

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2151506

Date:04/05/2018

Subject Name:Design of Facilities Layout

Time:02:30 PM to 05:00 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	(a) What is meant by facilities layout?	03
	(b) Explain the objectives of facilities design.	04
	(c) Discuss the factors considered for selection of location.	07
Q.2	(a) Give advantages for the selection of site in a rural area.	03
	(b) Explain the circumstances when revising and improving the layout become necessary.	04
	(c) In case you want to locate a ‘Cement manufacturing plant’, what factors would you consider for taking a location decision? How would you go about conducting a location study?	07
OR		
	(c) Which type of plant layout is best suitable for manufacturing of each of the following products: (i) LED Lamp (ii) Passenger Ship (iii) Paint	07
Q.3	(a) What are the characteristics of product type layout?	03
	(b) Discuss the dynamic nature of the layout of an industrial plant.	04
	(c) Compare the primary layout objectives for ‘Shopping Mall’ and ‘Cotton seed oil mill’. Justify your answer with relevant advantages and disadvantages.	07
OR		
Q.3	(a) What are the characteristics of process type layout?	03
	(b) What are the symptoms of a bad layout?	04
	(c) Discuss information to be collected to prepare a plant layout.	07
Q.4	(a) What are the characteristics of fixed position type layout?	03
	(b) Enumerate the safety considerations which must be viewed in a layout.	04
	(c) Discuss pitfalls in selection of site and also the remedies.	07
OR		
Q.4	(a) What do you mean by work-station layout?	03
	(b) How would you design the work-station layout?	04
	(c) How facilities layout is affected by equipment repair or replacement decision? Discuss the important considerations involved in it.	07

- Q.5** (a) Write application of 'Travel chart' in plant layout. **03**
(b) Explain how facilities layout is interrelated to materials handling system. **04**
(c) Discuss how 'Group technology - Production flow analysis' is useful in design of facilities layout. **07**

OR

- Q.5** (a) Write application of 'String diagram' in plant layout. **03**
(b) Write note on production flow systems. **04**
(c) Discuss quantitative and computer based approaches to facilities layout. **07**
