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

DipIETE – CS (Current & New Scheme)

Time: 3 Hours   **December 2016**   **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. A chart that illustrates project schedule.
   - **(A)** Pie chart
   - **(B)** line chart
   - **(C)** Gantt chart
   - **(D)** Project chart

   b. Risk as effect of uncertainty on objective has been defined as under.
   - **(A)** Iso 21000
   - **(B)** Iso31000
   - **(C)** Iso 21500
   - **(D)** Iso 31500

   c. A set of inputs, behaviour and outputs of a system is called _____.
   - **(A)** Function
   - **(B)** Requirement
   - **(C)** Software
   - **(D)** Process

   d. A good SRS document has following characteristic.
   - **(A)** Consistent
   - **(B)** Structured
   - **(C)** Complete
   - **(D)** All of these

   e. Which is not a software life cycle model?
   - **(A)** Iterative waterfall model
   - **(B)** Waterfall model
   - **(C)** Spiral model
   - **(D)** Capability maturity model

   f. Which of the following is a stronger testing approach?
   - **(A)** Black box
   - **(B)** White box
   - **(C)** Both **(A)** and **(B)**
   - **(D)** None of these

   g. Six sigma approach is associated with _____ .
   - **(A)** Risk management
   - **(B)** Project planning
   - **(C)** Requirement gathering
   - **(D)** Quality control

   h. Software verification and validation is basically used for what type of software system?
   - **(A)** Risky systems
   - **(B)** Mission critical
   - **(C)** Non mission critical
   - **(D)** None of these

    i. An example of component model is _____.
      (A) Corba   **(B)** DOM
      (C) RAD   **(D)** COCOMO

    j. What type of structure is implemented by client server model?
      (A) Line to line   **(B)** Distributed
      (C) Linear   **(D)** co planar

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

Q.2 a. What is system? Explain types of system? **(6)**

     b. Explain iterative waterfall model in detail. **(6)**

     c. Explain risk identification and management. **(4)**

Q.3 a. What are the types of requirement? Explain the process of requirement gathering.
                                                              (8)

     b. What is SRS? What are qualities of a good and bad SRS? **(8)**

Q.4 a. Explain distributed system architecture. **(6)**

     b. Explain software prototyping. What are its disadvantages? **(10)**

Q.5 a. Explain cohesion and coupling in detail. **(8)**

     b. Explain the process involved in software reuse. **(8)**

Q.6 a. Explain CBSE process. **(8)**

     b. Explain SCM. **(8)**

Q.7 a. What is black box testing? Explain its types. **(10)**

     b. Explain the following: **(6)**
       (i) regression testing
       (ii) performance testing

Q.8 a. What is Software quality and how can it be achieved? **(10)**

     b. Explain Halstead's project estimation matrices. **(6)**

Q.9   Write short notes on: **(4×4)**
        (i) COCOMO   (ii) ISO
        (iii) formal specification   (iv) RAD model