**✅ Core REST API Concepts**

These are basic but frequently asked in interviews.

1. What is a REST API?
2. What are the main principles of REST?
3. What are HTTP methods and how are they used in REST APIs? (GET, POST, PUT, PATCH, DELETE)
4. Difference between PUT and PATCH?
5. What are status codes? Give examples of commonly used ones.
6. What is idempotency? Which methods are idempotent?
7. What is the difference between API and web services?
8. What is the difference between REST and SOAP?
9. What are URI and URL in context of REST?
10. What is the role of headers in API requests?

**✅ Django REST Framework – Basics**

1. What is Django REST Framework?
2. How do you create an API in DRF from scratch?
3. What is a serializer in DRF? How is it different from Django forms?
4. What are the types of serializers in DRF? (ModelSerializer vs regular Serializer)
5. How do you create a CRUD API using ModelViewSet and Router?
6. What is the role of views in DRF?
7. Difference between APIView, GenericAPIView, and ViewSet?
8. What are Routers in DRF? How do they work?
9. How do you handle URL routing in DRF?
10. What is the purpose of the @api\_view decorator?

**✅ Intermediate DRF Topics**

1. How do you validate data in serializers?
2. How do you write custom validation in serializers?
3. How do you override create() and update() methods in serializers?
4. How do you override perform\_create() in views?
5. How do you filter data in DRF views?
6. What is filter\_backends? How do you implement filtering, searching, ordering?
7. What is pagination in DRF? How to configure it?
8. How do you handle file uploads in DRF?
9. How do you implement permissions in DRF?
10. Explain the difference between **authentication** and **permissions** in DRF.

**✅ Authentication & Authorization**

1. What authentication methods are supported by DRF?
2. How do you implement token-based authentication in DRF?
3. How does session authentication work in DRF?
4. How does JWT authentication work in DRF?
5. How do you protect API endpoints using permissions like IsAuthenticated, IsAdminUser, AllowAny?

**✅ Advanced Concepts**

1. How do you implement throttling in DRF?
2. What are custom permissions? How do you create one?
3. What are custom exceptions in DRF? How do you handle them?
4. What is @action decorator used for in ViewSets?
5. How do you use mixins like ListModelMixin, CreateModelMixin, etc.?
6. How to include nested serializers?
7. How to create a read-only field in serializer?
8. How to hide certain fields based on user/condition in serializer?

**✅ Practical/Scenario-Based Questions**

1. You need to create an API that returns only the logged-in user's posts. How will you do that?
2. You want to allow only the author to update/delete a post. How will you do that?
3. How do you optimize database queries in DRF (e.g., select\_related, prefetch\_related)?
4. What’s the difference between using serializer.save() and using the model’s .save() directly?
5. How do you handle related fields like ForeignKey or ManyToMany in serializers?
6. How do you test a DRF API?
7. Can you integrate Swagger/OpenAPI documentation in DRF?

**✅ Bonus: Good-to-Know Topics (Optional but Impressive)**

1. How to create API versioning in DRF?
2. What are signals in Django and when would you use them in APIs?
3. Difference between synchronous and asynchronous views in Django 3.1+?
4. What is caching? Can you use caching in DRF?
5. How can you secure your API from common threats (rate limit, CSRF, CORS)?