



Roll No.	
Name	
Class & Section	

APEEJAY COMMON ANNUAL EXAMINATION, 2019-20

INFORMATICS PRACTICES (CODE : 065)

Time Allowed : 3.00 Hrs.

Class – XI

Maximum Marks : 70

General instructions :

1. *All questions are compulsory.*
2. *The question paper is divided into 5 sections, section A, B, C, D, E.*
 - (i) *Section A : UNIT 1 (Introduction to Computer System)*
 - (ii) *Section B : UNIT 2 (Introductory Python Programming)*
 - (iii) *Section C : UNIT 3 (Data Handling)*
 - (iv) *Section D : UNIT 4 (Data Management)*
 - (v) *Section E : UNIT 5 (Society Law and Ethics)*

SECTION-A

5

1. (a) Operating System acts as a Resource Manager. Justify the statement. **1**
- (b) What will you do when you find that a program is not working properly or it is running slow? **1**
- (c) What do you mean by "Random Access Memory"? **1**
- (d) Explain the usage of Smart Card Reader. **1**
- (e) What is UNICODE and what is its significance? **1**

SECTION-B

30

2. (a) Why Python is called a Cross platform Language? **1**
- (b) Give the example of single line and multi line string in Python. **1**
- (c) Illustrate the use of the following operators. **2**
 - (i) =
 - (ii) ==

- (d) Draw a flowchart to accept Principle, Rate and Time and display the Simple interest. 2
- (e) What are keywords in Python? How do you print the available list of keywords in Python? 2
- (f) What will be the output; of the following : 2

m, n, p, w=40, 20, 0, 10

while m>n:

 m=m%7

 n=n//2

 p-=10

 w*=p

print(m, n, p, w)

OR

x=7

if x>3:

 if x>4:

 print("A", end="")

 else:

 print("B", end="")

elif x<2:

 if x!=0:

 print("C", end="")

print("D")

- (g) Convert the following Python program using "for" loop. 2

i=0

sum=0

while i<=10:

 sum=sum+i

 i=i+2

print(sum)

- (h) What is the return type of function type(True)? 1
- (i) int (ii) float
(iii) bool (iv) dict
- (i) Identify the type of operator from the following : 2
- (i) in (ii) not
(iii) != (iv) //
3. (a) Name the module and its function that 2
- (i) Returns the square root of a given number.
(ii) Returns any number between 1 and 20.
- (b) Find the output from the following code : 2
- ```
L=[100,200,300,400,500,600,700,800]
L1=L[:4:2]
print(L1)
L2=L[-1:-5:-2]
print(L2)
```
- (c) Find the output of the following program code : 2
- ```
adict={"Bhavna":1,"Richard":2,"Firoza":10,"Arshnoor":20}
temp=""
for key in adict:
    if temp<key:
        temp=key
print(temp)
```
- (d) Write a script to accept a string from a user and count the number of alphabets, digits and special characters in the string. 3
- OR**
- Write a program to read a string with multiple words and print each word on a new line.
- (e) Which string method is used to implement the following : 3
- (i) To count the number of characters in the string.

- (ii) To change the first character of the string to capital letter.
- (iii) To check whether the given character is alphabet or digit.
- (f) Write a Python program to find the frequency of elements in a list using a dictionary. 3

Eg. For the list

```
["Delhi", "Madras", "Delhi", "Chennai", "Madras", "Kolkata"]
```

The output should be

```
{"Delhi":2, "Madras":2, "Chennai":1, "Kolkata":1}
```

OR

Accept a list of 5 elements and print the second largest element from the accepted list.

