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**Question Paper Code: 34703**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

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. State the assumption made in Merchant Circle.
2. Mention the cutting fluids.
3. Distinguish between Capstan lathe from Turret lathe.
4. State the various feed mechanism used for obtaining automatic feed.
5. Name different types of drilling machines.
6. State the differences between a vertical shaper and slotter.
7. Give some limitations of gear hobbing process.
8. Define lapping
9. What is meant by APT language?
10. List the commonly used coordinate systems of CNC machine tools.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Discuss the various types of chips produced during metal machining process. (8)  
(ii) Explain the basic actions of cutting fluids. (8)

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) (i) State the differences between capstan and turret lathes. (8)  
(ii) Write short notes on automatic screw type machines. (8)
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 & Super finishing with neat sketch. (16)

Or

- (b) Briefly discuss about the different types of abrasives used in a grinding wheel. (16)
15. (a) Explain the different components of NC Machine Tool. (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)
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