

GANPAT UNIVERSITY
M. TECH. SEM. - II INFORMATION TECHNOLOGY
REGULAR EXAMINATION JULY - 2013
3IT204: SOFTWARE ENGINEERING

Time: 3 Hours]

[Total Marks: 70

Instructions:

1. Figures to the right indicate full marks.
2. Each section should be written in a separate answer book.
3. Be precise and to the point in your answer.

SECTION - I

- Q.1** (a) Discuss about following: (4)
 1. Software Process
 2. Attributes of Good Software
- (b) Explain about Generic Framework Activities. (4)
- (c) What is the difference between Incremental Model and Evolutionary Model? (4)

OR

- Q.1** (a) Discuss about Barry Boehm's W⁵HH Principles in brief. (4)
 (b) Discuss about Important categories of users of the SRS Document and their needs. (4)
 (c) Explain about any four Principles of communication practices. (4)
- Q.2** (a) Explain about analysis rules of Thumb. (4)
 (b) Discuss about Core Principle of Software Engineering Practice. (4)
 (c) Explain about System Context Diagram (SCD) with Suitable Example. (3)

OR

- Q.2** (a) Discuss about World View, Domain View, Element View and Detailed View with reference to System Engineering. (4)
 (b) Explain Quality Function Deployment with reference to Requirement Engineering. (4)
 (c) What is Architecture? Why Architecture important? (3)
- Q.3** (a) Draw the Use Case Diagram and Class Diagram (6)
 Xerox Machine: It used to create photocopy of our document. It can create black & white and color copy. In this machine we have to put only a paper of appropriate size. When we on the machine it will generate a copy of our hardcopy. If pages are not there in paper box it will give an error. When we put pages it will start copying our document. By this m/c we can generate no of copies of single document. It first store original document in its memory then it simply copies it.
- (b) Draw the Activity Diagram and Sequence Diagram for DVD Player. (6)
 (Note: Clearly mention all notation related to Activity and Sequence diagram)

SECTION-II

- Q.4 (a) What is Structure Analysis? Discuss about primitive symbols used for constructing DFD's. (4)
- (b) Draw the DFD for ATM system up to level-2. (4)
- (c) Discuss about Gantt Chart with Example. (4)

OR

- Q.4 (a) Discuss about COCOMO Model with Suitable Example. (4)
- (b) Discuss about following Architecture Style in Brief. (4)
1. Data Centered Architecture
 2. Data Flow Architecture
- (c) Draw the Context Level Diagram and DFD for xyz social web site. (4)

- Q.5 (a) Discuss about coding standards and guidelines (4)
- (b) Explain about following Term: (4)
1. Unit Testing
 2. Functional Testing

- (c) Find out Unique Operator, Unique Operand, Length and Volume for following Program: (3)

```
Main()
{
  int a,b,data;
  Scanf("%d %d", &a, &b);
  data = a+b ;
  Printf("data = %d",data);
}
```

OR

- Q.5 (a) Discuss about following with reference to Halsted's Software Science. (4)
1. Potential minimum volume
 2. Length estimation
- (b) Compute the function point value for a project with the following information domain characteristics. (4)
- Number of user inputs = 30, Number of user outputs = 42, Number of user enquiries = 08, Number of logical files = 07, Number of external interfaces = 06
- Assume that all complexity adjustment values are moderate.
- (c) Organic type software product has been estimated to be 32000 lines of source code. The average salary of software engineering is Rs. 15000 per month. Determine the effort required to develop the software product and the nominal development time. (3)

- Q.6 (a) Discuss about following with reference to Class Diagram using Example. (6)
1. Composition and Aggregation
 2. Association
 3. Generalization
- (b) Prepare sequence & collaboration diagram for Elevator System. (6)

END OF PAPER