CBSE Guess Paper
Informatics Practices (065)
Class 12

Max-Marks-70   Duration-3Hrs

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part c only.
8. All programming questions are to be answered using Python Language only.

Section – A (Multiple Choice Questions)

Attempt all questions:

Q.1   Which is called a smart HUB?   [1 Mark]
    i.   Gateway   iii.   Hub
    ii.   Switch   iv.   Repeater

Q.2   Which of the following action can be taken to keep the digital footprint clean?   [1 Mark]
    i.   Search what information you leftover social media and the internet
    ii.   Be smart and sensible while using any website, sending an email or opening a link
    iii.   Control visibility settings from the browser or website/app settings
    iv.   Remove any private details like mobile number, school, college name, address, photos, etc.

Q.3   _____ is the practice of taking someone else work or ideas and passing them off   [1 Mark]
as one's own:
    i.   Plagiarism   iii.   Patent
    ii.   Copyright   iv.   All of the above

Q.4   What will an output of the query given below?   [1 Mark]
Select MOD(Length('Divine Child'),5);
    i.   4   iii.   3
    ii.   2   iv.   1

Q.5   What will be an output of the following query given below: [1 Mark]
SELECT SUBSTR("PARICHA PE CHARCHA",3,5);
    i.   PARICHA   iii.   RICHA
    ii.   CHARCHA   iv.   PE CHARCHA

Q.6   Which of the following is not a wireless medium for communication?   [1 Mark]

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | CBSE News

i.	Satellite
ii.	Bluetooth

iii.   OFC
iv.   Microwave

Q.7   What will be an output of the query given below: [1 Mark]
        Select curdate()+20; ?
        i.   22   iii.   24
        ii.   26   iv.   None of these

Q.8   What will be an output of the query
        SELECT INSTR('I LOVE INFORMATICS PRACTICES', 'LOVE');   [1 Mark]
        i.   I   iii.   5
        ii.   3   iv.   INFO

Q.9   What will be an output of the query SELECT DAYOFYEAR("2023-02-06");?   [1 Mark]
        i.   06   iii.   36
        ii.   35   iv.   31

Q.10   What will be the output of the code?   [1 Mark]
        import pandas as pd
        import numpy
        S=pd.Series(data=[30,50,55,65,45], dtype=numpy.int)
        print(S>50)
        i.   0   False
                1   False
                2   True
                3   True
                4   False
                dtype: bool
        ii.   0   55
                1   65
        iii.   0   30
                1   50
                2   55
                3   65
                4   45
        iv.   None of the above

Q.11   Identify the correct option to select first four rows and second to fourth columns from   [1 Mark]
        DataFrame Data?
        i.   Data.iloc[1:4,2:4]   iii.   Data.iloc[0:4,1:4]
        ii.   Data.iloc[1:5,2:5]   iv.   Data.loc[1:4,2:4]

Q.12   The following code create a dataframe named 'D1' with _____ rows.   [1 Mark]
        import pandas as pd
        D1 = pd.DataFrame([1,2,3])
        i.   1   iii.   3
        ii.   2   iv.   4

Q.13   The two basic parts of URL are: [1 Mark]
        i.   TCP and FTP   iii.   HTTP and SMTP
        ii.   The protocol and domain name   iv.   Destination and device

Q.14   Which of the following function in mysql is not an aggregate function?   [1 Mark]
        i.   sum()   ii.   min()

iii.   round()   iv.   max()

Q.15   Data protection refers to protecting data from: [1 Mark]
  i.   Substantial Harm   iii.   Inconvenience and unfairness
  ii.   Embarrassment   iv.   All of these

Q.16   After practicals, Sumit left the computer laboratory but forgot to sign off his email   [1 Mark]
        account. Later his classmate Punit started using the same computer. He is now logged in as Sumit.
        He sends inflammatory email messages too few of his classmates using Sumit email account. Punit
        activity is an example of which of the following cybercrime? Justify your answer.
  i.   Hacking   iii.   Cyber bullying
  ii.   Identity theft   iv.   Plagiarism

Q.17   Assertion(A): Internet cookies are text files that contain small pieces of data, like   [1 Mark]
        username. password and user's preferences while surfing the internet.
        Reason(R) : To make browsing the internet faster and easier, its required to store certain information
        On the server's computer.
  i.   Both A and R are true and R is the correct explanation of A.
  ii.   Both A and R are true but R is not the correct explanation of A.
  iii. A is true but R is false.
  iv.   A is false but R is true

Q.18   Assertion (A):DataFrame has both a row and column index.   [1 Mark]
        Reasoning (R) :A DataFrame is a two-dimensional labelled data structure like a table of MySQL.
  i.   Both A and R are true and R is the correct explanation of A.
  ii.   A is true but R is false.
  iii. A is false but R is true.
  iv.   Both A and R are false.

Section-B

Very Short Answer Type Questions(Each question carries 2 Mark)

Q. 19   When a repeater used in a computer network?   [2 Marks]
Q. 20   Write the name of functions in mysql which: [2 Marks]
  (i)   returns first few characters as specified with function from a string.
  (ii)   returns specified number of characters from a string.
Q. 21   How where clause is different from having clause?   [2 Marks]
Q. 22   Define the following terms: [2 Marks]
  (i)   .loc[]
  (ii)   .iloc[]
Q. 23   Differentiate between static web page and dynamic web page. Write name of any two open [2 Marks]
        Source web browsers.

