

6406533039392. ✖ $\max\{watch[next[i]], watch[i + 1]\}$

6406533039393. ✖ $\max\{watch[next[i]], 1 + watch[i + 1]\}$

6406533039394. ✖ $\max\{1 + watch[next[i]], 1 + watch[i + 1]\}$

Question Number : 154 Question Id : 640653902440 Question Type : MCQ Calculator : Yes

Correct Marks : 4

Question Label : Multiple Choice Question

What is the time complexity of the given algorithm ?

Options :

6406533039395. ✖ $O(n^2)$

6406533039396. ✖ $O(n \log n)$

6406533039397. ✔ $O(n)$

6406533039398. ✖ $O(n^3)$

AppDev1

Section Id :	64065364076
Section Number :	8
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	32
Number of Questions to be attempted :	32
Section Marks :	100
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653133696
Question Shuffling Allowed :	No

**Question Number : 155 Question Id : 640653902444 Question Type : MCQ Calculator : Yes
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 :

6406533039412. ✓ YES

6406533039413. ✗ NO

Sub-Section Number :	2
Sub-Section Id :	640653133697
Question Shuffling Allowed :	Yes

**Question Number : 156 Question Id : 640653902445 Question Type : MCQ Calculator : Yes
Correct Marks : 3**

Question Label : Multiple Choice Question

Consider the following Python code snippet.

```

file.py
from jinja2 import Template
import sys
input_list = sys.argv
var_a, var_b = input_list[1], input_list[2]

if input_list[1]=="Meera":
    var_b = "Data Analyst"
elif input_list[1]=="Radha":
    var_b = "Scientist"
else:
    pass
template = "{{var_a}} is {{var_b}}"
t = Template(template)
print(t.render(var_a = var_a, var_b = var_b))

```

Map the commands in column A with the output on the terminal in column B.

Column A	Column B
a) python file.py Radha Data Analyst	1) Meera is Scientist
b) python file.py Meera Scientist	2) Sneha is Web
c) python file.py Sneha Web Developer	3) Meera is Data Analyst
	4) Radha is Data Analyst
	5) Radha is Scientist
	6) Sneha is Web developer

Options :

6406533039414. ✖ a - 4, b - 1, c - 6

6406533039415. ✖ a - 5, b - 3, c - 6

6406533039416. ✖ a - 5, b - 1, c - 2

6406533039417. ✔ a - 5, b - 3, c - 2

Question Number : 157 Question Id : 640653902446 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following HTML document.

```

<!DOCTYPE html>
<html>
<head>
  <style>
    span {
      background-color: yellow;
      color: red;
    }
    #id {
      border: 2px solid purple;
      color:blue ;
      display: inline-block;
    }
    .class {
      background-color: aqua;
      color: red;
      display: block;
      width:20%;
    }
  </style>
</head>
<body>
  <span class="class" id="id">SPAN</span>
  <span class="class" >SPAN</span>
  <span>SPAN</span>
</body>
</html>

```

How will the browser render above HTML file?

Options :

6406533039418. ✖   

6406533039419. ✖   

6406533039420. ✖   

6406533039421. ✔

SPAN
SPAN
SPAN

Question Number : 158 Question Id : 640653902447 Question Type : MCQ Calculator : Yes
Correct Marks : 3

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:
        if operator == 'one':
            return f'{a} + {b} = {a+b}'
        elif operator == 'two':
            return f'{a} - {b} = {int(a) - int(b)}'
        elif operator == 'three':
            return f'{a} x {b} = {int(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=4&b=2&operator=two	a	4 x 2 = 8
2	http://localhost:5000/calculate?a=4&b=2&operator=three	b	4 + 2 = 6
3	http://localhost:5000/calculate?a=4&b=2&operator=one	c	4 - 2 = 2
		d	4 + 2 = 42
		e	4 x 2 = 2222

Options :
6406533039422. ✖ 1-c, 2-a, 3-b
6406533039423. ✖ 1-c, 2-a, 3-d

6406533039424. ✓ 1-c, 2-e, 3-d

6406533039425. ✖ 1-c, 2-a, 3-e

Question Number : 159 Question Id : 640653902456 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following flask view functions will return a 200 OK for the URL:

`http://127.0.0.1:5000/details/1001/Michael ?`

Options :

```
@app.route('/details/<int:id>/<string:name>')
def show(id, name):
    details = {'student_id': id, 'student_name': name}
    return details
```

6406533039454. ✖

```
@app.route('/details/<string:id>/<string:name>')
def show(id, name):
    details = {'student_id': id, 'student_name': name}
    return details
```

6406533039455. ✖

```
@app.route('/details/<id>/<name>')
def show(id, name):
    details = {'student_id': id, 'student_name': name}
    return details
```

6406533039456. ✖

6406533039457. ✓ All of these

Question Number : 160 Question Id : 640653902457 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

Consider a function `func`, and a set of test cases given below.

