

Roll. No.

O.M.R. Serial No.

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Question Booklet Number

600224

BCA (SEM.-VI) (NON-NEP) EXAMINATION, 2024
COMPUTER APPLICATION
(Information System Analysis Design & Implementation)

[BCA-602 (N)]

Paper Code							
Z	2	0	0	0	7	5	N

Question Booklet
Series

D

Time : 1 : 30 Hours

Max. 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.
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 :

(Remaining instructions on 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, उसे तुरन्त बदल लें।
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 छोटना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

SE

1. It is necessary to gather :
 - (A) quantitative information only as qualitative information is usually biased
 - (B) both qualitative and quantitative information
 - (C) qualitative information only as it is easily available
 - (D) qualitative information only as quantitative information is usually not correct
2. Gathering information in large and complex organizations is difficult and takes time because :
 - (i) it is necessary to consult a large number of persons at various levels of hierarchy in the organization
 - (ii) one has to examine the current system in detail
 - (iii) a clear strategy has to be evolved to gather information
 - (iv) it is necessary to use an information flow model of an organization
 - (A) (i) and (ii)
 - (B) (iii) and (iv)
 - (C) (i) and (ii)
 - (D) (ii) and (iv)
3. The expansion of SRS is :
 - (A) System Requirements Specification
 - (B) System Resources Statement
 - (C) Statement of Reliability of System
 - (D) Standard Requirements Statement
4. All information required can be gathered in :
 - (A) one interview
 - (B) two interviews
 - (C) several interviews
 - (D) several interviews and group discussions
5. A cost-benefit analysis is performed to assess :
 - (A) economic feasibility
 - (B) operational feasibility
 - (C) technical feasibility
 - (D) all of the above
6. The intangible benefits in the following list are :
 - (i) savings due to reducing investment
 - (ii) savings due to sending bills faster and consequent early collection
 - (iii) providing better service to the customers
 - (iv) improving quality of company's products
 - (A) (i) and (ii)
 - (B) (iii) and (iv)
 - (C) (ii) and (iii)
 - (D) (i) and (iii)

7. Documentation is prepared :
 - (A) at every stage
 - (B) at system design
 - (C) at system analysis
 - (D) at system development
8. Decision tree uses :
 - (A) pictorial depiction of alternate conditions
 - (B) nodes and branches
 - (C) consequences of various depicted alternates
 - (D) All of the above
9. A decision table facilitates conditions to be related to :
 - (A) Actions
 - (B) Programs
 - (C) Tables
 - (D) Operation
10. Problem analysis is done during :
 - (A) system design phase
 - (B) systems analysis phase
 - (C) before system test
 - (D) All of the above
11. A _____ is an outline of a process that keeps develop successful information systems.
 - (A) System Development Life Cycle
 - (B) CASE tool
 - (C) Phased Conversion
 - (D) Success Factors
12. An appraisal, of a system's performance after it has been installed, is called system :
 - (A) planning
 - (B) review
 - (C) maintenance
 - (D) batch Processing
13. Which of the following is not a characteristic of good test data?
 - (A) users do not participate at this preliminary stage
 - (B) should be comprehensive
 - (C) every statement should be executed
 - (D) All of the above
14. An example of a hierarchical data structure is :
 - (A) Array
 - (B) Linked list
 - (C) Tree
 - (D) All of the above
15. is a group of interested components working together towards a common goal by accepting inputs and producing outputs in an organized transformation process.
 - (A) System
 - (B) Network
 - (C) Team
 - (D) System Unit
16. External Entities may be a :
 - (A) Source of input data only
 - (B) Source of input data or destination of results
 - (C) Destination of results only
 - (D) Repository of data

