S.E(Sem-IV) / Prod / Manufacturing Engg-II / Dec 09

Con. 5680-09. (REVISED COURSE) **SP-7782**

(3 Hours) **[Total Marks : 100**

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

1. (a) Why truing and dressing are necessary in grinding wheels ? **5**
   (b) Describe ETA and ASC II Tape coding system. **5**
   (c) Explain thread whirling process. **5**
   (d) Explain Chutes, Magazines and hopper for feeding in automatic machines. **5**

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) For centerless grinding process explain :— **10**
      (i) Working of centreless grinder
      (ii) Advantages over conventional grinder
      (iii) Through feed, in feed end feed.
   (b) Differentiate between :—
      (i) Centerless grinder and Surface grinder **5**
      (ii) NC. and CNC. Machining. **5**

4. (a) What are the factors to be considered while selecting grinding wheels ? Explain briefly. **10**
   (b) I. S. Marking system of grinding wheel. **5**
   (c) Explain grit, grain and structure of grinding wheel. **5**

5. (a) Explain in brief any three types of thread Manufacturing process. **10**
   (b) How grinding machines are classified ? **5**
   (c) Write short note on surface grinder. **5**

6. (a) What are the difference 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** of the following :—
   (a) Special Purpose Machines **5**
   (b) Mounting of Grinding Wheels **5**
   (c) Balancing of Grinding Wheels **5**
   (d) Single Spindle Automates **5**
   (e) Plasma Arc Machining (PAM). **5**
