Reg. No. :

Question Paper Code: 34703

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

Fourth Semester

Mechanical Engineering

01UME403 - MANUFACTURING TECHNOLOGY II

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. Why cutting forces are measured? What are the different ways to measure cutting forces?

2. What are the purposes of cutting fluid? What are their types?

3. Why brazed tipped tools are produced? What are the techniques of brazing the tips with tool shank?

4. State the various feed mechanism used for obtaining automatic feed.

5. What is meant by up milling and down milling?

6. What are the differences between drilling and reaming?

7. Mention four important factors that influence the selection of grinding wheel.

8. Give some limitations of gear hobbing process.

9. State the limitation of CNC machine tools.

10. Give some motion statements in APT.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain with schematic diagram the principle of thread cutting on a lathe. (16)

Or

(b) Derive an expression for the determination of shear angle in Orthogonal metal cutting. (16)

12. (a) Explain the working principle of apron mechanism with neat sketch. (16)

Or

(b) Explain the features and classification of multi spindle automatics. (16)

13. (a) Explain with a neat sketch the Ratchet and Pawl mechanism of a shaper? (16)

Or

(b) With a neat sketch explain the column and knee type milling machine and name its main parts. (16)

14. (a) Explain the working principle and various methods of centre less grinding with a neat sketch. (16)

Or

(b) Briefly discuss about the different types of abrasives used in a grinding wheel. (16)

15. (a) Explain the main difference between point to point and continuous path of numerically controlled machine tools. (16)

Or

(b) (i) Explain the hydrostatic slideways used in CNC machines. (8)

(ii) Explain the various steps to be followed while developing CNC part programs. (8)

―――――――――

34703