Test Canvas: ESE July 2020

The Test Canvas lets you add, edit and reorder questions, as well as review a test. More Help

Question Settings

You can edit, delete or change the point values of test questions on this page. If necessary, test attempts will be regraded after you submit your changes.

Description	**End Semester Online Examination, July 2020** **Programme**: M.Tech. CSE-II **Course**: Machine Learning **Course Code: CSAI 7007** **Course Coordinator:** Prof. Deepshikha Bhargava **Maximum Marks**: 100 **Duration**: 120 Minutes **Date & Time of Examination:** 14th July 2020 - 10.00 am to 12.00 pm

Instructions	**Important Instructions:**
	• ESE examination will be MCQ based examination and will be conducted online
	• There will be **60 questions**
	  ◦ 40 Questions: Multiple choice (1.5 marks each)
	  ◦ 20 Questions: True/False Type (2 marks each)
	• Duration of examination is **120 minutes**

Total Questions	60
Total Points	100
Number of Attempts	4

Select: All None Select by Type: - Question Type -

Delete and Regrade | Points | Update and Regrade | Hide Question Details

1. Multiple Choice: Following is the disadvantage of Deci...

Points: 1.5

Question	Following is the disadvantage of Decision Trees.
Answer	a) Possible Scenarios can be added
	✓ "b) For data including categorical variables with different number of levels, information gain in decision trees are biased in favor of those attributes with more levels"
	"c) Worst, best and expected values can be determined for different scenarios"
	"d) Use a white box model, If given result is provided by a model"

2. Multiple Choice: Automated vehicle is an example of __...

Points: 1.5

Question	Automated vehicle is an example of _____.
Answer	✓ a) Supervised learning
	b) Unsupervised learning
	c) Active learning
	d) Reinforcement learning

3. Multiple Choice: Decision trees are appropriate for th...

Points: 1.5

Question	Decision trees are appropriate for the problems where:
Answer	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

4. Multiple Choice: "A _____ is a decision support to...

Points: 1.5

Question	"A _____ is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility."
Answer	✓ a) Decision tree

b) Graphs

c) Trees

d) Neural Networks

☐ 5. **Multiple Choice: Decision Tree is** Points: 1.5

Question	Decision Tree is
Answer	a) Flow-Chart
	"b) Structure in which internal node represents test on an attribute, each branch represents outcome of test and each leaf node represents class label"
	✓ c) Both a) & b)
	d) None of the mentioned

☐ 6. **Multiple Choice: Choose from the following that are NO...** Points: 1.5

Question	Choose from the following that are NOT Decision Tree nodes
Answer	a) Decision Nodes
	✓ b) Weighted Nodes
	c) Chance Nodes
	d) End Nodes

☐ 7. **Multiple Choice: Decision Nodes are represented by** Points: 1.5

Question	Decision Nodes are represented by
Answer	a) Disks
	✓ b) Squares
	c) Circles
	d) Triangles

☐ 8. **Multiple Choice: How the decision tree reaches its dec...** Points: 1.5

Question	How the decision tree reaches its decision?
Answer	a) Single test
	b) Two test
	✓ c) Sequence of test
	d) No test

☐ 9. **Multiple Choice: What takes input as an object describ...** Points: 1.5

Question	What takes input as an object described bya set of attributes?
Answer	a) Tree
	b) Graph
	c) Decision graph
	✓ d) Decision tree

☐ 10. **Multiple Choice: "_____ is a more advanced type of...** Points: 1.5

Question	"_____ is a more advanced type of learning, where, the model learns from Experience ."
Answer	a) Supervised learning
	b) Unsupervised learning
	c) Active learning
	✓ d) Reinforcement learning

☐ 11. **Multiple Choice: In_____model learns to optimize ...** Points: 1.5

Question	In_____model learns to optimize the Situation to maximize the Rewards and hence improves the Outcome with Experience .
Answer	a) Supervised learning

b) Unsupervised learning

c) Active learning

✓ d) Reinforcement learning

☐ 12. **Multiple Choice: "If the available dataset has predefi...** Points: 1.5

Question	"If the available dataset has predefined features but lacks labels, then the Machine Learning algorithms perform operations on this data to assign labels to it or to reduce the dimensionality of the data. It is known as"
Answer	a) Supervised learning
	✓ b) Unsupervised learning
	c) Active learning
	d) Reinforcement learning

