Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION - WINTER 2015

Subject Code: 172603 Date: 09/12/2015

Subject Name: Rubber Plant and Process Engineering

Time: 10:30am to 1:00pm 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) Name the chemical responsible for each of the following health 07 hazards:
 - (i) Bladder cancer
 - (ii) Enlargement of liver.
 - (iii) Respiratory sensitization
 - (iv) Mutagenic and teratogenic effects
 - (v) Skin cancer
 - (vi) Systematic poison on central nervous system
 - (vii) Kidney damage
 - (b) Discuss the health hazard from various types of non black fillers. 07
- Q.2 (a) Describe the factors affecting cost of production. Discuss the point to be kept in mind while estimating the working result (profit).
 - **(b)** Calculate the amount of working capital loan which can be granted by the bank in general, if the company has following inventory.

S.No.	Particulars	Cost Rs.
1.	Raw materiais	60,00,000
2.	In-process	75,00,000
3.	Finished goods	30,00,000
4.	Debtors	45,00,000

OR

(b) Calculate annual raw material cost for natural rubber trolley tyre **07** from following data:

Weight of one trolley tyre:- 1200 g

Total production per year:- 1.5 units.

No. of shifts:- One

Also suggest mixing equipment. Assume suitable formulation, cost and other data.

Q.3	(a)	Explain preventive maintenance and its advantages.	
	(b)	Discuss air pollution in rubber industry	06
		OR	
Q.3	(a)	Write a note on Personal protective equipments.	07
	(b)	Discuss about fire triangle. Write any one incident.	07
Q.4	(a)	Define the terms peak power demand, power factor. Explain the ways for conserving energy in rubber industry.	07
	(b)		07
	(D)	OR	07
Q.4	(a)	Explain time study procedure.	07
~··	(b)	Discuss on Engineering Ethics.	07
	(~)		0.
Q.5	(a)	(i) Mention the features of Rural sites.	04
	` ,	(ii) Write a note on primary factors for selecting plant location.	04
	(b)	Why plant layout is done? Explain any one in detail.	06
		OR	
Q.5	(a)	List the advantages of Government Industrial Estates.	07
-	(b)	Draw the plant layout for Latex Balloon.	07
