WORLD MISSION
HIGH SCHOOL

DECISION	

EXAM DETAILS		TRAINEE'S DETAILS	
Sector	ICT & MULTIMEDIA	Trainee's name	
Trade	NIT	Trainer's name	H. Love
Module code	GENPP501	Module title	Python PROGRAMMING
Level	L5NIT	Date	

Answer all questions

1. Critically evaluate a scenario where two projects require incompatible versions of the same library. Design a step-by-step procedure using venv (Windows) and pip to resolve conflicts, and justify why this approach improves maintainability and deployment.

2. Consider the following code:

```
x = 15
y = 20
if x > y:
    print("A")
elif x + y == 35:
    print("B")
else:
    print("C")
```

   - What will be printed? Explain why.
   - How would the output change if elif x + y > 30: is used instead?

3. Examine this code snippet:

```
age = int(input("Enter your age: "))
if age > 18
    print("Adult")
else:
    print("Minor")
```

   - Identify the syntax error and correct it.
   - Explain why Python threw an error.

4. Write a Python program to determine the grade of a student based on marks:
   - 90–100: A
   - 75–89: B
   - 50–74: C

- Below 50: F

  Then explain why elif is preferred over multiple if statements in this scenario.

5.

A shop applies discounts based on age and membership:

- Members under 18 get 20% off
- Members 18 and above get 10% off
- Non-members get no discount

  Write the Python code for this logic and describe one possible logical error that could occur if the conditions are not carefully ordered.

6.

What is the output of the following code? Explain your reasoning.

```
x = 10
y = 5
if x > 5 and y < 10:
    print("P")
elif x > 10 or y < 5:
    print("Q")
else:
    print("R")
```

7.

What will the following code output? Explain each iteration.

```
for i in range(1, 6):
    if i % 2 == 0:
        print(i, "even")
    else:
        print(i, "odd")
```

8.

```
n = 5
while n > 0:
    print(n)
    n -= 2
```

- Predict the output.
- How many times does the loop execute? Explain why.

9.

Write a Python program using nested loops to print the following pattern:

```
*
**
***
****
```

- Explain how the inner and outer loops interact.

10.

Consider the following:

```
x = 10
while x > 0:
    print(x)
```

- Explain why this code produces an infinite loop.
- Rewrite it so that it prints numbers 10 down to 1 correctly.

11.

Write a Python program that sums all even numbers between 1 and 50.

- Explain why using if inside the loop is necessary.

- Could this be done without if? If yes, how?

12.

A user enters a password. They have three attempts to enter it correctly. Write Python code using while and if to validate the password.

- Explain how the loop stops when the correct password is entered.
- What happens if the user never enters the correct password?

13.

Write a Python program that prints all numbers divisible by 3 from 1 to 100.