B. Sc. (Computer Sci.) (Sem. V) Examination
October / November - 2018
Computer Science
CA - 503 : Software Engineering & Shell Programming with Linux
(New Course)

Faculty Code : 003
Subject Code : 1015015

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

1   Attempt the following questions :

(a)   Answer the following short questions: (all compulsory)   **4**

(1)   What is the purpose of SDLC ?

(2)   System Development process is also called as
_____.

(3)   In a DFD external entities are represented by a
_____.

(4)   The data Flow Diagram is the basic component
of _____ system.

(b)   Answer any **one** of the following questions :   **2**

(1)   Define Business System.

(2)   What is the use of Analysis face in SDLC ?

(c)   Answer any **one** of the following questions :   **3**

(1)   Differentiate use case diagram V/s class diagram.

(2)   What is the basic role of a computer system analyst
?

(d)   Answer any **one** of the following questions :   **5**

(1)   Write a short note on Data Dictionary.

(2)   Explain Information Gathering Technique
Questionnaires ?

2 (a) Answer the following short questions : (all compulsory) **4**

    (1) In the V-V model of software development, testing starts in parallel with the development. True or false ?

    (2) In V model, why test cases are created before code ?

    (3) Prototype is evaluated by customer or end user in _____.

    (4) Which model is also known as Verification and validation model ?

  (b) Answer any **one** of the following questions : **2**

    (1) Define Agile model.

    (2) Define Six Sigma.

  (c) Answer any **one** of the following questions : **3**

    (1) Write the advantages and disadvantages of waterfall model.

    (2) Write the advantages and disadvantages spiral model.

  (d) Answer any **one** of the following question : **5**

    (1) Explain Prototyping model.

    (2) Explain Software Quality Models SEI CMM and McCall's Quality Factor.

3 (a) Answer the following short questions : (all compulsory) **4**

    (1) The COCOMO model takes into account different approaches to software development, reuse, etc. True or Flase ?

    (2) _____ risks are derived from the software or hardware technologies that are used to develop the system ?

    (3) Which testing phase tests individual software modules combined together as a group ?

    (4) The SRS document is also known as _____ specification.

(b) Answer any **one** of the following questions : 2

(1) Define Unit testing.

(2) What is Test Script ?

(c) Answer any **one** of the following questions : 3

(1) Differentiate Verification V/s Validation.

(2) Differentiate Software Fault V/s Software Failure.

(d) Answer any **one** of the following question : 5

(1) Write a short note on Software Requirement Specification with IEEE format.

(2) Explain Software Risk Management.

4 (a) Answer the following short questions : (all compulsory) 4

(1) Who is the developer of Korn shell ?

(2) Which command is used to for examining file contents ?

(3) What is the core part of Linux Operating System ?

(4) What is the use of ctrl+f command in vi mode ?

(b) Answer any **one** of the following questions : 2

(1) Define Device file.

(2) Define command mode.

(c) Answer any **one** of the following questions : 3

(1) Explain Batch operating system.

(2) Explain the following commands with example find, grep, head.

(d) Answer any **one** of the following questions : 5

(1) Explain types of modes in VI.

(2) Write a short note on functions of Operating System.

5 (a) Answer the following short questions : (all compulsory) **4**

       (1) Full form of KDE.

       (2) What can be used to modify File permissions ?

       (3) What is a file system ?

       (4) How to find the current shell which you are using ?

    (b) Answer any **one** of the following questions : **2**

       (1) What is the purpose of using 'expr'.

       (2) What is shell scripting ?

    (c) Answer any **one** of the following questions : **3**

       (1) Explain system variable.

       (2) Explain positional parameters.

    (d) Answer any **one** of the following questions : **5**

       (1) Explain windows manager.

       (2) Write a shell script to print the reverse of a given number.

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