Filename: `test_file.py`

```
import pytest
def func(x,y):
    out = x**2+y**2
    return out

class Test_class0():
    def test_case1(self):
        assert func(1,2) == 5

    def case_test2(self):
        assert func(2,3) == 13

    def case_test3(self):
        assert func(6,2) == 38

class Test_class1():
    def test_case1(self):
        assert func(5,2) == 29

    def case_test2(self):
        assert func(1,1) == 2
```

What will be the output on the terminal for the command below?

`pytest test_file.py -k Test_class`

Options :

6406533039458. ✖

== 1 failed, 4 passed in 0.17s ==

6406533039459. ✖

== 2 passed, 3 deselected in 0.17s ==

6406533039460. ✔

== 2 passed in 0.07s ==

6406533039461. ✖

== 3 failed, 2 passed in 0.17s ==

Question Number : 161 Question Id : 640653902460 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

The lens of an HDD can read data on the rotating disk with the speed of 42,000 bits per second.

The disk is designed such that 600 bits pass under the lens for every revolution of the disk, what should be the maximum speed of disk in RPM so that the lens does not miss any data?

Options :

6406533039470. ✖ 70 RPM

6406533039471. ✖ 100 RPM

6406533039472. ✔ 4200 RPM

6406533039473. ✖ 6000 RPM

Question Number : 162 Question Id : 640653902463 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the below two python files code snippets *app.py* and *test_app_route.py*.

app.py

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

@app.route("/greet/<string:name>")
def home(name):
    return "Hello, " + name

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

test_app_route.py:

```
import pytest, requests

@pytest.fixture
def get_response():
    resp = requests.get("http://127.0.0.1:5000/greet/IITM")
    return resp

def test_response(get_response):
    assert get_response.text == "Hello, IITM"
```

Assume that *app.py* and *test_app_route.py* are running on two different terminals. And also all required modules are installed. Which of the below statement(s) are True?

- i) Executing the command `pytest test_app_route.py` on the terminal returns
`===== 1 passed =====`
- ii) Executing the command `pytest test_app_route.py` on the terminal returns
`===== 1 failed =====`
- iii) Executing the command `pytest test_app_route.py` on the terminal returns
`===== 1 selected, 1 passed =====`
- iv) Executing the command `pytest test_app_route.py` on the terminal returns
`===== 1 deselected =====`

Options :

- 6406533039482. ✓ Only statement i is correct
- 6406533039483. ✗ Only statement ii is correct
- 6406533039484. ✗ Statements i and iii are correct
- 6406533039485. ✗ Statements ii and iv are correct

Question Number : 163 Question Id : 640653902465 Question Type : MCQ Calculator : Yes Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following flask resource created using flask_restful.

```
from flask import Flask, request
from flask_restful import Api, Resource, reqparse

app = Flask(__name__)
api = Api(app)

parser = reqparse.RequestParser()
parser.add_argument("val")

class RestApi(Resource):
    def post(self, val):
        arg1 = parser.parse_args()
        arg2 = request.args
        return {
            "Course_1": arg1["val"],
            "Course_2": arg2["val"],
            "Course_3": val
        }

api.add_resource(RestApi, "/api/courses/<val>")
app.run(debug = True)
```

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

```
curl http://127.0.0.1:5000/api/courses/DBMS?val=JAVA -d
{"val":"PDSA"} -X POST -H "Content-Type: application/json"
```

Options :

```
{
    "Course_1": "JAVA",
    "Course_2": "PDSA",
    "Course_3": "DBMS"
}
```

6406533039490. ✖

6406533039491. ✖

```
{  
  "Course_1": "DBMS",  
  "Course_2": "JAVA",  
  "Course_3": "PDSA"  
}
```

```
{  
  "Course_1": "PDSA",  
  "Course_2": "JAVA",  
  "Course_3": "DBMS"  
}
```

6406533039492. ✓

```
{  
  "Course_1": "PDSA",  
  "Course_2": "DBMS",  
  "Course_3": "JAVA"  
}
```

