RK UNIVERSITY
SCHOOL OF ENGINEERING
SEE (April-2024)

Program: B. Tech.   **Semester: VI**

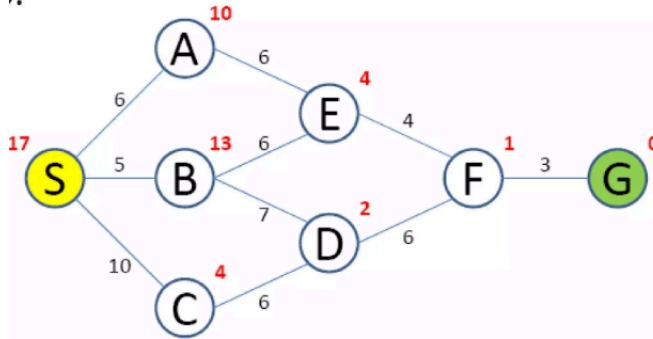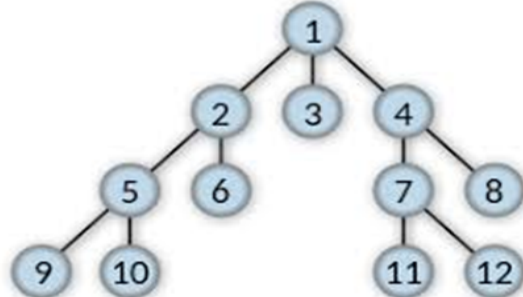**Date : 13/04/2024**   **Reporting time: 8:00AM**

Duration: 90 Mins   **Total Marks: 50**

Subject :CE628 Artificial Intelligence and Machine Learning

Dataset download link: ▭ **SET-4**

Q. No			Do as directed.	Marks
1	a		Find shortest path using A* algorithm.	5
	b		Find cost of above graph using A* algorithm.	
2	a		Implement BFS and DFS for a given graph.	5
	b		Write advantages and disadvantages of BFS and DFS.	
3	a		Read mobile.csv dataset.	1

	b	Apply MinMaxScaler( ) on Age and EstimatedSalary.	2
	c	Split the dataset into training and testing and build KNN model.	2
4	a	Read iris.csv dataset.	1
	b	Create a new column in the dataframe (v_nv), that distinguishes the species - 'versicolor'(marked by 0) from rest.	2
	c	Build SVM.	2
5	a	Which column has categorical data? Find categories. (Consider Q.4 dataset)	1
	b	Encode the species column with numerical values. And replace label 'setosa' with '0', 'versicolor' with '1' and 'virginica' with '2'.	2
	c	Build SVM.	2
6	a	Create 3D array with size 2 * 3 * 2. Use random values for initialization.	1
	b	Initialize a 5 by 5 array with all values are particular values(consider 10).	2
	c	Find maximum and minimum value from array.	2
7	a	Read computer.csv dataset.	1
	b	Build regression model	2
	c	Find accuracy of model? Conclude model is overfitting, underfitting or well fitted?	2
8	a	Read dataset "spambase.csv".	1
	b	Split the data into a train and test set.	2
	c	Implement Random Forest Algorithm.	2
9	a	Find no. of columns and rows from the dataset given in question no. 8	1
	b	Which algorithm is used for bagging and boosting.	2
	c	Implement boosting.	2
10	a	Define purpose of PCA.	1
	b	List steps of PCA.	2
	c	Give a difference between a well fitted model and well generalized model.	2

*******ALL THE BEST*********