BCH-003-1015015 Seat No. _____

B. Sc. (Sem. V) Examination

August – 2021

CS - 503 : Software Engineering and Linux

(New Course)

Faculty Code : 003
Subject Code : 1015015

Time : $2\frac{1}{2}$ Hours]   [Total Marks : 70

Instruction :   Attempt any five questions.

1 (a) Answer the following   **[4]**

   1. A _____ is an organized set of interdependent components that are related and linked to each other to interact among themselves to accomplish a specific task.

   2. The document prepared after the design phase is known as _____.

   3. _____ can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.

   4. The method for describing the logic of the decisions to be taken is known as _____.

   (b) Define the term Information System.   **[2]**

   (c) Write a note on Systems Analyst and Role.   **[3]**

   (d) What is Fact – finding technique? Explain Interview technique in detail.   **[5]**

2 (a) Answer the following   **[4]**

   1. Define the term Business System.

   2. In which step of SDLC Project early termination could be done?

   3. Bug fixes can be done in which stage of SDLC _____.

   4. Give the full form of DFD.

   (b) What is Questionnaire?   **[2]**

   (c) Differentiate Use Case Diagram vs. Class Diagram.   **[3]**

   (d) Explain Activity and Use Case Diagram with example.   **[5]**

3 (a) Answer the following objective questions: (all compulsory)   **[4]**

   1. A step in waterfall model to understand the customer requirements is known as _____.

   2. In V-Model, why test cases are created before code?

   3. SEI CMM full form is _____.

   4. How many product quality factors are proposed in McCall's quality model?

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(b) What is agility in Agile Model? [2]

(c) Explain the advantages and disadvantages of Spiral Model in detail. [3]

(d) What are SDLC Models? Explain Waterfall Model using appropriate diagram. [5]

4 (a) Answer the following objective questions: (all compulsory) [4]

    1. _____ offers mini-model of the proposed system.

    2. What is Six-Sigma?

    3. Define ISO 9126.

    4. The diagrammatic representation of _____ model appears like a spiral with many loops.

(b) Define prototype in Prototyping model. [2]

(c) Write a note on V model. [3]

(d) What are Software Quality Models? Explain Six Sigma and McCall's Quality Factor in detail. [5]

5 (a) Answer the following objective questions: (all compulsory) [4]

    1. COCOMO Model full form is _____.

    2. Which chart representation is suitable for project planning, monitoring and control?

    3. Which activity is carried out before validation in Testing?

    4. Which type of testing does Boundary value analyses belong to?

(b) What is Software Risk Management? [2]

(c) Explain Black Box Testing. [3]

(d) Explain Software Cost Estimation using the COCOMO Model. [5]

6 (a) Answer the following objective questions: (all compulsory) [4]

    1. _____ approach tries to overcome some of the shortcomings of the expert judgment approach.

    2. Full form of PERT is _____.

    3. What is Project Risk?

    4. What is Testing?

(b) Differentiate Test Case and Test Script. [2]

(c) Write a note on Scheduling using PERT chart. [3]

(d) Explain SRS (Software Requirement Specification) in detail [5]

7 (a) Answer the following objective questions: (all compulsory) [4]

    1. Who is the developer of Korn Shell?

    2. Give the full form of FSF.

    3. What is the pipe command?

    4. Define Touch command.

(b) Define the term open source. [2]

(c) Write a note on structure of Linux OS [3]

(d) Explain the Unix Architecture and Features of Unix. [5]

8(a) Answer the following objective questions: (all compulsory)   [4]

1. Who is the developer of Linux OS?
2. The _____ directory contains configuration files in Linux?
3. What does the pwd command do?
4. What is the use of cd command?

(b) Explain the following commands: news, mail   [2]

(c) Explain redirection operator.   [3]

(d) What is Unix File System? Explain the Types of Files in detail.   [5]

9 (a) Answer the following objective questions: (all compulsory)   [4]

1. Define MATE.
2. Which command is used to save and exit in VI.
3. Define the term system variable.
4. What are Positional parameters?

(b) Define X-Windows system.   [2]

(c) Explain Test command with example.   [3]

(d) Explain Unity and KDE.   [5]

10 (a) Answer the following objective questions: (all compulsory)   [4]

1. Which key is used to save and close the vi editor?
2. Which command is used to record a session in linux?
3. Full form of GNOME?
4. LXDE is Light Weight X11 _____.

(b) Define SUDO.   [2]

(c) Explain case statement with example.   [3]

(d) Explain types of window manager.   [5]

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