☐ 13. **Multiple Choice: The most common Unsupervised Learning...** Points: 1.5

Question	The most common Unsupervised Learning Models are
Answer	a) Principal Component Analysis (PCA)
	b) Clustering
	✓ c) Both a) & b)
	d) None of the mentioned

☐ 14. **Multiple Choice: Classification and Regression are mos...** Points: 1.5

Question	Classification and Regression are most common models of
Answer	✓ a) Supervised learning
	b) Unsupervised learning
	c) Active learning

d) Reinforcement learning

15. **Multiple Choice: _____ is an interdisciplinary fie...** Points: 1.5

Question	_____ is an interdisciplinary field of study and is a sub-domain of Artificial Intelligence
Answer	✓ a) Machine Learning
	b) Artificial Neural Netowork
	c) Natural langual processing
	d) None of the mentioned

16. **Multiple Choice: _____ is the process of determina...** Points: 1.5

Question	_____ is the process of determination/prediction of the category to which a data-point may belong to
Answer	a) Principal Component Analysis (PCA)
	b) Clustering
	✓ c) Classification
	d) Regression

17. **Multiple Choice: Classification is the process by whic...** Points: 1.5

Question	Classification is the process by which a_____ learns to draw inference from the features of a given dataset and predict which class or group or category does the particular data point belongs to
Answer	✓ a) Supervised learning
	b) Unsupervised learning
	c) Active learning
	d) Reinforcement learning

18. **Multiple Choice: The real-world applications of classi...** Points: 1.5

Question	The real-world applications of classification Algorithms are
Answer	a) Face Recognition
	b) Medical Image Classification
✓	c) Both a) & b)
	d) None of the mentioned

19. **Multiple Choice: _____is a measure of purity of an...** Points: 1.5

Question	_____is a measure of purity of an arbitrary collection of information.
Answer	✓ a) Entropy
	b) Information Gain
	c) Both a) & b)
	d) None of the mentioned

20. **Multiple Choice: "With the knowledge of Entropy, the a...** Points: 1.5

Question	"With the knowledge of Entropy, the amount of relevant information that is gained form a given random sample size can be calculated and is known as_____."
Answer	a) Entropy
	✓ b) Information Gain
	c) Both a) & b)
	d) None of the mentioned

21. **Multiple Choice: _____ is a concept where the mode...** Points: 1.5

Question	_____ is a concept where the model learns the data too well and hence performs well on training dataset but fails to perform on testing dataset.
Answer	a) underfitting
	✓ b) Overfitting

c) Sensitivity to hyperparameter tuning

d) None of the mentioned

☐ 22. **Multiple Choice: The following scenarios explain why w...** Points: 1.5

Question	The following scenarios explain why we should opt for machine learning:
Answer	"a) During facial recognition and speech processing, it would be tedious to write the codes manually to execute the process, that's where machine learning comes handy"
	"b) For market analysis, figuring customer preferences or fraud detection, machine learning has become essential"
	"c) For the dynamic changes that happen in real-time tasks, it would be a challenging ordeal to solve through human intervention alone."
	✓ d) All of the mentioned

☐ 23. **Multiple Choice: _____ helps analyse patterns very d...** Points: 1.5

Question	_____ helps analyse patterns very deeply And then it predicts the outcomes of the problem we have designed it for.
Answer	✓ a) Machine Learning
	b) Artificial Neural Netowork
	c) Natural langual processing
	d) None of the mentioned

☐ 24. **Multiple Choice: Some of the machine learning algorith...** Points: 1.5

Question	Some of the machine learning algorithms which use supervised learning method are:
Answer	a) Linear Regression
	b) Naive Bayes
	c) Support Vector Machines (SVM)

d) All of the mentioned

25. **Multiple Choice: Techniques used in unsupervised learn...** Points: 1.5

Question	Techniques used in unsupervised learning are
Answer	a) Anomaly detection
	b) Dimensionality Reduction
	✓ c) Both a) & b)
	d) None of the mentioned

26. **Multiple Choice: _____ is also known as Outlier det...** Points: 1.5

Question	_____ is also known as Outlier detection
Answer	✓ a) Anomaly detection
	b) Dimensionality Reduction
	c) Clustering
	d) Neural Networks

27. **Multiple Choice: Self-organizing map and Autoencoders ...** Points: 1.5

Question	Self-organizing map and Autoencoders are most popular type of
Answer	a) Supervised learning
	✓ b) Unsupervised learning
	c) Active learning
	d) Reinforcement learning

