Course	Prerequisite
Course 1	None
Course 2	None
Course 3	Course 1
Course 4	Course 2
Course 5	None
Course 6	Course 1, Course 3
Course 7	Course 2, Course 4
Course 8	Course 3
Course 9	Course 5, Course 7
Course 10	Course 6, Course 8
Course 11	Course 7
Course 12	Course 4, Course 8

There is no constraint on how many courses a student can take in a semester. The minimum number of **semesters** required to complete all 12 courses is ___.

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

AppDev1

Section Id :   64065323903

Section Number :   7   Online

Section type :   Mandatory

Mandatory or Optional :   17 17 50 Yes

Number of Questions :   No

Number of Questions to be attempted :

Section Marks :

Display Number Panel :

Group All Questions :

Enable Mark as Answered Mark for Review and

Clear Response :   Yes

Maximum Instruction Time :
                                                          0

Sub-Section Number :
                                                          1

Sub-Section Id :
                                                          64065355352

Question Shuffling Allowed :
                                                          No

Question Number : 98 Question Id : 640653386752 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 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   :

6406531286189. ✔ YES

6406531286190. ✖ NO

Sub-Section Number :   2

Sub-Section Id :   64065355353

Question Number : 99 Question Id : 640653386754 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

A certain text document consisting of only alphanumeric characters (including spaces) takes 1,36,000 bits, when encoded with UCS-4 (32 bit) encoding. How many bits will the same document take if encoded with ASCII 7 bit encoding?
(Concept: Encoding efficiency)

Options :

6406531286195.   34000 bits

6406531286196.   68000 bits

6406531286197.   29750 bits

6406531286198.   136000 bits

Question Number : 100 Question Id : 640653386755 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

For a certain table "worker" in SQLite database having one of its fields as "First_name", the correct SQL query to fetch all "First_name" values from "worker" table using the alias name as "Worker_name" is:
(Concept: basic SQL queries)

Options :

6406531286199.   `Select First_name ALIAS Worker_name from worker;`

6406531286200.
```
Select First_name AS Worker_name from worker;
```

6406531286201.
```
Select Worker_name from worker;
```

6406531286202.
```
Select First_name from worker;
```

Question Number : 101 Question Id : 640653386759 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 Python code snippet.

```
from jinja2 import Template
temp = """{% for num in seq|reject("even") %}
{{ num+2 }}
{% endfor %}
"""

seq = [6,5,71,13,30,22]
output = Template(temp)
print(output.render(seq = seq))
```

What will be the output if the given code is executed?

Options :

6406531286215.
```
8
7
73
15
32
24
```

6406531286216.
```
5
71
13
```

6406531286217.

7

73

15

6

5

71

13

30

6406531286218.

22

Sub-Section Number :	3
Sub-Section Id :	64065355354
Question Shuffling Allowed :	Yes

Question Number : 102 Question Id : 640653386753 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.

(Concept: Python string and Jinja2 templates)

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

info = {'girl1': 'Mary', 'girl2': 'Samantha',
        'girl3': 'girl2', 'girl4': 'girl1',
        'city1':'Moscow', 'city2':'city1'}

t1 = T1("{{$girl3}} and {{$girl4}} arrived at the {{$city2}} station early
and waited for the bus.")

out1 = t1.substitute(info)

out2 = T2(out1)

print(out2.render(info))
```

What will be the output on the terminal?

Options :

6406531286191.

girl2 and girl1 arrived at the city1 station early and waited for the bus.

6406531286192.

Samantha and Mary arrived at the Moscow station early and waited for the bus.

6406531286193.

Mary and Samantha arrived at the Moscow station early and waited for the bus.

6406531286194. Error

Question Number : 103 Question Id : 640653386756 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 code snippets given below.
(Concept: HTML and CSS)

File 1: index.html:

```html
<head>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h3>The CSS Box Model</h3>
    <div class="my_border box">
        <h3 class="title">Border</h3>
        <div class="my_padding box">
            <h3 class="title">Padding</h3>
            <div class="my_content box">
                <h3 class="title">Content</h3>
            <div>
        <div>
    <div>
</body>
```

File 2: style.css:

```css
div.my_border
 {background-color: purple;
   border: 2px dotted grey;
   height: 130px;
   width: 130px;}

div.my_padding
 {background-color: lightblue;
   height: 80px;
   width: 80px;}

div.my_content
 {background-color: yellow;
    height: 40px;
    width: 45px; }

.title
 {text-align: left;
   font-size: 10px;
   font-style: italic;}

.box
{margin: 10px 20px;
     padding: 0px;}
```

What will be rendered by the browser, when the above HTML file is loaded?
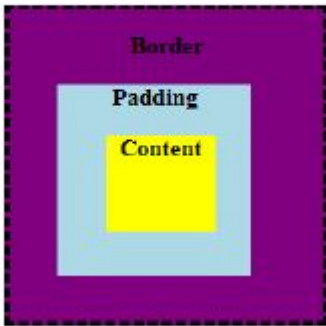
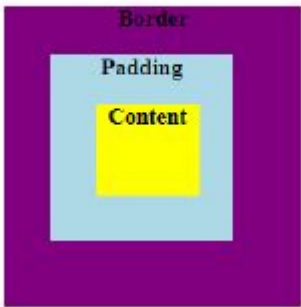**Options :**

6406531286203.

The CSS Box Model

Border
Padding
Content

The CSS Box Model

Border
Padding
Content

6406531286204.

The CSS Box Model

Border
Padding
Content

6406531286205.

The CSS Box Model

Border
Padding
Content

6406531286206.

Question Number : 104 Question Id : 640653386757 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 given below.
(Concept: Flask and concepts of HTTP methods)

```python
from flask import Flask, request, url_for

app = Flask(__name__)

@app.route('/dashboard')
def dashboard():
    return 'This is the dashboard'

@app.route('/user/<username>')
def user(username):
    return f'This is {username} profile'

@app.route('/login', methods=['GET', 'POST'])
def login():
    if request.method == 'POST':
        return(url_for('user', username='your_name'))
    else:
        return (url_for('dashboard'))

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

If the above flask application is running on URL "http://127.0.0.1:5000", which of the following is the correct output if a user visits the URL "http://127.0.0.1:5000/login", using a browser?

Options :

6406531286207. This is the dashboard.

6406531286208. /dashboard

6406531286209. "404 NOT FOUND" error

6406531286210.   /user/your_name

Question Number : 105 Question Id : 640653386758 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 code below.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8"/>
<style>
body{text-align: center;}
p{font-size: 30px;font-style: italic;color: black;}
.blue{color: green;}
.red{color: blue;}
.green{color: red;}
#myId{color: grey;}
</style>
</head>
<body>

<div>
<h2 class="red">Happy Coding</h2>
<p class="blue">1st class</p>
<p class="red" id="myId">2nd class</p>
<p class="green">3rd class </p>
</div>
</body>
```

How will the browser render the above HTML file?
Match the rendered colour for the text.

1. Happy Coding	a. green
2. 1st Class	b. blue
3. 2nd Class	c. red
4. 3rd Class	d. grey

Options :

6406531286211.   1- b, 2 - a, 3- d, 4 - c

6406531286212.   1- a, 2 - c, 3- d, 4 - b

6406531286213.   1- b, 2 - a, 3- c, 4 - d

6406531286214.   1- a, 2 - c, 3- b, 4 - d

Question Number : 106 Question Id : 640653386760 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 tables.

User Table:

Id	Name	Age
1	Mala	50
2	Kala	30
3	Saamy	25
4	Ramya	30

Book Table:

Id	Bookname	Username
1	Python	Saamy
2	Java	Kala
3	C	Mala
4	Modern App	Ramya

If the above tables are given as inputs, what will be the output of the following query?

```
SELECT b.Bookname, u.Name FROM User as u, Book as b WHERE b.Username = u.Name
```

Options :

	Name	Bookname
1	Mala	Python
2	Kala	Java
3	Saamy	C
4	Ramya	Modern App

6406531286219.

	Name	Age
1	Mala	50
2	Kala	30
3	Saamy	25
4	Ramya	30

6406531286220.

	Bookname	Name
1	Python	Kala
2	Java	Saamy
3	C	Mala
4	Modern App	Ramya

6406531286221.

	Bookname	Name
1	C	Mala
2	Java	Kala
3	Python	Saamy
4	Modern App	Ramya

6406531286222.

Question Number : 107 Question Id : 640653386764 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

Find the correct match with respect to **MVC** Software design pattern.

	Action		Component
1	Defining business logic	A	Model
2	Display the data to user	B	View
3	Databases, indexing for easy searching	C	Controller
4	User interfaces for finding information		
5	Stores core data for the application		

Options :

6406531286232.   1-A, 2-C, 3-A, 4-B, 5-B

6406531286233.   1-C, 2-B, 3-A, 4-B, 5-A

6406531286234.   1-C, 2-B, 3-A, 4-A, 5-B

6406531286235.   1-A, 2-B, 3-C, 4-B, 5-A

Question Number : 108 Question Id : 640653386770 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 below HTML and CSS styling.