17. The main objective of feasibility study is :
- (A) to assess whether it is possible to meet the requirements specifications
 - (B) to assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware
 - (C) to assist the management in implementing the desired system
 - (D) to remove bottlenecks in implementing the desired system
18. Initial requirements specification is :
- (A) not changed till the end of the project
 - (B) continuously changed during project implementation
 - (C) only a rough indication of the requirement
 - (D) changed and finalized after feasibility study
19. The final specifications are arrived at:
- (A) after feasibility study
 - (B) during feasibility study
 - (C) just before implementation phase
 - (D) when the system is being designed
20. System approval criteria are specified:
- (A) when the final specifications are drawn up
 - (B) during feasibility study
 - (C) during the requirements specifications stage
 - (D) during system study stage
21. Hardware study is required :
- (A) to find out cost of computer system needed
 - (B) to determine the type of computer system and software tools needed to meet the final system specification
 - (C) to make sure that the system does not become obsolete
 - (D) to find how to implement the system
22. System design is carried out :
- (A) as soon as system requirements are determined
 - (B) whenever a system analyst feels it is urgent
 - (C) after final system specifications are approved by the organization
 - (D) whenever the user management feels it should be done
23. The primary objective of system design is to :
- (A) design the programs, databases and test plan
 - (B) design only user interfaces
 - (C) implement the system
 - (D) find out how the system will perform

24. Which of the following is not a characteristic of a good requirement?
 (A) Specific
 (B) Measurable
 (C) Achievable
 (D) Ambiguous
25. What is the purpose of a data dictionary?
 (A) To provide a glossary of terms used in the system
 (B) To provide a description of the system's data structures
 (C) To provide a list of all the system components
 (D) To provide a description of the system's processes
26. is an important factor of management information system.
 (A) System
 (B) Data
 (C) Process
 (D) All of the above
27. Which DFD component represents entities that interact with the system but aren't part of it?
 (A) Rectangle
 (B) Ellipse
 (C) Diamond shaped box
 (D) Circle
28. What term describes raw data that has been transformed into something useful for making choices?
 (A) System
 (B) Information
 (C) Technology
 (D) Service
29. After the design phase the document prepared is known as.....
 (A) system specification
 (B) performance specification
 (C) design specification
 (D) None of these
30. Use the new system as the same time as the old system to compare the results. This is known as
 (A) Procedure Writing
 (B) Simultaneous Processing
 (C) Parallel Operation
 (D) File Conversion
31. can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.
 (A) System Analysis
 (B) System Data
 (C) System Procedure
 (D) System Record
32. Which of the following is / are the characteristics of information?
 (A) Accuracy and Relevance
 (B) Form of information and Timeliness
 (C) Completeness and Purpose
 (D) All of the above
33. The data Flow Diagram is the basic component of system.
 (A) Conceptual
 (B) Logical
 (C) Physical
 (D) None of the above

34. A data dictionary is usually developed:
- (A) At requirements specification phase
 - (B) During feasibility analysis
 - (C) When DFD is developed
 - (D) When a database is designed
35. A data element in a data dictionary may have :
- (A) only integer value
 - (B) no value
 - (C) only real value
 - (D) only decimal value
36. A concise code is necessarily :
- (A) Precise
 - (B) Meaningful
 - (C) Comprehensive
 - (D) Difficult
37. What does RAD stand for?
- (A) Rapid Application Document
 - (B) Rapid Application Development
 - (C) Relative Application Development
 - (D) None of the above
38. Interviews are essential to gather :
- (A) quantitative information
 - (B) qualitative information
 - (C) facts and figures
 - (D) statistical information
39. Sending questionnaires are the good means of gathering :
- (A) quantitative data
 - (B) qualitative data
 - (C) both quantitative and qualitative data
 - (D) data from top management
40. An organization requests an information system to be designed when :
- (A) there is a change in management
 - (B) it is dissatisfied with the current system as it does not meet their information requirement
 - (C) the current system has been working for 2 years
 - (D) new software tools are introduced in the market
41. Graphical tools used to arrive at SRS are:
- (i) Data Flow Diagrams
 - (ii) Program Flow Charts
 - (iii) System Flow Charts
 - (iv) Document Flow Diagrams
- (A) (i) and (ii)
 - (B) (ii) and (iii)
 - (C) (i) and (iv)
 - (D) (ii) and (iv)
42. The most difficult information to gather in an organization is :
- (A) that which is known to only few persons in an organization
 - (B) that which is not written down in an organizational manuals
 - (C) company confidential information
 - (D) what is consumed as obvious by the managers in an organization

