NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech.

SEM: V - THEORY EXAMINATION (2022 - 2023)

Subject: Python Web Development with Django

Time: 3 Hours   Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

<div align="center">SECTION A   20</div>

1. Attempt all parts:-

1-a.   What will be the output of the following Python code? (CO1)   1

```
>>> import collections
>>> a=collections.namedtuple('a',['i','j'])
>>> obj=a(i=4,j=7)
>>> obj
```

      (a) a(i=4, j=7)

      (b) obj(i=4, j=7)

      (c) (4,7)

      (d) An exception is thrown

1-b.   Config() in Python Tkinter are used for (CO1)   1

      (a) Destroy the widget

      (b) Place the widget

      (c) Change property of the widget

(d) Configure the widget

1-c.   Django is a web framework written in ? (CO2)   1

        (a) Java

        (b) Ruby On Rail

        (c) C++

        (d) Python

1-d.   In MVC pattern , Model is the component which contains ? (CO2)   1

        (a) Input Logic

        (b) UI Logic

        (c) Business Logic

        (d) Output Logic

1-e.   _____ is not a step in Form Validation. (CO3)   1

        (a) Clean()

        (b) Clear()

        (c) run_validators

        (d) None of the above

1-f.   Django authentication system handles (CO3)   1

        (a) User accounts

        (b) Groups

        (c) Permission and cookie based user session

        (d) All of the above

1-g.   Migrations in Django are _____. (CO4)   1

        (a) They are files saved in migrations directory.

        (b) They are created when you run make migrations command.

        (c) Migrations are files where Django stores changes to your models.

        (d) All of the above

1-h.   Django was introduced by (CO4)   1

        (a) Adrian Holovaty

        (b) Bill Gates

        (c) Rasmus Lerdorf

        (d) Tim Berners-Lee

1-i.   Four important pillar of website to deploy is __ (CO5)   1

        (a) GIT & Git Hub

        (b) Heroku

        (c) Heroku CLI

        (d) All of the above

1-j.   Which items are required to successfully set up Single Sign-on (SSO) services with Heroku?   1
       (CO5)

        (a) An identity provider with built-in support for Heroku

        (b) A Heroku Enterprise Team

        (c) Administrative permissions on the selected identity provider

        (d) All of the above

2. Attempt all parts:-

2.a.   Define Django Framework. (CO1)   2

2.b.   Explain only two features of Django ? (CO2)   2

2.c.   Describe the role of ssl/https in django security. (CO3)   2

2.d.   Describe Database migration. (CO4)   2

2.e.   Explain to Creating the Git ignore file in Django ? (CO5)   2

<div align="center">SECTION B   30</div>

3. Answer any <u>five</u> of the following:-

3-a.   Explain Zappa and Fask in detail. (CO1)   6

3-b.   Explain the difference between a project and an app in Django with example. (CO1)   6

3-c.   Discuss django MVC architecture in details with diagram ? (CO2)   6

3-d.   Explain Django's Request/Response Cycle ? (CO2)   6

3-e.   Explain the role of decorators in django. How it can be implemented in web app. (CO3)   6

3.f.   Describe ORM in Django. (CO4)   6

3.g.   List some popular applications using Heroku ? (CO5)   6

<div align="center">SECTION C   50</div>

4. Answer any <u>one</u> of the following:-

4-a.   Explain Tkinter-GUI applications in detail with example. (CO1)   10

4-b.   Write short notes on : a.)Dash b.)Pyramid (CO1)   10

5. Answer any <u>one</u> of the following:-

5-a.   What are the various files that are created with a Django Project? Explain briefly. (CO2)   10

5-b.   Django can be broken into many components like model.py , url.py and view.py explain   10
each in brief ? (CO2)

6. Answer any <u>one</u> of the following:-

6-a.   Explain the authentication and authorization system in django.Discuss the difference   10
between them. (CO3)

6-b.   Explain Django's Top 10 Vulnerabilities in details . (CO3)   10

7. Answer any <u>one</u> of the following:-

7-a.   Explain templates in Django or Django template language. (CO4)   10

7-b.   Interpret the ways in which Django views work? (CO4)   10

8. Answer any <u>one</u> of the following:-

8-a.   Name main five commands that helps to push your files to Heroku git repository . (CO5)   10

8-b.   What is the difference between Decentralized and Centralized Version Control system ?   10
(CO5)