17513

14115

3 Hours/100 Marks

Seat No. | | | | | | | | |

Instructions *: (1)* ***All*** *questions are* ***compulsory****.*
(2) Answer ***each*** *next main question on a new page.*
(3) Illustrate your answers with neat sketches ***wherever*** *necessary.*
(4) Figures to the ***right*** *indicate* ***full*** *marks.*
(5) Assume ***suitable*** *data, if* ***necessary****.*

MARKS

1. A) Attempt **any three** of the following : **12**
   a) What are the core principles of software engineering ? Explain.
   b) State any four attributes of good software.
   c) Explain following terms with the help of example of software engineering :
      i) cardinality
      ii) relationships
      iii) data objects
      iv) attributes.
   d) What do you mean by process framework ? Explain with suitable diagram.

   B) Attempt **any one** of the following : **6**
   a) Explain DFD with example.
   b) Explain different tasks of regions of spiral model with diagram.

2. Attempt **any four** of the following : **16**
   a) What are the modeling practices in software engineering? Explain their principles.
   b) Describe 4 layers of software engineering.
   c) With neat diagram explain the translation of analysis model into design model.
   d) Describe the RAD process model with neat diagram and its advantages.
   e) Write importance of analysis modeling.
   f) Explain incremental process model using suitable diagram.

P.T.O.

MARKS

3. Attempt **any four** of the following : **16**
   a) Write difference between cardinality and modaling.
   b) What are different data design element and architectural design elements ?
   c) What is requirement engg. ? What is its need ? What are different subtasks included in it ?
   d) Describe communication principles statements.
   e) What are PSP and TSP frame work activities ? Explain their meaning in detail.

4. A) Attempt **any three** of the following : **12**
   a) State benefits of ISO standards.
   b) Differentiate validation and verification.
   c) Explain briefly :
      i) unit testing
      ii) system testing.
   d) What is SCM ? What is its need ? What are its features ?

   B) Attempt **any one** of the following : **6**
   a) Explain risk refinement.
   b) Describe six sigma a strategy.

5. Attempt **any two** of the following : **16**
   a) Describe process of CMMI techniques.
   b) What are the principles used for project scheduling ? Explain their meaning.
   c) Explain different cycles in software development.

6. Attempt **any four** of the following : **16**
   a) Differentiate between alpha and beta testing.
   b) Describe integration testing approaches
      i) Top - down integration
      ii) Bottom up integration.
   c) Explain characteristics of software testing strategy.
   d) Describe people factor in software management spectrum.
   e) Enlist the reasons for failure of software project.
