

**April 2019**

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 are elastomers?
2. Mention the work holding devices of a planer.
3. What is land in the broach tool?
4. Mention any four work holding devices in milling machine.
5. What are the gear materials?
6. What is dressing of abrasive wheels?
7. What are the feedback devices?
8. What are the constituents of composite?

PART – B

9. What are the design considerations for plastic components?
10. Describe about the structural foam.
11. Describe about any one work holding device in shaper.
12. Write briefly the types of broaches.
13. Explain briefly spring collet.
14. Describe about planetary grinders.
15. What are the requirements of slide ways?
16. Describe the mounting of grinding wheels.

PART – C

17. (a) Explain the twin screw extruders with simple sketch.  
(Or)  
(b) Explain the pultrusion process of composite manufacturing.
18. (a) Explain a quick return mechanism in the planning machine.  
(Or)  
(b) Explain the automatic feed mechanism of the slotting machine.
19. (a) Explain the nomenclature of the cylindrical milling cutter.  
(Or)  
(b) Explain the gear burnishing process.
20. (a) Explain the standard marking systems of grinding wheels.  
(Or)  
(b) Explain the construction and working of a ultrasonic machining.
21. (a) Explain the construction and working of a turning centre.  
(Or)  
(b) Explain the working principle of a rotary transducer.

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