

[3862]-133

S.E. (Production) (First Semester) EXAMINATION, 2010

MACHINE TOOL OPERATIONS

(2008 COURSE)

Time : Three Hours

Maximum Marks : 100

N.B. :— (i) Solve *three* questions from each Section.

(ii) Use separate answer-sheets for each Section.

(iii) Assume suitable data, if required.

SECTION I

1. (a) Explain working of all geared head stock with suitable sketch. [8]
- (b) Discuss various types of mandrels with suitable sketches. [6]
- (c) Find full taper angle, if $D = 100$ mm, $d = 85$ mm and length = 120 mm. [4]

Or

2. (a) Discuss various taper turning methods with suitable sketches. [8]

P.T.O.

- (b) Explain tumbler gear feed reversing mechanism with suitable sketches. [6]
- (c) The pitch of leadscrew is 8 mm and the pitch of the thread to be cut is 1.5 mm. Find the change gears. [4]
- 3.** (a) Discuss various types of drills with suitable sketches. [8]
- (b) Explain working of floating holder with suitable sketch. [8]

Or

- 4.** (a) Discuss various types of reamers with suitable sketches. [8]
- (b) Explain construction and working of Jig boring machine with a suitable sketch. [8]
- 5.** (a) List various types of milling machine and explain column and knee type milling machine with suitable sketch. [8]
- (b) Explain construction and working of universal dividing head. [8]

Or

- 6.** (a) Explain Up milling and Down milling with suitable sketches. [8]
- (b) Discuss various types of milling cutters with suitable sketches. [8]

SECTION II

7. (a) Discuss various types of Broaching machines with suitable sketches. [10]
- (b) Explain hydraulic mechanism used in shaper with suitable sketch. [8]

Or

8. (a) Explain auto feed mechanism used in shaper with suitable sketch. [10]
- (b) Explain working of Crank and Slotted Link mechanism with suitable sketch. [8]

9. (a) Discuss factors to be considered for selection of grinding wheel. [8]
- (b) Explain external centerless grinding with suitable sketches. [8]

Or

10. (a) Explain mounting of grinding wheel with suitable sketch. [8]
- (b) Explain marking system of grinding wheel. [8]
11. (a) Explain Honing with suitable sketch. [8]
- (b) Explain electroplating with suitable sketch. [8]

Or

12. Write short notes on the following :

[16]

- (i) Polishing;
- (ii) Metal spraying
- (iii) Hot dipping.

