



MCR-003-001523

Seat No. _____

B. Sc. (Computer Science) (Sem. V) Examination

May / June - 2018

**CS - 503 : Software engineering & shell
Programming with Linux
(New Course)**

Faculty Code : 003

Subject Code : 001523

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

SECTION - I

1 Answer the short answer questions : 20

- (1) What are the indirect measure of product?
- (2) What do you understand by V&V in software testing?
- (3) If a program in its functioning has not met user requirements in some way is called _____.
- (4) In the Empirical Estimation Technique which model is developed by Barry W. Boehm?
- (5) Who was the developer of timeline chart?
- (6) What is testing process first goal?
- (7) Which of the following models combine the features of waterfall model and prototyping model?
- (8) Line of code (LOC) of the product comes under which type of measures?
- (9) Which model follow the purely sequential approach?
- (10) The tools that support different stages of software development life cycle are called as _____.
- (11) What is the another name of black box testing?
- (12) What is the core part of Linux Operating System?
- (13) What is the use of cd command?
- (14) What are the different type of variables used in a shell script?

- (15) The detailed study of existing system referred to _____.
- (16) IEEE provides a standard as IEEE 830-1993. For which activity this standard is recommended as standard?
- (17) SDLC stands for?
- (18) Which is the first step in the software development life cycle?
- (19) Which model is not suitable for accommodating any change?
- (20) In Design phase, which is the primary area of concern?

SECTION-II

- 2** (A) Answer the following questions : (Any **Three**) **6**
- (1) Define software engineering.
 - (2) Define software planning.
 - (3) What are various phases of SDLC ?
 - (4) What is software project management?
 - (5) What is project estimation
 - (6) Define COCOMO model
- (B) Answer the following questions : (Any **Three**) **9**
- Differentiate the following :
- (1) System testing V/s Integration testing
 - (2) Black-box testing V/s White-box testing
 - (3) Validation V/s Verification
 - (4) Defect V/s Failure
 - (5) Direct metrics V/s Indirect metrics
 - (6) Quality assurance V/s Quality Control
- (C) Answer the following questions : (Any **Two**) **10**
- (1) Explain planning an organizational structure.
 - (2) Write a short note on software project estimation technique.
 - (3) Explain SCM (Software Configuration Management).
 - (4) Write a short note on software testing.
 - (5) Explain the steps of waterfall model.

SECTION-III

- 3** (A) Attempt the following questions : (Any **Three**) **6**
- (1) Define the term product and process.
 - (2) Define software quality.
 - (3) What are software requirements ?
 - (4) What is SRS ?
 - (5) What is software metric ?
 - (6) What are the objectives of testing ?
- (B) Attempt the following questions : (Any **Three**) **9**
- (1) What are the advantages of waterfall model?
 - (2) Explain SDLC model.
 - (3) What are the challenges in software designing?
 - (4) Explain Case statement with example.
 - (5) Write a short note on software maintenance.
 - (6) Explain the following commands:
 - (a) sort
 - (b) mkdir
 - (c) wc-c
 - (d) tail
 - (e) grep
 - (f) ls
- (C) Attempt following questions : (Any **Two**) **10**
- (1) Explain system variable with example.
 - (2) Explain do-while statement with example.
 - (3) Explain spiral model with example.
 - (4) Write a shell script to check whether the number is prime or not.
 - (5) Write a shell script to count the no. of lines, no. of words and no. of characters from the particular files.