43. The main objective of system evaluation is :
- (A) to see whether the system met specification
 - (B) to improve the system based on operational experience for a period
 - (C) to remove bugs in the programs
 - (D) to assess the efficiency of the system
44. Systems are modified whenever :
- (A) user's requirements change
 - (B) new computers are introduced in the market
 - (C) new software tools become available in the market
 - (D) other similar organization modify these system
45. To easily modify the existing system it is necessary to :
- (A) use good software tools
 - (B) use the best hardware available
 - (C) design the system which can be changed at low cost
 - (D) keep the programming team happy
46. It is necessary to design an information system to easily accommodate change, because :
- (A) new computers are introduced every year
 - (B) new computer languages become popular every year
 - (C) organizations' requirements change over a period of time
 - (D) systems need continuous debugging
47. System analysts have to interact with :
- (i) managers of organizations
 - (ii) users in the organization
 - (iii) programming team
 - (iv) data entry operator
- (A) (iii) and (iv)
 - (B) (i), (ii) and (iii)
 - (C) (ii), (iii) and (iv)
 - (D) (ii) and (iii)
48. Changing an operational information system is :
- (A) impossible
 - (B) expensive and done selectively
 - (C) never required
 - (D) usually done
49. The most important attribute of a systems analyst is :
- (A) excellent programming skills
 - (B) very good hardware designing skills
 - (C) very good technical management skills
 - (D) very good writing skills
50. Systems analyst should use software tools in their work as :
- (A) all analysts use them
 - (B) they assist in systematic design of systems
 - (C) they are inexpensive
 - (D) they are easily available
51. Which of the following does not occur in phase - 4 of the system development life cycle (SDLC)?
- (A) conduct interviews
 - (B) train users
 - (C) acquire hardware and software
 - (D) test the new system

52. During what phase, the requirement analysis is performed?
- system design phase
 - system development phase
 - system analysis phase
 - system investigation phase
53. Which of the following activities, does not belong to the Implementation phase of the SDLC?
- File conversion
 - Program testing
 - User training
 - All of the above
54. During the system study, analysts determine manager's information needs by :
- conducting tours of a nearby computer center
 - asking questions
 - showing samples of computer reports
 - teaching short courses in programming languages
55. Which of the following is (are) the characteristic(s) of a system?
- Organization
 - Interaction
 - Interdependence
 - All of the above
56. A graphic representation of an information system is called :
- flow chart
 - pictogram
 - data flow diagram
 - histogram
57. Which of the following is not considered as a tool at the system design phase?
- pie chart
 - data-flow diagram
 - decision table
 - systems flowchart
58. Which are the tools not used for System Analysis ?
- System - test data
 - Decision table
 - Data Flow Diagram
 - Flowcharts
59. The code used for the validation purpose is known :
- Self-checking code
 - Sequence code
 - Alpha numeric code
 - Group classification code
60. A data dictionary is useful as :
- it is a documentation aid
 - it assists in designing input form
 - it contains all data in an application including temporary data used in processes
 - it is a good idea in system design
- (i) and (ii)
 - (i) and (iv)
 - (i),(ii) and (iii)
 - (i) and (iv)
61. By metadata we mean :
- very large data
 - data about data
 - data dictionary
 - meaningful data