6406533039493. ✖

Question Number : 164 Question Id : 640653902469 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

A flask application shown below is running locally on <http://127.0.0.1:5000>.

```
from flask import Flask, request, session, abort

app = Flask(__name__)
app.config['SECRET_KEY'] = "yekterces"

@app.route('/login')
def log_in():
    user = request.args['user']
    role = request.args['role'] if 'role' in request.args else
'general'
    session['user'], session['role'] = user, role
    return "Logged in successfully!"

@app.route('/home')
def land():
    if 'user' in session:
        if session['role'] == 'admin':
            return f"Welcome {session['user']}"
        return abort(401)
    return abort(404)

@app.route('/logout')
def log_out():
    session.pop('user', None)
    session.pop('role', None)
    return "Logged out sucessfully!"

app.run(debug=True)
```

If the application is running locally on <http://127.0.0.1:5000>. What will be the correct sequence of response status codes if the client visits the URLs one by one in the sequence given below?

1. <http://127.0.0.1:5000/home>
2. <http://127.0.0.1:5000/login/admin>
3. <http://127.0.0.1:5000/login?user=admin>
4. <http://127.0.0.1:5000/home>
5. <http://127.0.0.1:5000/logout>

Options :

6406533039506. ✖

401
401
200
404
200

404
200
200
200
6406533039507. ✖ 200

404
404
200
401
6406533039508. ✔ 200

404
200
404
200
6406533039509. ✖ 200

Question Number : 165 Question Id : 640653902470 Question Type : MCQ Calculator : Yes
Correct Marks : 3
Question Label : Multiple Choice Question

Consider the following flask application.

Python file: app.py

```
from flask import Flask, render_template, request

app = Flask(__name__)

emp = {'admin': 'manoj', 'user': 'sumit'}

@app.route('/profile/<user>')
def profile(user):
    access = request.args.get('access')
    if emp[access] != user:
        return render_template("profile.html", user = user,
                                access = access, error = True)
    return render_template("profile.html", user = user,
                            access = access, error = False)

app.run()
```

Template file: profile.html

```
<body>
    <div>
        {% if error %}
            <h3>Hi {{user}}, {{access}} access denied</h3>
        {% else %}
            <h3>Hi {{user}}, you are logged in as {{access}}.</h3>
        {% endif %}
    </div>
</body>
```

If the application is running locally on `http://127.0.0.1:5000`, then what will be rendered by the browser for URL,
`http://127.0.0.1:5000/profile/sumit?access=admin` ?

Options :

6406533039510. ✖ **Hi sumit, you are logged in as admin.**

6406533039511. ✖ **Hi sumit, you are logged in as user.**

6406533039512. ✔ **Hi sumit, admin access denied.**

6406533039513. ✖

Hi sumit, user access denied.

Question Number : 166 Question Id : 640653902473 Question Type : MCQ Calculator : Yes Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following models Library and Book corresponding to tables library and book in SQLite database.

```
class Library(db.Model):
    id = db.Column(db.Integer(), primary_key = True)
    name = db.Column(db.String(), unique = True)

class Book(db.Model):
    id = db.Column(db.Integer(), primary_key = True)
    name = db.Column(db.String(), unique = True)
    library = db.Column(db.Integer(), db.ForeignKey("library.id"))
```

Based on the model schemas, what relationship do the classes Library and Book share?

Options :

- 6406533039523. ✖ Many-to-Many
- 6406533039524. ✔ One-to-Many
- 6406533039525. ✖ One-to-One
- 6406533039526. ✖ The tables are not at all related

Question Number : 167 Question Id : 640653902476 Question Type : MCQ Calculator : Yes Correct Marks : 3

Question Label : Multiple Choice Question

Read the statements given below carefully and select the correct option.

Statement 1: If an element having an ID and a class is styled externally using both its ID and the class, then for the same attribute, it will acquire styling from the latest selector in order.

Statement 2: If an element that belongs to two different classes is styled externally using both the classes, then for the same attribute, it will acquire styling from the latest class in order.

