

Total No. of Printed Pages : 2

HS/XI/A.Sc.Com/CS/Pr-Ins/18 (Dec.)

2 0 1 8 (December)

COMPUTER SCIENCE

Full Marks : 30

Time : 3 hours

INSTRUCTIONS TO EXAMINERS

(Common for all sets)

1. Ensure that the software required for doing the practical examination i.e. **Python interpreter version 2.7.14 or above and also MySQL Database** are installed on the computers and made available to the students.
2. The ratio of computer to student should be 1:1.
3. All previous written programs are to be removed from the computers and the students should not have access to soft copies as well as hard copies of programs.
4. There are 7 (seven) sets for the examination, labelled as Set 1 through SET VII. Only one set, beginning with SET I, is to be used for each shift of examinees. If the number of sets is more than the shifts of examinees, then the un-utilized sets are *not* to be opened.
5. Two questions from Group-A and one question from Group-B are to be answered by the student.
6. Practical paper is to be evaluated based on the following criteria:–
 - (a) Lab Test
 - (i) Group-A (Programming in Python): 4+4 08 marks
 - (ii) Group-B (SQL commands) 04 marks
 - (b) Viva Voice 03 marks
 - (c) Project work 08 marks
 - (d) Lab Records 07 marks

(2)

Viva Voice (Based on Lab Records/Project work)

Lab Test programs should evaluated based on the following:–

Logic-60%

Documentation / indentation-20%

Output / presentation-20%

7. Use of Mobile phones, pen drives, CDs and memory cards are prohibited inside the laboratory.

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(FOR SCIENCE STREAM)

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Time : 3 hours

SET-I (One)

(Answer Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to read marks in 5 subjects and then print the average marks. 4

Or

Write a Python program to display multiplication table for any positive input number. 4

2. Write a Python program to read a temperature in Celsius and convert it into Fahrenheit. 4

Or

Write a Python program to read a three digit number and then print the reverse of the same.
(If the input is 342 then output should be 243). 4

(2)

GROUP – B

(SQL COMMANDS :: 4 MARKS)

3. Create a table "student" based on the following structure:

Column Name	Data Type	Size	Constraint
Roll No.	Integer	3	Primary key
Name	Varchar	25	
DOB	Date		
Address	Varchar	50	

Insert at-least four records into the table. Select the Name and DOB of all Students.

OR

Create a table "Department" based on the following structure:

Column Name	Data Type	Size	Constraint
Dept_ No	Integer	3	Primary key
Dept_ Name	Varchar	15	
Head_Dept_ Name	Varchar	25	

Insert the following records into the table and display only those records whose Depy_No is less than 125:

111	Physics	Prof. S. Paul
123	Chemistry	Prof. M. Lyngdoh
132	Mathematics	Prof. S. Sharma
115	Computer Science	Prof. A. Upadhaya

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HS/XI/A.Sc.Com/CS/Pr/Set-II/18 (Dec.)

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COMPUTER SCIENCE
(FOR SCIENCE STREAM)

Full Marks : 30

Time : 3 hours

SET-II (Two)

(Answer Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to calculate the real roots of a quadratic equation. 4

Or

Write a Python program to read the base and height of a triangle and calculate its area. 4

2. Write a Python program to read the principal amount, rate of interest and time and compute the simple interest. 4

Or

Write a Python program to find the factorial of a number. 4

(2)

GROUP – B
(SQL COMMANDS :: 4 MARKS)

3. Create a table "Employee" based on the following structure:

Column Name	Data Type	Size	Constraint
Emp_ No	Integer	3	Primary key
Emp_ Name	Varchar	25	
Department	Varchar	15	
Salary	Decimal	8,2	

Insert at-least four records into the table. Select all the records with Salary>15000.

OR

- Create a table "Teacher" based on the following structure:

Column Name	Data Type	Size	Constraint
Teacher_ Id	Char	4	Unique, Not Null
Teacher_Name	Varchar	25	
Department	Varchar	15	
Salary	Number	8,2	

Insert the following records into the table and display all the records.

E11	English	Prof. G. Upadhaya	50000
C11	Chemistry	Prof. P. Sharma	55000
M12	Mathematics	Prof. S. Marwein	60000
CS1	Computer Science	Prof. T. R. Dhar	58000

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HS/XI/A.Sc.Com/CS/Pr/Set-III/18 (Dec.)

2 0 1 8 (December)
COMPUTER SCIENCE
(FOR SCIENCE STREAM)

Full Marks : 30

Time : 3 hours

SET-III (Three)

(Answer Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to read a year as input and check if it is leap year or not. 4

Or

Write a Python program to read radius of a circle and then print its circumference.
(Take pi = 3.14) 4

2. Write a Python program to read length, breadth and height of a cuboid and then calculate and print its volume. 4

Or

Write a Python program to read three integers and print the largest of them. 4

(2)

GROUP – B

(SQL COMMANDS :: 4 MARKS)

3. Create a table "Exam" as shown below:

Roll No.	Name	Percentage	Division
1	Karan	89	First
5	Javed	40	Third
3	David	55	Second
2	Sukhbir	60	First
4	Suklang	50	Second

List only those records of students from the table "Exam", whose Division is 'First' in descending order of their Names.

OR

Create a table "Supplier" based on the following structure:

Column Name	Data Type	Size	Constraint
Scode	Number	4	Primary, Not Null
Product_Name	Varchar	15	
Supplier_Name	Varchar	15	
Quantity	Number	5	
Price	Number	6,2	

Insert the following records into the table and display all the records.

