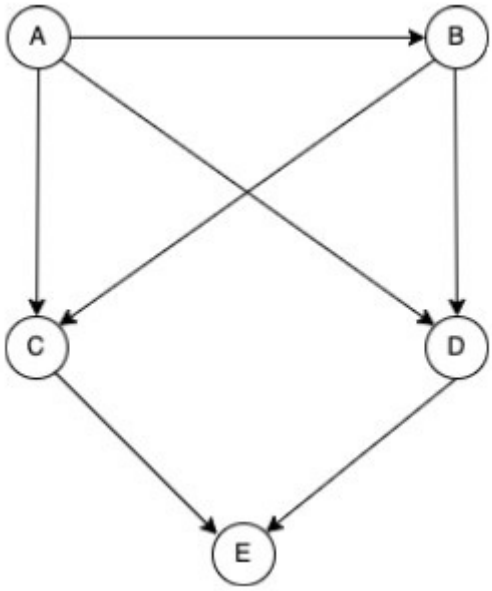
Question Number : 100 Question Id : 640653668540 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Consider the following Directed Acyclic Graph(DAG):



The number of possible topological order(s) for the given graph is_____.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

AppDev1

Section Id :	64065344901
Section Number :	7
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
Section Negative Marks :	0
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 :	64065395164
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 101 Question Id : 640653668541 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 "DIPLOMA LEVEL : MODERN APPLICATION DEVELOPMENT I (COMPUTER BASED EXAM)"

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 :

6406532239805. ✔ YES

6406532239806. ✖ NO

Sub-Section Number : 2

Sub-Section Id : 64065395165

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 102 Question Id : 640653668542 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

What does the term “responsive” mean in the context of web design?

Options :

6406532239807. ✖ The ability of a webpage to give visual feedback on any kind of user input.

6406532239808. ✖ The ability of a webpage to change its color scheme to “night mode”.

6406532239809. ✔ The ability of a webpage to alter its layout and appearance to suit different screen widths, resolutions, etc.

6406532239810. ✖ All of these.

Question Number : 103 Question Id : 640653668543 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 HTTP methods in Column A with their conventional usage in Column B.

	Column A		Column B
1	GET	a	Send data to a server to create/update 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

Options :

6406532239811. ✔ 1-c, 2-d, 3-b, 4-a

6406532239812. ✖ 1-c, 2-b, 3-d, 4-a

6406532239813. ✖ 1-c, 2-d, 3-a, 4-b

6406532239814. ✖ 1-a, 2-d, 3-b, 4-c

Sub-Section Number : 3

Sub-Section Id : 64065395166

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 104 Question Id : 640653668547 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 document.

```
<!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>
```

Which of the following is correct rendered output ?

Options :