Options :

- 6406533039535. ✖ Both statements 1 and 2 are correct
- 6406533039536. ✖ Both statements 1 and 2 are incorrect
- 6406533039537. ✖ Statement 1 is correct but statement 2 is incorrect
- 6406533039538. ✔ Statement 2 is correct but statement 1 is incorrect

Sub-Section Number :

3

Sub-Section Id :

640653133698

Question Shuffling Allowed :

Yes

Question Number : 168 Question Id : 640653902459 Question Type : MCQ Calculator : Yes

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the following Python code snippet.

log.py

```
import logging
import sys

logging.basicConfig(level=logging.WARNING,
                    format='%(asctime)s - %(levelname)s - %(message)s')

def check_val(value):
    if value < 0:
        raise ValueError("Invalid value: Please enter a positive value.")
    else:
        logging.info("Value added: %s", value)

try:
    input_value = -int(sys.argv[1])
    check_val(input_value)
except ValueError as ve:
    logging.exception("Exception occurred: %s", str(ve))
```

What will be the output on the terminal for the command: `python log.py -12` ?

Options :

6406533039466. ✖ 2023-08-14 21:01:05,684 - INFO - Value added: 12

6406533039467. ✖ 2023-08-14 21:01:05,684 - WARNING - Value added: -12

6406533039468. ✖ Error: Exception occurred: Invalid value: Please enter a positive value.

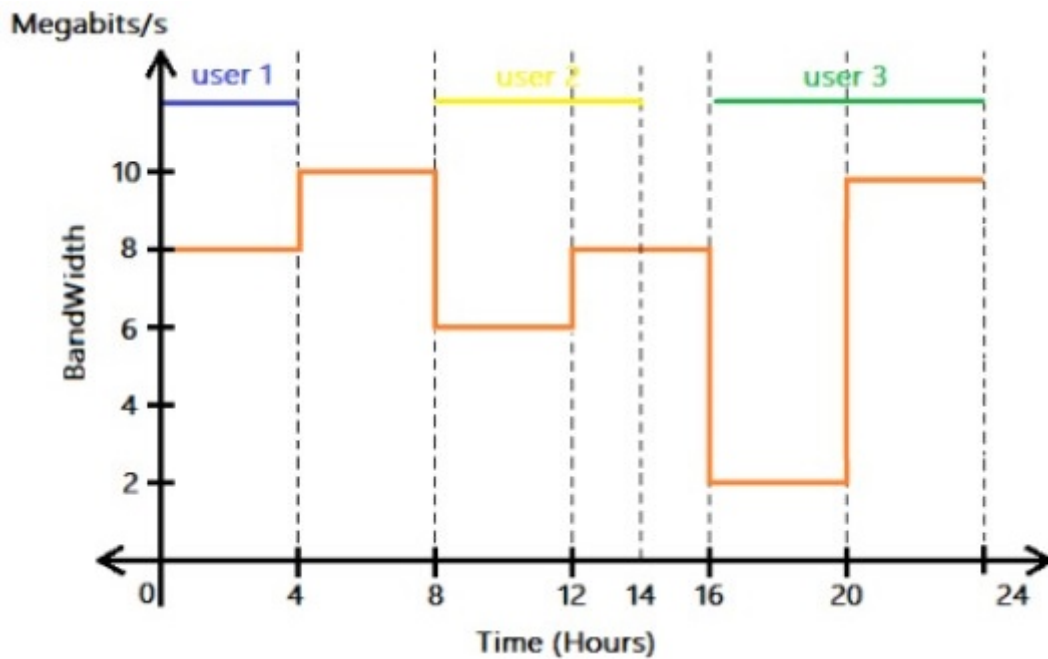
6406533039469. ✔ None of these

Question Number : 169 Question Id : 640653902462 Question Type : MCQ Calculator : Yes

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the following graph that represents the variation in bandwidth of a network for an entire day (24 hours). Three users were connected to the network at three different times of the day. What is the total data consumed in GigaBytes by all the users in 24 hrs?



Options :

6406533039478. ✖ 633.6 GB

6406533039479. ✔ 54 GB

6406533039480. ✖ 120 GB

6406533039481. ✖ 432 GB

Question Number : 170 Question Id : 640653902466 Question Type : MCQ Calculator : Yes

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the below flask application.

```
from flask_sqlalchemy import SQLAlchemy
from flask import Flask

app = Flask(__name__)
app.config['SQLALCHEMY_DATABASE_URI'] = 'sqlite:///testdb.sqlite3'
db = SQLAlchemy(app)
app.app_context().push()

class Material(db.Model):
    m_id = db.Column('m_id', db.Integer, primary_key = True)
    name = db.Column('name', db.String(100), unique = True)

db.create_all()
material1 = Material(name = 'Steel')
db.session.add(material1)
material2 = Material(name = 'Iron')
material3 = Material(name = 'Aluminium')
db.session.add(material2)
db.session.commit()
db.session.add(material3)

all_material = Material.query.all()
print([(x.m_id, x.name) for x in all_material])
```

If you run the flask application using a terminal. What will be the output in the terminal?

