

DipIETE – CS (NEW SCHEME) – Code: DC65

Subject: SOFTWARE ENGINEERING

Time: 3 Hours

Max. Marks: 100

DECEMBER 2011**NOTE: There are 9 Questions in all.**

- Please write your Roll No. at the space provided on each page immediately after receiving the Question Paper.
- 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. Which of the following is not a defect metric?

- (A) Location and Clause (B) Time to fix and classification
(C) Coverage (D) All of the above

b. Which of the following does not form a part of a workbench?

- (A) Standards (B) Quality attributes
(C) Quality control (D) Procedures

c. Modifying existing standards to better match the need of a project or environment is

- (A) Definition (B) Standard for a standard
(C) Tailoring (D) Customization

d. The concept of continuous improvement as applied to quality means:

- (A) Employees will continue to get better
(B) Processes will be improved by a lot of small improvements
(C) Processes will be improved through a few large improvements
(D) Improved technology will be added to the process, such as acquiring CASE tools

e. The activity which includes confirming understanding, brainstorming and testing ideas is a

- (A) Code walkthrough (B) Inspection
(C) Review (D) Structured walkthrough

- f. The most common reason for the presence of a large number of bugs in a software product is,
- (A) Incompetence of the developer (B) Incompetence of the tester
(C) Bad requirements (D) Wrong use of tools and techniques
- g. Measures designed to minimize the probability of modification, destruction, or inability to retrieve software or data is
- (A) Preventive security (B) Corrective security
(C) Protective security (D) None of the above
- h. The word management in quality assurance describes many different functions, encompassing
- (A) Policy management
(B) Human resources management, safety control
(C) Component control and management of other resources and daily schedules
(D) None of the above
- i. Statistical process control help to identify the _____ of process problems which are causing defects.
- (A) Root cause (B) Nature
(C) Person/persons involved (D) All of the above
- j. Function points provide an objective measure of the application system _____ that can be used to compare different kinds of application systems.
- (A) Size (B) Complexity
(C) Performance (D) Operation ease

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

- Q.2** a. Explain emergent system properties. (5)
- b. Explain features of any two software process models? (5)
- c. What do you understand by risk identification in risk management?
Give its features. (6)

- Q.3** a. Differentiate functional and non-functional requirements. (5)
- b. What do you mean by requirement change management? Mention various stages. (5)
- c. Describe object aggregation in object model. Give an illustration (6)
- Q.4** a. Explain the role of formal specification in the software process. (4)
- b. Discuss software prototyping in detail. (8)
- c. Explain features of behavioural specification. (4)
- Q.5** a. Write a short note on Modular Decomposition styles. (8)
- b. Explain various distributed system architectures. (8)
- Q.6** a. What do you mean by concurrent objects? (4)
- b. Describe the features of Application frameworks and application system reuse. (8)
- c. Mention sequence of steps in object oriented design process. (4)
- Q.7** a. What do you mean by CBSE process? Explain in detail. (8)
- b. Explain user Interface Prototype and Interface Evaluation process. (8)
- Q.8** a. What do you understand by verification and formal methods? (4)
- b. Explain the requirement based testing in test case design. Give an illustration. (8)
- c. Compare verification and validation. (4)
- Q.9** a. Explain the terms:
- (i) Quality assurance
- (ii) Quality planning
- (iii) Quality control (3×3)
- b. Describe system building in configuration management. Give sequence of steps. (7)