Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – SUMMER • 2014

Subject Code: 162505 **Date: 30-05-2014**

Subject Name: Estimating, Costing and Engineering Economics

Time: 10:30 am - 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.**

Q.1 **(a)** Define Estimator. Write functions of an estimator. Discuss step by step estimating procedure. **07**

(b) What is costing? Discuss objective of costing. Give advantages of efficient costing. **07**

Q.2 **(a)** Discuss various methods used for valuation of material issued from stores. **07**

(b) Discuss various methods of wage payment. **07**

OR

(b) Write short note on: (a) Journal and Ledger and (b) Measurement book. **07**

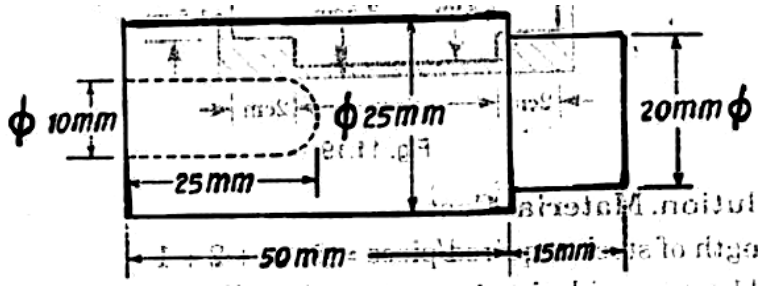
Q.3 **(a)** Define overheads. Give classification of overheads. Discuss fixed and variable overheads. **07**

(b) Enlist important methods of on-cost allocation. Discuss any three of them. **07**

OR

Q.3 **(a)** Define Mensuration. Give its importance in engineering. Write formula for calculating volume and surface areas of all different types of solids. **07**

(b) Find time taken to prepare a job according to dimensions shown in fig. from a rod of 30 mm diameter, including time for facing and parting off from long rod. Assume: (i) cutting speed = 20 m/min for all different operations, (ii) feed for facing and parting off = 0.15mm/rev. (iii) feed for turning = 0.35 mm/rev. (iv) feed for drilling = 0.06mm/rev. and (v) depth of cut not to exceed for all operations = 1.5mm. **07**



Q.4 **(a)** Discuss type's sheet metal joints. A container open in one side of size 0.5×0.5×1 metre height is to be made from plate of 6mm thickness. Take density of plate metal as 8gm/c.c. and joints are to be welded. Estimate the cost of container from following data: (i) cost of plate = Rs. 4/kg, (ii) sheet metal scrap = 5% of material, (iii) cost of labour = 10 % of material cost, (iv) cost of welding material = Rs. 5/metre weld. **07**

(b) 1000 M. S. pins of 40mm diameter and 100mm length are to be drop forged from a bar stock of 50mm diameter. Calculate the material cost, if bar is available at Rs 50 per metre length. Assuming all the possible losses. **07**

OR

Q.4	**(a)**	Discuss estimation of welding cost. List the cost included for estimating the arc welding. Write factors affecting welding cost.	**07**
	(b)	Discuss the estimation of pattern cost and estimation in foundry shop.	**07**
Q.5	**(a)**	Explain cost accounting. Give main objective of cost accounting. Write advantages of cost accounting.	**07**
	(b)	Define cost reduction. List steps taken for effective cost reduction. Discuss major cost saving areas.	**07**

OR

Q.5	**(a)**	What is capital? Give functions of capital. Discuss various forms of capital.	**07**
	(b)	Define money. Give functions of money. Discuss various kinds of money.	**07**

****