

C.U.SHAH UNIVERSITY**Winter Examination-2018****Subject Name: Manufacturing Process - I****Subject Code: 4TE04MPR1****Branch: B.Tech (Mechanical, Automobile)****Semester: 4****Date: 25/10/2018****Time : 10:30 To 01:30****Marks: 70**

Instructions:

- (1) Instructions written on main answer book are strictly to be obeyed.
 - (2) Draw neat diagrams and figures (if necessary) at right places.
 - (3) Assume suitable data if needed.
 - (4) Question number 1 is compulsory.
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Q-1**Attempt the following questions:****(14)**

- a) Which type of machine tool is used for mass production of essentially small parts?
 - a) general purpose
 - b) special purpose
 - c) automatic screw cutting
 - d) none of the mentioned
- b) Which of the following does all the work of lathe machine?
 - a) turning centre of CNC type
 - b) machining centre of CNC type
 - c) turning centre of CNC type and machining centre of CNC type both
 - d) none of the mentioned
- c) Machine tools can be classified as _____
 - a) geometric shape of the work piece
 - b) number of the work piece
 - c) function of the machine
 - d) all of the mentioned
- d) The knee is _____ adjustable on the column in horizontal column and knee type milling machine.
 - a) horizontally
 - b) vertically
 - c) can't say anything
 - d) none of the mentioned
- e) In this horizontal column and knee type machine, cutter rotates about _____ axis.
 - a) horizontal
 - b) vertical
 - c) 45 degree inclined to both plans
 - d) none of the mentioned
- f) Guideways are machined on the _____ of the knee.
 - a) top
 - b) middle
 - c) bottom
 - d) none of mentioned
- g) Which of the following holds the drill spindle?
 - a) radial arm
 - b) tubular column



- c) drilling head
 - d) none of the mentioned
- h)** Which of the following is true for radial drill machine?
- a) drilling spindle is subjected to rotation
 - b) the entire drilling head is mounted on radial arm
 - c) the gap between the drill and job is known as stroke length
 - d) all of the mentioned
- i)** The body of the shaper comprises of _____
- a) pillar
 - b) column
 - c) frame
 - d) all of the mentioned
- j)** Which of the following provides foundation for the whole machine?
- a) tailstock
 - b) bed
 - c) headstock
 - d) carriage
- k)** Which of the following is not the method of indexing?
- a) compound indexing
 - b) differential indexing
 - c) angular indexing
 - d) none of the mentioned
- l)** The cutting edges are spaced _____ on the circumference of the cutter.
- a) equally
 - b) unequally
 - c) can't say anything
 - d) none of the mentioned
- m)** Size of hand drill is relatively _____
- a) small
 - b) medium
 - c) large
 - d) very large
- n)** Which of the following operation is carried out to make the hole dimensionally more accurate?
- a) reaming
 - b) tapping
 - c) boring
 - d) none of mentioned

Attempt any four questions from Q-2 to Q-8.

- Q-2** (a) Define the term "Cutting speed" in detail. 7
 A steel shaft of 25 mm diameter is turned at a cutting speed of 50m/min. Find the r.p.m. of the shaft.
- (b) Draw and discuss the types of clutches used in machine tool. 7
- Q-3** (a) List the basic parts of geared head lathe. Discuss their functions and construction in detail. 7



- (b) Write a short note on lathe Chucks. 7
- Q-4** (a) Discuss Eccentric Turning and Chamfering operation with neat sketch for lathe. 7
- (b) Write a short note on Bar feeding mechanism. 7
- Q-5** (a) Classify drilling machine in detail. Write a note on sensitive drilling machine. 7
(b) Explain (1) machining angular surface (2) cutting slots and keyways using shaper. 7
- Q-6** (a) Compare and differentiate Shaper & Planer. 7
(b) Discuss with neat sketch slotter operations. 7
- Q-7** (a) Discuss in detail the abrasives used in grinding operations. 7
(b) Write a short note on special grinding machines. 7
- Q-8** (a) Write a short note on work holding devices used in milling machine. 7
(b) Discuss the Angular and Gang milling operations with neat sketches. 7

