PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Fourth Semester)

Branch –SOFTWARE SYSTEMS
(Five year integrated)

SOFTWARE ENGINEERING TECHNIQUES

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 x 1 = 10)

1. What is Software Engineering?
   a) Designing a software
   b) Testing a software
   c) Application of engineering principles to the design a software
   d) Developing a Software

2. Which is the first step in the software development life cycle?
   a) Analysis   b) Problem/Opportunity Identification
   c) Design   d) Development and Documentation

3. What is the full form of the "COCOMO" model?
   a) Cost Constructive Estimation Model   b) Constructive Cost Estimation Model
   c) Constructive Case Estimation Model   d) Constructive Cost Estimating Model

4. _____ also called requirements gathering, it combines elements of problem solving, elaboration, negotiation, and specification.
   a) Requirements Elicitation   b) Requirements Validation
   c) Requirements Negotiating   d) Requirements Monitoring

5. The _____ diagram addresses the issues and represents all data objects that are entered, stored, transformed and produced within an Software application.
   a) Entity-Relationship Diagram (ERD)   b) Data Flow Diagram
   c) System Flow Diagram   d) State Transition Diagram

6. The level 0 Data Flow Diagram is also called _____.
   a) Context Diagram   b) Content Diagram   c) Circular Diagram   d) ER Diagram

7. The word which describes the importance of software design is?
   a) Complexity   b) Quality   c) Efficiency   d) Accuracy

8. In Design Engineering _____ offers a graphic read of the processing logic concerned in a higher cognitive process and therefore the corresponding actions are taken.
   a) Design Tree   b) Graphic Tree   c) Decision Tree   d) Cognitive Tree

9. Software Debugging is known as _____.
   a) Identifying the task to be computerized   b) Creating program code
   c) Finding and correcting errors in the program code   d) Creating the algorithm

10. In which of the following categories can white-box testing be classified?
    a) Design Based Testing   b) Implementation Testing
    b) Structural Testing   d) Planning Testing

Cont...

SECTION - B (25 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 5 = 25)

11. a) Narrate in detail about the Objectives and Benefits of Software Engineering.
(OR)
    b) Describe in detail about the Software Process and its framework.

12. a) Explain in detail about Software Project Estimation.
(OR)
    b) Summarise the Eliciting Requirements in Requirements Engineering.

13. a) Outline about Data Dictionary in Software Engineering.
(OR)
    b) Describe about the ER Diagram with suitable examples.

14. a) Explain in detail about Decision Tree and Decision Table.
(OR)
    b) Describe in detail about The Design Model in Design Engineering.

15. a) Describe about the Software Testing Strategies.
(OR)
    b) Describe in detail about Software Maintenance issues.

SECTION -C (40 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 8 = 40)
Question no. 16 is compulsory

16.   Elucidate in detail about Waterfall model and Incremental Process Model.

17. a) Compare various Decomposition Techniques for Project Cost Estimation.
(OR)
    b) Elucidate about the Requirements Engineering.

18. a) Interpret in detail about Data flow diagram and State Transition Diagram.
(OR)
    b) Discuss in detail about Requirements Analysis.

19. a) Construct in detail about Design Concepts in Design Engineering.
(OR)
    b) Discuss in detail about the HIPO diagram and Structured Charts.

20. a) Elucidate in detail about the Software Testing Methodologies.
(OR)
    b) Interpret in detail about Software Implementation in Software Engineering.

Z-Z-Z   END