UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

Program: B.Tech PIE	**Semester– VII**
Subject (Course): TQM and Value Engineering	**Max. Marks: 100**
Course Code: IPEG 431	**Duration: 3 Hrs**
No. of page/s: 2	

SECTION A [20 Marks]

Note: Attempt all questions. All question carry equal marks. Be brief and specific.

Q1: Differentiate between Value Engineering and Value Analysis.

Q2: List down the steps of continuous improvement system.

Q3: Define the terms MTTR, MTTF and MTBF.

Q4: Define the term Value along with its different types.

SECTION B [40 Marks]

Note: Attempt all questions. All question carry equal marks. Be brief and specific.

Q5: Explain in detail the house keeping concept for tool room.

Or

Explain in detail the house keeping concept for production shop.

Q6: Draw the structure of ISO 14000 with its various clauses and sub-clauses.

Q7: Discuss the methodology/job plan of Value Engineering.

Q8: Discuss the potential benefits of registration with ISO 9000 and problems with its implementation.

SECTION C [40 Marks]

Note: Attempt all questions. All question carry equal marks. Be brief and specific.

Q9: Discuss the concept and principles of QFD. Write down the steps and draw House of Quality.

Q10: The number of customers who are not satisfied with the service provided in a retail store is found for 20 samples of size 100 and is shown in Table below. Construct a

control chart for the proportion of dissatisfied customers. Revise the control limits, assuming special causes for points outside the control limits.

Sample	Number of Dissatisfied Customers	Sample	Number of Dissatisfied Customers
1	2	11	5
2	5	12	4
3	4	13	2
4	3	14	5
5	4	15	3
6	2	16	12
7	3	17	3
8	2	18	2
9	4	19	5
10	11	20	2

Or

The number of processing errors per 100 purchase orders is monitored by a company with the objective of eliminating such errors totally. Table below shows samples that were selected randomly from all purchase orders. The company is in the process of testing the effects of a new purchase order form that it has designed. The last five samples were made using the new form. Construct a control chart that the company can use for monitoring the quality characteristic selected. Also find the revised control limits if any. What is the effect of the newly designed purchase order form?

Sample	Processing Errors	Sample	Processing Errors
1	6	14	3
2	4	15	6
3	2	16	1
4	3	17	5
5	4	18	2
6	7	19	6
7	5	20	4
8	7	21	2
9	11	22	3
10	4	23	2
11	2	24	1
12	5	25	2
13	4		