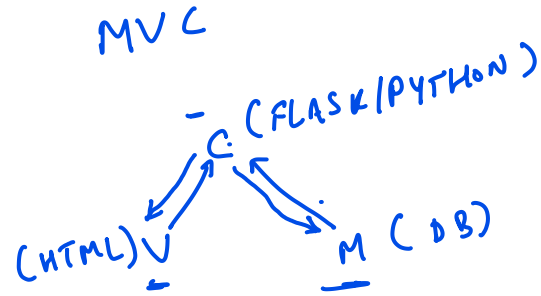


Which of the following options is correct regarding statements I and II?

Statement I: The controller is responsible for taking data from the model and giving it to the view to present it.

Statement II: The controller is responsible for taking data from the view and giving it to the model to perform certain actions.

- Only statement I is correct.
- Only statement II is correct.
- Both are correct.
- Both are incorrect.



No, the answer is incorrect.

Score: 0

Accepted Answers:

Both are correct.

Match the following HTTP methods in column A with their conventional usage in Column B.

3 points

	Column A		Column B
1	GET	a	Send data to a server to create a resource
2	HEAD	b	Update a resource
3	PUT	c	method, generally used to request a resource from the server.
4	POST	d	Asks for a response identical to that of a GET request, but without the response body

- 1-c, 2-d, 3-b, 4-a
- 1-c, 2-b, 3-d, 4-a
- 1-c, 2-d, 3-a, 4-b
- 1-a, 2-d, 3-b, 4-c

Get - request a resource
 Post - Send a data to server
 Put - Update a resource
 head - request a resource without the response body.

No, the answer is incorrect.

Score: 0

<https://developer.mozilla.org/en-US/docs/Web/HTTP/Methods>

Accepted Answers:

1-c, 2-d, 3-b, 4-a

For the statement given below:

3 points

`curl http://localhost:8080`

Select the appropriate option that correctly maps different components of the given statement to their corresponding values from the below table.

Column 1	Column 2
1) curl	a) protocol
2) 8080	b) host name
3) http	c) command
4) localhost	d) port

command protocol://hostname:port

query string.

- 1-c, 2-d, 3-a, 4-b
- 1-a, 2-c, 3-b, 4-d
- 1-c, 2-d, 3-b, 4-a
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

1-c, 2-d, 3-a, 4-b

1111
0001

2KB byte
2Kb

Let $L = \{ 'a', 'b', 'c', 'd', 'A', 'B', 'C', 'D', '0', '1', ' ' \}$ be a complete character set (i.e., 4.5 points only these characters can be used to represent text in the document). If a document that uses fixed encoding for all characters is created using the character set L and has a disk size of 2 Kilobytes, the number of characters in the documents would be _____. [Take 1 Byte = 8 bits, 1 KB = 1000 Bytes, 1 MB = 1000 Kilobytes and so on]

- 2000
- 4000
- 8000
- 16000

① $\# L = 11$
 $\rightarrow (2^3 = 8) < 11 < (2^4 = 16) \Rightarrow$ 4 bits are required for storing each character

② $\Rightarrow 2 \text{ KB} = 2 \times 1000 \times 8 = 16000$ bits (we are converting bytes to bits here)

③ $\# \text{ of character in doc} = \frac{\text{Size of disk}}{\text{bits req. for storing each character}} = \frac{16000}{4} = 4000$

No, the answer is incorrect.

Score: 0

Accepted Answers:

4000

Suppose you initiated the Python inbuilt HTTP server in a given directory that does not contain index.html file in its root directory, and you send a request to `http://127.0.0.1:8000` using a browser. What will be rendered by the browser? 2 points

- A file name index.html will automatically be created and will be rendered.
- The directory listing of the given directory will be displayed. `python -m http.server 8000`
- The browser will show an "Internal Server Error".
- The browser will show "Page not found error".

No, the answer is incorrect.

Score: 0

Accepted Answers:

The directory listing of the given directory will be displayed.

How many characters can be encoded using 5 bits?

2 points

- 8
- 16
- 64
- 32

$2^5 = 32$

No, the answer is incorrect.

Score: 0

Accepted Answers:

32

$$A = 65$$

$$i = 78 - \frac{1}{2}$$

How many bits are required to represent 'IITM' in ASCII? 2 points

- 12
- 24
- 32
- 35

Handwritten notes for the ASCII question:

IITM → 4 characters

7 or 8 bits

$7 \times 4 = 28$

or

$8 \times 4 = 32$

Diagram showing characters and their bit counts:

I	8
I	8
T	8
M	8

00101

No, the answer is incorrect.

