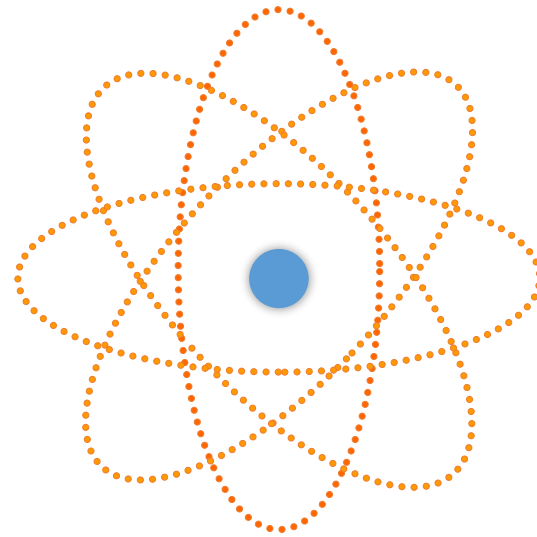# Holidays Homework Class XII

Computer Science

1. **Which of the following is not a valid identifier name in Python? Justify with a reason.**
   a. 5Total   b. _Radius   c. pie   d. While   e. Else   f. elif   g. for
   i. first.name   j.   Total_score   k. D_O_B   l. input   m. import   n. Break   o. print

2. **Given the list Word=['M','A','R','V','E','L','O','U','S'], write the output of the following:-**
   a. Word[-1:]
   b. Word[:]
   c. Word[-1:0:-1]
   d. Word[0:len(Word):2]
   e. Word[len(Word):0:-3]
   f. Word[5]
   g. Word[2:6]

3. **If given A=2,B=1,C=3, What will be the output of following expressions:**
   a. print((A>B) and (B>C) or(C>A))
   b. print(A**B**C)

4. **Evaluate the following expressions:**
   a. not(20>6) or (19>7)and(20==20)
   b. 20 or 0 and 30
   c. 10 and 10 or 0
   d. 14**2//10
   e. 12 + (3 * 4 – 6) / 3
   f. 12 * 3 % 5 + 2 * 6//4

5. Which of the following is valid arithmetic operator in Python:
a. //   b. is   c. and   d. <

6. Which of the following is not a valid arithmetic operator in Python:
a. /   b. in   c. %   d. –

7. Name the Python Library modules which need to be imported to invoke the following functions:
a. random( )   b. sin( )   c. median( )
d. sqrt( )   e. ceil( )   f. pow( )
g. randrange( )   h. floor( )   i. pow( )

8. Consider dictionary D given below:
D={'U1':'Programming', 'U2':'Data structures', 'U3':'Files', 'U4':'RDBMS', 'U5':'Networks'}
With reference to D, state True/False for each of the following expressions:
a. 'U2' in D

b. U2 in D

c. 'Programming' in D

d. Programming in 'D'

e. 'U3' not in D

f. 'Files' not in D

9. Write output of following codes:

a. Code 1:
```python
x=123045
while x%10:
    d=x%10
    for i in range(d):
        print(i)
    x//=10
    print(x)
```

b. Code 2:
```python
p=21//5
q=p%4
r=p*q
p+=p+q-r
r*=p-q+r
q+=p+q
print(p,q,r)
```

c. Code 3:
```python
n1=n2=12/5
if int(n1)==n2:
    print("Integer")
else:
    print("Non integer")
```

d. Code 4:

```python
s="United Nations"
for i in range(len(s)):
    if i%2==0:
        print(s[i],end='')
    elif s[i]>='a' and s[i]<='z':
        print('*',end='')
    elif s[i]>='A' and s[i]<='Z':
        print(s[i:],end='')
```

e. Code 5:

```python
Name = "ComPUteR"
for x in range(0,len(Name)):
    if Name[x].islower():
        print(Name[x].capitalize(), end='')
    elif Name[x].isupper():
        if x%2==0:
            print (chr(ord(Name[x])+32),end='*')
        else:
            print(Name[x-1])
```

10. Write output of following codes involving the use of random module:

a. Observe the following code and write the option which is expected from option i to iv. Also write minimum & maximum value of variable n

```
import random
L=['A','B','C','D']
n=random.randint(0,3)
for i in range(0,n+1):
    print(L[i],end='$')
```

