B. C. A. (Sixth Semester) EXAMINATION, 2022-23

INFORMATION SYSTEM : ANALYSIS DESIGN & IMPLEMENTATION

Paper Code
B C A 6 0 2 N

Questions Booklet Series

A

Time : 1:30 Hours]

[*Maximum Marks : 75*

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.

2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.

3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

(Remaining instructions on the last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।

2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।

3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, तो उसे तुरन्त बदल लें।

(शेष निर्देश अन्तिम पृष्ठ पर)

(Only for Rough Work)

1. The first process model is :

   (A) Spiral model

   (B) Incremental model

   (C) Waterfall model

   (D) None of the Above

2. SCM stands for :

   (A) Software Configuration Management

   (B) Software Control Management

   (C) System Consolidate Management

   (D) None of the Above

3. Who is design and implement database structure ?

   (A) Project Leader

   (B) Manager

   (C) User

   (D) Database Administrator

4. What is system analysis ?

   (A) Collecting facts and information

   (B) Interpreting facts

   (C) Identifying the problems

   (D) All of the mentioned above

5. JAD stands for :

   (A) Joint Approval Design

   (B) Joint Application Development

   (C) Java Application Data

   (D) None of the Above

6. Which is requirement gathering technique ?

   (A) Brainstorming

   (B) Questionnaires

   (C) Interview

   (D) All of the above

7. Which are non-functional requirement ?

   (A) Maintainability

   (B) Reliability

   (C) Compatibility

   (D) All of the above

8. UML is :

   (A) Universal Machine Language

   (B) Unique Modular Language

   (C) Unified Modeling Language

   (D) Unit Machine Learning

9. The primary tool used in structured design is :

   (A) Structure chart

   (B) Module

   (C) DFD

   (D) None of the above

10. Which of the following are system design and its types ?

   (A) Logical design

   (B) Physical design

   (C) Both Logical and Physical design

   (D) None of the mentioned above

11. The step by step instructions that solve a problem is called :

   (A) An Algorithm

   (B) Chart

   (C) List

   (D) None of the Above

12. COCOMO stands for :

   (A) Calculated Cost Model

   (B) Constructive Cost Model

   (C) Computer Cost Model

   (D) None of the above mentioned

13. What is the first step in the software development lifecycle ?

   (A) Testing

   (B) Primary Investigation and Analysis

   (C) Implementation

   (D) Maintenance

14. Documentation is prepared in :

   (A) Only system design

   (B) Only coding

   (C) Every stage of SDLC

   (D) Only system analysis

15. Which are features of Object Oriented Programming ?

   (A) Encapsulation

   (B) Inheritance

   (C) Polymorphism

   (D) All of the above

16. DBMS is :

   (A) Database Management System

   (B) Data Monitoring System

   (C) Data Byte System

   (D) None of the Above

17. A feasibility study :

   (A) considers only single solution

   (B) considers only maintenance

   (C) includes a statement of the problems

   (D) includes a statement of coding

18. System study involves :

   (A) study of an existing system

   (B) documenting the existing system

   (C) identifying current deficiencies and establishing new goals

   (D) All of the mentioned above

19. Which of the following is a valid step in SDLC framework ?

   (A) Requirement Gathering

   (B) System Analysis

   (C) Software Design

   (D) All of the above

20. Software is defined as ....

   (A) set of alphabet

   (B) set of instructions, data or program

   (C) set of numbers

   (D) None of the above

21. Which of the following is not correct model in Software Development Paradigm ?

   (A) Spiral Model

   (B) Waterfall Model

   (C) P Model

   (D) Iterative Enhancement Model

22. Which is not an object oriented programming language ?

   (A) Java

   (B) C

   (C) C++

   (D) All of the above

23. SQA is :

   (A) Software Quality Assurance

   (B) System Quality Audit

   (C) Software Queue Analysis

   (D) None of the above

24. DFD stands for :

   (A) Design Format Diagram

   (B) Data Flow Diagram

   (C) Decision Fact Diagram

   (D) None of the above

25. Which of the following are parameters involved in computing the total cost of a software development project ?

   (A) Effort costs

   (B) Hardware and software costs

   (C) Travel and training costs

   (D) All of the above

26. Which is a tabular method for describing the logic of decisions to be taken ?

