THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF COMPUTER SCIENCE
B.Sc. DEGREE PROGRAMME 2019/2020
CSU4302: SYSTEM ANALYSIS AND SOFTWARE ENGINEERING
NO BOOK TEST: 01

Reg. No:...........................

DURATION: ONE HOUR ONLY (1 HOUR)

Date: 13ᵗʰ August, 2019   Time: **04.15pm – 5.15pm.**

Answer **ALL** Questions.
Write the answers on the question paper itself.

Write the st suitable answer inside the cage provided for each question.	

1. What is a software?
   a. Software is a collection of executable programme code
   b. Software is documentation and configuration of data
   c. Both a and b
   d. None of the above	

2. What is the main aim of Software Engineering?
   a. Reliable software
   b. Complete software according to the requirements
   c. Cost effective software
   d. All of the above	

3. Which of these is <u>not</u> correct?
   a. Computer Science belongs to Software Engineering
   b. Software engineering is a part of the more general form of system engineering
   c. Software Engineering belongs to Computer Science
   d. Software engineering is concerned with the feasibilities of developing a reliable software	

4. Which of these is correct?
   a. Generic products and customized products are types of software products
   b. Generic products are produced by an organization and sold in the open market
   c. Customized products are bespoked by a particular customer
   d. All of the above	

5. Essential attributes of a good software are;
   a. Maintainability, dependability, efficiency, usability
   b. Maintainability, dependability, effectiveness, efficiency
   c. Maintainability, dependability, efficiency, availability
   d. Maintainability, dependability, effectiveness, usability	

6. The spiral model of software development;
   a. Ends with the delivery of software products in each iteration
   b. Is more confused than the incremental model
   c. Includes project risk evaluation during each iteration
   d. All of the above	

7. Requirements can be improved by using
   a. The Prototyping model
   b. The waterfall model
   c. The evolutionary model
   d. The spiral model

8. Which of these present the three perspectives of RUP?
   a. Dynamic, Static, Practice
   b. Dynamic, Static, Management
   c. Dynamic, Static, Workflow
   d. Dynamic, Static, Development

9. Extreme programming related software development is based on
   a. Incremental development
   b. Iterative development
   c. Liner development
   d. Both a and b

10. Which is not a step of the requirement engineering process?
    a. Requirement analysis
    b. Requirement elicitation
    c. Requirement design
    d. Requirement specification

11. What is an outcome of the requirements engineering process?
    a. SRS document
    b. Coding the project
    c. User manual
    d. None of the above

12. Which of the following is not included in the software requirement specification (SRS) document?
    a. Non-functional requirements
    b. Functional requirements
    c. Goals of implementation
    d. User manual

13. Identify the system model that illustrates the operational context of a system;
    a. Context model
    b. Behavioral model
    c. Dynamic model
    d. Object model

14. What is the graphical model that illustrates the relationships between the system and its environment?
    a. System models
    b. Software models
    c. Object models
    d. Requirement models

15. The probability that a software application is operating according to requirements at a given point in time is called as;
    a. Software Security
    b. Software Availability
    c. Software Reliability
    d. Software Safety

Write the answer in the space provided for each question.

16. The testing process consists of;

    a. ....

    b. ....

    c. ....

17. The steps of the waterfall model consists of;

    a. ....

    b. ....

    c. ....

    d. ....

    e. ....

18. RUP phases are;

    a. ....

    b. ....

    c. ....

    d. ....

19. What is the most suitable software development methodology that should be used, if the requirements are static and easy to understand?

    a. ....

20. What are the alternatives to the Natural Language Specification?

    a. ....

    b. ....

    c. ....

21. Name three purposes of requirement validation.

    a. ....

    b. ....

    c. ....

22. What are the three system components where critical systems failures may occur?

    a. ....

    b. ....

    c. ....

23. What is the main technology that can be used to decompose a system?

    a. ....

24. Identify three reliability matrices.

     a. ....

     b. ....

     c. ....

25. Identify two advantages of architectural design

     a. ....

     b. ....

26. What are the three organizational styles mainly used to structure a system when doing architectural design?

     a. ....

     b. ....

     c. ....

27. Modular decomposition can be done;

     a. ....

     b. ....

28. What are the stages of risk based analysis when used to develop a specification for critical system?

     a. ....

     b. ....

     c. ....

     d. ....

29. Identify two types of system models that can used to illustrate the behavior of a syste.

     a. ....

     b. ....

30. What is the data model used to describe the logical structure of data processed by a system?

     a. ....