

November 2022

*Time - Three hours*  
*(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. Write the functions of cutting fluid.
2. Write short notes on artificial grinding wheel.
3. What are the advantages of electric drive quick return mechanism in a planer?
4. Write about keyway broaching.
5. Write the principle of operation of milling machine.
6. Write the uses of cast-iron gear material.
7. Write the demerits of conventional machining processes.
8. Define tool wear ratio.
9. Write the working principle of a CNC system.
10. What are the features available in Machine control panel in CNC turning?

[Turn over.....

PART - B

11. (a) List out the cutting tool materials and explain any four of them.

(Or)

(b) Explain internal planetary grinders with neat sketch.

12. (a) Explain construction and working of double housing planer with neat sketch.

(Or)

(b) Explain hydraulic shaper with neat sketch.

13. (a) Explain vertical milling machine with neat sketch.

(Or)

(b) Explain the working principle of gear hobbing with neat sketch.

14. (a) Explain water jet machining with neat sketch and also write its advantages, disadvantages and applications.

(Or)

(b) Explain plasma arc machining with neat sketch and also write its advantages, disadvantages and applications.

15. (a) Explain the construction and working of coordinate measuring machine with neat sketch.

(Or)

(b) Explain the tool offsetting in CNC turning centre.

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