Question Number : 97 Question Id : 640653351321 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Let `T(n)` denote the worst-case running time for the given function `mystery`, where `n` is the length of `L`. The asymptotic expression for `T(n)` is_____. Consider that the running time for `partition` function is $O(n)$.

Options :

6406531166002. ✖ $O(\log n)$

6406531166003. ✖ $O(n)$

6406531166004. ✖ $O(n \log n)$

6406531166005. ✔ $O(n^2)$

AppDev-1

Section Id :	64065322136
Section Number :	6
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	17
Number of Questions to be attempted :	17
Section Marks :	50
Display Number Panel :	Yes

Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065350395
Question Shuffling Allowed :	No

Question Number : 98 Question Id : 640653351322 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "MODERN APPLICATION DEVELOPMENT 1"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?
CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406531166006. ✔ Yes

6406531166007. ✖ No

Sub-Section Number :	2
Sub-Section Id :	64065350396
Question Shuffling Allowed :	Yes

Question Number : 99 Question Id : 640653351323 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Consider the Python file and a template given below.

Python file: app.py

```
from flask import Flask, url_for, redirect, render_template
app = Flask(__name__)

@app.route("/<name>/")
def index1(name):
    return "Hi" + " " + name + "!" + " " + "This is your home page."

@app.route("/first_index/<string:name>")
def index2(name):
    if name == "XYZ":
        return redirect(url_for("index1", name = "XYZ"))
    else:
        return redirect( url_for("index3"))

@app.route("/second_index")
def index3():
    return render_template("index.html")

if __name__ == "__main__":
    app.run(debug=True)
```

Template file: index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>My Document</title>
</head>
<body>
  <h2> You are on the incorrect page.</h2>
  <a href="{{ url_for("index1", name="ABC") }}">Go back</a>
</body>
</html>
```

If the above flask application is running locally on the URL ‘http://127.0.0.1:5000’, which of the following statements is/are true about the above code snippet?

Options :

6406531166008. ✖ For the endpoint '/XYZ/', the browser will show 'Not Found' error.

6406531166009. ✔ On clicking the link "Go back" in "index.html", the browser will render: Hi ABC! This is your home page.

6406531166010. ✔ For the endpoint '/first_index/XYZ', the browser will redirect to the URL for the function index3, i.e., '/second_index'.

6406531166011. ✖ For the endpoint '/first_index/ABC', the browser will redirect to the URL for the function 'index3' i.e., '/second_index'.

Sub-Section Number : 3

Sub-Section Id : 64065350397

Question Shuffling Allowed : Yes

Question Number : 100 Question Id : 640653351324 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

A flask application is given below.

```
from flask import Flask, jsonify

app = Flask(__name__)

Gadgets = [
            {"tech":"Smartwatch, Digital camera"},
            {"mobile":"Headphones, Speakers"},
            {"Laptop":"Keyboard, Mouse"}
          ]

@app.route("/home", methods=["GET"])
def func1():
return jsonify({"The list of gadgets": Gadgets})

@app.route("//")
def rest_lists():
return {
         "Restaurant 1" : "Hotel Alpine",
         "Restaurant 2" : "Maurya Vihar",
         "Restaurant 3" : "Royal Garden"
       }

if __name__ == "__main__":
   app.run(debug=True)
```

If the above flask application is running locally on the URL 'http://127.0.0.1:5000', which of the following statement is true about the above flask application?

Options :

6406531166012. ✔ For the endpoint "/", The content type of the response is 'application/json'

For the endpoint '/home', the application returns:

```
"The list of gadgets":
    {
        "tech":"Smartwatch, Digital camera",
        "mobile":"Headphones, Speakers",
        "Laptop":"Keyboard, Mouse"
    }
```

6406531166013. ✖

6406531166014. ✖ None of the endpoints, i.e., '/' or '/home' can be considered as access URIs of an API.

For the endpoint '/home', the application returns:

```
"The list of gadgets":
    {
      "tech": "Smartwatch, Digital camera"
    },
    {
      "mobile": "Headphones, Speakers"
    },
    {
      "Laptop": "Keyboard, Mouse"
    }
```

6406531166015.

Question Number : 101 Question Id : 640653351326 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the table “production” in SQLite database given below:

Manufacturer	Product	Quantity	Cost
Industry A	Biscuits	3	100
Industry B	Shoes	2	500
Industry A	Chocolate	10	200
Industry C	Pen	20	50
Industry B	Shirts	5	700
Industry D	Beverages	30	150
Industry C	Notebook	40	250

What will be the output of the SQL query given below?

