

MODEL QUESTION PAPER

13.405 Production process/Manufacturing Technology (U)

(2013 Scheme)

Time: 3 Hours

Max. Marks: 100

PART – A

Answer all questions. (10×2=20 Marks)

1. How is a lathe specified?
2. List out the differences between capstan and turret lathes.
3. Describe Gang drilling.
4. What is the difference between a vertical shaper and a slotter?
5. Explain End milling
6. What is wheel dressing?
7. What are the limitations of using center-less grinding?
8. What do you mean by progressive broaching?
9. Distinguish between lapping and honin
10. What is absolute and incremental programming?

PART – B

Answer one question from each Module

(20×4=80 Marks)

Module- I

11. a) What are the different taper turning methods used in a lathe? Explain with sketch taper turning using a taper turning attachment.
b) Describe Apron mechanism of a lathe

or

12. a) Describe mandrels with suitable sketches
b) Sketch and explain the turret indexing mechanism.

Module- II

13. a) How are drilling machines classified?
b) Explain the types of drills with suitable sketches.

OR

14. a) Discuss the common work holding devices used on shapers, slotters and planers.
b) Explain the working of Automatic feed mechanism used in shaper with suitable sketch.

Module- III

15. a) Explain the following milling operations with sketches: (i) Straddle Milling, (ii) Gang Milling, (iii) Form Milling, (iv) End Milling and (v) Up Milling.
b) What is indexing in milling operation? Explain simple and compound indexing.

or

16. a) Explain the factors considered in selecting a grinding wheel
b) Explain through feed, In feed and End feed methods of center less grinding. Where are they used?

Module- IV

17. a) With a neat sketch explain the nomenclature of a broaching tool.
b) Explain lapping with sketches.

or

18. a) Explain the basic components of an NC system.
b) List down the various features of CNC machines.

or

b) Explain external center-less grinding with suitable sketches

12. Write short notes on the following : [16]

(i) Buffing

(ii) Superfinishing

(iii) Honing.