62. What is the purpose of system analysis and design?
- (A) To develop software
 - (B) To improve system efficiency
 - (C) To provide training to employees
 - (D) To monitor system performance
63. Which of the following is not a type of system requirement?
- (A) Functional
 - (B) Non-functional
 - (C) User
 - (D) Technical
64. Which of the following is not a phase of the SDLC (Software Development Life Cycle)?
- (A) Planning
 - (B) Analysis
 - (C) Implementation
 - (D) Review
65. What is the purpose of the planning phase of the SDLC?
- (A) To determine the system requirements
 - (B) To develop a detailed project plan
 - (C) To design the system
 - (D) To implement the system
66. What is the purpose of a feasibility study?
- (A) To determine if a project is technically feasible
 - (B) To determine if a project is financially feasible
 - (C) To determine if a project is socially feasible
 - (D) To determine if a project is politically feasible
67. Which of the following is not a component of UML (Unified Modeling Language)?
- (A) Use case diagram
 - (B) Activity diagram
 - (C) Entity-relationship diagram
 - (D) Class diagram
68. What is the purpose of a data flow diagram?
- (A) To illustrate the system architecture
 - (B) To depict the system inputs and outputs
 - (C) To depict the system data and relationships
 - (D) To illustrate the system processes
69. Which of the following is not a software development methodology?
- (A) Agile
 - (B) Waterfall
 - (C) RAD (Rapid Application Development)
 - (D) UML (Unified Modeling Language)

70. Data cannot flow between two data stores because :
- it is not allowed in DFD
 - a data store is a passive repository of data
 - data can get corrupted
 - they will get merged
71. The characteristics of well designed system are :
- Practical
 - Effective
 - Secure
 - Reliable
 - Flexible
 - Economical
- (a), (b), (c) and (d)
 - (a), (c), (d) and (e)
 - (a), (b), (c), (d) and (e)
 - (a), (b), (c), (d), (e) and (f)
72. gives defining the flow of the data through and organization or a company or series of tasks that may or may not represent computerized processing.
- System process
 - System flowchart
 - System design
 - Structured system
73. Actual programming of software code is done during the _____ step in the SDLC.
- Maintenance and Evaluation
 - Design
 - Analysis
 - Development and Documentation
74. Enhancements, upgrades, and bug fixes are done during the _____ step in the SDLC.
- Maintenance and Evaluation
 - Problem / Opportunity Identification
 - Design
 - Development and Documentation
75. _____ is a tabular method for describing the logic of the decisions to be taken.
- Decision Tables
 - Decision Tree
 - Decision Method
 - Decision Data
76. HIPO stands for :
- Hierarchy input process output
 - Hierarchy input plus output
 - Hierarchy plus input process output
 - Hierarchy input output Process
77. Advantages of system flowcharts
- Effective communication
 - Effective analysis
 - Queasier group or relationships
 - All of the above
78. The approach used in top-down analysis and design is :
- to identify the top level functions by combining many smaller components into a single entity
 - to prepare flow charts after programming has been completed
 - to identify a top level function and then create a hierarchy of lower level modules and components.
 - All of the above

79. The major goal of requirement determination phase of information system development is:
- (A) determine whether information is needed by an organization
 - (B) determine what information is needed by an organization
 - (C) determine how information needed by an organization can be provided
 - (D) determine when information is to be given
80. Requirement specification is carried out :
- (A) after requirements are determined
 - (B) before requirements are determined
 - (C) simultaneously with requirements determination
 - (D) independent of requirements determination
81. It is necessary to prioritize information requirements of an organization at the requirements determination phase as :
- (A) it is always good to prioritize
 - (B) there are conflicting demands from users
 - (C) there are constraints on budgets, available time, human resource and requirement
 - (D) all good organization do it
82. The role of a system analyst drawing up a requirements specification is similar to :
- (A) architect designing a building
 - (B) a structural engineer designing a building
 - (C) a contractor constructing a building
 - (D) the workers who construct a building
83. It is necessary to consult the following while drawing up requirement specification:
- (A) only top managers
 - (B) only top and middle management
 - (C) only top, middle and operational managers
 - (D) top, middle and operational managers and also all who will use the system
84. In order to understand the working of an organization for which a computer based system is being designed, an analyst must :
- (A) look at only current work and document flow in the organization
 - (B) discuss with top level and middle level management only
 - (C) interview top, middle, line managers and also clerks who will enter data and use the system
 - (D) only clerical and middle level staff who have long experience in the organization and will be users of the system