```
SELECT Manufacturer, COUNT(*)
FROM production
WHERE Quantity>10
GROUP BY Manufacturer
HAVING COUNT(*)=2;
```

Options :

6406531166020. ✖

```
Manufacturer|COUNT(*)
Industry D |1
```

6406531166021. ✔

```
Manufacturer|COUNT(*)
Industry C |2
```

6406531166022. ✖

```
Manufacturer|COUNT(*)
Industry C |2
Industry D |1
```

6406531166023. ✖

```
Manufacturer|COUNT(*)
Industry C |1
Industry D |2
```

Question Number : 102 Question Id : 640653351327 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the table “employee” given below. The model class “Employee” corresponds to table “employee” in the database.

id	first_name	last_name	email
1	Ruhil	Verma	verma@gmail.com
2	Monica	gulati	manisha@gmail.com
3	Sandeep	Sharma	sharma@gmail.com
4	Taapsi	Uma	uma@gmail.com

What will be the output of the `flask_sqlalchemy` command given below?

```
>>> user1= Employee.query.filter_by(first_name="Monica").first()
>>> user1.first_name= "Manisha"
>>> db.session.commit()
>>> emp = Employee.query.all()
>>> for emp1 in emp:
...print(first_name)
```

Options :

6406531166024. ✖

```
Ruhil
Monica
Sandeep
Taapsi
```

6406531166025. ✖

```
Ruhil
Sandeep
Taapsi
```

6406531166026. ✖

```
Ruhil
Manisha
Sandeep
Taapsi
```

6406531166027. ✔ None of these

Question Number : 103 Question Id : 640653351330 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following is the correct Python object representation of the given SQL query with declarative_base() class.

```
CREATE TABLE "Items" (
"ID"   INTEGER,
"name" TEXT,
"cost" INTEGER,
PRIMARY KEY("ID" AUTOINCREMENT)
)
```

Options :

6406531166036. ✖

```
Base = declarative_base()
class User(Base):
     __tablename__ = "User"
     ID = Column(Integer, primary_key = True, autoincrement = True)
     name = Column(String)
     cost = Column(Integer)
```

6406531166037. ✔

```
Base = declarative_base()
class Items(Base):
    __tablename__ = "Items"
    ID = Column(Integer, primary_key = True, autoincrement = True)
    name = Column(String)
    cost = Column(Integer)
```

6406531166038. ✖

```
Base = declarative_base()
class Items(Base):
    __tablename__ = "Items"
    Item_ID = Column(Integer, primary_key = True, autoincrement =
True)
    Item_name = Column(String)
    Item_cost = Column(Integer)
```

6406531166039. ✖

```
Base = declarative_base()
class Items(Base):
    __tablename__ = "Items"
    cost = Column(Integer, primary_key = True, autoincrement = True)
    name = Column(String)
    ID = Column(Integer)
```

Question Number : 104 Question Id : 640653351332 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

If the below flask application is running locally on the URL: 'http://127.0.0.1:5000', what will be rendered by the browser?

Python file: main.py

```
from flask import Flask, render_template
app=Flask(__name__)

@app.route('/')
def home():
my_course = ['App1', 'App2', 'python', 'Data science',
             'Database', 'machine learning']

return render_template('index.html', list=my_course)

if __name__=='__main__':
   app.run(debug=True)
```

Template: index.html

```
<html>
  <head>
    <title>template file</title>
  </head>
  <body>
    {% macro display(list) %}
       {% for course in list %}
          <p>{{ course }}</p>
       {% endfor %}
    {% endmacro %}
    {{ display(list) }}
   </body>
</html>
```

Options :

6406531166044. ✖

```
['App1',

'App2',

'python',

'Data science',

'Database',

'machine learning']
```

6406531166045. ✖

```
['App1', 'App2', 'python', 'Data science', 'Database',

'machine learning']
```

6406531166046. ✔

```
App1

App2

python

Data science

Database

machine learning
```

6406531166047. ✖

```
App1 App2 python Data science Database machine learning
```

Question Number : 105 Question Id : 640653351334 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following table “table_A” in SQLite database.

	ID	First_Name	Last_Name	Course
	Filter	Filter	Filter	Filter
1	1	Raj	R	Java
2	2	Riya	Z	Java
3	3	Sam	sundar	Java
4	4	praneeth	k	Java
5	5	Kunal	T	Python
6	6	vimal	singh	Python
7	7	sethu	J	Python
8	8	liza	G	C++
9	9	shylla	chopra	C++

What will be the output of the following SQL query?

