

## Student Result

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**Exam:** Python , Django , Angular Programming

**Score:** 32.0/45.0

**Percentage:** 71.11%

### Question-wise Summary

| Sr.no | Question                                                                        | Selected Answer                                              | Correct Answer                                                   |
|-------|---------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------|
| 1     | Which type of Programming does Python support?                                  | all of the mentioned                                         | all of the mentioned                                             |
| 2     | What does the @staticmethod decorator do in a Python class?                     | Defines a method that requires a class instance to be called | Defines a method that doesn't receive an implicit first argument |
| 3     | In Django, which method is used to create database tables based on your models? | manage.py makemigrations and manage.py migrate               | manage.py makemigrations and manage.py migrate                   |

|   |                                                                                                                                                                                                                                                                                                                                                                               |                         |                         |
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| 4 | <p>What will be the output of the following Python code?</p> <pre>def create_multipliers():<br/>    return<br/>    [lambda<br/>      x: i * x for<br/>      i in<br/>      range(4)]<br/>functions<br/>=<br/>create_multipliers()<br/>results =<br/>[f(2) for f<br/> in<br/> functions]<br/>print(results)</pre>                                                              | <p>[0, 2, 4,<br/>6]</p> | <p>[6, 6, 6,<br/>6]</p> |
| 5 | <p>What will be the output of the following Python code?</p> <pre>def create_funcs():<br/>    funcs = []<br/>    for i in<br/>      range(3):<br/>        def f(x,<br/>          i=i):<br/>            return x<br/>            + i<br/>        funcs.append(f)<br/>    return<br/>    funcs<br/>funcs =<br/>create_funcs()<br/>print([f(10)<br/> for f in<br/> funcs])</pre> | <p>[13, 13,<br/>13]</p> | <p>[10, 11,<br/>12]</p> |

6

```
What will  
be the  
output of  
the  
following  
Python  
code?  
def  
logger(func):  
def  
wrapper(*args,  
**kwargs):  
print(f"Calling  
{func.__name__}")  
return  
func(*args,  
**kwargs)  
return  
wrapper  
@logger  
def  
add(x, y):  
return x  
+ y  
result  
=  
add(add(1,  
2),  
add(3,  
4))  
print(result)
```

**Calling  
add (4  
times),  
then 10**

**Calling  
add (3  
times),  
then 10**

7

What will  
be the  
Output of  
the  
Following  
Code?  
class  
Weird:  
def  
\_\_init\_\_(self,  
x): self.x  
= x def  
\_\_eq\_\_(self,  
other):  
return  
self.x ==  
other.x a  
=  
Weird(10)  
b =  
Weird(10)  
d = {a:  
"Hello",  
b:  
"World"}  
print(len(d),  
d[a])

**1 World**

**2 Hello**

|   |                                                                                                                                                                                                                                                                                                                                                                 |         |         |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| 8 | <p>What will be the Output of the Following Code?</p> <pre>def tricky(n, cache={}):<br/>    if n in cache:<br/>        return cache[n]<br/>    if n &lt;= 1:<br/>        return 1<br/>    cache[n] =<br/>        tricky(n-1)<br/>        +<br/>        tricky(n-2)<br/>    return cache[n]<br/>print(tricky(4))<br/>print(tricky(3))<br/>print(tricky(2))</pre> | 5, 3, 1 | 5, 3, 2 |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|

|   |                                                                                                                                                                                                                                                                                                                             |                                  |                                  |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|
| 9 | <p>What will be the Output Of the Following Code?</p> <pre>def subgen():<br/>    yield 1<br/>    yield 2<br/>    return 3<br/>def main():<br/>    result =<br/>    yield<br/>    from<br/>    subgen()<br/>    print("Returned:",<br/>    result) g<br/>    = main()<br/>    for val in<br/>    g:<br/>    print(val)</pre> | <p>1, 2,<br/>Returned:<br/>3</p> | <p>1, 2,<br/>Returned:<br/>3</p> |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|

