BRAINWARE UNIVERSITY
Term End Examination 2020 - 21
Programme – Bachelor of Technology in Computer Science & Engineering
Course Name – Software Engineering
Course Code - PEC-501B
Semester / Year - Semester V

Time allotted : 85 Minutes   Full Marks : 70

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)   1 x 70=70

1.   *(Answer any Seventy)*

(i) RAD stands for

a) Relational Application Development   b) Rapid Application Development

c) Rapid Application Document   d) None of these

(ii) Which one of the following models is not suitable for accommodating any change?

a) Evolutionary Model   b) Incremental Model

c) Spiral Model   d) Waterfall Model

(iii) Which is/are the types of prototype of Prototyping Model?

a) Horizontal Prototype   b) Vertical Prototype

c) Diagonal Prototype   d) Both Horizontal Prototype & Vertical Prototype

(iv) RAD Model has

a) 4 phases   b) 7 phases

c) 5 phases   d) 3 phases

(v) Which is the first step in the software development life cycle?

a) Testing   b) Coding

c) Problem/Opportunity Identification   d) Analysis

(vi) Which of the following is not a characteristic of software?

a) Availability   b) Maintainability

c) Usability   d) Efficiency

(vii) The_____ phase of waterfall model involves interaction with users for a clear understanding of the requirements

a) Requirements analysis   b) Coding

c) Feasibility study   d) Design

(viii) Which of the following model is not suitable for accommodating changes?

a) Spiral model   b) Prototyping model

c) Evolutionary model   d) Waterfall model

(ix) Which of the following is a functional requirement?

a) Maintainability   b) Portability

c) Robustness   d) none of these

(x) The modification of the software to match changes in the ever changing environment, falls under which category of software maintenance?

a) Corrective   b) Adaptive

c) Perfective   d) None of these

(xi) Constraints can be represented in UML by?

a) [text]   b) {text}

c) (text)   d) None of these

(xii) Which of the following property does not correspond to good software Requirement Specification (SRS)?

a) Verifiable

b) Ambiguous

c) Complete

d) Traceable

(xiii) For an SRS document to be accurate and efficient, it should correct, and verifiable.

a) Unambiguous, complete

b) Ambiguous, complete

c) Verifiable, complete

d) Ambiguous, incomplete

(xiv) What is the system requirement of the documents?

a) SRS

b) SDD

c) SRD

d) DDD

(xv) The SRS is said to be consistent if and only if

a) Its structure and style are such that any changes to the requirements can be made easily while retaining the style and structure.

b) Every requirement stated therein is one that the software shall meet.

c) Every requirement stated therein is verifiable

d) No subset of individual requirements described in it conflict with each other

(xvi) Which of the following statements about SRS is/are true? i. SRS is written by customer ii. SRS is written by a developer iii. SRS serves as a contract between customer and developer

a) Only i is true

b) Both ii and iii are true

c) All are true

d) None of these

(xvii) Which of the following is not included in SRS?

a) Performance

b) Functionality

c) Design Solutions

d) External Interfaces

(xviii) Consider the following Statement: "The output of a program shall be given within 10 secs of event X 10% of the time."What characteristic of SRS is

being depicted here

a) Consistent

b) Verifiable

c) Non- verifiable

d) Correct

(xix) Considering the example of issue/return of a book, cataloging etc. in a library management. What type of management requirement is being depicted here?

a) Enduring

b) Volatile

c) Both enduring and Volatile

d) All of these

(xx) The fundamental notions of a software engineering does not account for

a) Software reuse

b) Software testing

c) Software design

d) Software Validation

(xxi) The importance of software design can be summarized in a single word

a) accuracy

b) complexity

c) efficiency

d) quality

(xxii) Which of the following is not a characteristic common to all design methods?

a) configuration management

b) functional component representation

c) quality assessment guidelines

d) refinement heuristics

(xxiii) What encapsulates both data and data manipulation functions?

a) Object

b) Class

c) Super class

d) Sub class

(xxiv) Which of the following is a disadvantage of OOD?