```
SELECT Course, count(ID) AS No_Of_Students
FROM table_A GROUP BY Course
ORDER BY No_Of_Students ASC;
```

Options :

6406531166052. ✖

	Course	No_Of_Students
1	Python	1
2	Java	1
3	Java	1
4	Java	1
5	C++	1
6	Java	1
7	Python	1
8	C++	1
9	Python	1

6406531166053. ✖

	Course	No_Of_Students
1	Python	1
2	C++	1
3	Python	1
4	Java	1
5	C++	1
6	Java	1
7	Java	1
8	Java	1
9	Python	1

6406531166054. ✖

	Course	No_Of_Students
1	Java	4
2	Python	3
3	C++	2

6406531166055. ✔

	Course	No_Of_Students
1	C++	2
2	Python	3
3	Java	4

Question Number : 106 Question Id : 640653351336 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following HTML file with embedded JavaScript.

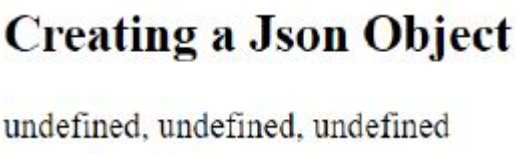
Filename: index.html

```
<!DOCTYPE html>
<html>
  <body>
    <h2>Creating a Json Object </h2>
    <p id="jsonobj"></p>
    <script>
       const txt = '{"name":"icecream","type":"cup",
"flavor":"vanilla"}'
       const obj = JSON.parse(txt);
       document.getElementById("jsonobj").innerHTML = obj.name + ", "
       + obj.flavor + ", " + obj.type;
    </script>
  </body>
</html>
```

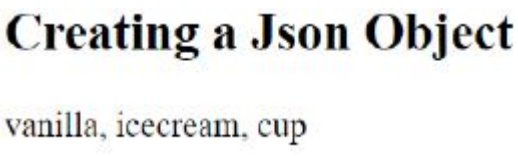
How will the browser render the above HTML file?

Options :

6406531166060. ✖



6406531166061. ✖



6406531166062. ✖

Creating a Json Object

6406531166063. ✔ icecream, vanilla, cup

Sub-Section Number : 4

Sub-Section Id : 64065350398

Question Shuffling Allowed : Yes

Question Number : 107 Question Id : 640653351325 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the statements given below.

Statement 1: APIs usually contain SDKs, but SDKs do not contain APIs.

Statement 2: The SDKs contains the group of tools that help developers to use a different product or services.

Which of the following is correct in the context of statements given above?

Options :

6406531166016. ✖ Both statement 1 and 2 are correct.

6406531166017. ✖ Statement 1 is correct, 2 is incorrect.

6406531166018. ✖ Both statement 1 and 2 are incorrect.

6406531166019. ✔ Statement 1 is incorrect, 2 is correct.

Question Number : 108 Question Id : 640653351329 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider a situation, where a developer wants to create his own customized application and wants to deploy it for the end users. For that, he wants a development environment that consists of some programming language execution environment, an operating system, a web server and a database, such that he can build, compile and run his programs without worrying about the servers, storage, and networking. Which of the following service models he would prefer in order to do so?

Options :

6406531166032. ✖ SaaS

6406531166033. ✔ PaaS

6406531166034. ✖ IaaS

6406531166035. ✖ None of these

Question Number : 109 Question Id : 640653351333 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the following table 'flowers' in SQLite database.

ID ▾1	Name	color
Filter	Filter	Filter
1	Jasmine	white
2	Rose	pink
3	Lily	pink
4	Lotus	pink
5	Red rose	red

What will be the output of the following SQL query?

```
Select count(ID), Name, color from flowers
group by color HAVING count(color)<2;
```

Options :

6406531166048. ✖

count(ID)	Name	color
3	Rose	pink

6406531166049. ✖

count(ID)	Name	color
1	red rose	red
1	Jasmine	white

6406531166050. ✖

count(ID)	Name	color
3	Rose	pink
1	red rose	red
1	Jasmine	white

6406531166051. ✔

count(ID)	Name	color
1	Red rose	red
1	Jasmine	white

Question Number : 110 Question Id : 640653351335 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Match the following based on the memory hierarchy of computer.

Parameters	Storage element
1. Highest Latency	a. HDD
2. Lowest Density	b. Register
3. Lowest Throughput	c. DRAM
	d. SSD
	e. SRAM

Options :

6406531166056. ✖ 1 - e, 2 - b, 3 - d

6406531166057. ✖ 1 - a, 2 - b, 3 - c

6406531166058. ✔ 1 - a, 2 - b, 3 - a

6406531166059. ✖ 1 - b, 2 - c, 3 - d

Sub-Section Number : 5

Sub-Section Id : 64065350399

Question Shuffling Allowed : Yes

Question Number : 111 Question Id : 640653351328 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the HTML document given below:

```
<!DOCTYPE html>
<html>
    <head>
        <style>
            [id~=out] {
              border: 10px solid red;
            }

