma arc machining.

21. (a) Explain the construction and working of a machining centre.

(Or)

- (b) Explain the working principle of a ATC.

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