

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER- V EXAMINATION – WINTER 2015

Subject Code:2650001

Date:01/12/ 2015

Subject Name: Software Engineering

Time:10.30 am 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** (a) i. List the names of Evolutionary Models. Why are they considered the best approach to software development in a modern context? **04**
ii. Describe the three key assumptions regarding software projects that every agile software process must address. **03**
(b) What is an analysis Patterns? What are the benefits of using analysis patterns during the modeling process? Suggest analysis pattern for the Internet browser. **07**
- Q.2** (a) List the types of models that might be used in requirements modeling and explain the role of each type of model. **07**
(b) List and discuss Agile process models. What are the primary advantages of it in software engineering? **07**
- OR
- (b) Explain how a process specification (PSPEC) differs from a control specification (CSPEC). **07**
- Q.3** (a) i. How does the object-oriented view of component-level design differ from the traditional view? **04**
ii. Describe the principle of information hiding as it applies to software design. **03**
(b) i. Explain how effective modular design is achieved through functional independence of the individual modules? **04**
ii. List and define content architectures found in WebApps? **03**
- OR
- Q.3** (a) List and Discuss all types of systems testing. **07**
(b) Differentiate Transaction and Transform mapping. How is a transaction center different from a transform center in a data flow diagram? **07**
- Q.4** (a) What is Design Pattern? Discuss different types of design pattern. **07**
(b) What is a formal technical review and why is one conducted? Outline the steps required to conduct a successful FTR? **07**
- OR
- Q.4** (a) What is behavior testing? List and discuss each technique of this testing. **07**
(b) What are the objectives for content testing? List the steps used in a WebApp testing strategy. **07**
- Q.5** (a) Discuss empirical estimation models. Explain COCOMOII model giving suitable example. **07**
(b) Discuss interface design issues present in the development of most user interfaces and list the characteristics of effective design patterns. **07**
- OR
- Q.5** (a) List activities in the Webapp design pyramid and what are the primary design objectives of a WebApp interface? Discuss each activity in brief. **07**
(b) Describe the five activities associated with the software measurement process. List the principles to characterize and validate metrics. **07**