85. What is the purpose of a use case diagram?
- (A) To depict the system architecture
 - (B) To depict the system inputs and outputs
 - (C) To depict the system data and relationships
 - (D) To illustrate the system functionality
86. What are the two main approaches to software testing, focusing on external behaviour versus internal structure?
- (A) Black box testing is conducted by the development team, while white box testing is conducted by the testing team
 - (B) Black box testing focuses on the system's internal logic, while white box testing focuses on the system's external behaviour
 - (C) Black box testing is conducted without knowledge of the system's internal workings, while white box testing is conducted with knowledge of the system's internal workings
 - (D) Black box testing is conducted using automated tools, while white box testing is conducted manually
87. What is the purpose of a class diagram?
- (A) To depict the system inputs and outputs
 - (B) To depict the system processes
 - (C) To depict the system data and relationships
 - (D) To illustrate the system architecture
88. What is the purpose of a communication diagram?
- (A) To depict the system inputs and outputs
 - (B) To depict the system processes
 - (C) To depict the system data and relationships
 - (D) To illustrate the interactions between objects in a system
89. What is the purpose of a system flowchart?
- (A) To illustrate the system architecture
 - (B) To depict the system inputs and outputs
 - (C) To depict the system data and relationships
 - (D) To illustrate the system processes
90. What is the purpose of a context diagram?
- (A) To illustrate the system architecture
 - (B) To depict the system inputs and outputs
 - (C) To depict the system data and relationships
 - (D) To illustrate the system processes

91. Programmers use _____ to organize and summarize the results of their problem analysis.
- (A) Flowcharts
 - (B) Input charts
 - (C) HIPO
 - (D) Output charts
92. Changes made periodically to a system, after its implementation, is known as system :
- (A) Analysis
 - (B) Design
 - (C) Development
 - (D) Maintenance
93. The first step in systems Development Life Cycle is :
- (A) database design
 - (B) system design
 - (C) preliminary investigation and analysis
 - (D) graphical user interface
94. An open rectangle :
- (A) defines a source or destination of system data
 - (B) identifies data flow
 - (C) represents a process that transforms incoming data flow(s) into outgoing data flows
 - (D) is a data store-data at rest, or a temporary repository of data
95. Graphic representation of the control logic of processing functions or modules representing a system, is known as:
- (A) Structured analysis
 - (B) Structured chart
 - (C) Structured English
 - (D) System Flow chart
96. Difference between Decision - Tables and Decision Trees is (are) :
- (A) value to end user
 - (B) form of representation
 - (C) one shows the logic while other shows the process
 - (D) All of the above
97. The first step in the problem-solving process is to _____.
- (A) Plan the algorithm
 - (B) Analyse the problem
 - (C) Desk-check the algorithm
 - (D) Evaluate and modify (if necessary) the program
98. Coding and testing are done In a :
- (A) top-down manner
 - (B) bottom-up manner
 - (C) ad hoc manner
 - (D) cross sectional manner
99. Mistakes made in the system analysis stage show up in :
- (A) implementation
 - (B) system design
 - (C) system developments
 - (D) All of the above
100. HIPO means :
- (A) is a forms-driven technique in which standard forms are used to document the information
 - (B) consists of a hierarchy chart and an associated set of input/ process/ output charts
 - (C) captures the essence of top down decomposition
 - (D) All of the above

Rough Work

Example :

Question :

Q.1 (A) ● (C) (D)

Q.2 (A) (B) ● (D)

Q.3 (A) ● (C) (D)

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 & 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 any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ● (C) (D)

प्रश्न 2 (A) (B) ● (D)

प्रश्न 3 (A) ● (C) (D)

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ०एम०आर० 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. ओ०एम०आर० 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 में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, 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 प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।