BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Master of Computer Applications
Course Name – Data science
Course Code - MCA401B
(Semester IV)

Time allotted : 1 Hrs.15 Min. **Full Marks : 60**

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question) 1 x 60=60

Choose the correct alternative from the following :

(1) Which of the following is the top most important thing in data science?

a) answer b) question
c) data d) none of the mentioned

(2) Which of the following approach should be used if you can't fix the variable?

a) randomize it b) non stratify it
c) generalize it d) none of the mentioned

(3) Point out the wrong statement

a) Randomized studies are not used to identify causation b) Complication approached exist for inferring causation
c) Causal relationships may not apply to every individual d) All of the mentioned

(4) Which of the following is a good way of performing experiments in data science?

a) Measure variability b) Generalize to the problem
c) Have Replication d) All of the mentioned

(5) Which of the following is commonly referred to as 'data fishing'?

a) Data bagging b) Data booting
c) Data merging d) None of the mentioned

(6) Which of the following data mining technique is used to uncover patterns in data?

a) Data bagging b) Data booting
c) Data merging d) Data Dredging

(7) Which of the following is the probability calculus of beliefs, given that beliefs follow certain rules?

a) Bayesian probability b) Frequency probability
c) Frequency inference d) Bayesian inference

(8) Point out the correct statement.

a) Bayesian inference is the use of Bayesian probability representation of beliefs to perform inference b) NULL is the standard missing data marker used in S
c) Frequency inference is the use of Bayesian probability representation of beliefs to perform d) None of the mentioned

inference

(9) Which of the following can be considered as random variable?

a) The outcome from the roll of a die
b) The outcome of flip of a coin
c) The outcome of exam
d) All of the mentioned

(10) Which of the following random variable that take on only a countable number of possibilities?

a) Discrete
b) Non Discrete
c) Continuous
d) All of the mentioned

(11) Which of the following is also referred to as random variable?

a) stochastic
b) aleatory
c) eliette
d) all of the mentioned

(12) Which of the following condition should be satisfied by function for pmf?

a) The sum of all of the possible values is 1
b) The sum of all of the possible values is 0
c) The sum of all of the possible values is infinite
d) All of the mentioned

(13) Which of the following function is associated with a continuous random variable?

a) pdf
b) pmv
c) pmf
d) all of the mentioned

(14) Which of the following is correct use of cross validation?

a) Selecting variables to include in a model
b) Comparing predictors
c) Selecting parameters in prediction function
d) All of the mentioned

(15) Point out the wrong combination.

a) True negative=correctly rejected
b) False negative=correctly rejected
c) False positive=correctly identified
d) All of the mentioned

(16) Which of the following is a common error measure?

a) Sensitivity
b) Median absolute deviation
c) Specificity
d) All of the mentioned

(17) Which of the following is not a machine learning algorithm?

a) SVG
b) SVM
c) Random forest
d) None of the mentioned

(18) Point out the wrong statement

a) ROC curve stands for receiver operating characteristic
b) Fore time series, data must be in chunks
c) Random sampling must be done with replacement
d) None of the mentioned

(19) Which of the following is a categorical outcome?

a) RMSE
b) RSquared
c) Accuracy
d) All of the mentioned

(20) Which of the following method is used for train Control resampling?

a) repeatedcv
b) svm
c) bag32
d) none of the mentioned

(21) Which of the following can be used to create the most common graph types?

a) qplot
b) quickplot
c) plot
d) all of the mentioned

(22) Which of the following is finally produced by Hierarchical Clustering?

a) final estimate of cluster centroids
b) tree showing how close things are to each other
c) assignment of each point to clusters
d) all of the mentioned

(23) Which of the following is required by K-means clustering?

a) defined distance metric
b) number of clusters
c) initial guess as to cluster centroids
d) all of the mentioned

(24) Point out the wrong statement.

a) k-means clustering is a method of vector
b) k-means clustering aims to partition n observations

quantization
into k clusters

c) k-nearest neighbor is same as k-means
d) none of the mentioned

(25) Which of the following combination is incorrect?

a) Continuous – euclidean distance
b) Continuous – correlation similarity

c) Binary – manhattan distance
d) None of the mentioned

(26) Which of the following clustering requires merging approach?

a) Partitional
b) Hierarchical

c) Naive Bayes
d) None of the mentioned

(27) Which of the following is countable?

a) Discrete
b) Non Discrete

c) Continuous
d) All of the mentioned

(28) Which of the following are examples of software development tools?

