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**Question Paper Code: 34703**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

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. List the various metal removal processes.
2. Mention the cutting fluids.
3. What is the main difference between live center and dead center?
4. State the various feed mechanism used for obtaining automatic feed.
5. What is the function of clapper block in a shaper?
6. State the differences between a vertical shaper and slotter.
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 the variables and factors affecting Machinability. (16)

Or

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

12. (a) List the step by step procedure for preparing tool layout of turret and capstan lathe in detail. (16)

Or

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

13. (a) Sketch and explain the hydraulic drive of a horizontal 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 Honing and Super finishing with neat sketch? (16)

Or

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

15. (a) (i) Define CNC and DNC? With a help of a diagram explain the working of NC machine tool. (8)

(ii) Write short notes on APT language (8)

Or

(b) Briefly explain with illustrations about the manual part programming? (16)