a) Easier maintenance

b) Objects may be understood as stand-alone entities

c) Objects are potentially reusable

d) None of these

components

(xxv) The spiral model was originally proposed by

a) Barry Boehm

b) Pressman

c) Royce

d) None of these

(xxvi) What is the final outcome of the requirements analysis and specification phase

a) drawing the data flow diagram

b) the SRS document

c) testing the project

d) none of these

(xxvii) Which one of the following is NOT desired in a good Software Requirement Specifications (SRS) document?

a) Non Functional Requirements

b) Functional dependency

c) Goals of design

d) Algorithms for Software Implementation

(xxviii) What is the appropriate pairing of items in the two columns listing various activities encountered in a software life cycle? P. Requirements Capture 1.Module Development and Integration Q. Design 2.Domain Analysis R. Implementation 3.Structural and Behavioral Modeling S. Maintenance 4.Performance Tuning

a) P-3, Q-2, R-4, S-1

b) P-2, Q-3, R-1, S-4

c) P-3, Q-2, R-1, S-4

d) P-2, Q-3, R-4, S-1

(xxix) White Box techniques are also classified as

a) Design based Testing

b) structural testing

c) error guessing technique

d) None of these

(xxx) What are the various Testing Levels?

a) Unit Testing

b) System Testing

c) Integration Testing

d) All of these

(xxxi) Acceptance testing is also known as

a) Grey box testing b) White box testing

c) White box testing d) Beta testing

(xxxii) Which of the following is non-functional testing?

a) Black box testing b) Performance testing

c) Unit testing d) None of these

(xxxiii) Behavioral testing is

a) White box testing b) Black box testing

c) Grey box testing d) None of these

(xxxiv) Which of the following is black box testing

a) Basic path testing b) Boundary value analysis

c) Code path analysis d) None of these

(xxxv) Software Maintenance includes

a) Error corrections b) Enhancements of capabilities

c) Deletion of obsolete capabilities d) All of these

(xxxvi) Which selective retest technique selects every test case that causes a modified program to produce a different output than its original version?

a) Coverage b) Minimization

c) Safe d) Maximization

(xxxvii) Which regression test selection technique exposes faults caused by modifications?

a) Efficiency b) Precision

c) Generality d) Inclusiveness

(xxxviii) Which of the following is not included in failure costs?

a) rework

b) repair

c) failure mode analysis

d) None of these

(xxxix) What is not included in prevention costs?

a) quality planning

b) test equipment

c) formal technical reviews

d) equipment calibration and maintenance

(xl) Who identifies, documents, and verifies that corrections have been made to the software?

a) Project manager

b) Project Team

c) SQA Group

d) all of these

(xli) In CMM, the life cycle activities of requirements analysis, design, code, and test are described in

a) Software Product Engineering

b) Software Quality Assurance

c) Software Subcontract Management

d) Software Subcontract Management Software Quality Management

(xlii) The process each manager follows during the life of a project is known as

a) Project Management

b) Manager life cycle

c) Project Management Life Cycle

d) All of these

(xliii) A 66.6% risk is considered as

a) very low

b) low

c) moderate

d) High

(xliv) Which of the following is incorrect activity for the configuration management of a software system?

a) Internship management

b) Change management

c) Version management

d) System management

(xlv) Identify the sub-process of process improvement

a) Process introduction   b) Process analysis

c) De-processification   d) Process distribution

(xlvi) A number of independent investigators have developed a team-oriented approach to requirements gathering that can be applied to establish the scope of a project called

a) JAD   b) CLASS

c) FAST   d) None of these

(xlvii) CLSS stands for

a) conveyor line sorting system   b) conveyor line sorting software

c) conveyor line sorting speed   d) conveyor line sorting specification

(xlviii) The project planner examines the statement of scope and extracts all important software functions which is known as

a) Association   b) Decomposition

c) Planning process   d) All of these

(xlix) What can be used to complement decomposition techniques and offer a potentially valuable estimation approach in their own right?

a) Automated estimation tools   b) Empirical estimation models

c) Decomposition techniques   d) Both Automated estimation tools and Empirical estimation models

