13141

3 Hours/100 Marks

Seat No.

Instructions : (1) **All** questions are **compulsory**.
(2) Illustrate your answers with **neat** sketches **wherever** necessary.
(3) Figures to the **right** indicate **full** marks.
(4) Assume suitable data, if **necessary**.

MARKS

1. a) Attempt **any three** of the following :   **12**
   i) Describe changing nature of software.
   ii) Differentiate between validation and verification.
   iii) What is project scheduling and tracking ?
   iv) State benefits of ISO standards.

   b) Attempt **any one** of the following :   **6**
   i) Describe level-O-DFD with suitable example.
   ii) State design modelling principles.

2. Attempt **any four** of the following :   **16**
   a) Explain data objects and data attributes with suitable example.
   b) Describe white-box testing.
   c) Explain six sigma strategy.
   d) Describe waterfall model with the help of neat diagram.
   e) Explain seven major task of requirement engineering.
   f) Explain characteristics of software testing.

3. Attempt **any four** of the following :   **16**
   a) What is reactive and proactive risk strategies ?
   b) Explain unit testing in detail.
   c) Define and explain clean-room approach.
   d) Explain different principles of software project scheduling.
   e) Explain COCOMO II model in detail.

4. a) Attempt **any three** of the following :   **12**

    i) Explain software decomposition technique.

    ii) Describe integration testing approaches :

        i) Top-down integration

        ii) Bottom-up integration.

    iii) Explain four principles of analysis modeling.

    iv) Describe debugging process.

  b) Attempt **any one** of the following :   **6**

    i) Describe CMMI.

    ii) Explain spiral model with diagram.

5. Attempt **any two** of the following :   **16**

  a) Describe communication practices in engineering. Explain briefly its different principles.

  b) Explain SCM scenario and also explain SCM features.

  c) Describe RAD process model with neat diagram and its advantages.

6. Attempt **any four** of the following :   **16**

  a) Differentiate between alpha and beta testing.

  b) Describe software engineering as a layered technology.

  c) Describe people factor in s/w management spectrum.

  d) What are McCall's quality factors ?

  e) Describe regression testing and smoke testing.

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