a) debuggers
b) editors

c) assemblers, compilers and interpreters
d) all of the mentioned

(29) The first AI programming language was called

a) BASIC
b) FORTRAN

c) IPL(Inductive logic programming)
d) LISP

(30) Which instruments are used for perceiving and acting upon the environment?

a) Sensors and Actuators
b) Sensors

c) Perceiver
d) None of the mentioned

(31) What is meant by the agent's percept sequence?

a) Used to perceive the environment
b) Complete history of actuator

c) Complete history of perceived things
d) None of the mentioned

(32) What is the rule of simple reflex agent?

a) Simple-action rule
b) Condition-action rule

c) Simple & Condition-action rule
d) None of the mentioned

(33) What are the compositions for agents in artificial intelligence?

a) Program
b) Architecture

c) Both Program & Architecture
d) None of the mentioned

(34) In which agent does the problem generator is present?

a) Learning agent
b) Observing agent

c) Reflex agent
d) None of the mentioned

(35) Which is used to improve the agent’s performance?

a) Perceiving
b) Learning

c) Observing
d) None of the mentioned

(36) Which agent deals with happy and unhappy states?

a) Simple reflex agent
b) Model based agent

c) Learning agent
d) Utility based agent

(37) Which action sequences are used to achieve the agent’s goal?

a) Search
b) Plan

c) Retrieve
d) Both Search & Plan

(38) Which element in agent is used for selecting actions which deals with outsiders?

a) Perceive
b) Performance

c) Learning
d) Actuator

(39) An ‘agent’ is anything that,

a) Perceives its environment through sensors and acting upon that environment through actuators
b) Takes input from the surroundings and uses its intelligence and performs the desired operations

c) A embedded program controlling line following robot
d) All of the mentioned

(40) Agents behaviour can be best described by

a) Perception sequence
b) Agent function
c) Sensors and Actuators
d) Environment in which agent is performing

(41) Categorize Crossword puzzle in Fully Observable / Partially Observable.

a) Fully Observable
b) partially Observable
c) All of the mentioned
d) None of the mentioned

(42) An expert system differs from a database program in that only an expert system

a) contains declarative knowledge
b) contains procedural knowledge
c) features the retrieval of stored information
d) expects users to draw their own conclusions

(43) What will take place as the agent observes its interactions with the world?

a) Learning
b) Hearing
c) Perceiving
d) Speech

(44) Which modifies the performance element so that it makes better decision?

a) Performance element
b) Changing elemen
c) Learning element
d) None of the mentioned

(45) What is used in determining the nature of the learning problem?

a) Environment
b) Feedback
c) Problem
d) None of the mentioned

(46) How many types are available in machine learning?

a) 1
b) 2
c) 3
d) None of the mentioned

(47) Which is used for utility functions in game playing algorithm?

a) Linear polynomial
b) Weighted polynomial
c) Polynomial
d) Linear weighted polynomial

(48) Which is used to choose among multiple consistent hypotheses?

a) Razor
b) Ockham razor
c) Learning element
d) None of the mentioned

(49) What will happen if the hypothesis space contains the true function?

a) Realizable
b) Unrealizable
c) Both Realizable & Unrealizable
d) None of the mentioned

(50) What takes input as an object described by a set of attributes?

a) Decision tree
b) Graph
c) Decision graph
d) None of the mentioned

(51) How the decision tree reaches its decision?

a) Single test
b) Two test
c) Sequence of test
d) None of the mentioned

(52) Factors which affect the performance of learner system does not include?

a) Representation scheme used
b) Good data structures
c) Training scenario
d) None of the mentioned

(53) Which of the following does not include different learning methods?

a) Memo rization
b) Analogy
c) Introduction
d) None of the mentioned

(54) Which of the following is the model used for learning?

a) Decision trees
b) Neural networks
c) Propositional and FOL rules
d) All of the mentioned

(55) Automated vehicle is an example of

a) Supervised learning
b) Unsupervised learning
c) Active learning
d) All of the mentioned

(56) Which of the following is an example of active learning?

a) News Recommender system
b) Dust cleaning machine
c) Automated vehicle
d) All of the mentioned

(57) In which of the following learning the teacher returns reward and punishment to learner?

a) Supervised learning
b) Unsupervised learning
c) Active learning
d) Reinforcement

(58) Decision trees are appropriate for the problems where

a) Attributes are both numeric and nominal
b) Target function takes on a discrete number of values.
c) Data may have errors
d) All of the mentioned

(59) Which of the following is not an application of learning?

a) Data mining
b) WWW
c) Speech recognition
d) None of the mentioned

(60) Which of the following is the component of learning system?

a) Goal
b) Model
c) Learning rules
d) All of the mentioned