

# C.U.SHAH UNIVERSITY

## Winter Examination-2019

**Subject Name : Production Technology**

**Subject Code : 4TE06PTE1**

**Branch: B.Tech (Mechanical)**

**Semester: 6**

**Date: 18/09/2019**

**Time: 10:30 To 01:30**

**Marks: 70**

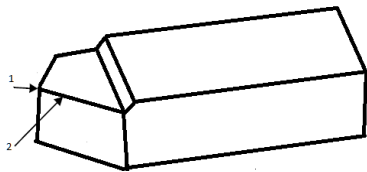
**Instructions:**

- (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.

**Q-1**

**Attempt the following questions:**

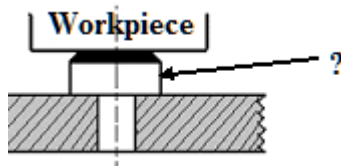
- a) Define the term "Metal cutting". (2)
- b) (2)



Give the names of 1 and 2 shown in above figure.

- c) Define the piercing operation. (2)

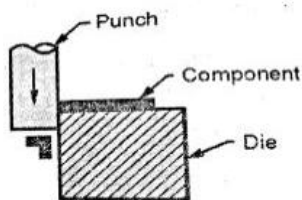
- d) (1)



What is the component known as in above figure?

- e) Gears can be produced using powder metallurgy process. State: True or False (1)

- f) (1)



The figure represents which sheet metal operation?

- g) Give the types of Turret laths. (1)
- h) What do you mean by combined cut in turret lathe? (2)
- i) Draw only Diamond pin locator. (2)



**Attempt any 4 questions from Q-2 to Q-8**

- Q-2** (a) For a metal machining, the following information is available **7**  
Tool change time = 8 min  
Tool regrind time = 5 min  
Machine running cost = Rs. 5 per hour  
Tool depreciation per re-grind = 30 p  
 $n = 0.25$   
 $c = 150$   
Calculate the optimum cutting speed.
- (b) Write a note on types of chips. **7**
- Q-3** (a) Discuss with neat sketches the effect of shear on cutting force. **6**  
(b) Define the followings **8**  
(i) Slitting (ii) Nibbling (iii) Bending (iv) Lancing
- Q-4** (a) Give the advantages of using Automatic Clamping devices. **7**  
(b) Discuss the construction and working of Renewable Bushings. **7**
- Q-5** (a) Explain step wise procedure to find the Center of Pressure in press working. **7**  
(b) Discuss in detail the milling machine vice. **7**
- Q-6** (a) Discuss the commonly used clamping devices in clamping the workpiece. **7**  
(b) Write the advantages of metal stamping. **7**
- Q-7** (a) Explain the principle working of Laser beam machining method. Also mentioned its advantages and limitations. **7**  
(b) Discuss the significance of Shut height of die. **7**
- Q-8** (a) Discuss with neat sketches the Gear finishing operations. **14**