28. **Multiple Choice: Markov s Decision process is the best...** Points: 1.5

Question	Markov s Decision process is the best example of
Answer	a) Supervised learning
	b) Unsupervised learning
	c) Active learning
	✓ d) Reinforcement learning

☐ 29. **Multiple Choice: "Which are the following steps involv...** Points: 1.5

Question	"Which are the following steps involved in reinforcement learning 1. Input state is taken by the agent 2. A predefined function indicates the action to be performed 3. Based on the action, the reward is obtained by the machine 4. The resulting pair of feedback and action is stored for future purposes"
Answer	a) only 1
	b) step 1 & 2
	"c) step 1,2 & 3"
	✓ "d) Step 1,2,3 & 4"

☐ 30. **Multiple Choice: "popular uses of _____are, face ...** Points: 1.5

Question	"popular uses of _____are, face recognition, filtering spam emails, predicting the user inputs in chat by checking communicated text and to label news articles as sports, politics etc."
Answer	a) Linear Regression
	✓ b) Naive Bayes
	c) Support Vector Machines (SVM)
	d) All of the mentioned

☐ 31. **Multiple Choice: The _____ defines a rule in det...** Points: 1.5

Question	The _____ defines a rule in determining the probability of occurrence of an Event when information about Tests is provided.
Answer	a) Autoencoder
	b) Self organizing maps
	c) Support Vector Machines (SVM)
	✓ d) Bayes theorem

☐ 32. **Multiple Choice: Agglomerative clustering and Divisiv...** Points: 1.5

Question	Agglomerative clustering and Divisive clustering are methods of
Answer	✓ a) hierarchical clusters
	b) Self organizing maps
	c) Support Vector Machines (SVM)
	d) Bayes theorem

☐ 33. **Multiple Choice: "When implementing algorithms in real...** Points: 1.5

Question	"When implementing algorithms in real time, you need to keep in mind three main aspects:"
Answer	a) Space and Output
	b) input and outpur
	c) Time and Output
	✓ "d) Space, Time, and Output"

☐ 34. **Multiple Choice: Best suited algorithm for a scenario ...** Points: 1.5

Question	Best suited algorithm for a scenario where we have Simple straightforward data set with no complex computations

Answer	✓ a) Linear Regression
	b) Logistic Regression
	c) Support Vector Machines (SVM)
	d) All of the mentioned

☐ 35. **Multiple Choice: Best suited algorithm for a scenario ...** Points: 1.5

Question	Best suited algorithm for a scenario where Classifying already labeled data into sub-labels
Answer	a) Linear Regression
	✓ b) Logistic Regression
	c) Support Vector Machines (SVM)
	d) All of the mentioned

☐ 36. **Multiple Choice: Simplest model that can perform power...** Points: 1.5

Question	Simplest model that can perform powerful pre-processing and cleaning of text
Answer	a) Linear Regression
	✓ b) Naive Bayes
	c) Support Vector Machines (SVM)
	d) All of the mentioned

☐ 37. **Multiple Choice: _____Best suited for complex com...** Points: 1.5

Question	_____Best suited for complex computations such as analyzing visual cortexes
Answer	✓ a) Convolutional neural network
	b) Naive Bayes
	c) Support Vector Machines (SVM)

d) Recurrent neural network

☐ 38. **Multiple Choice: _____Best suited for time-serie...** Points: 1.5

Question	_____Best suited for time-series analysis with well-defined and supervised data.
Answer	a) Convolutional neural network
	b) Naive Bayes
	c) Support Vector Machines (SVM)
	✓ d) Recurrent neural network

☐ 39. **Multiple Choice: _____Can be chosen when performa...** Points: 1.5

Question	_____Can be chosen when performance matters
Answer	a) Convolutional neural network
	b) Naive Bayes
	✓ c) Support Vector Machines (SVM)
	d) Recurrent neural network

☐ 40. **Multiple Choice: "A prototypical example of _____le...** Points: 1.5

Question	"A prototypical example of _____learning is provided by Pomerleau's system ALVINN,which uses a learned ANN to steer an autonomous vehicle driving at normal speeds on public highways"
Answer	a) Machine Learning
	✓ b) Artificial Neural Netowork
	c) Natural langual processing
	d) None of the mentioned