   (A) Decision method

   (B) Decision tree

   (C) Decision table

   (D) Decision data

27. CASE tools are :

   (A) Software design tool

   (B) Code generation tool

   (C) Document production tool

   (D) All of the above

28. Which one represents an entity ?

   (A) Table

   (B) Student

   (C) Chair

   (D) All of the above

29. The full form of CASE is :

   (A) Computer Aided Software
       Engineering

   (B) Computer Algorithm System
       Engine

   (C) Computer Advance System
       Existence

   (D) None of the above

30. Students name, their roll number, father
    name and address are examples of :

   (A) Entity

   (B) Relationship

   (C) Attribute

   (D) None of the above

31. Which features of the following is not an
    object oriented programming concept ?

   (A) Abstraction

   (B) Polymorphism

   (C) Encapsulation

   (D) Decision Tree

32. Which of the following software
    paradigms involve product delivery on a
    short cycle of iterations ?

   (A) Waterfall

   (B) Spiral

   (C) Rapid Application Development

   (D) None of the above

33. The change in state is called :

   (A) Transition

   (B) Event

   (C) Action

   (D) None of the above

34. Who consider diagrams as a type of
    Class diagram, component diagram,
    object diagram, and deployment diagram ?

   (A) Structural

   (B) Behavioral

   (C) Non-behavioral

   (D) Non-structural

35. Which diagram is used to show interactions between messages are classified as ?

(A) Activity

(B) State chart

(C) Collaboration

(D) Object lifeline

36. Which of the following are parameters involved in computing the total cost of a software development project ?

(A) Hardware and software costs

(B) Effort costs

(C) Travel and training costs

(D) All of the above

37. Which of the following costs is not part of the total effort cost ?

(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

38. Amongst which of the following is/are suitable to define User Interface Design in Software Engineering ?

(A) It is an effective communication medium between a human and computer

(B) It identifies interface objects and actions

(C) It create a screen layout that forms the basis for a user interface prototype

(D) All of the above

39. Which of the following is drawback of using CASE tool ?

(A) Communication between development team members

(B) Cost associated with the use of tool

(C) Reduction of time and effort

(D) None of the above

40. Which of the following is a part of UML diagrams ?

(A) Class diagram

(B) Object diagram

(C) Both (A) and (B)

(D) None of the above

41. A UML diagram which has a static view :

(A) Use case

(B) Class diagram

(C) List

(D) None of the above

42. Which of the following automate project management activities, manage all work product produced throughout the process ?

(A) Software Development Cycle

(B) Project Estimation cycle

(C) CASE tool

(D) Spiral Model

43. Arrange the following activities for making a software product :

(1) Design strategy

(2) Transformation into product

(3) Implementation

(4) Requirement Gathering

(A) 4, 1, 3, 2

(B) 4, 3, 2, 1

(C) 1, 2, 3, 4

(D) 1, 4, 2, 3

44. ISO stand for :

(A) International Social Organization

(B) Initial Service Operation

(C) Interactive Science Organization

(D) International Standard Organization

45. A/An .... is defined as a group of objects with the same structure and behaviour.

(A) Method

(B) Class

(C) Event

(D) None of the above

46. Which is type of requirement ?

(A) Functional

(B) Non-Functional

(C) Both (A) and (B)

(D) None of the above

47. Software project management begins with a set of activities that are collectively called :

(A) Project Planning

(B) Project Management

(C) Project Evaluation

(D) None of the above

48. In E-R Diagram doubled rectangle is represented as :

(A) Relationship

(B) Entity

(C) Attribute

(D) Weak Entity

49. In E-R diagram R is :

(A) Relationship

(B) Rational

(C) Ratio

(D) None of the above

50. CMM is :

(A) Code Maturity Model

(B) Capacity Module Model

(C) Capability Maturity Model

(D) None of the above

51. Which of the following is not a maturity level in CMM ?

(A) Table

(B) Repeatable

(C) Managed

(D) Optimizing

52. How many levels are there in CMM ?

(A) 1

(B) 2

(C) 4

(D) 5

53. The CMM emphasizes :

(A) The need to record information

(B) The need to accept quality system

(C) The need to coding of program

(D) None of the above

54. Identify which of the following life cycle contains the phases : test case design, test execution, defect tracking, maintenance ?