Q. 24   What will be the output of following code: [2 Marks]
        import pandas as pd
        data=[['Kalyani', 25],['Kasish',35], ['Kamya',45]]
        df1=pd.DataFrame(data, columns=['Name', 'Age'])
        print(df1)

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | CBSE News

Q. 25   What will be the output of the following? (Here S1 and S2 are two series)   [2 Marks]

```
        S1              S2
A       10      B       5
B       15      C       10
C       20      D       15
   print(S1+S2)
```

Section-C

Short Answer Type Questions(Each question carries 3 Marks)

Q. 26   Answer the following: [3 Marks]
    a.   What is the difference between Primary key and Unique key?
    b.   Define the function count()?
    c.   What is the data type of the value returned by length() and instr()?

Q. 27   Write a program in Python to create a Series as given below.   [3 Marks]
```
S1
a   40
b   60
c   198
d   90
e   110
f   4
```
Write sample code to display 3 elements from 3rd position of the Series and also to display
the dimension of the Series S1.

Q. 28   Write a program in Python to create a DataFrame Store as given below from a dictionary :   [3 Marks]

	Physics	Chemistry	IP	English	Biology
Dhiman	67	65	64	98	65
Suman	65	48	55	88	70
Rajesh	45	52	68	68	66
Mahesh	56	44	56	44	66
Surbhi	68	69	55	45	67

Also write the code to add the marks of the different subjects and assign to column "Total".

Q. 29   What is e-waste management? Explain how can we control e-waste?   [3 Marks]

Q. 30   Consider a table Store contains the column ICODE, INAME, SALE_PRICE and Item_Type)
    Write query/command in mysql for the following: [3 Marks]
    a.   To add a column GST of datatype float(11,2) in the table Store.
    b.   To increase the sale_price by 500 in the table store.
    c.   To display the different Item types.

Section-D
Long Answer Type Questions Type-1 (Each question carries 5 Marks)

Q. 31 Consider the table Items given below. Write commands/query in MySQL for (i) to (iv) and output [5 Marks] for (v).

TABLE   SPORTS

SrNo	PName	Class	Game	Grade	Fees
1	Rahul	12	Cricket	A	53000
2	Sugandha	10	Football	B	88000
3	Saumil	11	Cricket	NULL	NULL
4	Pradip	10	Football	B	23000
5	Amit	11	Carrom	A	75000
6	Vivek	12	Tennis	C	11000

i. Count and display records of those Games whose Fees is not known.

ii. Display sum, average and maximum of Fees of all Sports.

iii. Display first 4 characters of all the Games.

iv. Display sum of Fees Game wise.

v. Count and display different Games.

Q. 32 Rama Industries has set up its new production unit and sales office at Rajkot. The company [5 Marks] compound has 4 buildings as shown in the diagram below:

```
              ┌─────────────────┐
              │  Administrative │
              │     Office      │
              └─────────────────┘
┌──────────────┐  ┌─────────────┐      ┌──────────────┐
│  Factory A   │  │ Sales Office│      │  Factory B   │
└──────────────┘  └─────────────┘      └──────────────┘
```

Distances between these buildings are as follows:
Administrative Office to Factory A   150 m
Factory A to Factory B   50 m
Factory B to Sales Office   100m
Sales Office to Administrative office 200m
Administrative Office to Factory B   125 m
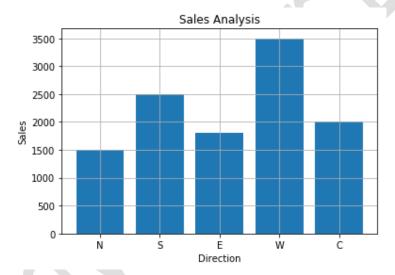**Number of Computers in each of the buildings is follows:**
Administrative Office -   15
Factory A –   25
Factory B -   18

Sales Office -   15

(i) Suggest the most appropriate topology of the connection between the offices.

(ii) Suggest a cable layout of connections between the buildings so that each building is directly connected to Administrative Office.

(iii) Suggest the most suitable place (i.e. building) to house the server of this production unit with a suitable reason.

(iv) Suggest the placement of the following devices with justification: (i) Repeater(ii) Hub/Switch.

(v) Suggest the type and name of communication medium to connect Administrative office in Rajkot with Head which is situated in New Delhi.

Q. 33   Write a program in Python to create the chart given below with all its specification.   [5 Marks]

Section-E

Long Answer Type Questions Type-2 (Each question carries 4 Marks)

Q. 34   Consider the following table – Persons

PID	PName	DOB	Gender	Address	Salary
P101	RRajkumar	1977-01-12	M	Delhi	45678.99
P102	S Singh	1965-12-31	M	Delhi	78954.50
P103	R Shukla	1987-11-23	F	Mumbai	23456.00
P104	K Kamal	1999-05-21	M	Mumbai	43222.99
P105	A Bose	1989-01-01	F	Kolkota	31000.00

Write queries in MySQL for the following:

    i.   To display records in ascending order of salary.   1

    ii.   To remove the decimal values from salary.   1

    iii.   To display sum of Salary of Persons whose Address is Delhi.   2

           Or

           To display sum of Salary of only female persons.

Help her by writing the query for the same to complete the task.

Q. 35   Given below the DataFrame Student.

```
        Name  Accounts  BS  Eco  Eng  IP
0       Ramu        10  20   15   22  40
1       Golu        20  10   25   33  30
2      Vinit        15  30   34   11  50
3    Sandhya        16  15   24   44  60
4      Surya        17  40   18   55  20
```

Based on the above DataFrame Student write the sample code or answer the following in Python.
a. To display first 3 row at a time.   1

b. To remove the column Name from the DataFrame.   1

c. To add a new record like (Divya, 23, 35, 45, 18, 60).   2

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | **CBSE News**