Options :

6406533039494. ✖ `[(1, 'Steel'), (2, 'Iron')]` will be displayed in the terminal and two records will be added in the "testdb" database.

6406533039495. ✖ `[(1, 'Steel'), (2, 'Iron'), (3, 'Aluminium')]` will be displayed in the terminal and three records will be added in the "testdb" database.

6406533039496. ✔ `[(1, 'Steel'), (2, 'Iron'), (3, 'Aluminium')]` will be displayed in the terminal and two records will be added in the "testdb" database.

6406533039497. ✖ `[(1, 'Steel', 2, 'Iron', 3, 'Aluminium')]` will be displayed in the terminal and two records will be added in the "testdb" database.

Question Number : 171 Question Id : 640653902472 Question Type : MCQ Calculator : Yes

Correct Marks : 4.5

Question Label : Multiple Choice Question

A client machine C is 18000 kms away from the server machine S. A router R is situated somewhere in between the client C and the server S and is connected to client C with cable and makes aerial connection with the server S. What will be the round-trip latency (milliseconds) of the network if the router is placed at exactly midway from the client and the server? [Assume: The speed of light on cable is 1.5×10^8 m/s and in air is 3×10^8 m/s. The client, server and the router lie on a straight line]

Options :

6406533039519. ✖ 45

6406533039520. ✖ 90

6406533039521. ✔ 180

6406533039522. ✖ 270

Sub-Section Number :

4

Sub-Section Id :

640653133699

Question Shuffling Allowed :

Yes

Question Number : 172 Question Id : 640653902454 Question Type : MCQ Calculator : Yes

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the following flask app and Jinja2 template.

app.py

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

@app.route('/')
def index():
    return render_template("index.html", data=['Harry', 'Karl', 'John',
'Jason', 'Ros'])

app.run()
```

index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Macro</title>
</head>
<body>
    {% macro unordered_list(items)%}
        <ul>
            {% for item in items %}
                {% if item|length >= 5 %}
                    <li>{{item}}</li>
                {% endif %}
            {% endfor %}
        </ul>
    {% endmacro %}
    {{ unordered_list(data) }}
</body>
</html>
```

If the flask app is running locally on `http://127.0.0.1:5000`. What will be the output on the browser for the base URL?

Options :

- Harry
- Karl
- John
- Jason
- Ros

6406533039446. ✖

6406533039447. ✖

- Karl
- John

6406533039448. ✓

- Harry
- Jason

6406533039449. ✗

- Karl
- John
- Ros

Question Number : 173 Question Id : 640653902455 Question Type : MCQ Calculator : Yes Correct Marks : 2

Question Label : Multiple Choice Question

Match the following types of testing with their functionality.

A. Regression testing	1. Beta Testing
B. User Acceptance testing	2. one step beyond integration testing, includes server and environment
C. System Testing	3. Simulates actual user interaction, allows to script browser
D. System testing Automation	4. Type of testing that runs after every change to ensure that the change introduces no unintended breaks.

Which of the following is the correct matching?

Options :

6406533039450. ✗ A → 1, B → 2, C → 3, D → 4

6406533039451. ✗ A → 4, B → 3, C → 2, D → 1

6406533039452. ✓ A → 4, B → 1, C → 2, D → 3

6406533039453. ✗ A → 3, B → 2, C → 1, D → 4

Question Number : 174 Question Id : 640653902458 Question Type : MCQ Calculator : Yes Correct Marks : 2

Question Label : Multiple Choice Question

Consider the following python code snippet app.py, the HTML files, base.html and home.html residing in “templates” folder.

