ROLL NO. _____

Code: AC63/AT63/AC114/AT114 Subject: SOFTWARE ENGINEERING

AMIETE – CS/IT (Current & New Scheme)

Time: 3 Hours **December - 2017** **Max. Marks: 100**

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after 45 Minutes of the commencement of the examination.**
- **Out of the remaining EIGHT Questions, answer any FIVE Questions. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated.**

Q.1 Choose the correct or the best alternative in the following: (2×10)

a. The software development model that explicitly recognize risk analysis is
(A) prototyping
(B) risk management model
(C) spiral model
(D) rapid application development model

b. If the requirements stated in the Software Requirement Specification (SRS) has more than one interpretation, SRS is said to be
(A) consistence **(B)** verified SRS
(C) ambiguous SRS **(D)** unambiguous SRS

c. An umbrella activity that deals with the management of versions, new requirements and release is _____
(A) project Tracking **(B)** documentation
(C) risk management **(D)** software configuration management

d. The process of validating the internal structure, logical functions and time complexity of a software is called as _____
(A) software review **(B)** black box testing
(C) white box testing **(D)** regression testing

e. Which software project sizing approach develops estimates of the information domain characteristics?
(A) Function point sizing **(B)** Change sizing
(C) Standard component sizing **(D)** Line of code (LOC)

f. According to Pareto's principle, x% of defects can be traced to y% of all causes. What are the values of x and y?
(A) 50, 50 **(B)** 60, 40
(C) 80, 20 **(D)** 20, 80

g. Which of the following is golden rule for interface design?
(A) Place the user in control **(B)** Make the interface consistent
(C) Reduce the user's memory load **(D)** All of these

h. Which of the following risk is the failure of a purchased component to perform as expected?
(A) Project risk **(B)** Product risk
(C) Business risk **(D)** None of these

i. Which of the following is a project scheduling method that can be applied to software development?
(A) Program evaluation and review technique (PERT)
(B) Critical path method (CPM)
(C) PERT and CPM
(D) Capability maturity model (CMM)

j. QFD in requirement engineering stands for
(A) quality function design **(B)** quality function development
(C) quality function deployment **(D)** None of these

Answer any FIVE Questions out of EIGHT Questions
Each Question carries 16 marks.

Q.2	a. Explain the spiral model with neat sketch.	**(8)**
	b. Define Risk and explain the process of software risk management.	**(8)**
Q.3	a. Explain the requirement engineering process with neat sketch.	**(12)**
	b. Sketch the use case diagram for an online ticket reservation system.	**(4)**
Q.4	a. Discuss about the organization of RAD environment with neat sketch.	**(8)**
	b. Discuss and represent the structure of an object specification.	**(8)**
Q.5	a. Explain the object oriented and function oriented pipelining for module decomposition.	**(10)**
	b. Discuss about Service oriented architecture (SOA).	**(6)**
Q.6	a. Explain the various object identification techniques in OOD.	**(6)**
	b. Discuss about COTS reuse and four problems in applying it for system reuse.	**(10)**
Q.7	a. With example, discuss about various error prone constructs in programming.	**(10)**
	b. Explain the User interface design process with neat sketch.	**(6)**
Q.8	a. Explain the structural components of a software test plan.	**(6)**
	b. Write about the metrics for computing project duration and staffing with example.	**(6)**
	c. How algorithmic cost model predicts the project cost.	**(4)**
Q.9	a. Discuss about Documentation standards for quality management.	**(6)**
	b. Explain the system release management process and its concepts.	**(10)**