17513

15162

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**

i) Define Software. State three characteristics of software.

ii) What is software coding ? State three principles of code validation.

iii) Describe the terms : Analysis Modelling and Design Modelling.

iv) Differentiate between Prescriptive Process Model and Agile Process Model (any four points).

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

i) Describe the layered technology approach of Software Engineering.

ii) Draw a data flow diagram level 0 and level 1 for a Book Publishing House.

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

a) Define the terms software process, software product, software work product and software engineering.

b) What is SRS ? Explain importance of SRS.

c) What is domain analysis ? Explain with suitable examples.

d) Describe the relationship between systems engineering and software engineering.

e) Draw a use case diagram for a Bank Management System.

f) What is Waterfall Model ? State the practical situations in which it can be used.

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

a) State and explain any four types of software.

b) What is Requirements Elicitation ? What are the problems faced in eliciting requirements ?

c) Explain the importance of SRS.

d) What is Data Modelling ? Explain the terms cardinality and modality.

e) Draw a use case diagram for a music system.

P.T.O.

Marks

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

i) What aspects of the software are tested in Unit Testing ?

ii) State any four basic principles to be followed for project scheduling.

iii) Define the terms : Software Reliability and Software Availability.

iv) Compare Alpha Testing and Beta Testing.

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

i) What are the activities involved in SCM ?

ii) What is Software Quality Assurance ? What are the activities carried out in SQA ?

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

a) What is Software deployment ? State the principles to be followed while preparing to deliver the software increment.

b) What is project scheduling and tracking ? State four reasons why project deadlines cannot be met.

c) What is CMMI ? State two objectives of CMMI. Briefly explain the CMMI maturity levels.

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

a) Compare top-down and bottom-up approach used for integration testing.

b) Describe different debugging strategies.

c) What is software risk ? Explain types of software risks.

d) List different ways in which the project schedule can be tracked.

e) Compare software verification and software validation.