```html
<html>
    <head>
        <style>
            h3 {
                color: green;
            }
            .content {
                color: red;
            }
        </style>
    </head>
    <body>
        <h3 class = "content">This is the main Content</h3>
        <button onclick = "remove_class"> Click Me </button>
    </body>
</html>
```

Assuming clicking the button with the text "Click Me" removes the class "content" from the "h3" element, what will be the text colour of the text placed inside the "h3" element, before and after clicking the button with the text "Click Me" (Assume a normal browser is used which shows black text on white background)?

Options :

6406531286253.   Before: Red
After: Green

6406531286254.   Before: Red
After: Black

6406531286255.   Before: Green
After: Black

6406531286256.   Before: Green
After: Red

Sub-Section Number :	4
Sub-Section Id :	64065355355
Question Shuffling Allowed :	Yes

Question Number : 109 Question Id : 640653386762 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 Server S needs to retrieve data from two datacenters D1 and D2 located at 2500 kilometres and 4500 kilometres respectively. Server S and D1 are connected via medium M1 through which information can be transferred with the speed of 1.5×10^8 m/sec, and server S and D2 are connected via medium M2. If the server received data from both the data centres at the same time, what must be the speed of information transfer in medium M2?

(Concept: Performance parameters of a network)

Options :

6406531286224. 1.5×10^8 m/sec

6406531286225. 2×10^8 m/sec

6406531286226. 2.7×10^8 m/sec

6406531286227. 3×10^8 m/sec

Question Number : 110 Question Id : 640653386765 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 code for flask application.

main.py:

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

@app.route('/viewdata/')
def student_list():
    student_data={
        'rollno': [1001,1002,1003,1004,1005],
        'name': ['Amit','Ravi','Karthik','Ankur','Ishan'],
        'course':['Python','MAD1','MAD2','DBMS','MAD2']
    }
    return render_template("viewlist.html",st = student_data)
if __name__ == '__main__':
    app.run()
```

viewlist.html:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <title>Document</title>
    <style>
        table, th, td {
            border: 1px solid black;
        }
    </style>
</head>

<body>
    <table>
        <tr>
            <th>Sno</th>
            <th>Roll No</th>
            <th>Name</th>
            <th>Course</th>
        </tr>

<!-- missing code block -->
    HTML code block
<!-- missing code block -->


    </table>
</body>

</html>
```

Suppose we want to display the student_data in the following table format for route "http://127.0.0.1:5000/viewdata/":

Sno	Roll No	Name	Course
1	1001	Amit	Python
2	1002	Ravi	MAD1
3	1003	Karthik	MAD2
4	1004	Ankur	DBMS
5	1005	Ishan	MAD2

Select the correct option to fill at the place of **HTML code block** in `viewlist.html` file to display the data in the above given table format without any error?

Options :

6406531286236.

```
{for i in range(st['rollno']|length)}
<tr>
    <td>{{i+1}}</td>
    <td>{{st['rollno'][i]}}</td>
    <td>{{st['name'][i]}}</td>
    <td>{{st['course'][i]}}</td>
</tr>
{endfor}
```

6406531286237.

```
{%for i in range(st['rollno']|length)%}
<tr>
    <td>{i+1}</td>
    <td>{st[i]['rollno']}</td>
    <td>{st[i]['name']}</td>
    <td>{st[i]['course']}</td>
</tr>
{%endfor%}
```

6406531286238.

```
{%for i in range(st['rollno']|length)%}
<tr>
    <td>{{i+1}}</td>
    <td>{{st['rollno'][i]}}</td>
    <td>{{st['name'][i]}}</td>
    <td>{{st['course'][i]}}</td>
</tr>
{%endfor%}
```

6406531286239.

```
{{for i in range(st['rollno']|length)}}
<tr>
    <td>{% i+1 %}</td>
    <td>{% st['rollno'][i] %}</td>
    <td>{% st['name'][i] %}</td>
    <td>{% st['course'][i] %}</td>
</tr>
{{endfor}}
```

Question Number : 111 Question Id : 640653386769 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Select Question

Which of the following statement(s) is/are true regarding HTML and encodings?

Concepts Covered: Encoding Standards, HTML & CSS

Options :

6406531286249.   Both UTF-8 and UTF-32 are variable length encodings.

6406531286250.   The UTF-8 can only be used for encoding $(2^{16} + 1)$ characters.

6406531286251.   The HTML tags are case-insensitive.

6406531286252.   The External CSS is preferred over internal and inline CSS for developing large websites.

Question Number : 112 Question Id : 640653386763 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

Question Label : Multiple Select Question

Which of the following option(s) will generate the HTML code equivalent to the below HTML code?

[Concepts covered: Programmatic HTML generation]

```html
<!DOCTYPE html>
<html>
  <head>
    <title>My title</title>
  </head>
  <body>
    <div>
      <div>
        <h2>inside title</h2>
      </div>
      <p>some text in a paragraph</p>
    </div>
  </body>
</html>
```

Options :

```python
import pyhtml as h
t = h.html(
    h.head(h.title('My title')),
    h.body(
        h.div(h.div(h.h2('inside title')),
        h.p('some text in a paragraph'))
    ))
print(t.render())
```
6406531286228.

6406531286229.

