



**INDIAN SCHOOL SOHAR**  
**TERM II EXAMINATION (2019-20)**  
**INFORMATICS PRACTICES**

**CLASS:XI**  
**DATE: 12/01/2020**

**MAX. MARKS: 70**  
**DURATION: 3HRS**

**Instructions:**

- a. All the questions are compulsory.**  
**b. Answer the questions after carefully reading the text.**

**1. Answer the following questions:**

- a. What is a Python module? 1
- b. What will be the output of the following: word="EXAMINATION"  
print(word[-8:-4])  
print(word[: :-4]) 1
- c. Explain the CPU of a mobile system. 2
- d. Differentiate between list and string. 2
- e. What type of objects can be used as keys in dictionaries? Can list be used as keys? Why? 2
- f. Evaluate: 2
- i) "abc"=="ABC" and not (2==3 or 3==4)      ii) 50//(5+3/2)

**2.**

- a. Differentiate between NumPy array and List. 2
- b. How is Series data structure different from Dataframe data structure? 2
- c. Write python code to create the following Dataframe(**dtf**) using Python Pandas. 2

	Hobby	Marks
Namit	Soccer	80
Kishore	Volleyball	75
Harish	Music	NaN
Vishnu	Dance	88

- d. Using the above Dataframe data given in Q2(b), answer the following:
- i) List the details of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> rows 1
- ii) Add a new column class with value 'XI' 1
- iii) List the details of column Hobby 1
- iv) Delete the details of Harish 1

v) What will the output of :

2

1. `dtf.count()`
2. `dtf['Marks']=[81,76,98,80]`  
`print(dtf)`

e. Given a list `L=[3,4,5]` and an ndarray `N` having elements 3,4,5. What will be the result produced: 2

- i) `L+L`   ii) `N+N`

f. Find the errors from the following code segment and rewrite the corrected code: 2

```
S=Pd.Series(3,6,8,10,index=range(7))  
print(s[1:2])
```

g. Write code to create an ndarray having 6 zeroes in it. Write statements to change 3<sup>rd</sup> element of this ndarray to 15 and display it. 2

h. What will be the output of the following program: 2

```
import pandas as pd  
s=pd.Series(range(1, 15, 3),index=[x for x in 'abcde'])  
print(s)
```

### 3.

a. Predict the output after execution of the following code: 2

```
i) x,y=10,15  
if x>=y:  
    z=x+y  
else:  
    z=x-y  
z=z**2  
print("result=",z)
```

ii) `m,n=40,20` 2

```
while m>n:  
    m=m%7  
    n//=2  
print(m,n,sep=" ")
```

b. Rewrite the following code using 'while' loop: 2

```
for x in range(10,20,2):  
    if x%2==0:  
        print(x)
```

- c. Find the errors from the following code segment and rewrite the corrected code: 2
- ```
n=10
ans=0
while n<100
    Answer+=n**2
n+=1
print("Answer": ans)
```
- d. Write a program in python to print the fibonacci series below 20 2
- e. Write a program to display the sum of even numbers between 10 and 100. 2
- f. Write the pseudocode to find the greatest of three numbers. 2
- g. Write a program which accepts a number from the user and prints the frequency of the number in the List, if the number is not in List it should print "number not available". 2
- h. Write a program in Python that accepts grade and salary of a user and calculates bonus on the basis of following condition:

| Grade          | Bonus         |
|----------------|---------------|
| A              | 30% of salary |
| B              | 25% of salary |
| C              | 20% of salary |
| For all others | 5% of salary  |

- i) The user should input the grade and salary 1
- ii) Calculate and display the Bonus as per the given criteria. 2
- iii) Calculate and display the Total salary.(Total Salary=Bonus + Salary) 1

#### 4.

- a. What is a constraint? 1
- b. Create a table Mobile based on the structure given below: 2

**Mobile:** Table structure

| Column name  | Data Type   | Constraint  |
|--------------|-------------|-------------|
| Mid          | Char(5)     | Primary key |
| Manufacturer | Varchar(25) | Not null    |
| Mname        | Varchar(15) |             |
| Price        | Integer(6)  |             |
| MfDate       | Date        |             |

**Mobile: Table**

| Mid   | Manufacturer | Mname    | Price | MfDate     |
|-------|--------------|----------|-------|------------|
| MB101 | Samsung      | Galaxy   | 7500  | 2013-01-12 |
| MB102 | Nokia        | N1100    | 3000  | 2011-12-10 |
| MB103 | Sony         | XperiaM  | 6000  | 2017-01-26 |
| MB104 | Samsung      | Note8    | 8600  |            |
| MB105 | Oppo         | SelfieEx | 7500  | 2010-03-29 |

**Stock: Table**

| Sno  | Mid   | MQty | MSupplier            |
|------|-------|------|----------------------|
| S001 | MB104 | 450  | New Vision           |
| S002 | MB103 | 250  | A-One Mobiles        |
| S003 | MB101 | 50   | Classic Mobile Store |
| S004 | MB103 | 150  | Mobile Centre        |

c. Write SQL Commands for the following:

- i) Insert a new row with the following values into the Mobile table: 1  
MB106, Nokia, 2018-01-01
- ii) List the name, quantity and supplier of mobiles with 'mobile' as a character anywhere in supplier name. 1
- iii) List the id, name and manufacturing date of Samsung mobiles. 1
- iv) List the various supplier names in descending order of mobile rate. 1
- v) List the id, name and price of mobiles whose quantity lies in range 200 and 500. 1
- vi) List the manufacturer, quantity and supplier of mobiles manufactured in the year 2017. 1
- vii) Delete the table Mobile. 1

5.

- a. What is digital footprint? 1
- b. What are cookies? 1
- c. What is Malware? What types of damages are caused by malware to your computer? 2
- d. How is pharming similar to and different from phishing? 2
- e. What are the usage rules (any four) for effective use of social networking sites? 2
- f. What is cyber bullying and cyber stalking? 2

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