D 10137 **(Pages : 3)** **Name.....**

Reg. No.....

FIFTH SEMESTER U.G. DEGREE EXAMINATION, NOVEMBER 2021

(CUCBCSS—UG)

Computer Science

BCS 5B 11—PRINCIPLES OF SOFTWARE ENGINEERING

(2014 Admissions)

Time : Three Hours Maximum : 80 Marks

Part A

Answer **all** *questions.*
Each question carrics 1 *mark.*

1. The process of developing a software product using software engineering principles and methods is referred to as :

   A) Software myths. B) Scientific Product.

   C) Software Evolution. D) None of the above.

2. What is the main aim of Software engineering ?

   A) Reliable software.

   B) Cost effective software.

   C) Reliable and cost effective software.

   D) None of the above.

3. The following is not a step of requirement engineering :

   A) Design. B) Elicitation.

   C) Documentation. D) Analysis.

4. The most important stakeholder is ————.

   A) Middle-level stakeholder. B) Entry level personnel.

   C) Users of the software. D) Managers.

5. In a DFD, an originator or data receiver is usually designated by :

   A) A square box. B) A circle.

   C) A rectangle. D) None of these.

6. What does the physical connection between the elements of the OO design represent ?

   A) Cohesion. B) Coupling.

   C) Both A) & B). D) None of the above.

Turn over

7. Hiding the implementation complexity can :

   A) Make the programming easy. B) Make the programming complex.

   C) Provide more number of features. D) Provide better features.

8. An inspection is regarded as a proper testing activity rather than an activity to evaluate a work product for suitability :

   A) True.

   B) False.

9. System testing is a :

   A) Black box testing. B) Grey box testing.

   C) White box testing. D) Both (A) and (B).

10. Who leads a walk through ?

    A) Author. B) Moderator.

    C) Reviewer. D) Scribe.

(10 × 1 = 10 marks)

Part B

Answer **all** *questions.*
Each question carries 2 *marks.*

11. Give the importance of software engineering.
12. What are the non-functional requirements of software ?
13. What is the purpose of use case diagram ?
14. What is the use of Unit testing in coding ?
15. How do you define test plan ?

(5 × 2 = 10 marks)

Part C

Answer any **five** *questions.*
Each question carries 4 *marks.*

16. Write a note on process improvement and feedback.
17. What are the different advantages offered by ETVX model for effective verification and validation ?
18. Why software requirement specification is important ?
19. What are the differences between verification and validation in software development ?

20. Briefly describe the different steps in Test Planning.

21. What is cohesion? Explain different levels of cohesion.

22. 'Information hiding is an effective tool for managing the complexity of developing software'. Justify.

23. Justify the importance of testing process.

(5 × 4 = 20 marks)

Part D

Answer any **five** *questions.*
Each question carries 8 *marks.*

24. What is the relationship between a process, process model and process specification for a project ?

25. Explain the various types of models which is used in software Engineering.

26. What steps are required to establish ground work for understanding software requirements ?

27. Develop a complete use case for making a withdrawal at an ATM.

28. Briefly describe each of the four elements of the design model.

29. What is structured design methodology in software engineering ?

30. Explain Incremental coding Process.

31. Explain black box testing method in detail.

(5 × 8 = 40 marks)