6406532239827. ✖ 

6406532239828. ✖ 

6406532239829. ✔ 

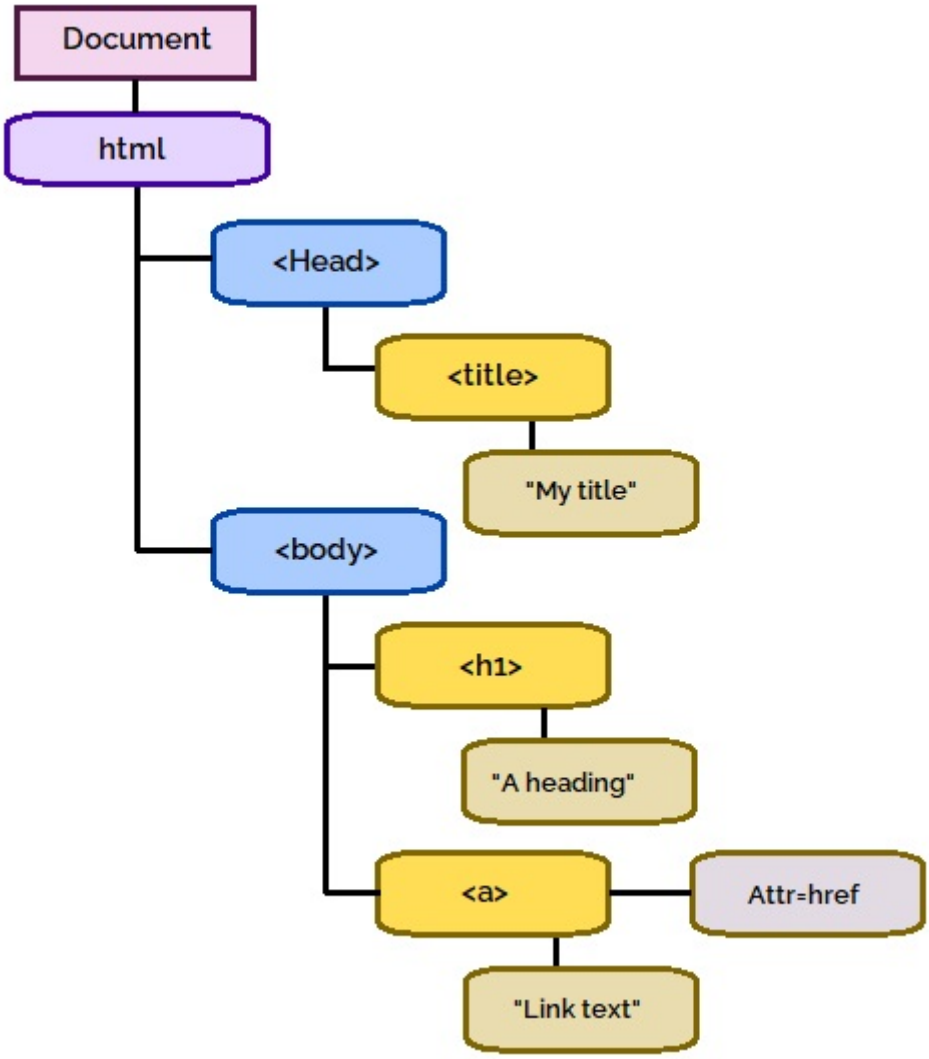
6406532239830. ✖ 

Question Number : 105 Question Id : 640653668548 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 DOM structure and select the HTML document that correctly represents the DOM structure .



Options :

6406532239831. ✖

```
<!DOCTYPE html>
<head>
    <title>My title</title>
<body>
    <h1>A heading</h1>
    <a href="link">Link text</a>
```

6406532239832. ✖

```
<!DOCTYPE html>
<html>
<head>
    <title>My title</title>
</head>
<body>
    <h1>A heading</h1>
    <a>Link text</a>
</body>
</html>
```

6406532239833. ✖

```
<!DOCTYPE html>
<html>
<head>
    <title>My title</title>
<body>
    <h1>A heading</h1>
    <a>Link text</a>
</html>
```

6406532239834. ✔

```
<!DOCTYPE html>
<html>
<head>
    <title>My title</title>
</head>
<body>
    <h1>A heading</h1>
    <a href="link">Link text</a>
</body>
</html>
```

Question Number : 106 Question Id : 640653668549 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 python code snippet.

```
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))
```

What is the generated output on python console?

Options :

6406532239835. ✖ city2 and city1 are the national and financial capitals of country1 respectively.
Delhi and Mumbai are the national and financial capitals of India respectively.

6406532239836. ✔ $city2 and $city1 are the national and financial capitals of $country1 respectively.
Delhi and Mumbai are the national and financial capitals of India respectively.

6406532239837. ✖ {{city2}} and {{city1}} are the national and financial capitals of {{country1}} respectively.
Delhi and Mumbai are the national and financial capitals of India respectively.

6406532239838. ✖ $city3 and $city4 are the national and financial capitals of $country2 respectively.
Delhi and Mumbai are the national and financial capitals of India respectively.

