

CSSC-AVADI CLUSTER-ZONE 9
PRE-BOARD EXAMINATION
Class-12
(Computer Science -083)

Time Allowed: 3 hours 15mts
Roll No.:

Maximum Marks: 70
Date:

(General Instructions)

This question paper contains 9 printed pages.

This question paper contains 35 questions.

Write down the question number before attempting.

Reading time of 15 minutes.

The paper is divided into 4 Sections- A, B, C, D and E.

Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.

Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.

Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.

Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.

Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.

All programming questions are to be answered using Python Language only.

Q. No	Question	Marks
SECTION - A		
1.	State True or False A Python program and a Python module means the same.	1
2.	In a table STOCK, 5 columns and 8 rows exist, if 3 columns are added and 5 rows are deleted from the table, what will be the new degree and cardinality of the table? a. degree=8 cardinality=15 c. degree=8 cardinality=5 b. degree=10 cardinality=8 d. degree=18 cardinality=28	1

3.	<p>What will the following expression be evaluated to in Python? $2^{**}3^{**}2+15//3$</p> <p>a. 69 b. 517 c. 175 d. 65</p>	1
4.	<p>Given the following dictionary <code>employee={'salary':10000,'age':22,'name':'Mahesh'}</code> <code>employee.pop('age')</code> <code>print(employee)</code> What is output?</p> <p>a. {'age':22} b. {'salary':10000,'age':22,'name':'Mahesh'} c. {'salary': 10000, 'name': 'Mahesh'} d. ['salary':10000,'age':22,'name':'Mahesh']</p>	1
5.	<p>Which keyword is used to eliminate duplicate values in an SQL select query?</p> <p>a. unique b. distinct c. key d. all</p>	1
6.	<p>Which of the following network device is a broadcasting device</p> <p>a. hub b. switch c. gateway d. router</p>	1
7.	<p>What will be output of following:</p> <pre>d={2:'b',4:'c'} d1={1:'a'} d.update(d1) d[1]='v' print(list(d.values()))</pre> <p>a. b,c,v b. ('b','c','v') c. {b,c,v} d. ['b', 'c', 'v']</p>	1
8.	<p>What will the following code print? <code>print(max("zoo 145 com"))</code></p> <p>a. 145 b. 5 c. z d. zoo</p>	1
9.	<p>Which of the following statement(s) would give an error after executing the following code?</p> <pre>def fun(n) : if (n > 100): return n-5 return fun(fun(n+11)) print (fun (45))</pre> <p>a. 50 b. 100 c. 74 d. infinite loop</p>	1
10.	<p>Which of the following statement(s) would give an error after executing the following code?</p> <pre>x= int("Enter the Value of x:") #Statement 1 for y in range[0,21]: #Statement 2 if x==y: #Statement 3 print(x+y) #Statement 4 else: #Statement 5 print (x-y) # Statement 6</pre> <p>a. Statement 4 b. Statement 5 c. Statement 4 & 6 d. Statement 1 & 2</p>	1
11.	<p>Fill in the blank:</p> <p>_____ is a standard network protocol used to transfer files from one host to another over a TCP-based network, such as the Internet.</p> <p>a. TCP b. IP c. FTP d. SMTP</p>	1

12.	Choose correct answer: <pre>def fun1(num): return num+5 print(fun1(5)) print(num)</pre> <p>a. Print value 10 b. Print value 5 c. Name Error d. 25</p> <p><i>num = n. n + 5 print(n+5) print(n+5)</i></p>	1
13.	State whether the following statement is True or False: Value returning functions should be generally called from inside of an expression.	1
14.	Which of the following statements is false? <p>a. A try-except block can have more than one except statement</p> <p>b. One block of except statement cannot handle multiple exceptions</p> <p>c. The finally block is always executed</p> <p>d. When <code>1 == "1"</code> is executed, no exception is raised</p>	1
15.	Fill in the blank: If all devices are connected to a central hub, then topology is called _____.	1
16.	Which of the following functions will read lines of a text file as list elements? <p>a. read() b. get() c. readline() d. readlines()</p>	1
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as <p>(a) Both A and R are true and R is the correct explanation for A.</p> <p>(b) Both A and R are true and R is not the correct explanation for A.</p> <p>(c) A is True but R is False.</p> <p>(d) A is false but R is True.</p> <p>(e) Both A and R are false or not fully True.</p>	1
17.	Assertion (A):- A default argument can be skipped in the function call statement. Reasoning (R):- The default values for parameters are considered only if no value is provided for that parameter in the function call statement.	1
18.	Assertion (A): CSV stands for Comma Separated Values Reason (R): CSV file are common file format for transferring and storing data.	1
SECTION B		
19.	Write two advantages and two disadvantages of circuit switching. OR Differentiate between Web server and web browser. Write the names of any two web browsers.	2
20.	Observe the following code carefully and rewrite it after removing all syntax and	2

