PG/IIIS/MCA/398(A&B)/22
(Pr.)

MCA 3rd Semester Examination, 2022

MCA

PAPER – MCA-398(A & B)

(Practical)

Full Marks : 50

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

PAPER—MCA-398A

(*Internet and Web Technology Lab*)

Answer any **one** question on lottery basis : 35×1

1. Design a web page to show information present in a table of a database. Candidates have to design its own structure of a table with minimum four different fields.

2. Create an employee database using MYSQL with name, employeeid, salary of the months (JAN, FEB, MAR). Create a page in PHP to access the table against the employee id and to generate the average salary of the employee and display the average salary.

3. Design a web page to allow listing of details of members of the club in a nice tabular form. The data to be fetched from the database. Use MySQL to create a table with attributes name, ID, Group and City of Residence.

4. Create a student database using MYSQL with name, roll, marks of three subjects (MATH, SCIENCE, ENGLISH). Create a page in PHP to access the table against roll and to generate the average marks of the student and display the average marks.

5. Design a login page for an administrator. After login only, an admin can visit any page (dummy). Or would be returned to login page.

6. Create a simple web page to input the following information and store it in the database. Create the database.

   - Name : Textbox
   - Subject : Checkbox, Options : English, Hindi, Bengali, Oriya
   - DOB : Combo Box (each for day, month and year)

7. Create a well-designed page using external CSS to show information present in a table of a database. Candidates have to design its own structure of a table with minimum four different fields.

8. Design a web page to allow listing of details of members of the club in a nice tabular form. The data to be fetched from the database. Use MySQL to create a table with attributes name, ID, Group and City of Residence.

PNB – 05

Viva – 10

PAPER—MCA-398B

(*Machine Learning Lab*)

(Write source code and input-output)

Answer any **one** question on lottery basis : 35×1

1. Write a program in python jupyter notebook to implement the logistic regression for binary classification algorithm, import all necessary packages and load any data in csv form either from url or from sklearn datasets. Split the datasets in 80% as training and 20% as test. Find the evaluation metrics of your model.

2. Write a program in python jupyter notebook to implement the SVM multiclass classification algorithm, import all necessary packages and load any data in csv form either from url or from sklearn datasets. Split the datasets in 75% as training and 25% as test. Find the evaluation metrics of your model.

3. Write a program in phython jupyter notebook to implement the decision tree classification algo-

rithm, import all necessary packages and load any data in .csv or .txt form either from url or from sklearn datasets. Split the datasets in 70% as training and 30% as test. Find the evaluation metric of your model.

4. Write a program in python jupyter notebook to implement the following functions :

   (*i*) Import the package pandas and then read any excel file (either from url or from your local disk)

   (*ii*) Display the first ten rows of the dataset

   (*iii*) Find the co-variance matrix of that dataset

   (*iv*) In the next cell import matplotlib package and plot the bar chart with the mean values of the attributes of the dataset.

5. Write a program in python jupyter notebook to implement the knn classification algorithm, import all necessary packages and load a data in .csv form either from url or from sklearn datasets. Split the datasets in 70% as training and 30% as test. Find the accuracy of your model.

6. Write a program in python jupyter notebook to implement the simple linear regression model for the data points x = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and y = [100, 300, 350, 500, 750, 800, 850, 900, 1050, 1250]. Find the coefficients and plot the data values with best fit line.

7. Write a program in python jupyter notebook to implement the k-means clustering algorithm, import all necessary packages and load a data in .csv form either from url or from sklearn datasets. Find the accuracy of your model.

8. Write a program in python jupyter notebook to implement the Naïve Bayes classification algorithm, import all necessary packages and load a data in .csv form either from url or from sklearn datasets. Split the database in 75% as training and 25% as test. Find the accuracy of your model.

9. Write a program in python jupyter notebook to implement the cross-validation training in any

classification algorithm, import all necessary packages and load a data in .csv form either from url or from sklearn datasets. Find the accuracy of your model.

[PNB – 05]

[Viva – 10]