|    |                                                                                                                                                                                                                                        |       |   |
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| 10 | <p>What will be the Output of the Following Code?</p> <pre>class Key: def __init__(self, val): self.val = val def __eq__(self, other): return self.val == other.val k1 = Key(1) k2 = Key(1) d = {k1: 'a', k2: 'b'} print(len(d))</pre> | Error | 2 |
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| 11 | <p>What will be the Output of the Following Code?</p> <pre>def dec1(func): def wrapper(*args): print("dec1") return func(*args) return wrapper def dec2(func): def wrapper(*args): print("dec2") return func(*args) return wrapper @dec1 @dec2 def hello(): print("Hello") hello()</pre> | <p><b>dec1,<br/>dec2,<br/>Hello</b></p> | <p><b>dec1,<br/>dec2,<br/>Hello</b></p> |
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| 12 | <p>What will be the Output of the Following Code?</p> <pre>def sub():<br/>    yield 1<br/>    yield 2<br/>    return "Done"<br/>def<br/>main():<br/>    x = yield<br/>    from sub()<br/>    print("Subgen returned:",<br/>    x)<br/>    g = main()<br/>    for i in g:<br/>        print(i)</pre> | <p><b>1</b><br/><b>Subgen</b><br/><b>returned:</b><br/><b>Done 2</b></p> | <p><b>1 2</b><br/><b>Subgen</b><br/><b>returned:</b><br/><b>Done</b></p> |
| 13 | <p>What will be the Output of the Following Code?</p> <pre>ef<br/>func(a,<br/>L=[]):<br/>    L.append(a)<br/>    return L<br/>print(func(1))<br/>print(func(2))<br/>print(func(3))</pre>                                                                                                            | <p><b>[1], [1,</b><br/><b>2], [1, 2,</b><br/><b>3]</b></p>               | <p><b>[1], [1,</b><br/><b>2], [1, 2,</b><br/><b>3]</b></p>               |

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| 14 | Which of the following operations will NOT trigger model.save() or signals (pre_save/post_save)?                                                                                                                                                                                      | <b>MyModel.objects.create(...)</b> <b>MyModel.objects.bulk_c</b> |                                                     |
| 15 | What will be printed?<br>Component:<br>@Component({<br>selector:<br>'app-test',<br>template:<br>'{{ value<br>}}' })<br>class<br>TestComponent<br>implements<br>OnInit {<br>value =<br>'initial';<br>ngOnInit()<br>{<br>setTimeout()<br>=><br>this.value<br>=<br>'changed',<br>0); } } | <b>Changed</b>                                                   | <b>Initial</b>                                      |
| 16 | What does providing a service in the component (instead of module) do?                                                                                                                                                                                                                | <b>Creates a new service instance per component</b>              | <b>Creates a new service instance per component</b> |

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| 17 | n a Django + Angular app using REST API, what is a good reason to disable CSRF middleware?                                                                 | Angular uses JWT Auth and doesn't send CSRF tokens | Angular uses JWT Auth and doesn't send CSRF tokens |
| 18 | If an Angular frontend calls a Django API and receives a CORS error, what should be done?                                                                  | Configure CORS_ORIGIN_ALLOW_ALL in Django          | Configure CORS_ORIGIN_ALLOW_ALL in Django          |
| 19 | What will be the Output of the Following Code?<br>stack = []<br>for i in range(3):<br>stack.append(i)<br>for i in range(2):<br>stack.pop()<br>print(stack) | [0]                                                | [0]                                                |

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| 20 | <p>What will be the Output of the Following Code? s = "((())"</p> <pre>stack = [] for ch in s:     if ch == '(':         stack.append(ch)     else:         if stack:             stack.pop() print(len(stack))</pre> | <p>Extra '(' remaining</p>                           | <p>Extra '(' remaining</p>        |
| 21 | <p>During project setup, if ng serve fails with the error "Local workspace file ('angular.json') could not be found", what is the likely issue?</p>                                                                   | <p>The angular.json file is missing or misplaced</p> | <p>Problems with node_modules</p> |
| 22 | <p>In Angular, which file is used to define the set of modules, components, and services?</p>                                                                                                                         | <p>app.module.ts</p>                                 | <p>app.module.ts</p>              |

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| 23 | What will be the Output of the Following Code?<br>def f(x, l=[]):<br>for i in range(x):<br>l.append(i*i)<br>return l<br>print(f(3))<br>print(f(2)) | <b>[0, 1, 4]</b><br><b>[0, 1, 4, 4]</b>                                                                     | <b>[0, 1, 4, 0, 1]</b>                                                                                      |
| 24 | In Angular (≥2+), what is the difference between NgModule.imports and NgModule.exports?                                                            | <b>imports declares dependencies the module needs, exports makes parts available to other modules</b>       | <b>imports declares dependencies the module needs, exports makes parts available to other modules</b>       |
| 25 | Which of these is a valid way to lazily load a module in Angular's router (from Angular 8+)?                                                       | <b>{ path: 'admin', loadChildren: () =&gt; import('./admin/admin.module').then(m =&gt; m.AdminModule) }</b> | <b>{ path: 'admin', loadChildren: () =&gt; import('./admin/admin.module').then(m =&gt; m.AdminModule) }</b> |