	<p>logical errors. Underline all the corrections made.</p> <pre> def check(a) for in range(len(a)): a[i]=a[i]+5 return a b=[1,2,3,4] c=Check(b) Print(c) </pre>	
21.	<p>Write a function even(L), where L is the list of element passed as argument to the function. The function return another list named changelist that stores even numbers. Sample List:[1,2,3,4,5,6,7,8,9] Expected Result:[2,4,6,8]</p> <p style="text-align: center;">OR</p> <p>Write a function LShift (Arr, n) in Python , which accepts a list Arr of numbers and n is a numeric value by which all elements of the list are shifted to left . Sample Input Data of the list Arr = [10, 20,30,40,12,11], n=2 Output Arr = [30,40,12,11,10,20]</p>	2
22.	<p>Predict the output of the following code:</p> <pre> def encrypt(str): str1="" for i in str: if i.isupper(): str1+=i.lower() else: str1+="*" return str1 s=encrypt("HeLLo") print(s) </pre>	2
23.	<p>Write a suitable Python statement for each of the following tasks using built-in functions/methods only:</p> <ol style="list-style-type: none"> To delete an element Mumbai:50 from Dictionary D. To display words in a string S in the form of a list <p style="text-align: center;">OR</p> <p>Write a Python Program to display alternate characters of a string my_str. For example, if my_str = "Computer Science" The output should be Cmue cec</p>	2
24	<p>Consider the following tables and write queries for a and b:</p>	2

Table: Bank_Account

Acctno	Name	BCode	Type
1001	Amrita	A2	Savings
1002	Parthodas	A3	Current
1005	Miraben	A2	Current

Table: Branch

Code	City
A1	Delhi
A2	Mumbai
A3	Nagpur

- a. To list Acctno, Name and City of those accounts whose Account Type is Current.
b. To display Acctno and Name of those accounts whose Code is A2.

OR

Differentiate between CHAR and VARCHAR datatypes

25. Predict the output of the following code:

```
def f():  
    global s  
    s += ' Is Great'  
    print(s) Is Great  
    s = "Python is funny"  
s = "Python"  
f()  
print(s)
```

SECTION C

26. Predict the output of the Python code given below:

```
d1={"a":10, "b":2, "c":3}  
str1=""  
for i in d1:  
    str1=str1+str(d1[i])+ "  
str2=str1[: -1]  
print(str2[: -1])
```

27. a. Write the output of the queries (i) to (iv) based on the table TECH_COURSE given below:

Table: TECH_COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	Animation and VFX	12000	2022-07-02	101
C202	CADD	15000	2021-11-15	NUL
C203	DCA	10000	2020-10-01	102
C204	DDTP	9000	2021-09-15	104
C205	Mob App Development	18000	2022-11-01	101
C206	Digital marketing	16000	2022-07-25	103

12000
15000
30000

- (i) SELECT TID FROM TECH_COURSE;
- (ii) SELECT TID, sum(feess), MIN(FEES) FROM TECH_COURSE GROUP BY TID HAVING COUNT(TID)=1;
- (iii) SELECT CNAME FROM TECH_COURSE WHERE FEES>15000 and Cname like 'D%';
- (iv) SELECT MAX(FEES) FROM TECH_COURSE WHERE FEES BETWEEN 15000 AND 17000;

b. Write the command to view all the databases in an RDBMS.

28. Write a method SHOWLINES() in Python to read lines from text file 'TESTFILE.TXT' and display the lines which do not contain 'ke'.

Example: If the file content is as follows:

An apple a day keeps the doctor away.
We all pray for everyone's safety.
A marked difference will come in our country.

The SHOWLINES() function should display the output as:

We all pray for everyone's safety.

OR

Write a function RainCount() in Python, which should read the content of a text file "RAIN.TXT" and then count and display the count of occurrence of word RAIN (case-insensitive) in the file.

Example: If the file content is as follows:

It rained yesterday
It might rain today
I wish it rains tomorrow too
I love Rain

The RainCount() function should display the output as: Rain - 2

29. As part of Fit India Campaign, Suresh has started a juice shop that serves healthy juices. As his database administrator, answer the following questions based on the data given in the table below.

Table : HEALTHYDRINKS

Add
12000 and
18000.

Drinkcode	Dname	Price	Calories
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nectar	15.00	115
104	Green Mango	16.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahar	12.00	150

Write the statements to:

- Insert the following record into the table
DrinkCode – 107, Dname – Santara Special, Price – 25.00, Calorie – 130
- Increase the price of the juices by 3% whose name begins with 'A'.
- Delete the record of those juices having calories more than 140.

30. A stack Book contains the following details of various books –
[book_no, book_title, book_price]. Write a function PushBook(Book) in Python that inputs the book details from the user and pushes into the stack. Also, display the stack elements.

