

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-V • EXAMINATION – SUMMER 2016

Subject Code: 650001

Date: 04-05-2016

Subject Name: Software Engineering

Time: 10.30am to 01.00 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** Explain the following terms in brief. **14**
- 1) Agile Process
 - 2) Abstraction
 - 3) Modularity
 - 4) Measures and Metrics
 - 5) Time line charts
 - 6) Open closed principle for component level design
 - 7) Verification and Validation
- Q.2 (a)** Explain Prototype model with stating its advantages and disadvantages while using it as process model for software development. **07**
- (b)** List the XP values and explain XP process for agile development **07**
- OR**
- (b)** List the validation principles and explain Testing principles in detail. **07**
- Q.3 (a)** Describe various distinct tasks for requirement engineering. **07**
- (b)** Draw a context level diagram and data flow diagram – level 1 for Hospital management system describing various functions as patient treatment, investigations, admission for treatment, billing and doctors related to different specialization (departments). **07**
- OR**
- Q.3 (a)** Describe various Architectural styles for software architectural design. **07**
- (b)** Explain Formal technical review for quality control of software. **07**
- Q.4 (a)** Write short note on: **07**
- 1) Coupling
 - 2) Cohesion
- (b)** Explain the three golden rules for user interface design. **07**
- OR**
- Q.4 (a)** Write short note on: **07**
- 1) Pattern languages and repositories
 - 2) Pattern organizing table
- (b)** List various technical attributes for webapp design quality, and explain content architecture for webapp design in detail. **07**
- Q.5 (a)** Give the difference between White box testing and Black box testing. Explain Control structure testing for conventional applications in brief. **07**
- (b)** Explain Random testing and Partition testing at the class level for object-oriented applications. **07**
- OR**
- Q.5 (a)** What is the objective of security testing? Explain various aspects of security testing and options to protect against these vulnerabilities for web applications. **07**

- (b)** Explain the Function point (FP) metric used for measuring the functionality delivered by a system, in detail. **07**
