

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III(New) EXAMINATION – SUMMER 2016

Subject Code:2132501**Date:31/05/2016****Subject Name:Machining Processes****Time:10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1	14
Short Questions	
1 The size of the Lathe is expressed by a) Gross weight of the lathe b) Diameter of the chuck c) Max. speed of the lathe d) Swing of lathe	
2 Lathe bed is made of a) Mild steel b) Cast steel c) Close grain of cast iron d) Pig iron	
3 The power is transmitted by lead screw to the carriage through a) Gear system b) Half nut c) chain drive d) Pulley drive	
4 A Fly cutter is used on a) Lathe b) Shaper c) drill machine d) Milling machine	
5 Shanks of taper drills are provided standard taper is known as a) Brown and sharpe taper b) Morse taper c) Sellers taper d) Chapman taper	
6 A knee is part of a) lathe b) jig boring c) Broaching d) Milling machine	
7 If drill does not cut, the probable cause would be a) Drill blunt b) Speed low c) Absence of coolant d) None of the above	

- 8 In centreless grinding, workpiece is clamp in
 a) Bed
 b) Chuck
 c) Not clamp
 d) Vice
- 9 Straight fluted drills are used for
 a) Brass and soft materials
 b) Hard materials
 c) Ferrous material
 d) Non of the above
- 10 A Steady rest is used
 a) During threading operation
 b) During finishing operation
 c) For supporting bed
 d) while cutting heavy and long jobs
- 11 Which of the following is an accessory for lathe machine
 a) Lead screw
 b) Coolant pump
 c) Tool post
 d) Cone pully
- 12 Which of the following operation cannot be carried out on a lathe machine
 a) Turning
 b) Threading
 c) Blanking
 d) Facing
- 13 The shape of the chips during broaching operation is
 a) Continuous
 b) short helical
 c) Small fragments
 d) Closed spirals
- 14 Which of the following is a single point cutting tool?
 a) Parting tool
 b) Milling cutters
 c) Grinding wheel
 d) File

- Q.2** (a) Explain Basic concepts of Machining and Machine Tools. **03**
 (b) Classify the Machine tools. **04**
 (c) Describe various types of chucks used on lathe machine **07**

OR

- (c) Explain parts of engine lathe & alignment tests for lathe in brief with neat sketch. **07**

- Q.3** (a) Enumerate different types of drilling machine. **03**
 (b) Explain gang drilling machine and multi spindle drilling machine with neat sketch. **04**
 (c) Enumerate various operations carried out on drilling machine. **07**
 Explain any four with neat sketch.

OR

- Q.3** (a) Explain different types of milling cutters. **03**
 (b) Explain different indexing methods used in milling machine. **04**
 (c) Enumerate various milling operations. Explain any three of them with neat sketch. **07**

- Q.4** (a) Differentiate between a shaper and a planer. **03**
 (b) Explain the slotted disc mechanism in slotting machine. **04**
 (c) Explain working of hydraulic shaper with neat sketch. **07**
- OR**
- Q.4** (a) With figure explain the twist drill nomenclature. **03**
 (b) Classify boring machine. Explain horizontal boring machine & jig boring machine with neat sketch. **04**
 (c) What is quick return motion mechanism? Explain hydraulic type quick return motion mechanism used in shaper machine with neat sketch along with its advantages and disadvantages. **07**
- Q.5** (a) Write advantages, limitations and applications for broaching. **03**
 (b) Explain the nomenclature of pull type broach. **04**
 (c) Write a note about grinding wheel parameters influencing the process in brief. **07**
- OR**
- Q.5** (a) Explain grinding wheel designation system. **03**
 (b) Explain Trueing and Dressing of grinding wheel. **04**
 (c) Explain centreless grinding process with neat sketch & standard work feeding methods for centreless grinding with neat sketch. **07**
