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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: V - THEORY EXAMINATION (2023 - 2024)

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.

SECTION A

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1. Attempt all parts:-

- 1-a. Choose a python library that can be used to send and receive data over HTTP. 1
(CO1)
- (a) http
 - (b) urllib
 - (c) port
 - (d) header
- 1-b. Choose the features available from the given options for Django web framework. (CO1) 1
- (a) Admin Interface (CRUD)
 - (b) Templating
 - (c) Form handling
 - (d) All of the above
- 1-c. Select the correct caching strategies in Django. (CO2) 1
- (a) File sytem caching

- (b) In-memory caching
(c) Both A and B
(d) None
- 1-d. Developer of Django is. (CO2) 1
(a) 1. Simon Willison
(b) 2. James Gosling
(c) 3. Guido Van Rossum
(d) 4. Anmol Tata
- 1-e. Session handling is done by: (CO3) 1
(a) Middle ware
(b) Admin
(c) Directory
(d) None of the above
- 1-f. Decorators in Django provides: (CO3) 1
(a) Restriction to access pages
(b) Restriction to access app
(c) Restriction to access project
(d) All of the above.
- 1-g. During execution of `form.clean()` on a form object and suppose at any point validation error is raised by a validator. What happens after the Validation Error occurs. (CO4) 1
(a) The program stops executing and Django server stops.
(b) The `clean()` method stops validation and returns a list of validation errors.
(c) The `clean()` method continues execution and catches all the validation errors in that form.
(d) The `clean()` method catches the validation error and corrects it.
- 1-h. Select the option for type of configuration Django requires for logging. (CO4) 1
(a) Django requires no configuration. Use logging by an import.
(b) Django requires a configuration of handlers and loggers.
(c) Django requires a `dictConfig` in `settings.py`.
(d) Logging can be directly used in each module separately.
- 1-i. Choose a shortcut to staging all the changes you have. (CO5) 1
(a) Git add

- (b) Git commit
 - (c) Git commit add
 - (d) None of the these
- 1-j. The main objectives of Git are (CO5) 1
- (a) speed
 - (b) data integrity
 - (c) support for distributed non-linear workflows
 - (d) All of the above

2. Attempt all parts:-

- 2.a. Explain use of place() method . (CO1) 2
- 2.b. Define concept of view in Django. (CO2) 2
- 2.c. Describe the security solution in Django. (CO3) 2
- 2.d. Explain the process of deleting Django Sessions. (CO4) 2
- 2.e. Define term Heroku founders. (CO5) 2

SECTION B

30

3. Answer any five of the following:-

- 3-a. Explain steps for creating a simple Flask App. (CO1) 6
- 3-b. Explain Web scrapping process and Scrapy in detail. (CO1) 6
- 3-c. Explain Django with its unique features in detail. (CO2) 6
- 3-d. Describe the process when a typical Django website gets a request. (CO2) 6
- 3.e. Explain Django's Vulnerabilities or Security problems. Also describe mention methods to overcome these problems. (CO3) 6
- 3.f. Describe the role of frameworks in Python, show with the help of example. (CO4) 6
- 3.g. Explain working of Django Heroku with example. (CO5) 6

SECTION C

50

4. Answer any one of the following:-

- 4-a. Explain Quixote web framework. Define core principle of Quixote web framework in your words. (CO1) 10
- 4-b. Explain features of BeautifulSoup in your words with the help of example. (CO1) 10

5. Answer any one of the following:-

- 5-a. Explain why Django is better than Flask. Explain the key difference between them. (CO2) 10

- 5-b. Write all step to Create Your First Django Model Student where you will have fields like roll no, name, class and department. (CO2) 10

6. Answer any one of the following:-

- 6-a. Create a registration form using Django and add email configuration settings. (CO3) 10
- 6-b. Describe security issues in Django and explain the ways of dealing with it. (CO3) 10

7. Answer any one of the following:-

- 7-a. Explain request-response life cycle of Django with diagram and code. (CO4) 10
- 7-b. Describe the concept of Database Migration in Django and how to fetch data from database. (CO4) 10

8. Answer any one of the following:-

- 8-a. Heroku and AWS serve similar goals but should be used in different use cases. Justify (CO5) 10
- 8-b. Explain handling of WSGI with gunicorn in detail. (CO5) 10

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