Question Paper Code : X10696

B.E./B.Tech. DEGREE EXAMINATIONS, NOV/DEC 2020 & APRIL/ MAY 2021

Fourth Semester

Mechanical Engineering

ME 8451 – MANUFACTURING TECHNOLOGY – II

(Common to Industrial Engineering/Industrial Engineering and Management/
Mechanical Engineering (Sandwich)/Mechanical and Automation Engineering)

(Regulations 2017)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions

PART – A   **(10×2=20 Marks)**

1. Give some factors which affect the life of a tool.

2. What are the different ways of applying cutting fluids ?

3. State whether you would set the height of the tool in turning operation at the centre of the work piece, a little above it, a little below it. Explain why ?

4. What is the role of lead screw and feed rod in a lathe ?

5. Explain the purpose of using a floating tool holder in drilling machine.

6. Differentiate between forming and generating of machining gears.

7. Make a note on centreless grinding.

8. Write short note on surface integrity.

9. What do you understand by preloading of bearing ?

10. What do you understand by quick change tooling ?

PART – B   **(5×13=65 Marks)**

11. a) Discuss the conditions with which different types of chips produced in metal cutting with neat sketches.

(OR)

    b) Discuss different types of cutting tool material and their properties.

12. a) When do jobs have to be turned in lathe : i) between centres, ii) in a four jaw chuck, iii) in a three jaw chuck, iv) on a face plate/angle plate.

(OR)

b) Explain the salient features of an automatic screw machines.

13. a) Explain how stroke length and position of ram has been set in a Crank and slotted link Shaper.

(OR)

b) How do you classify the different types of milling cutters ? Explain any six.

14. a) How do you classify broaching machines ? Discuss any one type with neat sketch.

(OR)

b) Explain briefly with neat sketches various types of surface grinding machines.

15. a) What is feed Drive in CNC ? Elucidate requirements of CNC feed drive.

(OR)

b) Enumerate about fundamental elements for developing manual part programme.

PART – C **(1×15=15 Marks)**

16. a) Discuss with examples essential factors will you take into consideration while choosing a grinding wheel.

(OR)

b) Discuss on process parameters and cutting tool requirement for ultra-precision machining of Silicon Wafer.

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