(A) SDLC

(B) SQLC

(C) STLC

(D) None of the above

55. What is the programming style of the object oriented conceptual model ?

(A) Algorithm

(B) Class and Object

(C) Invariant relationship

(D) Goals, often expressed in a predicate calculus

56. Interaction diagram is a combined term for :

(A) Sequence + collaboration diagram

(B) Activity diagram + state chart diagram

(C) Deployment + collaboration diagram

(D) None of the above mentioned

57. Which of the following is not a diagram studied in Requirement Analysis ?

(A) Use Case

(B) Entity Relationship Diagram

(C) State transition Diagram

(D) Activity Diagram

58. Planning, Analysis, and Design are a part of :

(A) Upper CASE tool

(B) Lower CASE tool

(C) Abstract window toolkit

(D) None of the above mentioned

59. A decision table is :

(A) Represent the information flow

(B) Documents rules, that select one or more actions, based on one or more conditions from a set of possible conditions

(C) Get an accurate picture of the system

(D) Show the decision paths

60. Implementation, Testing and Maintenance are a part of :

(A) Upper CASE tool

(B) Lower CASE tool

(C) Abstract window toolkit

(D) None of the above mentioned

61. Dashed ellipses represent in E-R diagram :

(A) Multivalued Attribute

(B) Derived Attribute

(C) Weak Entity set

(D) None of the above

62. 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 Detailed scheduling

(C) Software Project scheduling

(D) None of the above

63. Which of the following is not an adaptation criterion for software projects ?

(A) Size of the project

(B) Mission criticality

(C) Project staff

(D) Customers complaints

64. The components of the DFD known as a/an .... common synonyms are a bubble, a function or a transformation.

(A) Process

(B) Entity

(C) Level

(D) Flow

65. Which is the following is the most important feature of the spiral model ?

(A) Efficiency management

(B) Risk Management

(C) Time Management

(D) Quality Management

66. Which of the following sets represent levels defined by CMM in increasing order of maturity ?

(A) Initial, Repeatable, Defined, Managed, Optimized

(B) Initial, Defined, Managed, Optimized, Repeatable

(C) Initial, Defined, Managed, Repeatable, Optimized

(D) Defined, Initial, Repeatable, Managed, Optimized

67. In Data Base Management System DDL is :

(A) Data Duplication Line

(B) Data Definition Language

(C) Data Direction Line

(D) None of the above

68. In Data Base Management System DML is :

(A) Data Multiple Language

(B) Data Monitoring Language

(C) Data Manipulation Language

(D) None of the above

69. SQL is :

(A) Sequence Query Language

(B) Structured Query Language

(C) Sub Query Language

(D) None of the above

70. Among which of the following are the measuring software quality ?

(A) Correctness

(B) Maintainability

(C) Usability

(D) All of the above

71. ISO 9000 certificate is issued for :

   (A) An organization process

   (B) Specific product of organization

   (C) Marketing and Advertising Product

   (D) None of the above

72. The 0-Level DFD is also known as :

   (A) Virtual Diagram

   (B) Data Diagram

   (C) Object Diagram

   (D) Context Diagram

73. A software might allow a user to interact

   via :

   (A) Keyboard command

   (B) Mouse movement

   (C) Voice recognition command

   (D) All of the above

74. GUI stands :

   (A) Graphical User Interface

   (B) Graphical Unique Identification

   (C) Gigabyte User Interface

   (D) None of the above

75. CLI stands :

   (A) Common Language Interface

   (B) Command Line Interface

   (C) Component Line Initial

   (D) None of the above

76. A .... is represented graphically by an arrow into or out of a process in DFD.

   (A) Process

   (B) Entity

   (C) Level

   (D) Flow

77. Choose the correct answer from the codes below :

   Statement (1) : UML is a standard way to visualize the design of a system.

   Statement (2) : UML is a coding process.

   Codes :

   (A) Only Statement 1 is correct

   (B) Only Statement 2 is correct

   (C) Statement 1 and 2 both are correct

   (D) Statement 1 and 2 both are incorrect

78. What is major objective of System Analysis and Design ?

   (A) Improve Communication

   (B) Improve Organizational system

   (C) Improve Instruction

   (D) None of the above

79. To run the old system and the new system at same time for a specified period, the system implementation approach used is :

(A) Sequential

(B) Rapid

(C) Parallel

(D) None of the above

80. The full form of SSADM :

(A) Structured Systems Analysis and Design Method

(B) Sequential System Analysis and Data Method

(C) Short System Analysis and Data Method

(D) Systematic Static Analysis and Data Method

81. Type of feasibility study is :

(A) Technical

(B) Economical

(C) Operational

(D) All of the above

82. The benefit of object oriented modeling is :

(A) The ability to tackle more challenging problems

(B) Reusability of analysis, design and programming result

(C) Improved communication between users, analysts etc.

