Time: 3 Hours   Maximum marks: 70

SECTION-A

1. (a)   What is the output of the expression: round(4.576)   1
         4.5   b.   5   c.   4   d.   4.6
   (b)   What is the output of the function shown below?
         import math
         abs(math.sqrt(25))   1
         Error   b.   -5   c.   5   d.   5.0
   (c)   Name the python library modules which need to be imported to invoke the following functions: i. floor( )   ii. randint(1
)
   (d)   Give the output of following with justification.
         x=3
         x+=x-x   2
         print x
   (e)   Rewrite the following code in python after removing all syntax error's. Underline each correction done in code.
         For Name in[ramesh,suraj,priya]
            If Name[0]= 's':   2
         Print(Name).
   (f)   Write a program to accept a number n from user and print its table.   2
   (g)   Write output of the following code
         a=8   iii. score = 40
         while(a<0):   while score>1:
            print "Gotcha!"   score = score/2 -1
            a = a-3   print score
            if a == 5:
               break
            else
               print "going out!"   3
         i=0
         while i<6:
            j=0
            while j<i:
               print "*"
             j = j+1
            i = i+1
         print

2. (a)   Name the three categories of functions.   1
   (b)   What is file pointer?   1
   (c)   Which of the following functions accepts only integers as arguments?   1
         ord( )   b.   min( )   c.   chr( )   d.   any( )
   (d)   Python supports the creation of anonymous function runtime, using a construct called_____
         Lambda   b.   pi   c.   anonymous   d.   None of these.   1
   (e)   _____ is used to plot a line chart.
         show( )   b.   legend( ) c.   plot( )   d.   title( )   1
   (f)   Write a program in python to check a number is palindrome or not.   2
   (g)   Given below is the data of school going students

Mode of transport	School Bus	Walking	Other Vehicles
Number of boys	75	120	150
Number of girls	132	60	90

         Write a program to plot a bar graph to represent the above data.   2
                              (or)
         Write appropriate statements to do the following:
         (a) To open a file named "RESULT.DAT" for output.
         (b) To go to the end of the file at any time.
   (h)   Write a program to count number of words in a file.
                              (or)
         Calculate the time complexity of the given code
         1. for i in range(n):
         2. a=i+(i+1)   2
         3. Print(a)
         4. for j in range(m):
         5. b=j+(j+1)

6. Print(b)
    (i)   Write a program to display ASCII code of a character and vice versa .

                            (or)   3
        Write a program to generate random numbers between 1 to 6 and check whether a user won a lottery or not.

    (j)   Write a program to perform the operation on stack in python.   4

SECTION - B

3. (a)   _____ offer their services to anyone in general public and maintain large centers and computing hardware.   1

    (b)   _____ transmit data between two same protocol supporting LAN's.   1

    (c)   DNS stands for _____.   1

    (d)   Define VoIP.   1

    (e)   Expand the following abbreviations:
            FTP   ii.   TCP   iii.   SMTP   iv.   VoIP   2

    (f)   Why we use Ipv4 and Ipv6? Also specify the difference between them.   2

    (g)   What is the difference between Hub Switch and Router.   3

    (h)

Riana Medicos Centre has set up its new centre in Dubai. It has four buildings as shown in the diagram given below:

Accounts   Research Lab

Packaging Unit   Store

Distances between various buildings are as follows:

Accounts to Research Lab	55 m
Accounts to Store	150 m
Store to Packaging Unit	160 m
Packaging Unit to Research Lab	60 m
Accounts to Packaging Unit	125 m
Store to Research Lab	180 m

Number of computers:

Accounts	25
Research Lab	100
Store	15
Packaging Unit	60

4

As a network expert, provide the best possible answer for the following queries:
(i) Suggest the type of network established between the buildings.
(ii) Suggest the most suitable place (*i.e.*, building) to house the server of this organization.
(iii) Suggest the placement of the following devices with justification: (a) Repeater (b) Hub/Switch
(iv) Suggest a system (hardware/software) to prevent unauthorized access to or from the network.

SECTION - C

4. (a)   List the different type of constraint in DBMS.   1

    (b)   What are the different query used in comparison in DBMS.   1

    (c)   For record with ID=4 update record with last_name, user_id and salary.   1

    (d)   Modify the salary and increase it by 1000, for all who get salary less than 5000.   1

    (e)   Write an SQL statement to create a primary key constraint on the "P_Id" column of table persons, when the table is already created.   2

                            (or)
        What is django? What are get and post method in django.

    (f)   Write a note on SQL functions.   2

    (g)   Write the use of the following files: -
        admin.py, apps.py, models.py, tests.py, views.py, migrations   3

    (h)

1	Write SQL commands for the following on the basis of given table library:

Table : Library

No	Title	Author	Type	Pub	Qty	Price
1	Data structure	Lipschutz	Ds	Mcgraw	4	217
2	Computer studies	French	Fnd	Galgoria	2	75
3	Advanced pascal	Schildt	Prog	Mcgraw	4	350
4	Dbms dummies	Palmer	Dbms	Pustakm	5	130
5	Mastering c++	Gurewich	Prog	Bpb	3	295
6	Guide network	Freed	Net	Zpress	3	200
7	Mastering foxpro	Seigal	Dbms	Bpb	2	135
8	Dos guide	Norton	Os	Phi	3	175
9	Basic for beginners	Morton	Prog	Bpb	3	40
10	Mastering window	cowart	os	Bpb	1	225

4

    (i)   Select all the prog type published by bpb.
    (ii)   Display a list of all books with price more than 130 nad sorted by qty.
    (iii)   Display all the books sorted by price in ascending order.

SECTION - D

5. (a)   In a multi national company Mr. A steals Mr. B's intellectual work and representing it as A's own work without citing the source of information, which kind of act this activity be termed as?   1

    (b)   Give any two examples of Digital Property.   1

    (c)   Expand the following terms: - OSS, FSF, OSI, W3C.   2

    (d)   Differentiate between Public Domain Software and Proprietary Software with example.   2

(e)   What is cyber law and IT Act?   2
(f)   How a user of cyber world can safe personal information online?   2