Option i-   'B'$'C'$'D'$
Option ii -   'D'$
Option iii   'A'$'B'$'C'$'D'$
Option iv-   'C'$'D'$

b. Observe the following code and write the option which is expected from option i to iv. Also write minimum & maximum value of variable Taker.

```
import random
GuessMe=[100,50,200,20]
Taker=random.randint(0,2)+2
for chance in range(0,Taker):
    print(GuessMe[chance],end='#')
```

OPTIONS
(i) 100#
(ii) 50#200#
(iii) 100#50#200#
(iv) 100#50

Guidelines for Project/Practical – Entrepreneurship XII

(Refer page 252 – 271 of Entrepreneurship textbook class 12 for further details)

I. Market Survey

Students will have to conduct the survey in any **ONE** of the below mentioned topics and follow the guidelines:

  A. Conduct a simple market research with the objective of estimating demand for an existing product in the market. Students will have to give an innovative suggestion to the product.

  B. Conduct a survey for a new innovative product.

  C. Conduct a survey to study a social issue.
   a. Smoking habits.
   b. Skill Trading Option in an economically backward neighbourhood
   c. Wearing Helmets
   d. Attitudes of Road Users
   e. Conservation of Electricity
   f. Rainwater Harvesting
   g. Any other social issue

Points to remember

Identify a product which you like to manufacture [pre–assumption]. Now, make a project on the identified product, keeping in mind the following:

1. Think of an innovation in the selected product, (innovation could be in product content, feature, design, packaging, distribution, promotion strategy, service etc.)

2. Test the feasibility of this innovation via market analysis, using an objective questionnaire.

3. Competition analysis (2–3 existing brands in the same category).

4. Questionnaire analysis (There should be minimum 10 questions excluding personal details of respondents. The last question should be an innovation based question. Collect atleast 30 responses for analysis)

5. Data collection and presentation using tables and bar graphs and/or pie diagram followed by analysis for each question.

6. Recommendation to the company (For example, if you have chosen hair oil and if you want to find out the demand for a specific brand -Dabur Vatika then please give suggestions to the company as to how they can improve their product)

II.   Business Plan

Outline for the Business Plan Presentation

1) Your business idea: (Main product or service)

2) Name of your business, its logo and tagline (Refer to unit 3, Class XII Entrepreneurship Book)

3) Are there similar products or services in the market?

4) What is your competitive advantage and what is your unique selling proposition (USP)?

5) Your marketing plan:

a) Your market research plan (Describe your competitor, demand for your product/service – is it available or you think you can create it?) Talk about atleast 3 competitors if it is an existing product. If it is a new product, then analyse the demand for the product.

b) Your target customers and how will you reach them? Example: children, teenager, homemaker, working persons etc.

c) Your advertising and promotion ideas. Mention the tools of promotion mix used.

d) Packaging (if applicable) eg: types; material; Eco-friendly packaging

e) Distribution (How do you intend reaching your customers?) Channel of distribution – direct and indirect with relevant level of channel.

f) What does quality mean for your product or service? Eg: ISI, Agmark, ISO, FPO etc.

6) What is the cost per unit of your product or service? Also, show the computation or explain the logic. Compute Total Fixed cost – eg:

1) Consultancy charges 2) Salary 3) Rent 4) Insurance 5) Any other relevant fixed cost(s)

Compute Per unit Variable cost – eg:

1) Packing charges 2) Raw material 3) Power 4) Wages 5) any other relevant variable cost(s)

7) What is your selling price and pricing strategy adopted and your reason for its selection?

8) Give detailed list of your start–up costs – Land; Building; Computers; Equipment; Machinery; Vehicles; Vessels; Software; Inauguration ceremony; Raw material; Salary; Rent advance (Note: start-up cost comprises of both fixed and variable cost)

9) How would you meet your start-up costs (be realistic)? (write about the start-up capital required)

10) What are the likely risk factors in your business and how do you plan to mitigate them?

11) Suppose it is now a year since you started your business. Give us **ONE** month's profit and loss statement for the **first month of the second year.** All figures to be for one whole month. (*Refer format on page 270)*

12) What is the break-even point of your business? Show the computation in sales and units which will be sold.

PS: Use INTERLEAF (light colored) Sheets ONLY for both the project files. The **ruled** side should be used for writing question, data table followed by analysis. The **plain** side should be used for drawing graphs/ pie diagram or pasting pictures. The question and their graphs/diagram should be adjacent to each other. Avoid using designer fancy sheets.