

53R_54R_TEST_DJANGO

Duration: 2 hrs

Max Marks: 100

Section A – MCQs (10 × 2 = 20 marks)

Choose the correct option and tick/circle the answer.

1. In Django, which file is mainly responsible for mapping URLs to views?
 - a) settings.py
 - b) urls.py
 - c) models.py
 - d) wsgi.py

2. Which class do we generally inherit from to create a model in Django?
 - a) django.db.Model
 - b) django.db.models.Model
 - c) django.core.Model
 - d) django.models.BaseModel

3. JsonResponse in Django is mainly used to return:
 - a) HTML pages
 - b) Plain text
 - c) JSON data (like dict, list)
 - d) XML data

4. HTTP GET method is usually used to:
 - a) Create data
 - b) Update data
 - c) Delete data
 - d) Read / fetch data

5. Which decorator is used to skip CSRF validation on a view?
 - a) @csrf_required
 - b) @csrf_off
 - c) @csrf_exempt
 - d) @no_csrf

6. Middleware in Django runs:
 - a) Only before the view
 - b) Only after the view

- c) Around the view (before and after)
 - d) Only when server starts
7. Which of the following is true about hashing passwords?
- a) Hashed passwords can be decrypted easily
 - b) Hashing is a one-way process
 - c) Hashing and encryption are the same
 - d) Hashing is only for images
8. In Django, `make_password()` is used to:
- a) Compare passwords
 - b) Encrypt and decrypt passwords
 - c) Hash a password for storing in DB
 - d) Send password via email
9. In Django, `check_password(raw, hashed)` returns:
- a) The hashed password
 - b) True or False
 - c) The decrypted password
 - d) The username
10. In a Django view, `request.body` when we send JSON from Postman usually contains:
- a) Already parsed Python dict
 - b) A bytes/string JSON that we need to parse
 - c) HTML data
 - d) Only query parameters

Section B – Short Answer Questions

Each question carries 5 marks. ($8 \times 5 = 40$ marks)

1. What is the difference between `HttpResponse` and `JsonResponse`? Give a small example use case for each.
2. In simple English, what is a model in Django? Write 3–5 bullet points explaining its purpose.
3. Explain what `@csrf_exempt` does and when we typically use it in APIs.
4. Define encryption and hashing. Write one key difference between them. Which one is used for passwords and why?
5. Explain the role of `_init_` and `_call_` methods in a Django middleware class like this:

```
class RequestLoggerMiddleware:  
    def __init__(self, get_response):
```

```

self.get_response = get_response

def __call__(self, request):
    # some logic
    response = self.get_response(request)
    return response

```

6. What is the purpose of `self.get_response` in middleware? Explain in simple terms.

7. You have a single URL `/student/` and a view that handles POST to create a student and GET to list all students.

- Which variable in Django tells you the HTTP method?
- How do you check it in the view?

8. Explain the signup + login concept with hashed passwords in 4–6 lines (just the logic, not code).

Section C – Long Answer / Coding Questions

Each question carries 8 marks. ($4 \times 10 = 40$ marks)

1. Q1. Correct the Login Logic (Password Hashing)

You have the following signup and login code (pseudo):

```

# Signup
def signUp(request):
    if request.method == "POST":
        data = json.loads(request.body)
        user = Users.objects.create(
            username=data.get('username'),
            email=data.get('email'),
            password=data.get('password') # directly storing
        )
        return JsonResponse({"status": "success"}, status=200)

# Login
def login(request):
    if request.method == "POST":
        data = json.loads(request.body)
        username = data.get('username')
        password = data.get('password')

        user = Users.objects.get(username=username, password=password)
        return JsonResponse({"status": "login successful"}, status=200)

```

- a) Explain what is wrong in this code from a security point of view.
- b) Rewrite the signup and login parts using `make_password()` and `check_password()` correctly (only main logic needed).

2. Q2. Write a View Handling CRUD with Same URL

You have a `StudentNew` model with fields: name, age, email.

Write a Django view function `student_api(request)` that uses the same URL and handles:

- POST → Create a new student (data coming as JSON in `request.body`)
- GET → Return all students as JSON (list of dicts)
- PUT → Update a student's email based on id (given in JSON)
- DELETE → Delete a student based on id (given in JSON)

You can ignore `try/except` if it's too long, but show the basic logic for each method.

3. Q3. Middleware Understanding (Theory + Small Code)

- a) In 4–5 lines, explain what middleware is in Django and why we use it.

- b) Write a simple middleware that prints:

- `request` method
- `request` path

before calling the view, and prints:

- `response` status code

after calling the view.

(Just the class, no need to register it in `settings.py`.)

4. Q4. Short Notes on Password Security (Explain Like a Teacher)

Write short notes (in simple English) on the following (2–3 lines each):

- a) Why storing "harish123" directly in DB is dangerous.
- b) What `make_password()` does internally (high-level explanation).
- c) How `check_password(raw, hashed)` decides True or False.
- d) What is a salt in password hashing and why it is used.
- e) Why we cannot decrypt hashed passwords.