Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

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

Course: Software Quality Management **Semester: 6th**
Program: Btech(all branches) **Time 03 hrs.**
Course Code: CSEG363 **Max. Marks: 100**

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Name four causes of software error	**4**	**CO1**
Q2	Name product quality metrics	**4**	**CO2**
Q3	Name time between failure models	**4**	**CO3**
Q4	What could be measured about a product?	**4**	**CO4**
Q5	Name fault class in the inspection process	**4**	**CO2**
	SECTION B		
Q 6	Assume that a program will experience 200 failures in infinite time. It has now experienced 100. The initial failure intensity was 20 failures/CPU hr. (i) Determine the current failure intensity. (ii) Find the decrement of failure intensity per failure. (iii)Calculate the failures experienced and failure intensity after 20 and 100 CPU hrs. of execution. (iv)Compute addition failures and additional execution time required to reach the failure intensity objective of 5 failures/CPU hr.Use the basic execution time model for the above mentioned calculations	**5+5**	**CO3** **CO4**
Q7	What does SQA stands for ?Define its elements .How quality assurance is modelled? Explain with the help of its models	**1+4.5+ 4.5**	**CO3** **CO2**
Q8	Explain the term process modelling. What are three levels of modelling . Define software review and give its importance.	**5+5**	**CO1** **CO2**
Q9	Explain the concept of Quality assurance plan? Explain it with a scenario. OR What are the activities associated with SQA	**10**	**CO4**
	SECTION-C		
Q 10	a)Suppose you are being hired by an IT firm and recruited you in marketing sector .In your perspective how would you assure the quality of the product produced by your firm OR	**20**	**CO3**

	b)If you are a team leader ,how would you model a new system .Explain it with a scenario of your own and justify your answer with suitable diagrams.		
Q11	Being in a software industry if you need to satisfy the customers need what will be the product quality metrics which you will follow .Justify your answer.	**20**	**CO1 CO2**

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SECTION A

S. No.		Marks	CO
Q 1	Differentiate between Quality control & quality assurance	**4**	**CO4**
Q2	Name quality assurance certificate	**4**	**CO3**
Q3	List down the steps to model a system	**4**	**CO2**
Q4	Name four activities associated with Appraisal cost	**4**	**CO1**
Q5	a)Define Software review b)Name the types of Software review	**4**	**CO2**

SECTION B

Q 6	Explain Defect Arrival Pattern During Machine Testing and justify your answer.	**10**	**CO2**
Q7	Assume that the initial failure intensity is 20 failures/CPU hr. The failure intensity decay parameter is 0.02/failures. We have experienced 100 failures up to this time. (i) Determine the current failure intensity. (ii) Calculate the decrement of failure intensity per failure. (iii)Find the failures experienced and failure intensity after 20 and 100 CPU hrs. of execution. (iv)Compute the additional failures and additional execution time required to reach the failure intensity objective of 2 failures/CPU hr. Use Logarithmic Poisson execution time model for the above mentioned calculations.	**10**	**CO3**
Q8	Explain The Jelinski-Moranda Model	**10**	**CO3**
Q9	Explain the concept of measurement. What are the different scales of measurement? OR What modelling process? Write down its steps	**10**	**CO2**

SECTION-C

Q 10	a)Suppose you are being hired by an IT firm and recruited you. In your perspective how would you perform the inspection process in the firm so as to assure the quality of the product	**20**	**CO3**

	OR b)If you are a team leader ,how would you model a new system .Explain it with a scenario of your own and justify your answer with suitable diagrams.		
Q11	Being in a software industry if you need to satisfy the customers need how will you review the products How many types of reviews are there which u could apply .Justify your answer. How would you assure the quality in this aspect	**20**	**CO2** **CO4**