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Sixth Semester B.E. Degree Examination, June/July 2024
Full Stack Development

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is web framework? Explain django-admin command with example. (06 Marks)
 b. Explain the history of django. (07 Marks)
 c. Explain view function in django with an example. (07 Marks)

OR

- 2 a. Illustrate how django processes request. (08 Marks)
 b. Identify the key philosophy behind URL confs and loose coupling. (06 Marks)
 c. Describe the process of mapping URLs to views. (06 Marks)

Module-2

- 3 a. What is template? Explain basics of template systems with example. (10 Marks)
 b. Explain template inheritance. (10 Marks)

OR

- 4 a. Identify the different types of tags and filters in django template system. (12 Marks)
 b. Explain the models in django with example. (08 Marks)

Module-3

- 5 a. How to activate and configure the admin interface in django for managing application data? (08 Marks)
 b. Explain the process of handling and processing forms in a web application using django. (12 Marks)

OR

- 6 a. Develop a django program to create feedback forms. (08 Marks)
 b. Discuss the usage of the admin interface. (06 Marks)
 c. How to create form in django? What this class can do in python interpreter? (06 Marks)

Module-4

- 7 a. Discuss the concept of generic views of objects in django. (10 Marks)
 b. Explain cookies with example. (10 Marks)

OR

- 8 a. How does user authentication works in django? (10 Marks)
 b. Discuss the role of site map frame work. (10 Marks)

Module-5

- 9 a. Explain technologies on which AJAX overlaid. (10 Marks)
 b. Discuss about jQuery and basic Ajax. (10 Marks)

OR

- 10 a. Write a note on java script and XMLHttpRequest response. (10 Marks)
 b. Illustrate the following : i) CSS ii) JSON iii) HTML iv) IFrame (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.



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Sixth Semester B.E. Degree Examination, June/July 2024
Data Science & its Applications

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Describe dispersion and variance and write the python code to compute the variance. (07 Marks)
- b. Discuss random variables with an example in detail. (07 Marks)
- c. Explain standard deviation and interquartile range and write python code to compute standard deviation and interquartile range. (06 Marks)

OR

- 2 a. Explain Bar Chart, Line Chart and Histogram with help of diagram. (07 Marks)
- b. Discuss Conditional probability with an example in detail. (07 Marks)
- c. Explain Correlation and describe the impact of outlier on correlation. (06 Marks)

Module-2

- 3 a. Explain P-Values with an example. (07 Marks)
- b. Write Python program to plot Line chart by assuming your own data and explain the various attributes of line chart. (06 Marks)
- c. Describe A/B test with an example. (07 Marks)

OR

- 4 a. A certain disease affects 1% of the population. A test for the disease has a 99% sensitivity (true positive rate) and a 99% specificity (true negative rate). If a person tests positive, what is the probability that they actually have the disease? (07 Marks)
- b. Describe how data can be manipulated by considering an example. (06 Marks)
- c. Explain cleaning and munging of data with an example. (07 Marks)

Module-3

- 5 a. Explain support vector machines in detail. (07 Marks)
- b. Discuss digression in detail. (06 Marks)
- c. Discuss the need for fitting the model in multiple regressions. (07 Marks)

OR

- 6 a. Discuss Goodness of Fit in detail. (06 Marks)
- b. Write Python snippet for Accuracy, Precision, Recall and F_1 score. (07 Marks)
- c. Explain Feature Extraction and Feature selection. (07 Marks)

Module-4

- 7 a. Discuss perceptron neural network in detail. (10 Marks)
- b. Explain layer abstraction in deep learning. (10 Marks)

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OR

- 8 a. Write python program to compute loss and optimization in deep learning. (10 Marks)
b. Explain feed forward neural network in detail with a neat diagram. (10 Marks)

Module-5

- 9 a. Describe n-Gram language models in detail. (10 Marks)
b. Explain Eigen Vector centrality in detail. (10 Marks)

OR

- 10 a. Explain item based collaborative filtering. (10 Marks)
b. Discuss matrix factorization in detail. (10 Marks)

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