

Roll No.

Total No. of Questions : 9]
(2040)

[Total No. of Printed Pages : 4

**B.C.A. (CBCS) RUSA Vth Semester
Examination**

3842

SOFTWARE ENGINEERING

Paper : BCA-0605

Time : 3 Hours]

[Maximum Marks : 70

Note :- Attempt five questions in all. Part-A (Q. No. 1) is compulsory. Select one question each from Unit I to IV.

Part-A

(Compulsory Question)

1. (A) Attempt all parts :

Select the correct option for MCQ's.

- (i) Which of the following is/are considered stakeholder(s) in the software process ?
- (a) Customers
 - (b) End Users
 - (c) Project Managers
 - (d) All of these

- (ii) The process of developing a software product using software engineering principles and methods is referred to as
- (a) Scientific product
 - (b) Software myth
 - (c) Software evolution
 - (d) None of these
- (iii) Which is the most important feature of spiral model ?
- (a) Quality management
 - (b) Risk management
 - (c) Performance management
 - (d) Efficiency management
- (iv) Design phase is followed by :
- (a) Coding
 - (b) Testing
 - (c) Maintenance
 - (d) None of these
- (v) Waterfall model is not suitable for :
- (a) Small projects
 - (b) Complex projects
 - (c) Accommodating changes
 - (d) None of these

(vi) Requirement elicitation is a cyclic process.
(True/False)

(vii) SDLC stands for

(viii) SRS stands for

(ix) A software engineer must design the modules with the goal of high cohesion and low coupling. (True/False)

(x) Functional requirements capture the intended behaviour of the system.

(True/False)

$1 \times 10 = 10$

(B) Answer the following in **25** to **50** words :

(xi) What are the desired characteristics of a software process ?

(xii) Write the distinct steps in requirement engineering process.

(xiii) Differentiate between validation and verification.

(xiv) What are the characteristics of a good design ?

(xv) Discuss the components of a SRS document.

$4 \times 5 = 20$

Part-B (Unit-I)

2. (a) What are the various phases in Software Engineering ?

- (b) Discuss 'Software Engineering as a management Science'. 6,4
3. (a) Explain the spiral model with its advantages and disadvantages.
- (b) What are the advantages of incremental process model ? 6,4

Part-C (Unit-II)

4. (a) What is requirement specification ?
- (b) What is the need of requirement analysis ? 5,5
5. (a) What is the role of Software architecture ?
- (b) What do you mean by performance analysis ? 5,5

Part-D (Unit-III)

6. (a) Discuss function oriented design principles.
- (b) Explain structured design methodology. 5,5
7. (a) Discuss object oriented concepts in detail.
- (b) What is Functional Modelling ? Explain. 6,4

Part-E (Unit-IV)

8. (a) Give the steps to design algorithm.
- (b) Write a short note on critical design review. 5,5
9. (a) What are the steps involved in code review ?
- (b) What is Refactoring ? Explain in brief. 5,5