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PD-43

Total No. of Pages : 10

Ph.D. Entrance Examination, 2024
COMPUTER APPLICATION
(Faculty of Commerce and Management)
Subject Code - 58844

Day and Date : Wednesday 13-11-2024

Total Marks : 100

Time : 01.00 p.m. to 3.00 p.m.

Instructions :

- 1) SECTION I have 25 questions and 50 marks.
- 2) SECTION II have 25 questions and 50 marks.
- 3) Total 50 questions and each question have 2 marks.

SECTION-I

Q.1 Which of the following is an example of research misconduct?

- | | |
|-----------------------|---------------------|
| a) Fabricating data | b) Plagiarism |
| c) Falsifying results | d) All of the above |

Q.2 What is a Research Design?

- a) A way of conducting research that is not grounded in theory.
- b) The choice between using qualitative or quantitative methods.
- c) The style in which you present your research findings e.g. a graph.
- d) A framework for every stage of the collection and analysis of data.

Q.3 A research paper

- a) is a compilation of information on a topic.
- b) contains original research as deemed by the author.
- c) contains peer-reviewed original research or evaluation of research conducted by others.
- d) can be published in more than one journal,

Q.4 The main problem in questionnaire is

- a) Accessible to Diverse Respondent
- b) Greater Anonymity
- c) Shows an inability of respondent to provide information
- d) None of these

Q.5 What do you consider as the main aim of inter disciplinary research?

- a) To bring out holistic approach to research.
- b) To reduce the emphasis of single subject in research domain.
- c) To over simplify the problem of research.
- d) To create a new trend in research methodology.

Q.6 Which of the following refers to a method of sampling in which a core group of participants who are initially sampled for a research study recruit or recommend other potential participants?

- a) Simple Random Sampling
- b) Snowball Sampling
- c) Quota Sampling
- d) Stratified Random Sampling

Q.7 A college principal conduct ethnographic probe into the problems faced by tribal students. Which method of sampling will be most appropriate?

- a) Random Sampling
- b) Stratified Sampling
- c) Cluster Sampling
- d) Systematic Sampling

Q.8 The internal validity factor in research is related to the issue of:

- a) Causality
- b) Naturalism
- c) Generalisability
- d) Duplication

Q.9 Research design that needs to collect factual information on a continuing basis is classified as:

- a) Longitudinal Study Design
- b) Pre and Post Study Design
- c) Cross Sectional Study Design
- d) Double Control Study Design

Q.10 Age of the respondent is an example of-

- a) Parallel Variable
- b) Monadic variable
- c) Dyadic Variable
- d) Simple Variable

Q.11 Variables in the cross sectional research design are:

- a) Nominal
- b) Ordinal
- c) Both continuous and discrete
- d) Both interval and ratio

Q.12 A simple random sample is one in which:

- a) From a random starting point, every nth unit from the sampling frame is selected
- b) A non-probability strategy is used, making the results difficult to generalize
- c) The researcher has a certain quota of respondents to fill for various social groups
- d) Every unit of the population has an equal chance of being selected

Q.13 After identifying the important variables and establishing the logical reasoning in theoretical framework, the next step in the research process is.....

- a) To conduct surveys
- b) To generate the hypothesis
- c) To focus group discussions
- d) To use experiments in an investigation

Q.14 Secondary data consists of information

- a) That already exists somewhere and was collected for another purpose
- b) Used by competitors
- c) That does not currently exist in an organized form
- d) That already exists somewhere and is outdated E. That the researcher can obtain through surveys and observation.

Q.15 Which is not type of test of significance for small sample?

- a) t-test
- b) z-test
- c) F-test
- d) Q-test

Q.16 The dividing point between the region where the null hypothesis is rejected and the region where it is not rejected is said to be

- a) Critical region
- b) Critical value
- c) Acceptance region
- d) Significant region

Q.17 If H_0 is true and we reject it is called:

- a) Type-I error
- b) Type-II error
- c) Standard error
- d) Sampling error

Q.18 The degree of freedom for paired t-test based on n pairs of observations is:

- a) $2n-1$
- b) $n-2$
- c) $2(n-1)$
- d) $n-1$

Q.19 A primary data collection method that involves tracking behavior over a period of time is called:

- a) browsing
- b) observation
- c) sampling
- d) testing

Q.20 Which of these is NOT an example of plagiarism?

- a) Explaining another author's concept with your own words without citing.
- b) Using the author's exact words into your work but enclose the work with inverted commas and provide a reference.
- c) Slightly adapting a figure from the internet and claim it as your own.
- d) Copying a sentence but change two words and provide a reference

Q.21 In the true experimental research design:

- a) No control on external variable
- b) Less control on external variables
- c) Control on external variables by randomization
- d) No use of randomization

Q.22 The feasibility of a research study should be considered in light of:

- a) Cost and time required to conduct the study
- b) Access to gatekeepers and respondents
- c) Potential ethical concerns
- d) All of the above

Q.23 A radical perspective on ethics suggests that:

- a) Researchers can do anything they want
- b) The use of checklists of ethical actions is essential
- c) The powers of Institutional Review Boards should be strengthened
- d) Ethics should be based on self-reflexivity

Q.24 A study of teaching professionals posits that their performance-related pay increases their motivation which in turn leads to an increase in their job satisfaction. "What kind of variable is 'motivation' in this study?"