3

SECTION D

31. Write SQL command for (a) to (e) on the basis of tables INTERIORS and NEWONES.
Table: INTERIORS

4

NO	ITEMNAME	TYPE	DATEOFSTOCK	PRICE	DISCOUNT
1	Red rose	Double bed	23/02/02	32000	15
2	Soft touch	Baby cot	20/01/02	9000	10
3	Jerry's home	Baby cot	19/02/02	8500	10
4	Rough wood	Office Table	01/01/02	20000	20
5	Comfort zone	Double bed	12/01/02	15000	20
6	Jerry look	Baby cot	24/02/02	7000	19
7	Lion king	Office Table	20/02/02	16000	20
8	Royal tiger	Sofa	22/02/02	30000	25
9	Park sitting	Sofa	13/12/01	9000	15

Table: NEWONES

NO	ITEMNAME	TYPE	DATEOFSTOCKS	PRICE	DISCOUNT
11	White wood	Double bed	23/03/03	20000	20
12	James 007	Sofa	20/02/03	15000	15
13	Tom look	Baby cot	21/02/13	7000	10

- To show all information about the sofas from the INTERIORS table.
- To list the ITEMNAME which are priced at more than 10,000 from the INTERIORS table.
- To list ITEMNAME and TYPE of those items, in which DATEOFSTOCK is before 22/01/02
- To count the number of items, whose type is "Double Bed" from INTERIOR

	table.	
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32.	A csv file Employee.csv has three columns [EmpID, Name, Salary]. (i) Write a user defined function writescv(L) which accepts a list L from the user containing EmpID, Name, Salary and write it to the csv file Employee.csv. (ii) Write a function readcsv(name) which accepts the employee name as parameter and prints the salary of that employee.	4
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SECTION E

33	<p>Ionex Private Ltd. Patna has different divisions Marketing (A1), Sales (A2), Finance (A3) and Production (A4). The company has another branch in New Delhi. The management wants to connect all the divisions as well as all the computers of each division (A1, A2, A3, A4) of Patna branch.</p> <p>Distance between the divisions are as follows :</p> <p>A3 to A1: 20 m A1 to A2: 35 m A2 to A4: 20 m A4 to A3: 130 m A3 to A2: 1000 m A1 to A4: 190 m</p> <p>The number of computers in each division is as follows :</p> <p>A1: 50 A2: 40 A3: 110 A4: 60</p>	5
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	<p>Based on the above configurations, answer the following questions :</p> <p>(i) Suggest the type of network (PAN, LAN, MAN, WAN) required to connect the Finance (A3) division with the New Delhi branch by giving suitable reasons.</p> <p>(ii) Suggest the placement of following devices (a) Switch (b) Repeater</p> <p>(iii) Suggest the division which should be made server by quoting suitable reasons.</p> <p>(iv) The company wants to conduct an online video conference between employees of the Patna and New Delhi branches. Name the protocol which will be used to send voice signals in this conference.</p> <p>(v) Suggest the topology and draw the most suitable cable layout for connecting all the divisions of the Patna branch.</p>	
34.	<p>(a) What is the difference between readline() and readlines() function in file handling?</p> <p>(b) Write a Program in Python that defines and calls the following user defined functions:</p> <p>i) ADD() – To accept and add data of a book to a CSV file 'book.csv'. Each record consists of a list with field elements as bookid, title and price to store book id, book title and book price respectively.</p> <p>ii) COUNTR() – To count the number of records present in the CSV file named 'book.csv'.</p> <p style="text-align: center;">OR</p> <p>(a) What are the advantages of binary file over text file?</p> <p>(b) Write a Python program in Python to search the details of the employees (name, designation and salary) whose salary is greater than 5000. The records are stored in the file emp.dat. consider each record in the file emp.dat as a list containing name, designation and salary..</p>	1+4=5
35.	<p>(i) Differentiate between fetchone() and fetchall() methods.</p> <p>(ii) Write a python program that inserts the record in the table Student with the fields as below:</p> <p>ano – integer Name – string gender – string dob - date stream-string marks –integer</p> <p>Note the following to establish connectivity between Python and MYSQL:</p> <ul style="list-style-type: none"> • Username is root • Password is tiger • The table exists in a MYSQL database named school. • The details (ano, name, gender, dob, stream, Marks) are to be accepted from the user. <p style="text-align: center;">OR</p> <p>(i) Write about candidate key and foreign key.</p> <p>(ii) Write the Python code to update mark as 65 whose admn_no is 3456 in the table student of MYSQL database "education"</p> <p>Note the following to establish connectivity between Python and MYSQL</p>	1+4=5



user = root
Password=tiger
Host= localhost

cut -cno6
cno6

cut

cut

cut 3, cut 4, cut 5, cut 6

cut 7

cut 8
cut 9