

9. What will be output of the following python code?

```
from functools import reduce
def do_sum(x1, x2):
    return x1-x2
print(reduce(do_sum, [1,2,3,4]))
```

- (A) 8 (B) -8
(C) -7 (D) -9

1 1 3 3

10. What is the output of the following code?

```
b = 1
def func(a):
    return (a**3)
b = func(b) ** 3
print(func(b))
```

- (A) 1 (B) 9
(C) 3 (D) 27

1 1 3 3

11. _____ is needed to prevent mutual exclusion while accessing shared resources.

- (A) Process (B) Thread
(C) Synchronization (D) Race condition

1 1 3 2

12. Function involving reading files, using global data, random number are referred to as _____.

- (A) First-order function (B) Higher-order function
(C) Impure function (D) Closure function

1 1 3 1

13. Bind () needs for binding with socket

- (A) IP address and port number (B) IP version and port number
(C) Socket family and port number (D) Socket type and port number

1 2 4 1

14. What does a threading. Lock do?

- (A) Pass messages between threads (B) Allow only one thread at a time to access a resource
(C) Synchronize threads (D) Wait until a thread is finished

1 1 4 1

15. Identify the correct syntax from the following

- (A) pyDatalog.create_terms('X, Y') (B) pyDatalog.createTerms('X, Y')
(C) pyDatalog.create_terms('X, Y') (D) pyDatalog.create_terms('X', 'Y')

1 2 4 2

16. STREAM and DGRAM is purely meant for

- (A) UDP and TCP (B) TCP and UDP
(C) FTP and TCP (D) UDP and HTTP

1 2 4 1

17. Predict the output of the following

```
from sympy import*
rslt = 00 + 10000
print("value of rslt is: "+str(rslt))
```

- (A) value of rslt is : 1000 (B) value of rslt is : 1001
(C) value of rslt is : NULL (D) value of rslt is : 00

1 1 5 2

18. Which of the following is not a part of 5-tuple finite automata?

- (A) Input alphabet (B) Transition function
(C) Initial state (D) Output state

1 1 5 1

19. Find the correct syntax for the expression $2\cos(2x)$

- (A) $\text{sym.diff}(\text{sym.tan}(2 * x), x)$ (B) $\text{sym.diff}(\text{sym.cos}(2 * x), x)$
(C) $\text{sym.diff}(\text{sym.sin}(2 * x), x)$ (D) $\text{sym.diff}(\text{sym.limit}(2 * x), x)$

20. A push down automation employs _____ data structure.

- (A) Queue (B) Stack
(C) Hash table (D) Linked list

1 2 5 2

PART – B (5 × 4 = 20 Marks)

Answer ANY FIVE Questions

Marks BL CO PO

21. Explain the four types of function arguments.

4 2 1 2

22. Write a python program to calculate Fahrenheit and Celsius using map () function and print the temperature in Fahrenheit and Celsius.

4 3 1 2

23. Compare imperative programming paradigm with declarative programming paradigm with example.

4 2 2 2

24.i. List the various states of threading.

2 2 3 2

ii. Differentiate multithreading from multiprocessing.

2 2 3 2

25. Create the below table and insert two rows into the table.

4 3 2 2

Student
reg no : Primary key
Sname : varchar (20)
Sec : Char (10)
DOB : Date

26. Give the importance of the following function in the symbolic programming paradigm.

2 5 2

limit ()
diff ()
integrate ()
expand ()

1

1

1

1

27. Specify three types of socket methods available in python socket library.

4 2 4 2

PART – C (5 × 12 = 60 Marks)

Answer ALL Questions

Marks BL CO PO

28. a.i. Brief about three main categories of control structures.

4 3 1 2

ii. Write a python program to find a factorial of given number using recursion, the function accepts the number as an argument with classes and objects.

8 3 1 2

(OR)

b. Enumerate on the following with suitable example

2 1 2

- (i) Map
(ii) List
(iii) Set
(iv) Tuple
(v) Dict

2

2

2

2

2

29.a. Write a python program to design a registration form for hotel room accommodation using tkinter.

12 3 2 3