(D) All of the above

83. Which of the following are types of code review ?

(A) Code walkthrough

(B) Code inspection

(C) Both (A) and (B)

(D) None of the above

84. In DFD, an input/output receiver is generally represented by :

(A) An arrow

(B) A circle

(C) A rectangle

(D) None of the above

85. Which type of data can be stored in the database ?

(A) Image oriented data

(B) Text, files containing data

(C) Both (A) and (B)

(D) None of the above

86. Which of the following is not an example of DBMS ?

(A) MySQL

(B) MongoDB

(C) Microsoft SQL Server

(D) Google Chrome

87. The disadvantage of Structured System Analysis and Design Methodology is :

(A) Usability

(B) Time Consuming

(C) Effective use of skill

(D) None of the above

88. The advantage(s) of CASE tool is/are :

(A) Improve speed and reduce the time needed to complete software development

(B) Have the capability to produce working source code for the application

(C) To provide maintenance support

(D) All of the above

89. Which is not an input device ?

(A) Monitor

(B) Keyboard

(C) Scanner

(D) Mouse

90. Which is not an output device ?

(A) Printer

(B) Monitor

(C) Speaker

(D) Keyboard

91. Who identifies, documents, and verifies that corrections have been made to the software ?

(A) Project manager

(B) Project team

(C) Software Quality Assurance (SQA) group

(D) None of the above

92. A common reason for changing an information system is :

(A) New requirements

(B) New technology

(C) Problems in the existing system

(D) All of the above

93. Which among the following best describes polymorphism ?

(A) It is the ability for a message/data to be processed in more than one form

(B) It is the ability for a message/data to be processed in only 1 form

(C) It is the ability for many messages/data to be processed in one way

(D) It is the ability for undefined message/data to be processed in at least one way

94. The 4GLs (Fourth Generation Language) is :

(A) BASIC

(B) COBOL

(C) FORTRAN

(D) PHP

95. Choose the correct answer from the codes below :

Statement (1) : Functional requirements is same as non-functional requirement.

Statement (2) : Maintainability is non-functional requirement.

Codes :

(A) Only Statement 1 is correct

(B) Only Statement 2 is correct

(C) Statement 1 and 2 both are correct

(D) Statement 1 and 2 both are incorrect

96. The OOP stands for :

(A) Other Object Platform

(B) Object Oriented Programming

(C) Oriented Other Platform

(D) None of the above

97. Why is software difficult to build ?

(A) Controlled changes

(B) Lack of reusability

(C) Lack of monitoring

(D) All of the above

98. The COCOMO model is used for :

(A) Size estimation

(B) Cost estimation

(C) Variable estimation

(D) Function estimation

99. .... is a measure of the degree of interdependence.

(A) Cohesion

(B) Coupling

(C) Entity

(D) All of the above

100. Which of the following is not a project manager's activity ?

(A) Project control

(B) Project management

(C) Project planning

(D) Project design

4. Four alternative answers are mentioned for each question as—A, B, C & D in the booklet. The candidate has to choose the correct answer and mark the same in the OMR Answer-Sheet as per the direction :

Example :

Question :

Q. 1 Ⓐ ⬤ Ⓒ Ⓓ
Q. 2 Ⓐ Ⓑ ⬤ Ⓓ
Q. 3 Ⓐ ⬤ Ⓒ Ⓓ

Illegible answers with cutting and over-writing or half filled circle will be cancelled.

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.

6. All answers are to be given on OMR Answer sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.

7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.

8. After the completion of the examination candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.

9. There will be no negative marking.

10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.

11. To bring and use of log-book, calculator, pager and cellular phone in examination hall is prohibited.

12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. : On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is ny discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर— A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छाँटना है। उत्तर को OMR आन्सर-शीट में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

उदाहरण :

प्रश्न :

प्रश्न 1 Ⓐ ⬤ Ⓒ Ⓓ
प्रश्न 2 Ⓐ Ⓑ ⬤ Ⓓ
प्रश्न 3 Ⓐ ⬤ Ⓒ Ⓓ

अपठनीय उत्तर या ऐसे उत्तर जिन्हें काटा या बदला गया है, या गोले में आधा भरकर दिया गया, उन्हें निरस्त कर दिया जाएगा।

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।

6. सभी उत्तर केवल ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।

7. ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।

8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।

9. निगेटिव मार्किंग नहीं है।

10. कोई भी रफ कार्य, प्रश्न-पुस्तिका के अन्त में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।

11. परीक्षा-कक्ष में लॉग-बुक, कैलकुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।

12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण : प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्न-पुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्न-पुस्तिका प्राप्त कर लें।