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Question Paper Code: 31473

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

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. List the various tool holding devices used in capstan/turret lathes.
5. Name different types of drilling machines.
6. How a horizontal boring machine is specified?
7. What are the different methods of indexing?
8. Why precision grinding is important? Name the types of precision grinders.
9. What are the important components of a NC system?
10. Name the common NC machining programming languages used in practice.

PART - B (5 x 16 = 80 Marks)

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

Or

(b) With sketch explain the turret indexing mechanism. (16)

12. (a) List various types of chip breakers. Why they are used? (16)

Or

(b) What do you understand by cutting tool nomenclature? Sketch and label tool angles / tool nomenclatures. (16)

13. (a) Name different broaching machines. Sketch the block diagram of vertical broaching machines and describe it briefly. (16)

Or

(b) What is sawing? List different types of sawing machines and explain the reciprocating saws. (16)

14. (a) What is gear hobbing? Explain it with a neat sketch. (16)

Or

(b) What is meant by an 'universal' grinder? How does it differ from a plain grinder? (16)

15. (a) Explain the working principle of a digitizer. (16)

Or

(b) Differentiate between CNC and DNC systems with a neat sketch. (16)
