

GANPAT UNIVERSITY
B. Tech SEMESTER-VII CE/IT
REGULAR EXAMINATION NOVEMBER – DECEMBER 2014
2CE701/2IT701: 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
4. Draw the diagrams if necessary

SECTION-I**Q.1 Answer the following.**

- (A) Define software and explain characteristics of Software (6)
- (B) What is software engineering? Discuss Program Vs. Software (6)

OR

Q.1 Answer the following.

- (A) What is life cycle model? Explain Prototype model and also write advantages (6)
- (B) Explain Spiral model. Also write advantages of Spiral model (6)

Q.2 Answer the following.

- (A) Define risk and briefly explain risk management activities (5)
- (B) Consider a software project with the following functional units: (6)
- Number of user inputs = 50, Number of user outputs = 40, Number of user enquiries = 35,
 Number of internal logical files = 06, Number of External Interface files = 04
- Assume all complexity adjustment factors and weighing factors are average. Calculate Function Points (FP) for this software project.

OR

Q.2 Answer the following.

- (A) Explain any two requirement gathering techniques in detail (5)
- (B) Answer the following in brief. (6)
1. Explain LOC
 2. Explain Organic mode, Semidetached mode and Embedded mode

Q.3 Answer the following.

- (A) State different categories of Software metrics and explain any one with suitable example (6)
- (B) What is the use of UML? Draw use case diagram for Library Management System and Bank Management System (6)

SECTION-II

Q.4 Answer the following.

- (A) What is formal technique? Briefly explain advantages and disadvantages of formal technique (6)
(B) Define coding and describe coding standards. (6)

OR

Q.4 Answer the following.

- (A) What is Software testing? What is the role of software tester? Compare: Black box testing and White Box testing. (6)
(B) Explain Unit testing and Stress testing (6)

Q.5 Answer the following.

- (A) Write difference between. (6)
1. Alpha testing and Beta testing
2. Validation and verification
(B) Explain Code Walkthrough. (5)

OR

Q.5 Answer the following.

- (A) For the following program, draw the Control Flow Graph(CFG) and find out cyclomatic complexity using McCabe's different methods (6)

```
1. while(a<5) {  
2. printf("%d", a);  
3. a++;  
4. printf("Ok"); }
```

- (B) Explain Integration Testing in Detail. (5)

Q.6 Answer the following.

- (A) Explain System testing in detail. (6)
(B) What is maintenance? Explain different types of Software maintenance. (6)

End of Paper