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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech.

SEM: III - THEORY EXAMINATION (2021 - 2022) (ONLINE)

Subject: Software Engineering

Time: 02:00 Hours   Max. Marks: 100

General Instructions:

1. *All questions are compulsory. It comprises of two Sections A and B.*

* *Section A - Question No- 1 has 35 objective type questions carrying 2 marks each.*
* *Section B - Question No- 2 has 12 subjective type questions carrying 3 marks each. You have to attempt any 10 out of 12 question.*
* *No sheet should be left blank. Any written material after a Blank sheet will not be evaluated/checked.*

<u>SECTION A</u>   35 x 2 = 70

1. Attempt ALL parts:-

1.1.a   Software engineers should not use their technical skills to misuse other people's computers. "Here the term misuse refers to (CO1)   1

         (a) Unauthorized access to computer material

         (b) Unauthorized modification of computer material

         (c) Dissemination of viruses or other malware

         (d) All of the mentioned

1.1.b   Efficiency in a software product does not include _____   1

         (a) Responsiveness

         (b) Licensing

         (c) Memory utilization

         (d) Processing time

1.1.c   Identify the correct statement: "Software engineers shall   1

         (a) act in a manner that is in the best interests of his expertise and favour."

         (b) act consistently with the public interest."

         (c) ensure that their products only meet the SRS."

         (d) all of the mentioned

1.1.d   Efficiency in a software product does not include   1

         (a) responsiveness

         (b) licensing

         (c) memory utilization

         (d) processing time

1.1.e   The reason for software bugs and failures is due to (CO1)   1

         (a) Software companies

         (b) Software Developers

         (c) Both Software companies and Developers

         (d) All of the mentioned

1.1.f   What does RAD stand for?   1

         (a) Rapid Application Document

         (b) Rapid Application Development

(c) Relative Application Development

(d) None of the above

1.1.g   Software is defined as ____ .   1

        (a) Instructions

        (b) Data Structures

        (c) Documents

        (d) All of the above

1.2.a   The process each manager follows during the life of a project is known as (CO2)   1

        (a) Project Management

        (b) Manager life cycle

        (c) Project Management Life Cycle

        (d) All of the mentioned

1.2.b   Which of the following is not project management goal? (CO2)   1

        (a) Keeping overall costs within budget

        (b) Delivering the software to the customer at the agreed time

        (c) Maintaining a happy and well-functioning development team

        (d) Avoiding customer complaints

1.2.c   Which of the following costs is not part of the total effort cost?   1

        (a) Costs of networking and communications

        (b) Costs of providing heating and lighting office space

        (c) Costs of lunch time food

        (d) Costs of support staff

1.2.d   CASE Tool is   1

        (a) Computer Aided Software Engineering

        (b) Component Aided Software Engineering

        (c) Constructive Aided Software Engineering

        (d) Computer Analysis Software Engineering

1.2.e   A stage in which individual components are integrated and ensured that they are error-free to 1
meet customer requirements.

        (a) Coding

        (b) Testing

        (c) Design

        (d) Implementation

1.2.f   Which of the following are valid step in SDLC framework?   1

        (a) Requirement Gathering

        (b) System Analysis

        (c) Software Design

        (d) All of the above

1.2.g   Waterfall model is not suitable for: 1

        (a) Small projects

        (b) Complex projects

        (c) Accommodating changes

        (d) Maintenance Projects

1.3.a   How is reliability and failure intensity related to each other?   1

        (a) direct relation

        (b) inverse relation

(c) no relation

(d) none of the mentioned

1.3.b   How many product quality factors are proposed in McCall quality model?   1

       (a) 2

       (b) 3

       (c) 11

       (d) 8

1.3.c   Which one of the following is not a software quality model? (CO3)   1

       (a) ISO 9000

       (b) McCall model

       (c) Boehm model

       (d) ISO 9126

1.3.d   What is MTTF ? (CO3)   1

       (a) Maximum time to failure

       (b) Mean time to failure

       (c) Minimum time to failure

       (d) None of the mentioned

1.3.e   Which level of CMM is for process management?   1

       (a) Initial

       (b) Repeatable

       (c) Defined

       (d) Optimizing

1.3.f   In ISO 9126, time behavior and resource utilization are a part of   1

       (a) maintainability

       (b) portability

       (c) efficiency

       (d) usability

1.3.g   Which of the following is not a Probabilistic Model?   1

       (a) Error seeding

       (b) NHPP

       (c) Input domain

       (d) Halstead's software metric

1.4.a   If every requirement stated in the Software Requirement Specification(SRS) has only one interpretation, SRS is said to be _____?   1

       (a) Correct

       (b) Unambiguous

       (c) Verifiable

       (d) Consistent

1.4.b   Which of the following property does not correspond to a good Software Requirements Specification (SRS) ? (CO4)   1

       (a) Verifiable

       (b) Ambiguous

       (c) Complete

       (d) Traceable

1.4.c   The SRS document is also known as _____ specification. (CO4)   1

       (a) black-box

(b) white-box

(c) grey-box

(d) none of the mentioned

1.4.d   How many Scenarios are there in elicitation activities ?   1

(a) One

(b) Two

(c) Three

(d) Four

1.4.e   Which of the following elicitation techniques is a viewpoint based method?   1

(a) FODA

(b) QFD

(c) CORE

(d) IBIS

1.4.f   How many steps are involved in Feature Oriented Domain Analysis (FODA) ?   1

(a) Two

(b) Three

(c) Four

(d) Five

1.4.g   Which of the following is an indirect measure of product?   1

(a) Quality

(b) Complexity

(c) Reliability

(d) All of the above

1.5.a   Which is not a principle of software testing   1

(a) Early testing

(b) Pesticide paradox

(c) Identify Critical Path

(d) Absence of errors fallacy

1.5.b   How many types of test plans are available for software testing   1

(a) 4

(b) 3

(c) 2

(d) 5

1.5.c   Functional Testing is also refered as (CO5)   1

(a) White Box Testing

(b) Sand Box Testing

(c) Maintinance testing

(d) Black Box Testing

1.5.d   A program is correct when it behaves exactly as intended can be termed as   1

(a) Program Effectiveness

(b) Program Correctneess

(c) Program Rating

(d) None of these

1.5.e   Grouping of information is   1

(a) Inheritance

(b) Encapsulation

        (c) Abstraction

        (d) Polymorphism

1.5.f   Hiding of information is   1

        (a) Inheritance

        (b) Encapsulation

        (c) Abstraction

        (d) Polymorphism

1.5.g   Redefining of information is   1

        (a) Inheritance

        (b) Encapsulation

        (c) Abstraction

        (d) Polymorphism

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SECTION B   10 X 3 = 30

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2. Answer any TEN of the following:-

2.1.a	What are the types of software failure?	2
2.1.b	'Software does not wear out'. Justify (CO1)	2
2.2.a	What Is SDLC? (CO2)	2
2.2.b	Explain Low Level Or Detailed Design concerning SDLC	2
2.2.c	Name five Models used in SDLC	2
2.3.a	What is the strategy for Automation Test Plan?	2
2.3.b	Explain stress testing, load testing and volume testing?	2
2.3.c	What are the five common solutions for software developments problems?	2
2.4.a	Define functional requirements. (CO4)	2
2.4.b	Draw the DFD for the following (i) External entity (ii) Data items	2
2.5.a	What is modularity (CO5)	2
2.5.b	What is information hiding	2