Question Number : 107 Question Id : 640653668550 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 flask view functions will return a 404 error for the URL: http://127.0.0.1:5000/home/student1/2001 ?

Options :

6406532239839. ✖

```
@app.route('/home/<student_id>/<course_id>')
def home(student_id, course_id):
      details = { 'student_id': student_id, 'course_id': course_id}
```

6406532239840. ✖

```
@app.route('/home/<string:student_id>/<int:course_id>')
def home(student_id, course_id):
      details = { 'student_id': student_id, 'course_id': course_id}
```

6406532239841. ✖

```
@app.route('/home/<string:student_id>/<string:course_id>')
def home(student_id, course_id):
      details = { 'student_id': student_id, 'course_id': course_id}
```

6406532239842. ✔

```
@app.route('/home/student/<student_id>/<course_id>')
def home(student_id, course_id):
      details = { 'student_id': student_id, 'course_id': course_id}
```

Question Number : 108 Question Id : 640653668553 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 a character set L, which consists of only those characters which are used in the statement, “pack my box with five dozen liquor jugs”. If this statement is to be saved in a document with minimum encoding, what will be the size of the document given that no other information or context is to be saved?

Options :

6406532239851. ✖ 160 bits

6406532239852. ✖ 320 bits

6406532239853. ✔ 195 bits

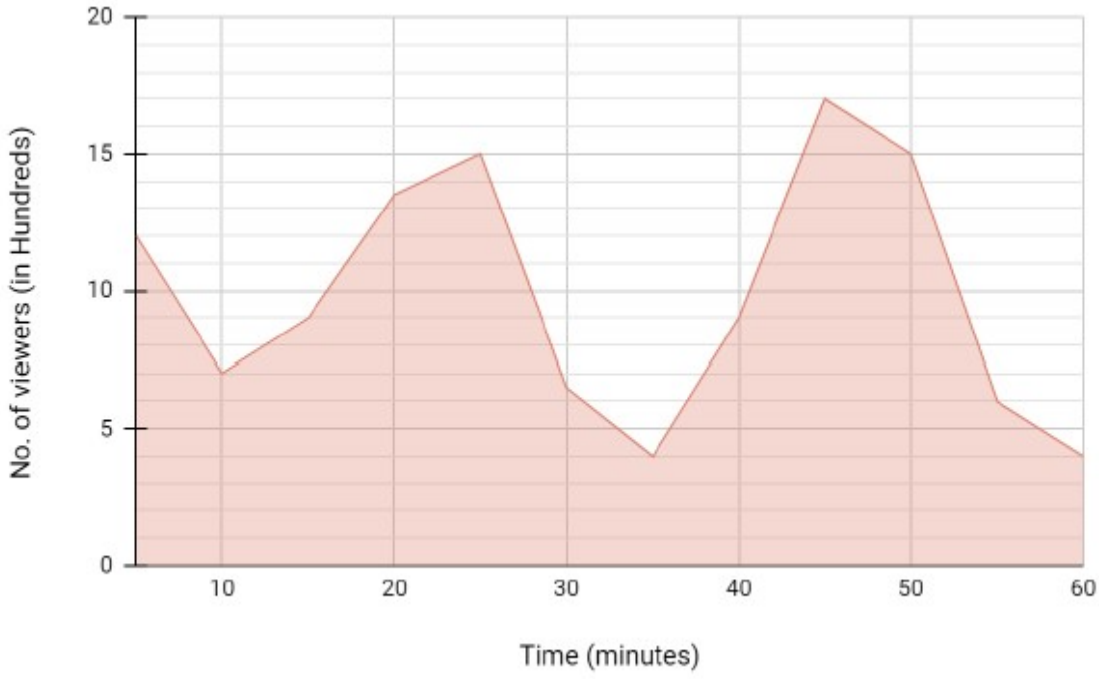
6406532239854. ✖ 390 bits

Question Number : 109 Question Id : 640653668555 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 certain video that was available on the web only for an hour occupied 2 gigabytes of memory of the server. If the number of viewers of the video over time for that hour is given by the curve shown below and assuming that each viewer required an individual connection to the server to view the video, what would be the minimum RAM requirement of the server that could process requests from all the viewers simultaneously at any point of time?



