

Enrollment No.....



Faculty of Engineering
 End Sem (Odd) Examination Dec-2018
 CS3CO11/IT3CO12 Software Engineering
 Programme: B.Tech. Branch/Specialisation: CSE/IT

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Waterfall model is suggested when: 1
 - (a) Requirements are clearly understood
 - (b) Problems are small and easy
 - (c) Software development is fast paced
 - (d) Team size is small
- ii. Spiral model was developed by: 1
 - (a) Bev Littlewood (b) Barry Boehm
 - (c) Roger Pressman (d) Ian Somerville
- iii. User-system scenario is represented by which diagram: 1
 - (a) Dataflow diagram (b) Activity diagram
 - (c) Use-case diagram (d) Class diagram
- iv. During analysis phase requirements cannot be modelled as: 1
 - (a) Flow oriented models (b) Data oriented models
 - (c) Class oriented models (d) Programs
- v. Design does not include: 1
 - (a) System design (b) Interface design
 - (c) Data design (d) Cost Estimations
- vi. Process to control changes during system development is: 1
 - (a) System management (b) Configuration management
 - (c) Version control (d) Change control
- vii. Reliability is achieved by: 1
 - (a) Fault avoidance (b) Fault tolerance
 - (c) Fault detection (d) All of these
- viii. Risks involve loss due to: 1
 - (a) Technical Risks (b) Business Risks
 - (c) Project Risks (d) All of these

- ix. Efforts are measured in: 1
 - (a) Person-months (b) Persons
 - (c) Months (d) Rupees
- x. What is not considered as a valid metric: 1
 - (a) Quality (b) KLOC (c) Constraints (d) Defect rate
- Q.2 i. Define Software Engineering. 2
- ii. Elaborate on the software generic process framework. 3
- iii. Explain spiral model in detail. Why is spiral model referred as a metamodel? 5
- OR iv. Enumerate and describe various software application domains with suitable examples of each. 5
- Q.3 i. Differentiate functional and non-functional requirements? 4
- ii. Explain different requirement elicitation techniques? How are requirements modelled and analysed? 6
- OR iii. Explain the components and significance of class diagram? How are relationships between classes classified? 6
- Q.4 i. What are components? How do classes and components differ? 2
- ii. Enumerate and explain basic design principles? 3
- iii. What is the significance of user interfaces in software design? List some characteristics of effective interface design? 5
- OR iv. Describe architectural design and its types? 5
- Q.5 i. Differentiate verification and validation? 4
- ii. Explain various quality characteristics of software. How are risks classified and managed? 6
- OR iii. What is the aim of software testing? Explain V model for testing? 6
- Q.6 Write short note on any two:
 - i. Function Point Analysis 5
 - ii. COCOMO Model 5
 - iii. Project and Product Metrics 5
