Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(NEW) • EXAMINATION - WINTER 2016

Subject Code:2173611 Date:25/11/2016 **Subject Name: Project & Plant Engineering** Time: 10.30 AM to 1.00 PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. (a) Discuss water treatment in brief. 07 0.1 Write notes 1) Heating oil 2) boiler feed water. 07 0.2 Discuss briefly about factors affecting in plant location. 07 (a) Distinguish between special and standard equipment. **(b)** 07 OR**(b)** Discuss various stages of project implementation. 07 (a) Discuss in brief about cost indexes. 0.3 07 List out factors affecting investment and production cost. **(b)** 07 OR Write about alternative investments in industry. 07 0.3 (a) State methods of estimating capital investment and discuss any one in detail. What 07 criteria do you look for the selection of a method? What are various methods to determine the depreciation cost? Explain any two 07 **Q.4** (a) briefly? **(b)** The original value of piece of equipment is Rs, 5.00 lacs. At the end of useful life of **07** 10 years its salvage value is estimated to be Rs. 50,000. Determine the asset value of the equipment at the end of 6 years using: Declining-balance method i) ii) Straight-line method. OR What is break-even point? Explain importance of break-even point with the help of 0.4 07 neat diagram. From the following information calculate: **(b)** 07 1) Break-even sales in terms of value. 2) The sales required (I units) to earn a profit of Rs.60, 000. 3) If the selling price per unit is reduced by 10%, then the sales at new break-even point. Selling price per unit : 20 Rs. Material and labor cost-per unit : 11 Rs. Variable overhead-per unit : 3 Rs. Factory overhead (fixed) annual : 5, 40,000 Rs. Selling overhead (fixed) annual : 2, 52,000 Rs. With example explain practical factors in alternative investment and replacement Q.5 07 (a) studies. Write a short note on PERT and CPM techniques. **07 (b)** OR **Q.5** (a) List various method of profitability analysis. Explain any one method in detail. 07 **(b)** Discuss briefly about specification sheet for a distillation column.

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