Options :

6406532239859. ✖ 1.7 GB

6406532239860. ✖ 3.4 GB

6406532239861. ✖ 1.7 TB

6406532239862. ✔ 3.4 TB

Question Number : 110 Question Id : 640653668556 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 Python code snippet.

```
from string import Template

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

out = Template(statement)

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

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

Options :

6406532239863. ✔ `out.substitute({'g':'GET'})`

6406532239864. ✖ `out.substitute({'g':'GET','p':'POST', 'd': 'delete'})`

6406532239865. ✖ `out.safe_substitute({'g':'GET'})`

6406532239866. ✖ `out.safe_substitute({'g':'GET','p':'POST', 'd': 'delete'})`

Question Number : 111 Question Id : 640653668557 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 Python code snippet "code.py".

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[1] == 'mad 1':
    print(temp.render(myTech['mad 1']))
elif vars[1] == '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` ?

Options :

6406532239867. ✖ `This course focuses on frontend development.`

6406532239868. ✖ `This course focuses on backend development.`

6406532239869. ✔ `Mention the course name specifically.`

6406532239870. ✖ `IndexError: list index out of range`

Sub-Section Number : 4

Sub-Section Id :	64065395167
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 112 Question Id : 640653668551 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 flask application.

app.py

```
from flask import Flask, request
app = Flask(__name__)
@app.route('/calculate')
def calculate():
    a = request.args.get('a')
    b = request.args.get('b')
    operator = request.args.get('operator')
    if a and b and operator:
        a = int(a)
        b = int(b)
        if operator == 'one':
            return f'{a} + {b} = {a+b}'
        elif operator == 'two':
            return f'{a} - {b} = {a-b}'
        elif operator == 'three':
            return f'{a} x {b} = {a*b}'
        elif operator == 'four':
            return f'{a}/{b} = {a/b}'
    else:
          return 'Error: Insufficient arguments'
app.run(debug=True)
```

If the application is running locally on http://127.0.0.1:5000 then match the URLs with their rendered output?

	URLs		Output
1	http://localhost:5000/calculate?a=3&b=1&operator=four	a	3 x 1 = 3
2	http://localhost:5000/calculate?a=3&b=1&operator=one	b	3/1 = 3.0
3	http://localhost:5000/calculate?a=3&b=1&operator=two	c	3 - 1 = 2
4	http://localhost:5000/calculate?a=3&b=1&operator=three	d	3 + 1 = 4

Options :

6406532239843. ✖ 1-b, 2-d, 3-a, 4-c

6406532239844. ✔ 1-b, 2-d, 3-c, 4-a

6406532239845. ✖ 1-c, 2-d, 3-a, 4-b

6406532239846. ✖ 1-a, 2-d, 3-b, 4-c

Question Number : 113 Question Id : 640653668554 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

A mobile server and a client initially 750 km apart are moving towards each other in a straight line with the speeds of 165 kmph and 85 kmph respectively. The network bandwidth is set constant to 2 Mbps. Determine how much data (in Gigabytes) is used by the client before the client and the server collide. [speed of light in vacuum: 3 *x* 10^8 m/sec, 1 MB = 1000 KB and so on.]

Options :

6406532239855. ✖ 21.6

6406532239856. ✖ 6

6406532239857. ✔ 2.7

6406532239858. ✖ 7.5

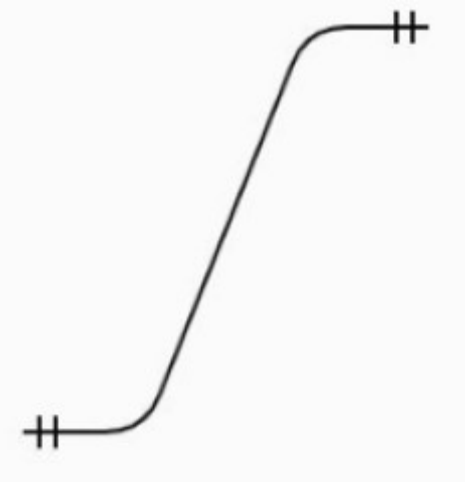
Sub-Section Number :	5
Sub-Section Id :	64065395168
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 114 Question Id : 640653668544 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following entities and their relationship has been correctly represented by the ER diagram shown in the image?



Options :

6406532239815. ✔ Person - Passport

6406532239816. ✖ Person - Mobile number

6406532239817. ✔ Person - Birth certificate

6406532239818. ✔ Person - Fingerprint

Question Number : 115 Question Id : 640653668552 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following statements regarding dynamic webpages is/are true?

Options :

6406532239847. ✖ The page is already present at the server even before a user requests it.

6406532239848. ✖ The page generally maintains the same content every time the user requests it.

6406532239849. ✔ The page is generated on demand by a program or a request from a browser.

6406532239850. ✔ On every request, every new page created may be different from the last.

Sub-Section Number : 6

Sub-Section Id : 64065395169

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 116 Question Id : 640653668545 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following HTML document.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Document</title>
    <style>
        span {
            background-color: yellow;
            color: red;
            ===code1===
        }
        .class {
            border: 2px solid purple;
            color:blue ;
        }
        #id {
            background-color: aqua;
            color: red;
        }
    </style>
</head>
<body>
    <span class="class" id="id">SPAN 1</span>
    <span class="class">SPAN 2</span>
    <span>SPAN 3</span>
</body>
</html>
```