app.py

```
from flask import Flask, render_template
app = Flask(__name__)
@app.route('/')
def home():
    return render_template('home.html')
app.run(debug=True)
```

home.html

```
{% extends "base.html" %}
{% block content %}
<p>MAD I</p>
<span>MAD II</span>
<p>DBMS</p>
{% endblock %}
```

base.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>IITM</title>
</head>
<body>
    <h2 style="color: violet;"> Diploma Courses </h2>
    {% block content %}
    {% endblock %}
</body>
</html>
```

What will be the rendered output for base URL if flask app is running locally on <http://localhost:5000> ?

Options :

MAD I

MAD II

6406533039462. ✖ DBMS

6406533039463. ✔

Diploma Courses

MAD I

MAD II

DBMS

Diploma Courses

MAD I

6406533039464. ✖

MAD II DBMS

MAD I

6406533039465. ✖ MAD II DBMS

Question Number : 175 Question Id : 640653902464 Question Type : MCQ Calculator : Yes

Correct Marks : 2

Question Label : Multiple Choice Question

You have a DRAM module with bus width of 64 bits, clock speed of 2 GHz, and operating in DDR (double-data-rate or two values per clock cycle) mode. What is the maximum bandwidth (in Giga-bytes per second) of data transfer achievable with this module?

Options :

6406533039486. ✖ 16

6406533039487. ✖ 8

6406533039488. ✔ 32

6406533039489. ✖ 128

Question Number : 176 Question Id : 640653902467 Question Type : MCQ Calculator : Yes

Correct Marks : 2

Question Label : Multiple Choice Question

The hexadecimal equivalent of the IPv4 address 172.16.254.10 would be _____.

Options :

6406533039498. ✖ AC0A FE01

6406533039499. ✖ CA10 EF0A

6406533039500. ✖ AC01 0AEF

6406533039501. ✔ AC10 FE0A

Question Number : 177 Question Id : 640653902475 Question Type : MCQ Calculator : Yes

Correct Marks : 2

Question Label : Multiple Choice Question

Which of the following is true about the term “stateless” in the client-server model?

Options :

- 6406533039531. ✖ The server keeps the state of the client to respond to the required request.
- 6406533039532. ✖ Server use variant HTTP methods to respond to the client's request.
- 6406533039533. ✔ Server ready to respond to the client's request without knowing anything about the client.
- 6406533039534. ✖ Server use the URL to convey context to the client.

Sub-Section Number : 5
Sub-Section Id : 640653133700
Question Shuffling Allowed : Yes

Question Number : 178 Question Id : 640653902448 Question Type : MSQ Calculator : Yes
Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following Python code snippet “code.py”.

Filename: code.py

```
import sys
from jinja2 import Template
vars = sys.argv

course_technologies = {'python': 'backend', 'javascript': 'frontend'}
template = Template("This course focuses on {{ technology }} development.")

if len(vars) > 2 and vars[2] in course_technologies:
    course = vars[1]
    technology = course_technologies[course]
    print(template.render(technology=technology))
else:
    print("Please specify a valid course name!")
```

Which of the following will be the correct command line input to the terminal to get the output: This course focuses on backend development. ?

Options :

- 6406533039426. ✖ python code.py course python
- 6406533039427. ✔ python code.py python javascript
- 6406533039428. ✔ python code.py python python

6406533039429. ✖ python code.py python backend

Question Number : 179 Question Id : 640653902453 Question Type : MSQ Calculator : Yes

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following flask application.

app.py

```
from flask import Flask, abort, request
app = Flask(__name__)

data = {"CS2001": "DBMS", "CS2003": "MAD-I", "CS2006": "MAD-II"}
@app.route('/login')
def login():
    username = request.args.get('uname')
    if username not in data:
        abort(400, "Bad Request: Invalid Username")
    return f'<h1>Welcome to {data[username]} course!</h1>'

app.run(debug=True)
```

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

Options :

For URL <http://127.0.0.1:5000?uname=CS2001> the browser will render

6406533039442. ✖ **Welcome to DBMS course!**

For URL <http://127.0.0.1:5000/login> the browser will render

6406533039443. ✖ **Welcome to MAD-I course!**

For URL <http://127.0.0.1:5000/login?uname> the browser will render
Bad Request: Invalid Username

6406533039444. ✔

For URL <http://127.0.0.1:5000/login?uname=CS2006> the browser will

6406533039445. ✔ render **Welcome to MAD-II course!**

Sub-Section Number :

6

Sub-Section Id :

640653133701

Question Shuffling Allowed :

Yes

Question Number : 180 Question Id : 640653902449 Question Type : MSQ Calculator : Yes

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following flask application.

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

@app.route('/home')
def home():
    var_a = request.args.get('method')
    if var_a == "GET":
        return "Hello from GET method"

    elif var_a == "POST":
        return "Hello from POST method"

    else:
        return "Invalid Method"

app.run(debug=True)
```

If the application is running locally on `http://127.0.0.1:5000` then which of the following statements are correct?

