

AMRITA VIDYALAYAM

ANNUAL EXAMINATION 2019 - 20

Class : XI

Marks : 70

Time : 3 hrs

INFORMATICS PRACTICES (065)

SECTION - A

- 1.a) What is Unicode? Mention any 2 advantages of Unicode. **3**
- b) Give any 2 differences between Computer and a Calculator. **1**
- c) Suggest any two solution measures when your computer is frozen. **1**
- d) Which keyword is used to filter records from a table? **1**
- e) What do you mean by Aggregate functions in Mysql? Mention any two. **2**
- f) Differentiate between Alter and Update command. **2**
- g) Differentiate between Char and Varchar datatypes. **2**
- 2.a) Predict the output for the following statements st1, st2, st3. **3**
- ```
d1={ 1:10 , 2:20 , 3:30 , 4:40 , 5:50 }
print (d1.values()) #st1
d2={ 6:60 , 7:70 }
d1.update (d2)
print (d1) #st2
print (len (d1)) #st3
```
- b) What is the difference between del command and pop () in a dictionary. Illustrate with an example. **2**
- c) What will be the output for the following Python statements pr1, pr2, pr3 and pr4. **2**
- ```
import math
import statistics
print (math.pow (2,4))      #pr1
print (math.floor (100.72)) #pr2
print (math.fabs (-15.5364)) #pr3
s1=statistics.median ([1,2,3,8,9])
print (s1)                 #pr4
```
- d) Write the Python expressions for the following. **3**
- (i) $\sqrt{x^2 + y^2 + z^2}$ (ii) $\frac{(\cos x) + x}{\sin x}$ (iii) $\frac{1}{2} bh$
- e) Mention any two jump statements used in Python. **1**
- f) Based on the below list, write the output for the following statements st1, st2 and st3. **3**
- ```
L1= [13, 18, 20, 10, 18, 23, 18, 11]
print (L1.count (18)) #st1
print (L1.index (23)) #st2
L2=L1.append (5)
print (L1) #st3
```
- g) What are operators? Explain the different operators present in Python with example. **4**

#### SECTION - B

- 3.a) Differentiate between Numpy array and Lists. **2**
- b) Write a program in Python which performs the basic arithmetic operations on 2D array. **4**
- c) Differentiate between vstack() and hstack(). Illustrate with appropriate examples. **3**
- d) Write the output for the following statements. **3**
- ```
Import numpy as np
```

```
A1=np.array([5,7,9,10,11,15])
print(A1[2:])          #st1
print(A1[1:4])        #st2
print(A1[-3: ])       #st3
```

- e) Mention the methods used for the following tasks. 3
- (i) To create a 2D array from a 1D array.
- (ii) To create array from a range.
- (iii) To join two arrays.

SECTION - C

- 4.a) Define the following terms. 4
- (i) Attributes (ii) Cardinality (iii) Primary Key (iv) DDL
- b) Write the Mysql queries for the following. 2
- (i) Create a table with the following structure and apply necessary constraints in the table.

Table : Salesperson

Field	Datatype	Constraint
Sid	Int(5)	Primary Key
Sname	Char(15)	Not null
Age	Int(3)	
Salary	Decimal(15,2)	
Phone	Int(12)	

- (ii) Add one record into the table with the following values. 1
- (1108, 'Sunil S', 34, 40000, 9586864541).
- (iii) To display the Salesperson's details who earns salary in the range of 10000 to 20000 (both values included). 1
- (iv) To display the name of Salesperson in their descending order of Salary. 1
- (v) To display the name of Salesperson whose is age below 35 and name starts with A. 1
- (vi) Increase the salary by ₹ 500 of all Salesperson whose salary is above 20,000. 1
- (vii) Add one field DOJ of Date data type. 1
- c) Write the output for the following queries based on the table below. 3

Table : Student

St_Id	St_Name	Game	Grade	Fees
10	Sameer	Hockey	A	500
11	Sujith	Cricket	B	750
12	Vaishak	Volley Ball	B	600
13	Veena	Hockey	C	NULL
14	Anuja	Tennis	B	700
15	Arpit	Tennis	A	300

- (i) SELECT St_Name from Student WHERE Game IN ('Tennis', 'Cricket');
- (ii) SELECT DISTINCT (Grade) from Student;
- (iii) SELECT St_Id, St_Name from Student Where St_Name LIKE '%a' AND Fees IS NULL;

SECTION - D

- 5.a) Mention any 2 tips to ensure our safety while browsing the web. 1
- b) What do you mean by Netiquettes? 1
- c) Define Eavesdropping. 1
- d) Differentiate between Cyber Bullying and Cyber Stalking. 2
- e) What is Digital Footprint? Why is it so important? 2
- f) What measures should one take to avoid and maintain confidentiality of personal information? 3