```python
from jinja2 import Template
temp_val = { 0: "<div><h2>inside title</h2></div>",
             1: "<title>My title</title>",
             2: "<p>some text in a paragraph</p>"  }

template = """<!DOCTYPE html>
<html>
  <head>
    {{val[1]}}
  </head>

  <body>
    <div>
      {{val[0]}}
      {{val[2]}}
    </div>
  </body>
</html>"""
t = Template(template)
print(t.render( val = temp_val))
```

```python
import pyhtml as h
t = h.html(
    h.head(h.title('My title')),
    h.body(
        h.div(h.div(h.p(h.h2('inside title'),
        ('some text in a paragraph')))))
    ))
print(t.render())
```

6406531286230.

6406531286231.

```
from jinja2 import Template
template = """<!DOCTYPE html>
<html>
  <head>
    <title>{{ title}}</title>
  </head>
  <body>
    <div>
      <div>
        <h2>{{header}}</h2>
      </div>
      <p>{{content}}</p>
    </div>
  </body>
</html>"""
t = Template(template)
print(t.render( header = 'My Title', title = 'Paragraph', content = 'This is
the content'))
```

Sub-Section Number :   7

Sub-Section Id :   64065355358

Question Shuffling Allowed :   Yes

Question Number : 113 Question Id : 640653386761 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 below table student:

(Concept: SQL INNER JOIN)

student

Rollno	Name	Grade
CE01	Anil	A
CE02	Sunil	B
EE01	Kapil	B
EE02	Anil	C

How many tuples are retrieved by the below SQL query?

Note: The answer must be an integer.

```
SELECT *
FROM (SELECT Rollno, Name FROM student) AS A INNER JOIN
(SELECT Name, Grade FROM student) AS B on A.Name = B.Name;
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes **Answers**

Type : Equal **Text Areas :**

PlainText **Possible Answers :**

Sub-Section Number :   8

Sub-Section Id :   64065355359

Question Shuffling Allowed :   No

Question Id : 640653386766 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (114 to 115)

Question Label : Comprehension

Consider the following instance of relational tables:-

Student

S_Id	Student_Name	City
1001	Sunil	Delhi
1002	Madhur	Chennai
1003	Nihal Surya	Mumbai
1004	Rama Yamuna	Delhi
1005	Sunil	Chennai
1006	Madhur	Chennai

Course

C_Id	Course_Name
CS2001	DBMS
CS2002	PDSA
CS2003	MAD1

Result

S_Id	C_Id	Marks
1001	CS2002	70
1002	CS2003	68
1003	CS2003	76
1004	CS2003	86
1005	CS2001	49
1006	CS2003	73

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 114 Question Id : 640653386767 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2.5

Question Label : Multiple Select Question

Which of the following statement is/are always true for the given instance of the relational tables?

Options :

6406531286240.   The Marks of students in each course can be uniquely identified if the value of the column "Student_Name" is known.

6406531286241.   The average of Marks for any particular course can be retrieved if the value of the column "Course_Name" is known.

6406531286242.   All Course_Name in which at least one student is enrolled can be identified if all the values of column "S_Id" are known.

6406531286243.   The City of the student can be uniquely identified if the value of the column "Student_Name" is known.

6406531286244.   The number of enrolled students in any particular course can be retrieved if the value of the column "Course_Name" is known.

Question Number : 115 Question Id : 640653386768 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 S_Id(s) is/are returned by the following SQL query for the given instance of the relational tables?

```
select R.S_Id from Student S join Result R on S.S_Id=R.S_id join
Course C on R.C_Id=C.C_Id where R.Marks>70 and S.City='Chennai' and
C.Course_name='MAD1'
```

Options :

6406531286245.   1006, 1002

6406531286246.   1005

6406531286247.   1006

6406531286248.   1002, 1005

MLF

Section Id :	64065323904
Section Number :	8 Online
Section type :	Mandatory
Mandatory or Optional :	16 16 50 Yes
Number of Questions :	No
Number of Questions to be attempted :	
Section Marks :	
Display Number Panel :	
Group All Questions :	
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355360
Question Shuffling Allowed :	No

Question Number : 116 Question Id : 640653386771 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0