Options :

6406533039430. ✓ The command `curl -X GET http://127.0.0.1:5000/home?method=GET` will give output as `Hello from GET method` on terminal

6406533039431. ✓ The command `curl -X POST http://127.0.0.1:5000/home?method=POST` will give output as `Method not Allowed` on terminal

6406533039432. ✗ The command `curl -X POST http://127.0.0.1:5000/home?method=POST` will give output as `Hello from POST method` on terminal

6406533039433. ✗ The command `curl -X POST http://127.0.0.1:5000/home?method` will give output as `Invalid Method` on terminal

Question Number : 181 Question Id : 640653902471 Question Type : MSQ Calculator : Yes

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following flask_sqlalchemy data models "User" and "Role".

```
class User(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    username= db.Column(db.String(), unique=True, nullable=False)
    password = db.Column(db.String(), nullable=False)
    email= db.Column(db.String())
    roles= db.relationship("Role", backref="bearer")

class Role(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    r_name = db.Column(db.String(), unique=True, nullable=False)
    user = db.Column(db.Integer, db.ForeignKey("user.id"))
```

python shell:

```
>>> from app import *
>>> db.create_all()
>>> user1 = User(username="Rakesh",password="1234",email="user1@gmail.com")
>>> user2 = User(username="Suresh",password="123",email="user2@gmail.com")
>>> db.session.add_all([user1,user2])
>>> db.session.commit()
>>> r1=Role(r_name="instructor",user=1)
>>> r2=Role(r_name="admin",user=1)
>>> r3=Role(r_name="ops",user=2)
>>> r4=Role(r_name="student",user=2)
>>> db.session.add_all([r1,r2,r3,r4])
>>> db.session.commit()
>>> users = User.query.all()
>>> roles = Role.query.all()
```

If the above commands are run in the python shell then which of the following options is /are correct with respect to these models?

Options :

Command: >>> users

6406533039514. ✖ Output: ["Ramesh", "Suresh"]

Command: >>> u1 = users[1]

>>> u1.roles

6406533039515. ✔ Output: [<Role 3>, <Role 4>]

Command: >>> roles[2].user

6406533039516. ✖ Output: ["Suresh"]

Command: >>> roles[3].user

6406533039517. ✓ Output: 2

Command: >>> roles[0].bearer

6406533039518. ✓ Output: <User 1>

Question Number : 182 Question Id : 640653902477 Question Type : MSQ Calculator : Yes Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Suppose a request `https://xyz.com?name=amey&age=34` generates the below response on the browser's console,

```
Name : amey
```

The definition of the flask endpoint which handles the above request is given below,

```
@app.route(code1)
def getData():
    data = code2
    print("Name :", data)
```

Which of the following options should be used to fill the placeholders "code1" and "code2", to achieve the desired result as shown above?

Options :

```
Code1: "/"
Code2: request.form['name']
```

6406533039539. ✗

```
Code1: "/", methods = ['GET']
Code2: request.form['name']
```

6406533039540. ✗

```
Code1: "/", methods = ['GET', 'POST']
Code2: request.args['name']
```

6406533039541. ✓

```
Code1: "/"
Code2: request.args.get('name')
```

6406533039542. ✓

Sub-Section Id :

640653133702

Question Shuffling Allowed :

Yes

Question Number : 183 Question Id : 640653902461 Question Type : MSQ Calculator : Yes

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following function to be tested and test functions given in the Python code snippet below.

test_file.py

```
import pytest

def square(x):
    sum = 0
    for counter in range(x):
        sum += x
    return sum

@pytest.mark.marker1
def testcase_1():
    assert square(10) == 100

@pytest.mark.marker2
def testcase_2():
    assert square(4) == 4

@pytest.mark.marker3
def testcase_3():
    assert square(5) == 25

@pytest.mark.marker4
def testcase_4():
    assert square(6) == 6
```

On running this file on the terminal using pytest, the summary of the output is;

```
===== 1 passed, 3 deselected, 4 warnings in 0.04s =====
```

What command will result into the outcome given above?