- a) Extraneous
- b) Confounding
- c) Intervening
- d) Manipulated

Q.25 When designing a questionnaire it is important to do each of the following EXCEPT

- a) Pilot the questionnaire
- b) Avoid jargon
- c) Avoid double questions
- d) Use leading questions

SECTION-II

Q.26 Which of the following is a mutable data type in Python?

- a) Tuple
- b) String
- c) List
- d) Integer

Q.27 Which of the following is a method that initializes attributes in a Python class?

- a) `_class_`
- b) `_self_`
- c) `_init_`
- d) `_main_`

Q.28 What is a "critical region" in the context of inter-process communication?

- a) A shared section of memory only accessible by one process at a time
- b) A region within the CPU that handles process control
- c) An area of the operating system for I/O management
- d) A type of inter-process communication protocol

Q.29 Which deadlock prevention technique ensures that a process will release all resources before requesting new ones?

- a) Circular Wait
- b) Hold and Wait
- c) No Preemption
- d) Mutual Exclusion

Q.30 Which type of exception is defined by the user in PL/SQL?

- a) Predefined Exception
- b) System-defined Exception
- c) Named Exception
- d) Implicit Exception

Q.31 Which Normal Form removes partial dependency?

- a) 1NF
- b) 2NF
- c) 3NF
- d) BCNF

Q.32 What does ACID stand for in the context of transactions?

- a) Addition, Control, Integrity, Duration
- b) Atomicity, Consistency, Isolation, Durability
- c) Access, Control, Isolation, Duration
- d) Addition, Consistency, Integrity, Database

Q.33 Which measure of dispersion indicates how much data varies from the mean in the same units as the data?

- a) Variance
- b) Coefficient of Variation
- c) Sample Standard Deviation
- d) Interquartile Range

Q.34 Which measure of central tendency is shown in a boxplot?

- a) Mean
- b) Median
- c) Mode
- d) Range

Q.35 Which traversal method uses a stack data structure?

- a) Depth-First Search (DFS)
- b) Breadth-First Search (BFS)
- c) Both DFS and BFS
- d) Neither DFS nor BFS

Q.36 Which of the following is a key element of Organizational Behaviour?

- a) Leadership
- b) Marketing
- c) Finance
- d) All of the above

Q.37 Which motivation theory focuses on intrinsic and extrinsic rewards?

- a) Maslow's Hierarchy of Needs
- b) McClelland's Theory of Needs
- c) Expectancy Theory
- d) Reinforcement Theory

Q.38 Which of the following is NOT typically considered an information criterion in IT' governance?

- a) Confidentiality
- b) Integrity
- c) Availability
- d) Redundancy

Q.39 Which function is used to establish a connection to the MySQL database using MySQLI?

- a) mysqli_connect()
- b) connect_mysql()
- c) db_connect()
- d) mysqli_open()

Q.40 Which method is used to start a new thread in Java?

- a) start Thread()
- b) begin()
- c) start()
- d) run()

Q.41 Which of the following is not a linear data structure?

- a) Array
- b) Linked List
- c) Stack
- d) Tree

Q.42 Which of the following is NOT a type of NoSQL database?

- a) Document-oriented
- b) Key-value
- c) Graph
- d) Relational

Q.43 Which layer of the OSI model is responsible for error detection and correction?

- a) Application Layer
- b) Presentation Layer
- c) Transport Layer
- d) Data Link Layer

Q.44 What does ISO 9001 focus on in a quality management system?

- a) Environmental management b) Product safety
- c) Customer satisfaction and continuous improvement
- d) Data security

Q.45 Which cyber crime is defined under the Indian Penal Code (IPC)? -

- a) Hacking b) Identity theft
- c) Data theft d) All of the above

Q.46 Which of the following is an example of an activation function?

- a) Linear function b) Sigmoid function
- c) ReLU (Rectified Linear Unit) d) All of the above

Q.47 Which component is responsible for managing database connections in Hibernate?

- a) SessionFactory b) Session
- c) Transaction d) Query

Q.48 What is the role of machine learning in IoT applications?

- a) To store large amounts of data
- b) To enhance device capabilities through data analysis
- c) To design hardware components
- d) To create operating systems

Q.49 Which of the following communication protocols is widely used for IoT devices?

- a) HTTP b) MQTT
- c) FTP d) POP3

Q.50 In MapReduce, what does the Mapper do?

- a) Aggregates the results
- b) Reads the input data and produces intermediate key-value pairs
- c) Writes output to HDFS
- d) Manages job scheduling

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