Which of the following is/are correct rendered output for given ===code1===?

Options :

6406532239819. ✔

If ===code1=== is replaced by:

```
display:inline-block;
border: 2px solid purple;
```

Output:

If ===code1=== is replaced by:

```
display:block;
color: blue;
```

Output:

6406532239820. ✖

If ===code1=== is replaced by:

```
color: blue;
border: 2px solid purple;
```

Output :

6406532239821. ✔ 

If ===code1=== is left blank:

Output:

6406532239822. ✔ 

Question Number : 117 Question Id : 640653668546 Question Type : MSQ Is Question

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

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following flask application.

app.py

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

@app.route("/if")
def ifelse():
      user = "MAD I"
      return render_template("if_example.html", name=user)

@app.route("/for")
def for_loop():
      list_of_courses = ['Java', 'Python', 'DBMS', 'PDSA']
      return render_template("for_example.html", courses=list_of_courses)

@app.route("/choice/<pick>")
def choice(pick):
      if pick == 'if':
            return url_for('ifelse')
      if pick == 'for':
            return (url_for('for_loop'))

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

Which of the following statements is/are true if the application is running locally on http://127.0.0.1:5000 ?

Options :

6406532239823. ✖ For URL, http://127.0.0.1:5000/choice/for browser will render `for_example.html`

6406532239824. ✖ For URL, http://127.0.0.1:5000/choice/if browser will render `if_example.html`

6406532239825. ✔ For URL http://127.0.0.1:5000/choice/for browser will display `/for` as output.

6406532239826.

For URL http://127.0.0.1:5000/choice/if browser will display `/if` as output.

MLF

Section Id :	64065344902
Section Number :	8
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	15
Number of Questions to be attempted :	15
Section Marks :	40
Display Number Panel :	Yes
Section Negative Marks :	0
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 :	64065395170
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 118 Question Id : 640653668558 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 "DIPLOMA LEVEL : MACHINE LEARNING FOUNDATIONS (COMPUTER BASED EXAM)"