41. **True / False: Decision Tree is a display of an algo...** Points: 2

Question	Decision Tree is a display of an algorithm.
Answer	✓ True False

42. **True / False: Decision Trees can be used for Classi...** Points: 2

Question	Decision Trees can be used for Classification Tasks.
Answer	✓ True False

43. **True / False: "In the Engineering domain, one of th...** Points: 2

Question	"In the Engineering domain, one of the widely used applications of decision trees is the determination of faults."
Answer	✓ True False

44. **True / False: "The machine has to be thus trained, ...** Points: 2

Question	"The machine has to be thus trained, such that, when given an input of any such hand-written digit, it has to correctly classify the digits and mention which digit the image represents. This is classed classification of hand-written digits."
Answer	✓ True False

45. **True / False: Regression problem is synonym to curv...** Points: 2

Question	Regression problem is synonym to curve fitting
Answer	True ✓ False

46. **True / False: In Regression Prediction is discrete ...** Points: 2

Question	In Regression Prediction is discrete or categorical in nature
Answer	True ✓ False

47. **True / False: Hyperparameters are those parameters ...** Points: 2

Question	Hyperparameters are those parameters which are in control of the programmer and can be tuned to get better performance out of a given model.
Answer	✓ True False

48. **True / False: No algorithm is an all-in-one solutio...** Points: 2

Question	No algorithm is an all-in-one solution to any type of problem; an algorithm that fits a scenario will also fit in another one.
Answer	True ✓ False

49. **True / False: Self-Organizing Map uses the data vis...** Points: 2

Question	Self-Organizing Map uses the data visualization technique by operating on a given high dimensional data.
Answer	✓ True False

50. **True / False: Hierarchical clustering produces hier...** Points: 2

Question	Hierarchical clustering produces hierarchy resembles a tree structure which is called a Dendrogram .
Answer	✓ True False

51. **True / False: OPTICS works in principle like an ext...** Points: 2

Question	OPTICS works in principle like an extended DB Scan algorithm for an infinite number for a distance parameter which is larger than a generating distance.
Answer	True ✓ False

52. **True / False: "There are four units that receive in...** Points: 2

Question	"There are four units that receive inputs directly from all of the 30 x 32 pixels in the image. These are called ""hidden"" units because their output is available only within the network and is not available as part of the global network output. Each of these four hidden units computes a single real-valued output based on a weighted combination of its 960 inputs "
Answer	✓ True False

53. **True / False: "Bayesian learning algorithms that ca...** Points: 2

Question	"Bayesian learning algorithms that calculate explicit probabilities for hypotheses, such as the naive Bayes classifier, are among the most practical approaches to certain types of learning problems"
Answer	✓ True False

54. **True / False: "In many learning scenarios, the lear...** Points: 2

Question	"In many learning scenarios, the learner considers some set of candidate hypotheses H and is interested in finding the most probable hypothesis h ? H given the observed data D. Any such maximally probable hypothesis is called a Maximum Likelihood (ML) Hypothesis"
Answer	True ✓ False

55. **True / False: In order specify a learning problem f...** Points: 2

Question	In order specify a learning problem for the BRUTE-FORCE MAP LEARNING algorithm we need not to specify the values to be used for P(h)
Answer	True ✓ False

56. **True / False: "Because FIND-S outputs a maximally s...** Points: 2

Question	"Because FIND-S outputs a maximally specific hypothesis from the version space, its output hypothesis will be a MAP hypothesis relative to any prior probability distribution that favours more specific hypotheses"
Answer	✓ True False

57. **True / False: Bayesian framework is a way to charac...** Points: 2

Question	Bayesian framework is a way to characterize the behaviour of learning algorithms
Answer	✓ True False

58. **True / False: The naive Bayes classifier applies to...** Points: 2

Question	

	The naive Bayes classifier applies to learning tasks where each instance x is described by a conjunction of attribute values and where the target function f (x) can take on any value from some finite set V.
Answer	✓ True False

59. **True / False: "The EM algorithm can be used even fo...** Points: 2

Question	"The EM algorithm can be used even for variables whose value is directly observed, provided the general form of the probability distribution governing these variables is known"
Answer	True ✓ False

60. **True / False: "The perceptron can be viewed as repr...** Points: 2

Question	"The perceptron can be viewed as representing a hyperplane decision surface in the ndimensional space of instances (i.e., points)"
Answer	✓ True False

Select: All None Select by Type: - Question Type -

Delete and Regrade | Points | Update and Regrade | Hide Question Details

← OK