

Class : 12Register
Number**COMMON HALF YEARLY EXAMINATION-2024-25**

Time Allowed : 3.00 Hours]

COMPUTER SCIENCE

[Max. Marks : 70

PART - I

Note : i) All the questions. **YouTube/ Akwa Academy** **15X1=15**
 ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

1. Which of the following is a unit of code that is often defined within a greater code structure?
 (a) Subroutines (b) Function (c) Files (d) Modules
2. Which of the following is constructed by placing expressions within square brackets?
 (a) Lists (b) Tuples (c) Classes (d) quadrats
3. Which scope refers to variables defined in current function?
 (a) Global scope (b) Local Scope (c) Module scope (d) Function Scope
4. Which of the following is used to describe the worst case of an algorithm?
 (a) Big Ω (b) Big θ (c) Big β (d) Big O
5. Which of the following character is used to give comments in Python Program?
 a) # b) & c) @ c) \$
6. What is the output of the following snippet?

```
i=1
while True:
    if i%3 ==0:
        break
    print(i,end="")
    i +=1
```

 (a) 1234 (b) 123 (c) 12 d) 124
7. Read the following statement and choose the correct statement(s).
 (I) In Python, you don't have to mention the specific data types while defining function.
 (II) Python keywords can be used as function name.
 (a) Both are wrong (b) Both are correct
 (c) I is wrong and II is correct (d) I is correct and II is wrong
8. What will be the output of the following code?

```
str1 = "Tirupathur"
str2 = "-Schools"
print(str1+str2)
```

 a) Tirupathur - Schools (b) Tirupathur -Schools
 c) Type error d) Tirupathur
9. What will be the result of the following Python code?

```
S=[x**2 for x in range(5)]
print(S)
```

 a) [0,1,2,4,5] (b) [0,1,4,9,16] (c) [0,1,4,9,16,25] d) [1,4,9,16,25]
10. Which of the following method is used as destructor?
 a) `__init__()` (b) `__dest__()` (c) `__rem__()` (d) `__del__()`
11. What symbol is used for SELECT statement?
 a) X (b) Π (c) σ (d) Ω
12. The clause used to sort data in a database.
 a) SORT BY (b) ORDER BY (c) GROUP BY (d) SELECT
13. The expansion of CRLF is
 a) Control Return and Line Feed (b) Carriage Return and Form Feed
 c) Carriage Return and Line Feed (d) Carriage Router and Line Feed
14. `getopt()` will return an empty array if there is no error in splitting strings to
 a) argv variable (b) opt variable (c) args variable (d) ifile variable
15. Which of the following is called the master table?
 a) `sqlite_master` (b) `sql_master` (c) `main_master` (d) `master_main`

PART - II

II. Answer any six questions. Question No. 24 is compulsory.

6x2=12

16. Differentiate interface and implementation.
17. Define mapping?
18. Write a short note on Exponent data.
19. What is slicing?

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20. What will be the value of x in following python code?
 List1=[2,4,6,[1,3,5]]
 x=len(List1)
21. What is normalization?
 22. What is use of next() function?
 23. Write the SQL command to fetch all rows from the database table.
 24. Write the output for the following python program.
 Dict = { x : 2 * x for x in range(1,10)}

PART – III

III. Answer any six questions. Question No. 33 is compulsory.

6x3=18

25. Identify which of the following are constructors and selectors?
 (a) N1:=number() (b) accetnum(n1) (c) displaynum(n1)
 (d) eval(a / b) (e) x,y:= makeslope(m), makeslope(n) (f) display()
26. Write a note on Asymptotic notation.
 27. Using if..else..elif statement write a suitable program to display largest of 3 numbers.
 28. Write a short note on the following with suitable example.
 (a) capitalize() (b) swapcase()
29. Differentiate ceil() and floor() function.
 30. List any three uses of data visualization.
 31. Write a SQL statement using DISTINCT keyword.
 32. What is MinGW? Write its uses?
 33. Write a program to display the given output.
 A
 AB
 ABC
 ABCD

PART – IV

IV. Answer all the questions.

5x5=25

34. (a) What are called Parameters and write a note on
 (i) Parameter without type (ii) Parameter with type
 (OR)
 (b) Elucidate the types of scopes for variable (or) LEGB rule with example.
35. (a) What is Binary search? Discuss with an example.
 (OR)
 (b) Explain input() and print() functions with examples.
36. (a) Describe recursive function with an example.
 (OR)
 (b) Explain the set operations supported by python with suitable example.
37. (a) Differentiate DBMS and RDBMS.
 (OR)
 (b) Consider the following employee table. Write SQL commands for the questions. (i) To (v).

EMPCODE	NAME	DESIG	PAY	ALLOWANCE
S1001	HARISHRAN	SUPERVISOR	29000	12000
P1002	SHAJI	OPERATOR	10000	5500
P1003	PRASAD	OPERATOR	12000	6500
C1004	MANJIMA	CLERK	8000	4500
M1005	RATHEESH	MECHANIC	20000	7000

- (i) To display the details of all employees in descending order of pay.
 (ii) To display all employees whose allowance is between 5000 and 7000.
 (iii) To remove the employees who are mechanic.
 (iv) To add a new row.
 (v) To display the details of all employees who are operators.

38. (a) Write a Python program to write a CSV File with custom quotes.
 (OR)
 (b) What is the use of HAVING clause? Give an example.

TPR/12/C.S/2