Score: 0

Accepted Answers:

32

A mobile client starts from and is cruising away continuously at 60 kmph from the network tower whose network **3 points** range is 40 km and bandwidth is 120 Mbps. How much data (in Gigabytes) will be consumed by the client who is continuously using the entire bandwidth before completely moving out of the network?

[Take 1 Byte = 8 bits, 1 KB = 1000 Bytes, 1 MB = 1000 Kilobytes and so on.]

[Consider the speed of light in air to be 3 x 10⁸ m/sec.]

- 24
- 28.8
- 36
- 288



Speed = 60 km/h (convert in sec)

Handwritten calculations for the bandwidth question:

range (40 km)

BW = 120 Mbps (convert in GB)

$$= \frac{120}{8000} = \frac{3}{200}$$

2 x 2 x 6 x 6

No, the answer is incorrect.

Score: 0

Accepted Answers:

36

Which of the following is correct syntax to check if the length of a list is equal to 10 in jinja2 template? 2 points

- {% if list | length == 10 %}
- {% if list | length == 10 %} X
- {% if len(list) == 10 %} X



No, the answer is incorrect.

Score: 0

Accepted Answers:

{% if list | length == 10 %}

What will be the output of the following Python code?

4.5 points

```
from jinja2 import Template

my_gadgets = {"first": "Television", "second": "Smart phone", "third": "Tablet",
              "fourth": "Computer"}

for item in my_gadgets:
    statement = Template("My {{item}} gadget is {{gadget}}.")
    print(statement.render(item = item, gadget = my_gadgets[item]))
```

My k gadet is - .
My first ga. is Te. .
 Second — Sp.

1
2
3
4

- My First gadget is Television.
My Second gadget is Smart phone.
My Second gadget is Tablet.
My Fourth gadget is Computer.
- My first gadget is Television.
My second gadget is Smart phone.
My third gadget is Tablet.
My fourth gadget is Computer.
- My first gadget is Television.
My first gadget is Smart phone.
My first gadget is Tablet.
My first gadget is Computer.
- My first gadget is Television.
My second gadget is Television.
My third gadget is Television.
My fourth gadget is Television.

Speed = 60 km/h. \Rightarrow seconds.

D = 40 km

$D = S \cdot T \Rightarrow T = \frac{D}{S} = \frac{40}{60} = \frac{2}{3}$ hr ✓

120 Mbps $\Rightarrow \frac{120}{8 \times 1000}$ GB

$= \frac{2}{3} \times 60 \times 60$

Data = BW x T = $\frac{120}{8 \times 1000} \times \frac{2}{3} \times 60 \times 60 = 3 \times 2 \times 6 = 36$ GB

No, the answer is incorrect.

Score: 0

Accepted Answers:

My first gadget is Television.
 My second gadget is Smart phone.
 My third gadget is Tablet.
 My fourth gadget is Computer.

Consider the following HTML document.

4.5 points

```
<!DOCTYPE html>
<html>
<head>
  <title>Document</title>
  <style>
    div{
      margin: auto;
      padding: auto;
      background-color: aqua !important;
      width:225px;
      text-align: center;
      color:blue;
    }
  </style>
</head>
<body>
  <div style="border:4px solid purple;background-color:lightgrey;color:red;">
    <h2>Welcome to IITM</h2>
  </div>
</body>
</html>
```



Handwritten notes: <div? </div? u di v

-
-
-
-



No, the answer is incorrect.
Score: 0

Accepted Answers:



Consider the following Python code snippet.

3 points

```
from string import Template
```

```
statement = "$g http method is used to retrieve information while $p  
for sending information"
```

```
out = Template(statement)
```

```
print(=== OUTPUT ===)
```

GET http \$p for s - s.

Which of the following statements, when substituted in place of === OUTPUT ===, will throw a KeyError?

- out.substitute({'g': 'GET'})
- out.substitute({'g': 'GET', 'p': 'POST', 'd': 'delete'})
- out.safe_substitute({'g': 'GET'})
- out.safe_substitute({'g': 'GET', 'p': 'POST', 'd': 'delete'})

No, the answer is incorrect.