101	Coffee	Nestle	200	55.00
102	Jam	Kissan	100	10.50
103	Chocolate	Cadbury	150	25.00
104	Cake	Britania	50	20.00

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HS/XI/A.Sc.Com/CS/Pr/Set-IV/18 (Dec.)

2 0 1 8 (December)
COMPUTER SCIENCE
(FOR SCIENCE STREAM)

Full Marks : 30

Time : 3 hours

SET-IV (Four)

(Answer any Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to read a positive integer and checks whether the input integer is odd or even. 4

Or

Write a Python program to read length and breadth of a rectangle and calculate its area. 4

2. Write a Python program to display the sum of integers within a given range. 4

Or

Write a Python program to input an integer and then test whether the number is a prime number or not. 4

(2)

GROUP – B
(SQL COMMANDS :: 4 MARKS)

3. Create the following table "Bank" and insert at-least four records. Display all the records.

Field Name	Data Type	Size	Constraints
Acc_No	Number	10	Not Null, Primary
Cust_Name	Varchar	30	Not Null
Cust_Address	Varchar	40	
Mobile_No	Number	11	
Account_Type	Char	15	Default='SAVING'
Balance_Amt	Number	10,2	

OR

Create a table "Hospital" based on the following structure:

Column Name	Data Type	Size	Constraint
Patient_No	Number	4	Primary
Patient_Name	Char	25	Unique
Age	Int	2	
Department	Char	15	Default="OPD"
Date_Adm	Date		Default SYSDATE

Insert at-least four records into the table and display all the records.

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COMPUTER SCIENCE

(FOR SCIENCE STREAM)

Full Marks : 30

Time : 3 hours

SET-V (Five)

(Answer Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to find the sum of even integers within a given range. 4

Or

Write a Python program to produce following output: 4

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

2. Write a Python program to generate the first 7 terms of the Fibonacci series. 4

Or

Write a Python program to read a temperature in Fahrenheit and then convert it into Celsius. 4

(2)

GROUP – B
(SQL COMMANDS :: 4 MARKS)

3. Create a table "Student" based on the following structure:

Column Name	Data Type	Size	Constraint
Roll No.	Integer	3	Primary key
Name	Varchar	25	
DOB	Date		
Address	Varchar	50	

Insert at-least four records into the table. Select the Name and DOB of all Students.

OR

Create a table "Department" based on the following structure:

Column Name	Data Type	Size	Constraint
Dept_No	Integer	3	Primary key
Dept_Name	Varchar	15	
Head_Dept_Name	Varchar	25	

Insert the following records into the table and display only those records whose Depy_No is less than 125:

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2 0 1 8 (December)
COMPUTER SCIENCE
(FOR SCIENCE STREAM)

Full Marks : 30

Time : 3 hours

SET-VI (Six)

(Answer Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to read the marks in 5 subjects and then print the average marks. 4

Or

Write a Python program to calculate the factorial of a number using 'while' loop. 4

2. Write a Python program to test whether a word is a palindrome or not. 4

Or

Write a Python program to count the number of vowels in a string. 4

(2)

GROUP – B
(SQL COMMANDS :: 4 MARKS)

3. Create a table "Report_Card" as shown below:

Roll No.	Name	Eng_Marks	Phy_Marks	Com_Marks	Division
1	Kishan	80	40	70	First
5	Jashbir	40	30	35	Third
3	Dyan	55	40	40	Second
2	Suresh	60	65	55	First
4	Seema	50	45	40	Second

List only those records of students, whose Division is 'First and 'Com_Marks>60 in ascending order of their Names.

OR

Create a table "Supplier" based on the following structure:

Column Name	Data Type	Size	Constraint
Scode	Number	4	Primary, Not Null
Product_Name	Varchar	15	
Supplier_Name	Varchar	15	
Quantity	Number	5	
Price	Number	6,2	

Insert the following records into the table and display all the records.

101	Coffee	Nestle	200	55.00
102	Jam	Kissan	100	10.50
103	Chocolate	Cadbury	150	25.00
104	Cake	Britania	50	20.00

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(FOR SCIENCE STREAM)

Full Marks : 30

Time : 3 hours

SET-VII (Seven)

(Answer Two questions from Group-A and One question from Group-B)

GROUP – A

(PYTHON PROGRAMMING :: 8 MARKS)

1. Write a Python program to display the following pattern. 4

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

Or

Write a Python program to display multiplication table for any input number. 4

2. Write a Python program to read three integers and then print the largest of them. 4

Or

Write a Python program to input an integer & then test if it is a prime number or not. 4

(2)

GROUP – B
(SQL COMMANDS :: 4 MARKS)

3. Create the following table "Bank" and insert at-least four records. Display all the records.

Field Name	Data Type	Size	Constraints
Acc_No	Number	10	Not Null, Primary
Cust_Name	Varchar	30	Not Null
Cust_Address	Varchar	40	
Mobile_No	Number	11	
Account_Type	Char	15	Default='SAVING'
Balance_Amt	Number	10,2	

OR

Create a table "Hospital" based on the following structure:

Column Name	Data Type	Size	Constraint
Patient_No	Number	4	Primary
Patient_Name	Char	25	Unique
Age	Int	2	
Department	Char	15	Default="OPD"
Date_Adm	Date		Default SYSDATE

Insert al-least four records into the table and display all the records.

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