

CLASS - XI
COMPUTER SCIENCE WITH PYTHON

TIME - 3 HOURS

[MAX. MARKS - 70]

General Instructions:

- i) All questions are compulsory.**
- ii) Mark for each question is mentioned against it.**

iii) Programming Language: PYTHON

- a) Who developed python Programming language and when? 1
 - b) Name any two immutable data objects of Python. 1
 - c) Classify each of the following as a valid or invalid variable: 2
 - a. i)Length ii)%age iii)2ndinnings iv)Half_Yearly
 - d) Given that A=4, B=5, C=4, what will be the result of the following expressions:2
 - i)A<=C ii)A<=B
 - e) What is error? 1
 - f) What are variables? Give example. 2
 - g) Write the pseudo code that will take a number from the user 2 and print if it is positive, negative or zero. 2
 - h) Rewrite the following program using for loop : 2

```
sum=0
i=1
while (i<=10):
sum=sum+i
i=i+1
print("sum=",sum)
```
 - i) Write a Python script to print Fibonacci series. 3
 - j) Identify the errors in the following code: 2
 - i. i. L1 = [1,2,3,5] ii. L1 = [1,3,5,8]
 - An = L1.remove(7) An = L1.remove(8)
 - print(An + 2)
 - l) Suggest appropriate functions for the following tasks: 2
 - (i) To check whether the string contains digits
 - (ii) To capitalize all the letters of the string
 - (iii) To remove all white spaces from the beginning of a string.
 - (iv) To check whether all letters of the string are in capital letters.
 - m) Write a program, which consider a list and find the average of number entered through keyboard until enter '0', if number is Zero then it will quit. Finally displays list of numbers. 3
 - n) t1= (1,)*3
t1[0]=2
print(t1) , What is the output ? 1
 - o) What is the use of json package? 1
 - p) Write the steps to arrange the elements using insertion sort. 12,5,14,8,3,54,25,10,27,30 2
 - q) What will be the output 2

```
t2=(1,2,3)
t3=(6,7)
t4=t3+t2
t5=t2+t3
print(t4)
print(t5)
```
 - r) Write a program to find factorial of a given number. 4
 - s) Write an appropriate for loop to be repeated 100 times, except the loop is to be terminated if the value of the variable p becomes 50. 2
- 2.a Expand the following terms: 1**
- i) EPROM ii)ASCII

- b. What is application software? Name any two software. 1
- c. Convert following 2
- 1) $(10111001)_2 = ()_8$
- 2) $(1234)_8 = ()_{16}$
- d. Prove Distributive law using truth table. 2
- e. Draw the logic circuit from the following expression $A'B+A'C$ 2
- f. Answer the following 2
- (i) Minimize the following $A+(A.(B.C))$
- (ii) Add binary numbers 111.01 and 111.01
3. a What is primary key? 1
- b. Give example for degree and cardinality. 1
- c. What is the use of **distinct** in sql. 1
- d. Answer the following questions. 6

TABLE : HOSPITAL

No.	Name	Age	Department	DatoFadm	Charges	Sex
1	Arpit	62	Surgery	21/01/98	300	M
2	Zareena	22	ENT	12/12/97	250	F
3	Kareem	32	Orthopedic	19/02/98	200	M
4	Arun	12	Surgery	11/01/98	300	M
5	Zubin	30	ENT	12/01/98	250	M
6	Ketaki	16	ENT	24/02/98	250	F
7	Ankita	29	Cardiology	20/02/98	800	F
8	Zareen	45	Gynecology	22/02/98	300	F
9	Kush	19	Cardiology	13/01/98	800	M
10	Shilpa	23	Nuclear Medicine	21/02/98	400	F

- (a) To list the names all the patients admitted after 15/01/98. 1
- (b) To list the names of female patients who are in ENT department. 1
- (c) To list names of all patients with their date of admission in ascending order. 1
- (d) To display Patient's Name, Charges, Age for only female patients. 1
- (e) Find Out the Output of Following SQL Command:- 2
- (i) Select COUNT(DISTINCT charges) from HOSPITAL;
- (ii) (ii) Select MIN(Age) from HOSPITAL where Sex="F";
- f. Define the following 6
- (i) foreign key (ii) DBMS (iii) desc command
- (iv) group by clause (v) Order by clause (vi) candidate key
4. Answer the following Questions:
- a) What are the rules for using social networking sites 2
- b) What is Cracking? Suggest the ways to protect the computer from cyber attack. 2
- c) Define eavesdropping and phishing . 2
- d) What is cyber stalking? How it is done. 2
- e) What are the tips to safely browse the internet. 2