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2606E786

Candidate's Seat No:____

IM.SC.(CS) Sem.-6 Examination

Web Framework

Time : 3.00 Hours] **June-2025** **[Max.Marks : 70**

Instruction :

- Write both the sections in the separate answer book.
- Both Sections having equal weightage.
- Draw diagrams wherever necessary.
- Make assumptions wherever necessary

SECTION - I

Q.1 (A) Answer the following questions in short [Each question carries 1 Mark] **[5 M]**

a. Who developed Django?
b. What command is used to start a Django project?
c. Which file contains the configuration for URLs in a Django project?
d. What is the purpose of the admin.py file in an app?
e. What is view in Django?

Q.1 (B) Answer the following in detail [Each question carries 2 Marks] **[6 M]**

a. What is Django? List two of its key features.

OR

a. What are MVT components in Django?
b. Differentiate between render() and redirect() in Django.

OR

b Define the purpose of Django Admin interface.
c. What is the difference between GET and POST methods in Django forms?

OR

c. What is the use of manage.py in Django?

Q.2 (A) Answer the following in detail [Each question carries 4 Marks] **[12 M]**

a. What is the difference between a project and an app in Django? Explain it with example.

OR

a. How can you define a model in Django? Write an example.
b. Explain the process of handling forms using forms.py in Django.

OR

b. How is data inserted into a database using Django ORM? Give an example.
c. How does Django handles URLs ? Write an example of a URL pattern.

OR

c. What is the difference between HttpResponse and render() in Django views?

(P.T.O)

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Q.3 (A) Answer the following questions in detail [Each question carries 6 Marks] **[12 M]**

a. Create a Student Registration Form using `forms.py` and `models.py`.

Requirements:

- Define a `Student` model with fields like `name`, `email`, `course`, and `age`.
- Create a form using `forms.py` to insert data into the model.
- Display a success message after submission.

OR

a. Create a Django app to display a list of products stored in the database using templates.

Requirements:

- Define a `Product` model with fields like `name`, `price`, `category`.
- Fetch and display all products in an HTML table using a view and template.
- Use a simple `for` loop in the template to iterate data.

b. Create a Contact Us page using Django Form where data is saved and displayed in the admin panel.

Requirements:

- Define a model with `name`, `email`, `message`.
- Use `forms.py` to create the form.
- Show a success message after submission.
- Ensure the data appears in Django Admin

OR

b. Build a login/logout system using Django's built-in authentication.

Requirements:

- Use Django's `User` model.
- Create views for login and logout.
- Use template forms for input.
- Restrict access to a dashboard page unless the user is logged in.

SECTION - II

Q.4 (A) Answer the following multiple-choice questions by choosing the correct option: [Each question carries 1 Mark] **[5 M]**

a. What is the use of @login_required decorator?
b. Which HTTP methods are mainly used in forms?
c. Name any two template tags in Django.
d. What is a view in Django?
e. What is the default database used in Django?

Q.4 (B) Answer the following in detail [Each question carries 2 Marks] **[6 M]**

a. What is the use of **urls.py** file in a Django project?

OR

a. Explain the use of form.is_valid() method in Django.
b. What is the purpose of makemigrations and migrate commands?

OR

b. List two advantages of using Django over other web frameworks.
c. What are static files in Django? Give example.

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Q.5 (A) Answer the following in detail [Each question carries 4 Marks] **[12 M]**

a. What are Django templates? Explain the template tags and filters with examples.

OR

a. How can you display data from a model in an HTML template? Show with code snippets.

b. Write a Django view to handle both GET and POST requests for a registration form.

OR

b. Explain how Django handles sessions. How do you set and retrieve session data?

c. What are Django templates? Explain template tag and filters with examples.

Q.6 (A) Answer the following questions in detail. [Each question carries 6 Marks] **[12 M]**

a. Explain the Django MVT (Model-View-Template) architecture with an example.

Points to cover:

- Describe Model, View, Template roles.
- How they interact.
- Include a small code snippet for each (Model, View, Template).
- Mention URL routing briefly.

OR

a. Create a Django application to register student details using `forms.py` and `models.py`.

Requirements:

- `models.py` should contain fields like `name`, `email`, `age`, and `course`.
- `forms.py` should be used to create the form.
- View should handle form submission and data saving.
- Template should render the form

b. Describe how URL routing works in Django with examples.

Points to explain:

- `urls.py` in project and app.
- Use of `path()` and `re_path()`.
- Named URLs and their use in templates.
- Example of linking a view to a URL.

OR

b. Write a Django program to display a list of books from the database using `models.py`, `views.py`, and a template.

Requirements:

- `models.py`: Define a `Book` model with `title`, `author`, and `price`.
- `views.py`: Query all books and pass them to a template.
- `template.html`: Loop through the books and display in table format.
- Mention the required URL configuration.

(P.T.O)

2606E786-4

Candidate's Seat No:____

IM.SC.(CS) Sem.-6 Examination
Artificial Intelligence
June-2025

Time : 3.00 Hours] **[Max.Marks : 70**

Instructions:

- **Write both the Sections in the separate answer book.**
- **Both Sections having equal weightage.**
- **Draw Diagrams wherever necessary.**
- **Make Assumptions wherever necessary.**

Section - I

Q.1 Explain the following with proper example: (Any – 5) [15]

1. Problem – Solving Agent.
2. Knowledge – based Agent.
3. Artificial Intelligence.
4. Sensors, Actuators, Effectors.
5. Intelligent Agent.
6. Rational Agent.

Q.2 Write the difference with example: (Any – 2) [10]

1. Uninformed search and Informed search.
2. Breadth First Search and Depth First Search
3. Tic - Tac - Toe Strategy 2 and Tic – Tac – Toe Strategy 2'.

Q.3 Write in detail: [10]

1. Write the algorithm of 8 – puzzle based on heuristic. Explain it with proper example.

OR

1. Write the algorithm of Steepest – Ascent hill climbing. Explain it with proper example.

Section – II

Q.4 Write the difference with example: (Any – 2) [10]

1. Artificial Neural Network and Biological Neural Network.
2. Procedural and Declarative Knowledge.
3. Single Layer Perceptron and Multi Layer Perceptron.

Q.5 Answer in detail: [10]

1. Represent the sentence into First – order Predicate Logic.
   - All professors consider the dean friend or don't know him.
   - Jack went to school and brought Maggie in lunch box.
   - Everyone who loves all animal is loved by someone.
   - Nobody loves those who kill an animal.
   - Either Ben or Addy killed Pussy.

OR

1. What is Natural Language Processing? Explain the steps of preprocessing in NLP with its application.

Q.6 Answer in brief: (Any – 2) [10]

1. Explain Alpha – Beta pruning method with the help of an example.
2. Write the algorithm of Tic – Tac – Toe by strategy – 3 in detail.
3. Explain the difference between Semantic Network and Partitioned Semantic Network with example.

Q.7 Explain the components of Expert system with its applications and also write its pros and cons. [05]