

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –V EXAMINATION –SUMMER-2019

Subject Code:2650001

Date: 02-05-2019

Subject Name: Software Engineering

Time:10.30 am to 1.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks

- Q-1 (a) (i) Choose correct option. 07**
1. Design phase is followed by _____.
(A) Coding (B) Testing (C) Maintenance (D) Analysis
 2. If requirements are easily understandable and defined then which model is best suited?
(A) RAD (B) Waterfall (C) Spiral (D) Prototype
 3. Implementation of pattern is described by
(A) Solution (B) Initial context (C) Resulting context (D) Problem
 4. CMMI stands for
(A) Capability Maturity Melt Integration
(B) Consumed Maturity Model Integration
(C) Capability Maturity Model Integration
(D) Capability Maturity Model Increment
 5. Software Testing with real data in real environment is known as
(A) Alpha (B) Beta (C) Regression (D) None of the mentioned
 6. In the Empirical Estimation Technique which model is developed by Barry W. Boehm?
(A) Putnam model (B) COCOMO (C) Both A & B (D) None of the above
 7. Grouping of all functionally related elements is known as _____.
(A) Cohesion (B) Coupling (C) Both A & B (D) None of the above
- (b) (i) Define terms: (1) Agile Process ii) Functional Independence 04**
(ii) Write a short note on Extreme Programming. 03
- Q-2 (a) Demonstrate the seven distinct tasks encompassed in requirement engineering 07**
(b) Compare Spiral Model and Prototype Model. 07
- OR**
- (b) What is a component? Discuss three views of the components. 07**
- Q-3 (a) Discuss Four Common Design issues of a User Interface. 07**

- (b) Differentiate between Black Box Testing and White Box Testing with suitable Example. 07
- OR**
- (a) Compare Architectural Style V/S Architectural Pattern with suitable example: 07
- (b) Discuss the aesthetic design and content architecture for WebApp design. 07
- Q-4**
- (a) Discuss application of COCOMOII model with suitable example in empirical estimation. 07
- (b) Discuss interface design issues present in the development of most user interfaces and list the characteristics of effective design patterns. 07
- OR**
- (a) Discuss application of Object Oriented Design Metrics in the design modelling. 07
- (b) What is the objective of Security Testing and how it is different from Performance Testing? 07
- Q-5**
- (a) What is Function Point metric for requirement modelling? Also compute FP metric for Safe Home Software. 07
- (b) Compare and contrast in following 07
- i. Cohesion V/S Coupling
- ii. Verification and Validation
- OR**
- (a) How Cyclomatic Complexity for 5 Nodes and 4 Edges are calculated and also Calculate $V(G)$ where Predicate nodes are 3. 07
- (b) Compare Equivalence Class Partitioning and Boundary value analysis. 07
