

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-VI Examination-Nov/Dec-2011

Subject code: 160701

Date: 21/11/2011

Subject Name: Software Engineering

Time: 10.30 am -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) State True/False:

07

- i) Agility has become today's buzzword when describing a modern software process.
- ii) Top down integration testing is a decrement approach for the construction of the software architecture.
- iii) Design should be traceable to the requirement model.
- iv) Once we write the program and get it to work, our job is done.
- v) A software system exists for one reason: to provide value to its user.
- vi) Phase pattern defines a problem associated with SE action.
- vii) SRS is a document that is created when a details description of all aspects is required.

(b) Select the appropriate option :

07

- i) Which model incurs more cost?
a) RAD b) Prototyping c) Spiral d) All of these

Fill in blank from following option.

- a) Cost & Effort b) Cost & Time c) Scope & Effort d) None of these
- ii) Software _____ & _____ estimation will never be an exact science.

iii) What is the full form of MTBF

- a) Meantime – between-failure b) Max time between failure
- c) All of the above d) None of these

iv) In order to develop a project schedule, a task set must be _____ on the project time line.

- a) Assign b) Completed c) None of these d) Distributed

v) The first activity in software project planning is the determination of.

- a) Software Size b) Software Scope c) Software Prize d) All of the above

vi) A statement of software scope must be.

- a) Free b) Bounded c) None of these d) All of the above

vii) Software configuration belongs to which of the following activities?

- a) Umbrella activity b) Economic activity c) None of these d) All of the above

- Q.2** (a) Explain the difference between DFD and ER diagram with symbols and example. **07**
- (b) i) Using example explain the spiral model. **04**
 ii) Explain Software Prototyping. **03**
- OR**
- (b) i) Explain Software Project Plan. **04**
 ii) List the SQA related activities. **03**
- Q.3** (a) i) Compare the relative advantages of function oriented and object oriented approaches to software design. **04**
 ii) Explain Software Engineering as a Layered Technology. **03**
- (b) What do you mean by risk? What is software risk? Explain all type of Software risk. **07**
- OR**
- Q.3** (a) Explain white box and black box testing. Discuss all the testing strategies that are available. **07**
- (b) What do you mean by Quality Assurance? Explain various factors that affect software quality. **07**
- Q.4** (a) i) Explain the difference between coupling and cohesion. **04**
 ii) Differentiate alpha testing and beta testing. **03**
- (b) Explain five-level of SEI-CMM. **07**
- OR**
- Q.4** (a) i) Explain data dictionary in brief and where it is used. **04**
 ii) Distinguish between a program and a software product. **03**
- (b) What do you mean by software model? Explain each model in detail. **07**
- Q.5** (a) A Library lends books and magazines to member, who is registered in the system. Also it handles the purchase of new titles for the Library. Popular titles are bought into multiples copies. Old books and magazines are removed when they are out of date or in poor condition. A member can reserve a book or magazine that is not currently available in the library, so that when it is returned or purchased by the library, that person is notified. The library can easily create, replace and delete information about the tiles, members, loans and reservation in the system. **07**
- Prepare Software Requirement Specification and Use Case Diagram.**
- (b) Explain how do we design interfaces that allow the user to maintain control? **07**
- OR**
- Q.5** (a) Software is to be developed for hotel management system in which information is provided for all type of activities conducted in hotel. The major users of the system are hotel staff, people who stay in the hotel and people who visit the restaurant. Information for the billing system, hotel account management, staff salary, hotel menu information, hotel room information is provided by software. **07**
- Prepare Software Requirement Specification and Use Case Diagram.**
- (b) What do you mean by software configuration? What is meant by software configuration management? **07**
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