UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2019

Course: MBA (GM-Operations)   **Semester: II**
Subject: Service Operations   **Subject code- MBCQ-723**
Max. Marks: 100   **Time: 03 hrs.**
Instructions:

SECTION A			
S. No.	**Attempt all of the following, each question carry two marks.**		
Q 1	Heterogeneity in service	2	CO 1
Q 2	Service Quality	2	CO 1
Q 3	Service operations	2	CO 1
Q 4	Resource Utilization	2	CO 1
Q 5	Benchmarking	2	CO 1
Q 6	BSC	2	CO 1
Q 7	Service layouts	2	CO 1
Q 8	House of Quality	2	CO 1
Q 9	Customer Value Equation	2	CO 1
Q 10	Poka-Yoke	2	CO 1
SECTION B **Attempt any Four**			
Q 1	What is Quality Loss Function? Discuss in details.	5	CO2
Q 2	Discuss the Role of Services in an Economy with examples.	5	CO2
Q 3	Discuss the characteristics of services with suitable examples.	5	CO2
Q 4	Explain New service development process in detail.	5	CO3
Q 5	What is Self-service Technologies? Why it is important in digital era ?	5	CO2
SECTION-C **Attempt any three**			
Q 1	Discuss the New Technology Adoption process in Services sector.	10	CO3
Q 2	Explain the Service Quality Gap Model with suitable example.	10	CO3
Q 3	What is Taguchi's Loss function? Company C received an average of 10 complaints per month last year. In current month they received 15 complaints (y). Management sets an acceptable level at 2 (tolerance). It costs the company Rs.50 directly per complaint to correct the problems. They determined the cost in lost sales to be	5+5	CO2

Q 4	Rs.100. Total cost per complaint Rs.150. What is the quality loss to the company C?		
Q 4	What is Quality Function Deployment? What is the design process of it to meet customer demands?	10	CO4

SECTION-D (Case study/Analytical)

Q 1	A Service facility (ABC Ltd.) provides service. The time duration specified for the service is 5 minutes. Every hour, six services are sampled and their timings are measured and recorded. Twenty of these samples of six services are gathered. (Given for n=6; A2= 0.483, D3 = 0, D4 = 2.004)		

Sample 1	5.13	4.92	5.01	4.88	5.05	4.97
Sample 2	4.96	4.98	4.95	4.96	5.01	4.89
Sample 3	5.21	4.87	5.02	5.08	5.12	5.04
Sample 4	5.02	5.09	4.99	5.02	5.03	5.01
Sample 5	5.12	5.08	5.09	5.13	5.06	5.13
Sample 6	4.98	5.02	4.97	4.99	4.98	4.99
Sample 7	4.99	5.00	5.00	5.02	5.01	5.01
Sample 8	4.96	5.01	5.02	5.05	5.04	5.02
Sample 9	4.96	5.00	4.91	4.87	4.96	5.01
Sample 10	5.03	4.99	4.96	5.14	5.11	5.04
Sample 11	4.91	4.93	5.04	5.00	4.90	4.82
Sample 12	4.97	4.91	5.02	4.93	4.95	4.96
Sample 13	5.09	4.96	5.05	5.12	5.06	5.01
Sample 14	4.96	4.99	4.82	5.03	5.00	4.96
Sample 15	4.99	4.97	5.01	4.98	4.96	5.02
Sample 16	5.01	5.04	5.09	5.07	5.12	5.13
Sample 17	5.05	4.97	5.04	5.03	5.09	5.01
Sample 18	4.96	4.93	4.97	5.01	4.98	4.92
Sample 19	4.90	4.85	5.02	5.01	4.88	4.86
Sample 20	5.04	5.03	4.97	4.99	5.05	5.06

Q 1	Help ABC Ltd. construct a $\bar{X}$ and R chart from these data.	10	CO4
Q 2	How does your chart show that the "Service duration of the process" is out-of-control?	10	CO4
Q 3	What action do you recommend for ABC Ltd?	10	CO4

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Q 2	Total Quality	**2**	**CO 1**
Q 3	Service operations	**2**	**CO 1**
Q 4	Resource Utilization	**2**	**CO 1**
Q 5	Six Sigma	**2**	**CO 1**
Q 6	BSC	**2**	**CO 1**
Q 7	Service layouts	**2**	**CO 1**
Q 8	House of Quality	**2**	**CO 1**
Q 9	Customer Value Equation	**2**	**CO 1**
Q 10	Poka-Yoke	**2**	**CO 1**
	SECTION B **Attempt any Four**		
Q 1	Difference between product and service? Discuss in details.	**5**	**CO2**
Q 2	Discuss the Role of Services in an Economy with examples.	**5**	**CO2**
Q 3	Discuss the service operations process with flow chart.	**5**	**CO2**
Q 4	Explain New service development process in detail.	**5**	**CO3**
Q 5	What is Self-service Technologies? Why it is important in digital era ?	**5**	**CO2**
	SECTION-C **Attempt any three**		
Q 1	Discuss the New Technology Adoption process in Services sector.	**10**	**CO3**
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