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Question Paper Code: 31743

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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. List any four work holding devices.
5. What is the difference between up milling and down milling?
6. State the differences between a vertical shaper and slotter.
7. What is gear hobbing?
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) Explain the classification of various cutting tool materials.

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