(l) Which of the following uses empirically derived formulas to predict effort as a function of LOC or FP?

a) FP-Based Estimation   b) Process-Based Estimation

c) COCOMO   d) Both FP-Based Estimation and COCOMO

(li) Which one is not a size measure for software product?

a) LOC

b) Halstead's program length

c) Function Count

d) Cyclomatic Complexity

(lii) COCOMO was developed initially by

a) B. Beizer

b) Rajiv Gupta

c) B.W.Bohem

d) Gregg Rothermal

(liii) COCOMO-II was developed at

a) University of Texas

b) University of Southern California

c) MIT

d) IIT-Kanpur

(liv) Which one is not a stage of COCOMO-II?

a) Early design estimation model

b) Application Composition estimation model

c) Comprehensive cost estimation model

d) Post architecture estimation model

(lv) Which one is not a risk management activity?

a) Risk assessment

b) Risk generation

c) Risk control

d) None of these

(lvi) What is the product of the probability of incurring a loss due to the risk and the potential magnitude of that loss?

a) Risk exposure

b) Risk prioritization

c) Risk analysis

d) All of these

(lvii) What threatens the viability of the software to be built?

a) Known risks

b) Business risks

c) Project Risks

d) Technical Risks

(lviii) Which risks are associated with the overall size of the software to be built or modified?

a) Business impact risks

b) Process definition risks

c) Product size risks

d) Development environment risks

(lix) Risk management is one of the most important jobs for a

a) Client

b) Advisor

c) Product Team

d) Project Manager

(lx) Which of the following risk is the failure of a purchased component to perform as expected?

a) Product Risk

b) Project Risk

c) Business Risk

d) Programming Risk

(lxi) Which of the following term is best defined by the statement: "There will be a change of organizational management with different priorities."?

a) Staff turnover

b) Technology change

c) Management change

d) Product competition

(lxii) Which of the following term is best defined by the statement: "The underlying technology on which the system is built is superseded by new technology."?

a) Technology change

b) Product competition

c) Requirements change

d) None of these

(lxiii) Which of the following term is best defined by the statement: "Derive traceability information to maximize information hiding in the design."?

a) Underestimated development time

b) Organizational restructuring

c) Requirements changes

d) None of these

(lxiv) Which of the following statements are TRUE? I. The context diagram should depict the system as a single bubble. II. External entities should be identified clearly at all levels of DFDs. III. Control information should not be represented in a DFD. IV. A data store can be connected wither to another data

store or to an external entity.

    a) II and III   b) I and III

    c) I and II   d) I, II and III

(lxv) Consider the following statements about the cyclomatic complexity of the control flow graph of a program module. Which of these are TRUE? I. The cyclomatic complexity of a module is equal to the maximum number of linearly independent circuits in the graph. II. The cyclomatic complexity of a module is the number of decisions in the module plus one,where a decision is effectively any conditional statement in the module. III. The cyclomatic complexity can also be used as a number of linearly independent paths that should be tested during path coverage testing

    a) II and III   b) I and II

    c) I and III   d) I, II and III

(lxvi) How many forms exist of Barry Boehm's COCOMO Model?

    a) Two   b) Three

    c) Four   d) None from Exists

(lxvii) A make-buy decision is based on whether

    a) The software may be purchased off-the-shelf   b) "Full-experience" or "Partial-experience" software components should be used

    c) Customer-built software should be developed   d) All of the Mentioned

(lxviii) Programming language experience is a part of which factor of COCOMO cost drivers?

    a) Personnel Factor   b) Product Factor

    c) Platform Factor   d) Project Factor

(lxix) If an Indirect approach is taken, then the sizing approach is represented as

a) LOC   b) FP

c) Fuzzy Logic   d) LOC & FP

(lxx) Which of the following is an activity that distributes estimated effort across the planned project duration by allocating the effort to specific software engineering tasks?

a) Software Macroscopic schedule   b) Software Project scheduling

c) Software Detailed schedule   d) None of these