

DiplETE – CS (Current & New Scheme)

Time: 3 Hours

JUNE 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. Which model can be selected if user is involved in all the phases of SDLC?
 (A) Waterfall Model (B) Prototyping Model
 (C) RAD Model (D) Both (B) & (C)
- b. The spiral model has two dimensions namely _____ and _____.
 (A) diagonal, angular (B) radial, perpendicular
 (C) radial, angular (D) diagonal, perpendicular
- c. Agile Software Development is based on
 (A) Incremental Development (B) Iterative Development
 (C) Linear Development (D) Both (A) & (B)
- d. Which four framework activities are found in the Extreme Programming(XP) ?
 (A) analysis, design, coding, testing
 (B) planning, analysis, design, coding
 (C) planning, design, coding, testing
 (D) planning, analysis, coding, testing
- e. How is generalization implemented in Object Oriented programming languages?
 (A) Inheritance (B) Polymorphism
 (C) Encapsulation (D) Abstract Classes
- f. Object that collects data on request rather than autonomously is known as
 (A) Active Object (B) Passive Object
 (C) Multiple instance (D) None of these
- g. Which requirements are the foundation from which quality is measured?
 (A) Hardware (B) Software
 (C) Programmers (D) None of these
- h. Which of the following is a type of Architectural Model?
 (A) Static structural model (B) Dynamic process model
 (C) Distribution model (D) All of these

- i. Which of the following is black box testing
 (A) Basic path testing (B) Boundary value analysis
 (C) Code path analysis (D) None of these
- j. Which of the following is not a diagram studied in Requirement Analysis ?
 (A) Use Cases (B) Entity Relationship Diagram
 (C) State Transition Diagram (D) Activity Diagram

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

- Q .2** a. Explain Classical Waterfall Model. (4)
 b. Explain risk management in detail. (6)
 c. Explain Software management activities. (6)
- Q.3** a. What is software requirement? Explain types of software requirement. (6)
 b. Explain requirements engineering process. (5)
 c. Explain Categories of Data Models (5)
- Q.4** a. What is software prototyping? What are its benefits? (6)
 b. Explain following (5×2)
 (i) Extreme programming (ii) Formal specification
- Q.5** a. What is Cohesion? Explain its types (8)
 b. Explain distributed object architectures. (8)
- Q.6** a. Explain encapsulation, inheritance and polymorphism in object orient design. (8)
 b. What is software reuse? Explain design pattern for software use. (8)
- Q.7** a. Explain user interface design process in detail. (8)
 b. Explain CBSE process (8)
- Q.8** a. What is white box testing? Explain Basis path testing. (8)
 b. Explain following testing method- (4×2)
 (i) Validation and Verification (ii) Alpha and Beta testing
- Q.9** Write short notes on: (4×4)
 (i) SQA (ii) SCM
 (iii) Release management (iv) CASE