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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.

X10696



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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