SECTION-C

10

4. (a) Given a list L=[3,4,5] and an array N having elements 3,4,5. What will be the result produced by : 1

(i) L+L

(ii) N+N

- (b) If you have a NumPy array in a variable Bats, how would you access the data item at the 5th column and 2nd row? 1

(i) Bats [2,5]

(ii) Bats(1,4)

(iii) 'Bats[1,4]

(iv) Bats(4,1)

- (c) Find the output of the following code : 2

```
import numpy as np
```

```
arr1=np.array([1,2,3,4,5])
```

```
arr2=np.array([0,9,8,7,6])
```

```
arr3=arr1+arr2
```

```
arr3*=arr1
```

```
print(arr3[2])
```

- (d) What will be the output of the following NumPy code : 2

```
import numpy as np
```

```

a=np.array([[1,2],[2,4]])
b=np.array([[7,8]])
c=np.concatenate((a,b),axis=0)
print(c)
d=np.concatenate((a,b.T),axis=1)
print(d)

```

- (e) Write a NumPy program to replace all odd numbers in an array with -1. 2
- Input
- [0,1,2,3,4,5,6,7,8,9]
- Output
- [0,-1,2,-1,4,-1,6,-1,8,-1]
- (f) Write the code to do the following : 2
- (i) Create an array of five ones in NumPy
- (ii) Create a NumPy array with even numbers between 1 to 20

SECTION-D

- 15
5. (a) NULL value means 1
- (i) 0 value
- (ii) 1 value
- (iii) No value
- (iv) None of the above
- (b) Name and explain any one aggregate function. 1
- (c) Differentiate between the following : 2
- (i) DDL and DML commands
- (ii) Primary and alternate key

(d) Consider the following table STUDENT and answer the questions following it.

3

ROLLNO	NAME	ADDRESS	PHONE	AGE
1	HARSH	DELHI	XXXXXX	18
2	PRATIK	BIHAR	XXXXXX	19
3	RIYANKA	SILIGURI	XXXXXX	20
4	DEEP	RAMNAGAR	XXXXXX	18
5	SAPTARHI	KOLKATA	XXXXXX	19
6	DHAN RAJ	BARABAJAR	XXXXXX	20
7	ROHIT	BALURGHAT	XXXXXX	18
8	NIRAJ	ALIPUR	XXXXXX	19

(i) What will be the output of the command

SELECT DISTINCT (COUNT AGE) FROM STUDENT;

(ii) What is the degree and cardinality of the above table?

(iii) Write the command to add adhar_no column to the table.

(e) Consider the Loan_Acc table.

(8)

Acctno	Cust_name	Loan_amount	Installment	Int_rate	Start_date_interest
1	Ajay	300000	36	12.00	2019-07-19
2	Neha	500000	48	10.00	2018-03-22
3	Vijay	300000	36	NULL	2017-03-08
4	Suneha	800000	60	10.00	2018-12-06
5	Pooja	200000	36	12.50	2016-01-03
6	Anil	700000	60	12.50	2018-03-05
7	Yogesh	500000	48	NULL	2018-03-05

Answer the following questions :

(i) Display the details of all the loans with less than 45 installments.

(ii) Display the int_rate of all the loans started after April 1, 2019.

(iii) Display the amounts of various loans from the table Loan_accounts. A loan amount should appear only once.

- (e) What damage can be caused by adware to your computer? 1
- (iii) Refers to safe and responsible use of internet so as to ensure safety and security of personal information.
- (ii) A passive attack on a network that gains access to communication medium and listens to the communication to fetch content.
- (i) A micro blogging social network website that allows 280 character messages. 3
- (d) Give one word for the following : 3
- (c) What is the difference between a virus and a worm? 2
- (b) What will you do if you receive an email from an unknown source containing a lucrative financial offer and a link to activate that? 1
- (iii) Trojan
- (ii) Phishing
- (i) Cyber stalking
- (a) Explain the following : 3

SECTION-E

- (viii) Display details of all loans for customers whose name doesn't start with "A". 10
- (vii) Delete the records of all the loans availed by Poja.
- (vi) Increase the interest rate by 0.5% for all the loans for which the loan amount is more than 400000.
- (v) Display the details of all the loans in the descending order of their start date.
- (iv) Display the details of all the loans whose loan amount is in the range 400000 and 500000.