

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	Short Questions	14
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**

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| 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 |
