

Time: 3 Hours

June 2019

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. _____ is a set of related activities that leads to the production of a software product.
(A) Software Process (B) Software procedure
(C) Software method (D) Software tool
- b. _____ are socio-technical computer-based systems that have been developed in the past, often using older or obsolete technology.
(A) System Engineering (B) Legacy systems
(C) Software engineering (D) Organizational processes
- c. _____ for a system describe what the system should do.
(A) Functional requirements (B) Non-Functional requirements
(C) System requirements (D) Software requirements
- d. _____ can be used as a way of classifying stakeholders and other sources of requirements.
(A) Scenarios (B) Use cases
(C) Viewpoints (D) Interviewing
- e. _____ approach is one of the fundamental approaches to formal specification.
(A) Interviewing (B) Arithmetic approach
(C) Conventional approach (D) Algebraic approach
- f. _____ is perhaps the best known and most widely used of the agile methods.
(A) RAD (B) XP
(C) COTS (D) CAD
- g. _____ is the process of assessing the usability of an interface and checking that it meets user requirements.
(A) Questionnaires (B) Observation
(C) Interface evaluation (D) Prototyping

Code: DC65/DC115**Subject: SOFTWARE ENGINEERING**

- h. _____ is a process that locates and corrects the defects.
(A) Verification (B) Validation
(C) Testing (D) Debugging
- i. _____ are collected by measurements made of a program in execution
(A) Dynamic metrics (B) Static metrics
(C) Quality metrics (D) Software metrics
- j. _____ is used to manage all change proposals and that may be linked to a version management system.
(A) Change reporting (B) change database
(C) Workflow system (D) Form editor

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

- Q.2** a. Discuss in detail about Rational Unified process. (8)
b. Discuss about emergent system properties. (8)
- Q.3** a. What is the difference between functional and nonfunctional requirements of system? Explain with an example. (8)
b. Draw and explain the sequence diagram for ATM Withdrawal. (8)
- Q.4** a. Elaborate on subsystem interface specification. (8)
b. Write short note on RAD and Software prototyping. (8)
- Q.5** a. Write short note on Client-Server architecture. (8)
b. Explain the layered architecture and subsystems in the weather mapping system. (8)
- Q.6** a. Explain distributed object architecture in detail. (8)
b. Discuss in detail about repository model and state the advantages and disadvantages of shared repository. (8)
- Q.7** a. Write short notes on Component models. (8)
b. Discuss in detail about User interface prototyping. (8)
- Q.8** a. What are various verification and validation tools on Software Engineering? (8)
b. Explain different methods and components of Software Testing. (8)
- Q.9** a. Discuss about version and release management. (8)
b. Explain in detail about measurement process. (8)