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| 26 | <p>Given the following models:</p> <pre>class Author(models.Model):     name = models.CharField(max_length=100) class Book(models.Model):     title = models.CharField(max_length=100)     author = models.ForeignKey(Author, on_delete=models.CASCADE, related_name='books')</pre> <p>Which of these queries returns all Author instances that have no books?</p> | <p><code>Author.objects.filter(books__isnull=True)</code></p> | <p><code>Author.objects.filter(books__isnull=False)</code></p> |
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| 27 | What happens when you call save() on a Django model instance without specifying force_insert or force_update, and the instance has a primary key that already exists in the database? | It will do an UPDATE                                                   | It will do an UPDATE                                                   |
| 28 | In Django REST Framework (DRF), what is the main function of SerializerMethodField?                                                                                                   | It enables custom read-only fields whose value is computed by a method | It enables custom read-only fields whose value is computed by a method |

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| 29 | Which of the following is the most efficient way to handle a large number of background tasks in Django? | <b>Integrating with a task queue like Celery.</b>                                                                            | <b>Integrating with a task queue like Celery.</b>                                                                            |
| 30 | How would you implement real-time communication (e.g., chat) in a Django application?                    | <b>Using Django Channels for WebSockets.</b>                                                                                 | <b>Using Django Channels for WebSockets.</b>                                                                                 |
| 31 | What is the primary purpose of ChangeDetectionStrategy.OnPush in Angular?                                | <b>To improve performance by only checking for changes when input properties change or an event is explicitly triggered.</b> | <b>To improve performance by only checking for changes when input properties change or an event is explicitly triggered.</b> |

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| 32 | How can you ensure proper communication between two unrelated Angular components without a direct parent-child relationship?                         | <b>Utilizing a shared service with a Subject or BehaviorSubject.</b>                                                     | <b>Utilizing a shared service with a Subject or BehaviorSubject.</b>                                                     |
| 33 | When integrating Django as a backend and Angular as a frontend, what is the recommended approach for handling user authentication and authorization? | <b>Implementing token-based authentication (e.g., JWT) where Django issues tokens and Angular stores and sends them.</b> | <b>Implementing token-based authentication (e.g., JWT) where Django issues tokens and Angular stores and sends them.</b> |

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| 34 | <p>What will be the Output of the Following Code?</p> <pre>Python x = 10 def outer_func():     x = 5     def inner_func():         print(x)     inner_func() outer_func()</pre> | 5                                                                                                     | 5                                                                                                     |
| 35 | <p>What is the best data structure to implement a cache with FIFO eviction policy?</p>                                                                                          | Queue + HashMap                                                                                       | Queue + HashMap                                                                                       |
| 36 | <p>What is the purpose of csrf_token in a Django form?</p>                                                                                                                      | To prevent Cross-Site Request Forgery (CSRF) attacks by ensuring the request comes from your own site | To prevent Cross-Site Request Forgery (CSRF) attacks by ensuring the request comes from your own site |

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| 37 | What is the main advantage of lazy loading feature modules in Angular?    | <b>It allows for loading modules on demand, which reduces the initial application load time.</b>             | <b>It allows for loading modules on demand, which reduces the initial application load time.</b>             |
| 38 | What is the main purpose of the RouterModule.forRoot() method in Angular? | <b>To register the routing service and provide the router configuration for the root application module.</b> | <b>To register the routing service and provide the router configuration for the root application module.</b> |

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|----|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39 | What is the difference between constructor and ngOnInit in an Angular component? | <b>constructor is for dependency injection and simple initializations, while ngOnInit is for more complex logic that should run after the component's inputs are available.</b> | <b>constructor is for dependency injection and simple initializations, while ngOnInit is for more complex logic that should run after the component's inputs are available.</b> |
| 40 | What does the queryset attribute in a Django generic ListView define?            | <b>The list of objects that the view will display</b>                                                                                                                           | <b>The list of objects that the view will display</b>                                                                                                                           |
| 41 | In the context of exception handling, what is the purpose of the finally block?  | <b>It is always executed, regardless of whether an exception occurred or not.</b>                                                                                               | <b>It is always executed, regardless of whether an exception occurred or not.</b>                                                                                               |

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| 42 | What does the pass statement do in Python?                                | <b>It acts as a placeholder where code is syntactically required but no action is needed.</b> | <b>It acts as a placeholder where code is syntactically required but no action is needed.</b> |
| 43 | How do you pass data from a child component back up to a parent component | <b>B) Using @Output() and an EventEmitter.</b>                                                | <b>B) Using @Output() and an EventEmitter.</b>                                                |
| 44 | In the Django MVT (Model-View-Template) architecture, what is the "T"?    | <b>Template</b>                                                                               | <b>Template</b>                                                                               |
| 45 | How do you pass data from a parent component to a child component?        | <b>Using the @Input() decorator.</b>                                                          | <b>Using the @Input() decorator.</b>                                                          |