Sardar Patel University
Master of Computer Application
SEMESTER – IV Examination
PS04CMCA04: Software Engineering
Wednesday, 10th April, 2019

Time: 02:00 PM to 05:00 PM

Max Marks: 70

Q.1 Select the most appropriate answer for the following questions: **[8]**

i. _____ is the structure or structures of the system, which comprise software elements, the externally visible properties of those elements, and the relationships among them.
   A) Software Architecture
   B) Software Design
   C) Software Reuse
   D) None of these

ii. Which of the following is **NOT** a component of ETVX?
   A) Exit Criteria
   B) Test
   C) Task
   D) Entry Criteria

iii. As per IEEE, SRS document should have __ main sections.
   A) 3
   B) 4
   C) 5
   D) 4.5

iv. In COCOMO, projects are categorized into __.
   A) 5 types
   B) 4 types
   C) 3 types
   D) 2 types

v. __abstraction forms the basis for OOD.
   A) Functional
   B) Data
   C) Requirement
   D) Class

vi. A __ is a systematic approach to creating a design by applying of a set of techniques and guidelines.
   A) Design Methodology
   B) Design Model
   C) Design Implementation
   D) None of these

vii. Which of the following type of testing is impractical?
   A) Alpha
   B) Beta
   C) Exhaustive
   D) All of these

viii. Regression testing is primarily related to __.
   A) Functional testing
   B) Development testing
   C) Maintenance testing
   D) Unit testing

Q.2 Answer the following questions (Any seven): **[14]**

i. What is 'Software Engineering'?

ii. Define the term 'Software'. List out general characteristics of a software.

iii. List characteristics of web applications.

iv. List out various quality attributes of a software.

v. Write the full-form of: OOA, WBS, UML, COCOMO.

vi. What is activity diagram?

vii. What is coding?

viii. Differentiate: Black-box testing and White-box testing.

ix. What do you mean by 'Software Reuse'? Why is it useful?

Q.3

A   Explain waterfall model for software development with merits and demerits.   [6]

B   List desired characteristics of software process. Explain any two of them.   [6]

OR

B   Explain - various challenges for Software Engineering.   [6]

Q.4

A   Explain the structure of SRS prescribed by IEEE.   [6]

B   Discuss Risk Management of a software project planning.   [6]

OR

B   Explain (i) Q&P and (ii) V&V   [6]

Q.5

A   What is UML? Explain (i) class diagram and (ii) sequence diagram by giving suitable examples.   [6]

B   Explain the steps of methodology for producing structured design.   [6]

OR

B   Write a note on coupling.   [6]

Q.6

A   What is coding process? Explain TDD   [6]

B   Explain the terms (i) Error (ii) Fault and (iii) Failure by giving suitable examples of each.   [6]

OR

B   What do you mean by "Test Case"? Explain levels of testing.   [6]

— X —

(2)