Score: 0

Accepted Answers:

```
out.substitute({'g': 'GET'})
```

Consider the following python code snippet.

4.5 points

```
from jinja2 import Template as T1 ✓
from string import Template as T2 ✓
```

```
info = {'city1': 'Mumbai', 'city2': 'Delhi',
        'city3': 'city2', 'city4': 'city1',
        'country1': 'India', 'country2': 'country1'}
```

```
t1 = T1("${{city3}} and ${{city4}} are the national and financial capitals  
of ${{country2}} respectively.")
```

```
out1 = t1.render(info)
print(out1)
out2 = T2(out1) ✓
print(out2.substitute(info))
```

\$city2 and \$city1 of \$country1
Delhi and Mumbai of India.

What is the generated output on python console?

- city2 and city1 are the national and financial capitals of country1 respectively.
- Delhi and Mumbai are the national and financial capitals of India respectively.
- \$city2 and \$city1 are the national and financial capitals of \$country1 respectively. Delhi and Mumbai are the national and financial capitals of India respectively.
- {{city2}} and {{city1}} are the national and financial capitals of {{country1}} respectively. Delhi and Mumbai are the national and financial capitals of India respectively.

- \$city3 and \$city4 are the national and financial capitals of \$country2 respectively.
Delhi and Mumbai are the national and financial capitals of India respectively.

No, the answer is incorrect.

Score: 0

Accepted Answers:

\$city2 and \$city1 are the national and financial capitals of \$country1 respectively.
Delhi and Mumbai are the national and financial capitals of India respectively.

Consider the following flask application:

3 points

```
from flask import Flask, request
app = Flask(__name__)
@app.route('/get_value')
def get_value():
    val1 = request.args.get("val1")
    return "The value is "+ val1
app.run(port = 5000, debug = True)
```

Which of the following route(s) will return The value is 10 in the browser?

- http://127.0.0.1:5000?val1=10
- http://127.0.0.1:5000/get_value?10
- http://127.0.0.1:5000/get_value?val1=10
- http://127.0.0.1:5000/get_value?val1=10&val2=10

No, the answer is incorrect.

Score: 0

Accepted Answers:

http://127.0.0.1:5000/get_value?val1=10
http://127.0.0.1:5000/get_value?val1=10&val2=10

Consider the following Python code snippet "code.py".

3 points

Filename: code.py

```
import sys
from jinja2 import Template

vars = sys.argv
myTech = {'mad 1': 'backend', 'mad 2': 'frontend'}

temp = Template("This course focuses on {{var}} development.")

if vars[2] == 'mad 1':
    print(temp.render(myTech['mad 1']))
elif vars[2] == 'mad 2':
    print(temp.render(myTech['mad 2']))
else:
    print("Mention the course name specifically.")
```

What will be the output on the terminal for input: python code.py mad 1 ?

- This course focuses on frontend development.
- This course focuses on backend development.
- Mention the course name specifically.
- IndexError: list index out of range

No, the answer is incorrect.

Score: 0

Accepted Answers:

Mention the course name specifically.

Which of the following options is correct regarding the following code?

3 points

```

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <title>Document</title>
    <style>
      .class1 {
        color: red;
      }
      .class2 {
        font-weight: bold;
      }
    </style>
  </head>
  <body>
    <div>
      <p class="class1 class2">
        Lorem ipsum dolor sit amet consectetur adipisicing elit.
      </p>
    </div>
  </body>
</html>

```

- The color of the text inside <p> tag will be red, but font weight will not be bold.
- Font weight of the text inside the <p> tag will be bold, but the color of the text will not be red.
- Font weight of the text inside the <p> tag will be bold and color will be red.
- Font weight of the text inside the <p> tag will be normal and color will be black.

No, the answer is incorrect.

Score: 0

Accepted Answers:

Font weight of the text inside the <p> tag will be bold and color will be red.

Quiz-1

Content - Week 1-4

Question type - MCQ & MSQ

of Que. - 16

Marks - 2/3/4.5

Week wise Content

✓ to be covered for quiz-1 is discussed in this revision

✓ Agenda

- Recap - W1-4 ✓
- Mock Paper discussion ✓
- Topic to watch out for / Doubts

As given in PYQ's
same format

for a detailed video on Mock, use this
link:

<https://www.youtube.com/watch?v=Kb5E9a7k1rQ&lc=UgyRzsYn4L6puogBv4F4AaABAg>