

**ST.JOSEPH CALASANZ SCHOOL, KANYAKUMARI**  
**ANNUAL EXAMINATION (2019-2020)**

**Class: XI**

**Subject-Informatics Practices (065)**

**Time allowed: 03 Hours**

**Maximum Marks: 70**

**Instructions: All the questions are compulsory. Programming Language: Python**

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|--|-----------|
| <b>1. Introduction to Computer System</b>  | <b>5</b>  |
| a. List the name of two components of the CPU  | 1         |
| b. What is the use of Light Pen?   | 1         |
| c. What is the function of memory? What are its measuring Unit?  | 2         |
| d. What is an operating system?  | 1         |
| <b>2. Introduction to python programming</b>   | <b>30</b> |
| a. Who developed python?   | 1         |
| b. Write any two features of python.   | 1         |
| c. What is the difference between interactive mode and script mode in python?  | 2         |
| d. What is the difference between a keyword and a variable?  | 2         |
| e. What will be the output produced by following code:   | 6         |
| i-   name='neeru'  |           |
| age=21   |           |
| print(name, "you are", 21, "now but")  |           |
| print("you will be ", age+1, "next year")  |           |
| ii-  x,y=2,6   |           |
| x,y=y,x+2  |           |
| print(x,y)   |           |
| iii- p=10  |           |
| q=20   |           |
| p*=q/2   |           |
| q+=q/3   |           |
| print(p,q)   |           |
| f. Identify invalid variable names from the following, giving reason for each:<br>lf , s.i , tot_strength , 9tag   | 2         |
| g. Convert the following for loop into while loop:<br>for k in range(10,20,5)<br>print(k)  | 2         |
| h. Write a program to find the largest number among the three inputted numbers. Also draw the flow chart for it.   | (2+1)     |
| i. Write a program along with a flow chart to display sum of even numbers up to number n entered by user.  | (2+1)     |
| j. Write a program to accept a number from the user and print the table of that number.  | 2         |
| k. Write a program to print the following pattern:2<br>* *<br>* *<br>* *   |           |
| l. Consider the string str="Green Revolution". Write statements in python to implement the following:<br>i-        To display the last four characters<br>ii-       To repeat the string 3 times | 2         |
| m. Write a program to count the frequency of an element in a given list.   | 2         |
| <b>3. Data Handling(Numpy Array):</b>  | <b>10</b> |

- a. Explain the syntax and purpose of the following numpy functions: 3  
 1- `arange()`  
 2- `empty()`
- b. Why are Numpy arrays used over list? 2
- c. Write a program to create a 1D array holding numeric values from 0 to 9. 1
- d. ----- is a array is named contiguous set of elements that are homogeneous data type 1

e. An Array X contains the following Data

```
[[0 1 2 3]
 [4 5 6 7]
 [8 9 10 11]
 [12 13 14 15]]
```

What will be returned by the Statement?

a) `print(x[0:2,0:2])`

Find out the Shape ,Rank, itemsize ,Dtype of this array? 2

f. -----is tuple that stores the number of elements in each dimension of the array

DTYPE B) SHAPE C) LENGTH D) SIZE 1

**4. Data Management:** 15

- a. Define the following terms: 3  
 1- Primary Key  
 2- Foreign Key  
 3- What is Mysql ? Where it is used?
- b. What are DDL and DML statements? 1
- c. What is the difference between Cardinality and Degree of a relation? 1
- d. Write SQL commands for (1) to (4) and write output for (5) on the basis of PRODUCTS relation given below: 8

**Table: Product**

PCODE	PNAME	COMPANY	PRICE	STOCK	MANUFACTURE	WARRANTY
P001	TV	BPL	10000	200	12-Jan-2018	3
P002	TV	SONY	12000	150	23-Mar-2017	4
P003	PC	LENOVO	39000	100	09-Apr-2018	2
P004	PC	COMPAQ	38000	120	20-Jun-2019	2
P005	HANDYCAM	SONY	18000	250	23-Mar-2017	3

- 1-To show details of all PCs with stock more than 110.  
 2-To list the company which gives warranty of more than 2 years.  
 3-Add a new record with the following data:  
 (P006,'TV','SONY',35000,220,'15-Jan-2019',5)  
 4-To increase the price of all the product of SONY company by Rs. 2000.  
 5-Give the output of the following statements:  
 i-Select MAX(Price) from PRODUCT where WARRANTY<=3;  
 ii-Select SUM(Stock) from PRODUCT where COMPANY="SONY";  
 iii- Select COUNT(Distinct COMPANY ) from PRODUCT;  
 iv-Select Price\*Stock from PRODUCT where warranty>2;

e. Create table Customer as per following Table Instance Chart. 2

Column name	Cust_ID	Cust_Name	Cust_Address	Pincode	Cust_Phone
Data Type	Varchar	Varchar	Varchar	Varchar	Varchar
Length	10	40	50	6	10
Constraint	Primary Key	Not Null			Unique

**5. Society, Law and Ethics** 10

- a. What is cyber trolling? 1

b.	What is the role of firewall?	1
c.	What is cyber Law?	1
d.	Differentiate between Virus and Trojan Horse.	2
e.	What are the privacy and security features being provided by web browsers?	2
f.	Write any four demerits of social networking sites.	2
g.	<b>Identify the Crime :</b>	
	Stealing or Using someone's personal information to gain some financial advantage or other benefits	.1