

Con. 3704-10.

(REVISED COURSE)

AN-3415

(3 Hours)

[Total Marks : 100

- N.B.** (1) Attempt any **five** questions including Q. No. 1 which is **compulsory**.
 (2) Draw **neat** sketches wherever it is **necessary**.
 (3) Answer in **legible** handwriting.

1. Answer any four question :- (20)
 - (a) Why truing and dressing are necessary in grinding wheels.
 - (b) Explain thread whirling process.
 - (c) Describe EIA and ASC II tape coding system.
 - (d) List out the different unconventional machining processes and explain the application of these processes in brief.
 - (e) Explain chutes, magazines and hopper for feeding in automatic machines.

2. (a) Explain the working principle of NC and CNC with the help of block diagram. (10)
 (b) Explain the salient features of CNC machining centre with neat sketches. (10)

3. (a) What are the different types of grinding wheels used for external surface grinding? Explain the I-S marking system for grinding wheel. (10)
 (b) What are the different screw thread cutting processes? Explain any two important screw thread cutting processes. (10)

4. (a) What are the factor to be considered while selecting grinding wheels? Explain briefly. (10)
 (b) Explain grit, grain and structure of grinding wheel. (10)

5. (a) Explain with diagram Electrical Discharge Machining (EDM). (10)
 (b) Give classification of single spindle and multi spindle automats. With suitable examples, explain how different turning operations are arranged on Swiss type automat. (10)

6. (a) What are the differences between form cutting and generating processes used for gear cutting? (5)
 (b) What is gear hobbing? With neat diagram explain principles of gear hobbing. (10)
 (c) Write short note on gear burnishing. (5)

7. Write short notes on any four :- (20)
 - (a) Closed loop control system in CNC machine
 - (b) Gear teeth lapping
 - (c) Special purpose machine
 - (d) Single spindle Automats
 - (e) Plasma arc Machining (PAM)