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**M.Phil/Ph.D. Entrance Examination, October - 2021**  
**COMPUTER APPLICATION**

**Day and Date : Tuesday, 26 - 10 - 2021****Total Marks : 100****Time : 10.00 a.m. to 12.00 noon**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Each question carries 2 marks.
  - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
  - 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR Answer Sheet.
  - 5) Follow the instructions given on OMR Sheet.
  - 6) Rough work shall be done on the sheet provided at the end of question paper.
  - 7) Only non programmable calculators are allowed.

**Section - I (Research Methodology)**

- 1) Research Methodology can reduce which of the following in VUCA world:  
(A) Volatility (B) Uncertainty  
(C) Complexity (D) Ambiguity
- 2) The method by which a sample is chosen:  
(A) Unit (B) Random  
(C) Design (D) Census
- 3) Which of the following Research Method is used for formation of hypothesis?  
(A) Exploratory Research (B) Descriptive Research  
(C) Causal Research (D) Experiments

***P.T.O.***

## M/P ENT – 140

- 4) In which of the following method of Descriptive analysis, A fixed sample (or samples) of population element is measured repeatedly on the same variables (sample or samples remain the same over time)
- (A) Longitudinal Design
  - (B) Multiple Cross Sectional Design
  - (C) Single Cross Sectional Design
  - (D) Experimental Research
- 5) When little is known about problem situation, it is desirable to begin with which of the following method.
- (A) Exploratory Research
  - (B) Causal Research
  - (C) Descriptive Research
  - (D) Experiments
- 6) The property by which consistent results are achieved when we repeat the measurement is called \_\_\_\_\_.
- (A) Validity
  - (B) Reliability
  - (C) Standard Deviation
  - (D) Variance
- 7) The methodological framework contains
- (A) All of the key concepts in the research project.
  - (B) All of the detail on how the research was conducted.
  - (C) The literature review.
  - (D) Detail on the background to the research.
- 8) Referencing is:
- (A) Quite important
  - (B) Somewhat important
  - (C) Not important
  - (D) Critically important

- 9)** What does the term ‘longitudinal design’ mean?
- (A) A study completed far away from where the researcher lives.
  - (B) A study which is very long to read.
  - (C) A study completed over a distinct period of time to map changes in social phenomena.
  - (D) A study with two contrasting cases.
- 10)** The term ‘external validity’ is concerned with:
- (A) the question of whether the results of a study can be generalized beyond the specific research context.
  - (B) whether the research question is judged to be a good research question by those outside the study.
  - (C) the question of whether or not social scientific findings are applicable to people’s every day, natural social settings.
  - (D) an ambiguous concept whose meaning depends on how it is defined.
- 11)** A research study was carried out to see whether people notice web addresses on television advertisements. This is an example of:
- (A) Employee Research
  - (B) Pure Research
  - (C) Applied Research
  - (D) Management Consultancy
- 12)** Which research strategy is described here?
- The introduction of planned change on one or more of the variables; measurement on a small number of variables and control of other variables.
- (A) Survey
  - (B) Case Study
  - (C) Experiment
  - (D) Ethnography
- 13)** Which ONE of these is an example of processed data?
- (A) CCTV recordings of shopper visits
  - (B) Number of visitors to a store
  - (C) Customer comments
  - (D) Tables from surveys.

- 14)** “Do you think asbestos should be banned from the workplace because it causes cancer as demonstrated by the medical profession”? is an example of:
- (A) vague wording (B) a leading question  
(C) position bias (D) a generalisation
- 15)** Suppose that a population with  $N = 200$  has  $\mu = 30$ . What is the mean of the sampling distribution of the mean for sample of size 40?
- (A) Not possible to determine as this information is inadequate  
(B) 40  
(C) 25  
(D) 30
- 16)** Which of the following is not a way of assessing the trust worthiness of qualitative research?
- (A) Dependability (B) Accessibility  
(C) Transferability (D) Credibility
- 17)** Which Statistical tool comes under Bivariate Analysis?
- (A) Linear Regression Analysis (B) Association of Attributes  
(C) Two-way ANOVA (D) All of these
- 18)** Which analysis is related with descriptive analysis?
- (A) Univariate Analysis (B) Bivariate Analysis  
(C) Multivariate Analysis (D) All of the above
- 19)** A systematic literature review is:
- (A) One which starts in your own library, then goes to on-line databases and, finally, to the internet  
(B) A replicable, scientific and transparent process  
(C) One which gives equal attention to the principal contributors to the area  
(D) A responsible, professional process of time-management for research

- 20)** In order to pursue the research, which of the following is priorly required?
- (A) Developing a research design
  - (B) Formulating a research question
  - (C) Deciding about the data analysis procedure
  - (D) Formulating a research hypothesis
- 21)** Research and Development become the index of development of the country. Which of the following reasons are true with regards to this statement?
- (A) R & D targets human development
  - (B) R & D can enhance people's standard of living in the country
  - (C) R & D reflects the actual economic and social conditions being prevailed in the country
  - (D) All the above
- 22)** Why is data analysis concerned with data reduction?
- (A) Because far too much data is collected than is required
  - (B) Because we need to make sense of the data
  - (C) Because of the repetitions in answers to questionnaires
  - (D) Because the sample size has been exceeded
- 23)** Which one among the following falls under the category of research development?
- (A) Descriptive Research
  - (B) Philosophical Research
  - (C) Action Research
  - (D) All of the above
- 24)** \_\_\_\_\_ is used to test for differences among the means of the population by examining the amount of variation within each of these samples, relative to the amount of variation between the samples.
- (A) SD
  - (B) ANOVA
  - (C) Chi-Square
  - (D) Z test
- 25)** A research intends to explore the result of possible factors for the organization of effective mid-day meal interventions. Which research method will be most appropriate for this study?
- (A) Descriptive survey method
  - (B) Historical method
  - (C) Ex-post facto method
  - (D) Experimental method