Options :

pytest test_file.py -m marker4

6406533039474. ✓

6406533039475. ✖

```
pytest test_file.py -m marker1
```

6406533039476. ✔

```
pytest test_file.py -m marker2
```

6406533039477. ✖

```
pytest test_file.py -m marker3
```

Question Number : 184 Question Id : 640653902468 Question Type : MSQ Calculator : Yes

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following flask application.

```

from flask import Flask, abort
app = Flask(__name__)
modules = ['python', 'react', 'node']

@app.route('/home/modules/')
def all_modules():
    return f"<h3>List of modules: {modules}</h3>"

@app.route('/get/<string:module_1>')
def get_module(module_1):
    if module_1 in modules:
        return f"<h3>One module found: {module_1}</h3>"
    else:
        abort(400)

@app.errorhandler(400)
def module_error(error):
    return "<h3>Cannot find module</h3>"

@app.errorhandler(404)
def module_error(error):
    return "<h3>Incorrect Path</h3>"

app.run(debug=True)

```

If the application is running locally on `http://127.0.0.1:5000`, select the correct statement(s).

Options :

- For the URL, `http://127.0.0.1:5000/home/modules`, the browser will render;
6406533039502. ✓ **List of modules: ['python', 'react', 'node']**
- For the URL, `http://127.0.0.1:5000/home/modules`, the browser will render;
6406533039503. ✗ **Incorrect Path**
- For the URL, `http://127.0.0.1:5000/get/vuejs`, the browser will render;
6406533039504. ✓ **Cannot find module**
- For the URL, `http://127.0.0.1:5000/get/react/`, the browser will render;
6406533039505. ✗ **One module found: react.**

Question Number : 185 Question Id : 640653902474 Question Type : MSQ Calculator : Yes

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following code snippet.

```
@app.route('/student/<student_id>')
def profile(student_id):
    # CODE BLOCK HERE
```

Assume the database has a "student" table which has a TEXT column "student_id". If we want the server to return a 404 status code when a user goes to the route

'/student/<student_id>' with a student_id that does not exist in the database, which of the following lines would give us the desired output?

Options :

```
student = Student.query.filter_by(student_id=student_id).first()
if student is None:
    abort(404)
return render_template('profile.html', student=student)
```

6406533039527. ✓

```
student = Student.query.filter_by(student_id=student_id).first()
if student is None:
    return render_template("404.html")
return render_template('profile.html', student=student)
```

6406533039528. ✗

```
student = Student.query.filter_by(student_id=student_id).first_or_404()
return render_template('profile.html', student=student)
```

6406533039529. ✓

```
student = Student.query.filter_by(student_id=student_id).first()
if student is None:
    return render_template("404.html"), 404
return render_template('profile.html', student=student)
```

6406533039530. ✓

Sub-Section Number :

8

Sub-Section Id :

640653133703

Question Shuffling Allowed :

No

Question Id : 640653902450 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None

Question Numbers : (186 to 187)

Question Label : Comprehension

Consider the following flask application running locally on

`http://127.0.0.1:5000`

app.py

```
from flask import Flask, request
import sys
app = Flask(__name__)
data = ["Java", "Application Development", "DBMS"]

@app.route('/course')
def home():
    course = request.args.get('course')
    if course in sys.argv[1]:
        if sys.argv[1] in data:
            return f"Welcome to {sys.argv[1]}!"

        return f"Welcome to {course}!"
    else:
        return "Invalid Data"

app.run(debug=True)
```

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 186 Question Id : 640653902451 Question Type : MSQ Calculator : Yes

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

What should be the code to run the application, and what should be the URL respectively such that the browser gives output as: `Welcome to Application Development!` ?

Options :

Code: `python app.py Application Development DBMS`

URL: `http://127.0.0.1:5000/course?course=Application Development`

6406533039434. ✖

6406533039435. ✔

Code: `python app.py "Application Development" Java`

URL: `http://127.0.0.1:5000/course?course=Application`

Code: `python app.py Application Development DBMS`

6406533039436. ✖ **URL:** `http://127.0.0.1:5000/course?course=Application`

Code: `python app.py "Application Development" DBMS`

6406533039437. ✔ **URL:** `http://127.0.0.1:5000/course?course=Application Development`

Question Number : 187 Question Id : 640653902452 Question Type : MCQ Calculator : Yes

Correct Marks : 3

Question Label : Multiple Choice Question

What will be the output given by
browser if the application is
run with command

`python app.py Application Development DBMS`

on terminal with URL:

`http://127.0.0.1:5000/course?course=Application Development ?`

Options :

6406533039438. ✖ `Welcome to Application Development!`

6406533039439. ✖ `Welcome to DBMS!`

6406533039440. ✔ `Invalid Data`

6406533039441. ✖ `Not Found`

MLF

Section Id :

64065364077

Section Number :

9

Section type :

Online

Mandatory or Optional :

Mandatory