

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III (New) EXAMINATION – WINTER 2015

Subject Code: 2132501**Date: 21/12/2015****Subject Name: MACHINING PROCESSES****Time: 2:30pm to 5:00pm****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	Which of the following taper turning methods can be used only for turning external taper? (a) Form tool (b) Tailstock offset (c) Taper attachment (d) all of the above	
2	The headstock of a lathe is situated at the (a) Left-hand end of the lathe bed (b) Right-hand end of the lathe bed (c) Middle of the lathe bed (d) Bottom of the lathe bed	
3	Lathe bed is made of (a) Mild steel (b) High alloy steel (c) High carbon steel (d) Cast iron	
4	Which of the lathe parts mentioned below is not provided with power feed? (a) Carriage (b) Cross slide (c) Lead screw (d) Compound rest	
5	Tail stock centre which do not revolve with the workpiece are known as (a) Non revolving centre (b) live centre (c) dead centre (d) independent centre.	
6	Large jobs on shaper are held with the help of (a) Clamps, bolts, squares (b) Clamp (c) Vice (d) Magnetic vice	
7	Flat thin work is held on planer by (a) C-Clamp (b) toe dogs & stops (c) angle plate (d) Vice	
8	The feeding of the job in a shaper is done by (a) V-Block (b) Ram movement (c) Table movement (d) Tool Movement	
9	Size of the shaper is Specified by (a) Size of the table (b) H.P. of the motor (c) Length of the stroke (d) Maximum size of tool	

- 10** Which of the following is non chip removal process?
 (a) Milling (b) Grinding
 (c) Hobbing (d) Spinning on lathe
- 11** For drilling operation, the cylindrical job should always be clamped on a
 (a) V-Block (b) socket
 (c) Collet (d) Shanks
- 12** The helical grooves which extend to the full length of the drill body are called
 (a) Lips (b) Cutting edge
 (c) Flutes (d) Shanks
- 13** The cutting tool in a milling machine is mounted on
 (a) Tool holder (b) Arbor
 (c) Spindle (d) Table
- 14** In Tool signature, nose radius is indicated
 (a) in the beginning (b) in the middle
 (c) in the end (d) none of above
- Q.2** (a) Explain the basic concept of machining. **03**
 (b) Classify the machine tool. **04**
 (c) Explain the functions of the basic parts of the lathe with neat sketches. **07**
- OR**
- (c) Discuss various lathe operations with neat sketches. **07**
- Q.3** (a) Explain in brief different types of Lathe-centres used on tailstock side of a lathe machine. **03**
 (b) Discuss the alignment test of the lathe machine. **04**
 (c) Differentiate between Capstan and Turret lathe. **07**
- OR**
- Q.3** (a) Classify boring machine. **03**
 (b) Sketch the twist drill with its nomenclature. **04**
 (c) Enumerate various operations carried out on drilling machine. Explain any four with neat sketch. **07**
- Q.4** (a) Explain with neat sketch up milling and down milling process. **03**
 (b) Explain the different milling machine attachments. **04**
 (c) Explain different indexing methods used in milling machine. **07**
- OR**
- Q.4** (a) State comparison of shaper and planer. **03**
 (b) Explain the nomenclature of pull type broach. **04**
 (c) Explain 'Hydraulic shaper mechanism' **07**
- Q.5** (a) Define broaching. Write advantages, limitation & applications. **03**
 (b) Explain jig boring machine. **04**
 (c) Can slotter be called as vertical shaper? Justify your answer. With neat sketch explain operations performed on slotter. **07**
- OR**
- Q.5** (a) How grinding wheel is specified? **03**
 (b) Explain standard marking system of grinding wheels. **04**
 (c) Explain centreless grinding process with neat sketch & standard work feeding methods for centreless grinding with neat sketch. **07**