**Section - II (Computer Application)**

- 26)** Code optimization is responsibility of:
- (A) Application programmer                      (B) System programmer  
(C) Operating system                              (D) All of the above
- 27)** Which of the statements related to Compilers is wrong?
- (A) Lexical analysis is breaking the input into tokens  
(B) Syntax analysis is for parsing the phrase  
(C) Syntax analysis is for analyzing the semantic  
(D) None of these
- 28)** Which of the following derivations does a top-down parser use while parsing an input string? The input is assumed to be scanned in left to right order
- (A) Leftmost derivation  
(B) Leftmost derivation traced out in reverse  
(C) Rightmost derivation  
(D) Rightmost derivation traced out in reverse
- 29)** Consider the schema  $R(S, T, U, V)$  and the dependencies  $S \rightarrow T, T \rightarrow U, U \rightarrow V, V \rightarrow S$ . Let  $R = \{R_1, R_2\}$  such that  $R_1 \cap R_2 = \Phi$ . Then the decomposition is:
- (A) not in 2NF                                      (B) in 2NF but not in 3NF  
(C) in 3NF but not in 2NF                      (D) in both 2NF and 3NF
- 30)** Which data management language component enabled the DBA to define the schema components?
- (A) DML    (B) Subschema DLL  
(C) Schema DLL                                      (D) All of these

- 31)** The subnet mask 255.255.255.192 \_\_\_\_\_.  
(A) Extends the network portion to 16 bits  
(B) Extends the network portion to 26 bits  
(C) Extends the network portion to 36 bits  
(D) Has no effect on the network portion of an IP address
- 32)** What is the function of a translating bridge?  
(A) Connect similar remote LANs  
(B) Connect similar local LANs  
(C) Connect different types of LANs  
(D) Translate the network addresses into a layer 2 address
- 33)** A 10 BASE-2 network is limited to:  
(A) 20 bytes per data field  
(B) 30 stations per segment  
(C) 40 segments  
(D) 50 feet of cable
- 34)** A compiler for a high level language that runs on one machine and produces code for a different machine is called:  
(A) Optimizing  
(B) One pass compiler  
(C) Cross compiler  
(D) Multipass compiler
- 35)** A permanent database of a general model of compiler is \_\_\_\_\_.  
(A) Identifier table  
(B) Page map table  
(C) Literal table  
(D) Terminal table

- 36)** Tasks done in parsing are:
- (A) Check the validity of a source string
  - (B) Determine the syntactic structure of a source string
  - (C) Both (A) and (B)
  - (D) None of these
- 37)** Are we building the right product? This statement refers to
- (A) Verification
  - (B) Validation
  - (C) Testing
  - (D) Software quality assurance
- 38)** The COCOMO model is used for \_\_\_\_\_.
- (A) software design
  - (B) software cost estimation
  - (C) software cost approximation
  - (D) software analysis
- 39)** Which of the following tools is not required during system analysis phase of system development life cycle?
- (A) Case tool
  - (B) RAD tool
  - (C) Reverse engineering
  - (D) None of these
- 40)** Concept description is the basic form of the \_\_\_\_\_
- (A) Predictive data mining
  - (B) Descriptive data mining
  - (C) Data warehouse
  - (D) Relational data base
- 41)** \_\_\_\_\_ describes the data contained in the data warehouse.
- (A) Relational data
  - (B) Operational data
  - (C) Metadata
  - (D) Informational data



- 42)** Data Warehouse provides \_\_\_\_\_.  
(A) Transaction Responsiveness  
(B) Storage, Functionality Responsiveness to queries  
(C) Demand and Supply Responsiveness  
(D) None of the above
- 43)** What is a web browser?  
(A) a program that can display a web page  
(B) a program used to view html documents  
(C) it enables user to access the resources of internet  
(D) all of the mentioned
- 44)** Dynamic web page \_\_\_\_\_.  
(A) is same every time whenever it displays  
(B) generates on demand by a program or a request from browser  
(C) both (A) and (B)  
(D) none of the mentioned
- 45)** Which one of the following is not used to generate dynamic web pages?  
(A) PHP  
(B) ASP.NET  
(C) JSP  
(D) none of the mentioned
- 46)** Cloud computing is a kind of abstraction which is based on the notion of combining physical resources and represents them as \_\_\_\_\_ resources to users.  
(A) Real  
(B) Cloud  
(C) Virtual  
(D) Replication

- 47)** Which of the following package stores all the standard Java classes?
- (A) lang (B) java  
(C) util (D) java.packages
- 48)** Which of the following is correct way of implementing an interface salary by class manager?
- (A) class manager extends salary { }  
(B) class manager implements salary { }  
(C) class manager imports salary { }  
(D) none of the mentioned
- 49)** Which of these method of class String is used to obtain length of String object?
- (A) get() (B) Sizeof()  
(C) lengthof() (D) length()
- 50)** Which one of the following refers to the non-functional requirements in cloud environment?
- (A) Service Development  
(B) Quality of service  
(C) Plan Development  
(D) Technical Service



**Rough Work**

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