            [class~=out]{
                border: 5px solid yellow;
            }
        </style>
    </head>
    <body>
        <h2>Hello World!</h2>
        <h1 id="out">Hey!</h1>
        <p id="out-text">My name is Fred.</p>
        <p class="outcontent">I am learning to develop
applications.</p>
        <p id ="out"> Are you also willing to learn?</p>
        <p class="out">Welcome to the world of Application
development!</p>
        <h3>Have a nice day!!</h3>
    </body>
</html>
```

Which of the following statements is true for the above HTML document when rendered by the

browser?

Options :

6406531166028. ✖ The headings, i.e., 'Hello World!' and 'Hey!', both will have red border color.

6406531166029. ✔ The paragraph with class='out', will get a yellow color border.

6406531166030. ✖ The paragraph with id='out' will get a yellow color border.

6406531166031. ✖ The two paragraphs with contents, 'My name is Fred.' and 'I am learning to develop applications.', will both get a red color border and yellow color border.

Question Number : 112 Question Id : 640653351331 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the following PyHTML program. Identify the corresponding HTML file which will be generated on running the PyHTML code.

```
from pyhtml import *
my_html = html(head(title("Quiz 2")),
               body(h2("Second level heading"),
                    div("This is my first div"),
                    p("Paragraph1"),
                    p("Paragraph2")
                    )
              )
output = my_html.render()
print(output)
```

Options :

6406531166040. ✔

```
<!DOCTYPE html>
<html>
  <head>
     <title>Quiz 2</title>
  </head>
  <body>
     <h2>Second level heading</h2>
     <div>This is my first div</div>
     <p>Paragraph1</p>
     <p>Paragraph2</p>
  </body>
</html>
```

6406531166041. ✖

```
<!DOCTYPE html>
<html>
  <head>
     <h2>Second level heading</h2>
  </head>
  <body>
     <title>Quiz 2</title>
     <div>This is my first div</div>
     <p>Paragraph1</p>
     <p>Paragraph2</p>
  </body>
</html>
```

6406531166042. ✖

```
<!DOCTYPE html>
<html>
  <head>
     <title>Quiz 2</title>
     <div>This is my first div</div>
  </head>
  <body>
     <h2>Second level heading</h2>
     <p>Paragraph1</p>
     <p>Paragraph2</p>
  </body>
</html>
```

6406531166043. ✖

```
<!DOCTYPE html>
<html>
  <head>
     <title>Quiz 2</title>
  </head>
  <body>
     <h2>Second level heading</h2>
     <div>This is my first div
     <p>Paragraph1</p>
     <p>Paragraph2</p>
     </div>
  </body>
</html>
```

Question Number : 113 Question Id : 640653351337 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider two software packages A and B. The average processing time of the package A is TA(n) = 0.001n milliseconds and the average processing time of the package B is $TB(n) = 500\sqrt{n}$ milliseconds, where n is the number of records being processed. Which of the given software packages A and B should be chosen to process data collections, containing 10^8 records?

Options :

6406531166064. ✔ Package A

6406531166065. ✖ Package B

6406531166066. ✖ Both A and B will take same time

6406531166067. ✖ Both A and B will infinite time to process records

Question Number : 114 Question Id : 640653351338 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the following Python code snippet:

```
from flask import Flask
from flask_restful import Resource, Api, reqparse, fields,
marshal_with

app = Flask('__main__')
api = Api(app)

parser = reqparse.RequestParser()
parser.add_argument("Id")
parser.add_argument("name")
parser.add_argument("email")

out_fields = {
    "Id": fields.Integer,
    "name": fields.String
}

class MyApi(Resource):
    def get(self):
        info = parser.parse_args()
        return {"Identity": info['Id'] , "Name": info['name'],
"E-mail": info['email']}

    @marshal_with(out_fields)
    def post(self):
        info = parser.parse_args()
        return info

api.add_resource(MyApi, '/myinfo')

app.run(debug = True)
```

If the application is running locally on the URL: "http://127.0.0.1:5000", What will be the output on the terminal for command:

```
curl -X POST -H "Content-Type: application/json"
     -d "{\"Id\":3, \"name\":\"user_1\", \"email\":
\"user_1@gmail.com\"}" http://127.0.0.1:5000/myinfo
```

Options :

6406531166068. ✖

```
{
    "Identity": "3",
    "Name": "user_1",
    "E-mail": "user_1@gmail.com"
}
```

6406531166069. ✔

```
{
    "Id": 3,
    "name": "user_1"
}
```

6406531166070. ✖

```
{
    "Id": "3",
    "name": "user_1"
}
```

6406531166071. ✖

```
{
    "name": "user_1",
    "email": "user_1@gmail.com"
}
```

MLF

Section Id :	64065322137
Section Number :	7
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	12
Number of Questions to be attempted :	12
Section Marks :	50
Display Number Panel :	Yes
Group All Questions :	No