DAV PS, BHATGAON

OBJECTIVE TYPE QUESTIONS- 2019-20

Class: XII   Sub: Computer Science with Python (083) MM: 40 TIME:1 HRS

General instructions –

- There are 40 questions in total are given in question paper and all the questions are compulsory.

- Language used : Python

1. Answer following multiple choice questions (Choose appropriate one) :

    (i)   String, Numeric, Boolean, None (Special), Literal collection viz lists, tuples etc. are types of following:
    (a) Identifiers
    (b) Tokens
    (c) literals
    (d) variables

    (ii)   Write type of token : if
    (a) Identifier
    (b) Keyword
    (c) Data Structure
    (d) Funtion

    (iii)   A chunk of python code that exists in its own (.py)
    file is meant to be used by python code itself is known as:
    (a) Array
    (b) List
    (c) function
    (d) Module

    (iv)   Which of the following is valid arithmetic operator in Python:

    (a) //

    (b) ?

    (c) <

    (d) and

    (v)   The randint( ) belongs to following module :

    (a) math

    (b) random

    (c) pickle

    (d) Datetime

    (vi)   A package defined as :

    (a) Collection of files

    (b) Collection of functions

    (c) Collection of modules

    (d) Collection of libraries

    (vii)   An escape sequence consumes :

(a) 1 byte

(b) 2 byte

(c) 3 byte

(d) 4 byte

(viii) Which of following is not a valid identifier :

(a) False

(b) except

(c) raised

(d) yield

(ix) Which of the following is not a valid python token :

(a) keywords

(b) identifier

(c) Linked list

(d) punctuators

(x) Which makes IPO happen ?

(a) Module

(b) library

(c) package

(d) program

2. Fill in the blanks :

(i) One can work in python in two modes _____ and _____.

(ii) Default installation of python is called _____.

(iii) Data visualization can be done using _____.

(iv) Data structure that works on the principle of FIFO is _____.

(v) The name of any two list functions are _____ and _____.

(vi) To return the length of an object one can use _____ function.

(vii) Function _____ evaluates takes a string as argument and evaluate it as a number.

(viii) floor(x) returns _____ integer that is less than or equal to x.

(ix) We use _____ to shuffle or swap the contents of a list randomly.

(x) The return statement to return multiple values of x, y will be_____.

(xi) The return statement in a function f1( ) to find the factorial of a number n using recursion is _____.

(xii) In Python scopes can either be _____ or _____.

(xiii) The random( ) function generates a random number from _____ to
_____.

(xiv) _____ opens a file for both reading and writing in binary format.

(xv) _____ opens a file for both reading and writing. The file pointer will
be at the beginning of file.

(xvi) Complete the following :

def binary_search(list, low, high, val) :

if (high < low):

return none

else :

midval= _____ .

(xvii) A package must hold file _____ .

(xviii) If we want to write structure like list or dictionary to a file and read it
subsequently then we need to use python module _____ .

(xix) To install NumPy the command will be _____ .

(xx) The full form of VOIP is _____ .

(xxi) MAC address is _____ .

(xxii) A cloud is combination of_____ , _____, _____ ,
_____ .

(xxiii) Network tool used to troubleshoot internet connection problem
_____ .

(xxiv) Django is a _____ .

(xxv) To fetch multiple values from a database table _____ method is used.

(xxvi) HAVING clause is used in combination with _____ clause.

(xxvii) The syntax for insert command is _____ .

(xxviii)Biometric authentication means _____ .

(xxix) Any two methods to recycle e-waste safely is _____ and _____
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(xxx) The two types of cyber crimes are _____ and _____ .

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UNIT – III (Database and Structed Query Language)

02 Marks Questions

1. Why SQL is known as RDBMS ?

2. What are the three views of data abstraction ?

3. Differentiate between WHERE and HAVING Clause.

4. What do you mean by Cartesian Product Operation.

5. Differentiate between Primary Key and Foreign Key .

6. Name some Database Integrity constraints with examples.

7. What are JOINS ? Differentiate between Natural and Equi joins.

8. Differentiate between Physical and Logical data Independence .

9. What do you understand by Degree and Cardinality of a table?

10. Write two advantages and two disadvantages of databases in SQL.

11. What do you mean by links in Network Data Model ? What is the use it ?

12. What are DDL and DML statements ? Explain DROP TABLE command.

13. Write two point of difference between CHAR and VARCHAR2 Datatype ?

14. In SQL, can two NULL values be added or compared, Justify your answer.

15. What do you mean by SQL Statements ? How it is different from PL/SQL ?

16. How do Database Management systems ensure data security and Privacy ?

17. What do you mean by Relations? Explain any two types of Relational Algebra .

18. Write two point of difference between UNIQUE and PRIMARY KEY constraint.

19. What are the similarities and differences between Network and Hierarchical Data Models ?

20. Define the following with examples :

    a) Tuples   b) Attributes   c) Cardinality   d) Degree

    e) View   f) Domain   g) Relation.

21. Differentiate between Set Difference Operation and Set Insertion operation.

22. What do you mean by Alternate Key ? How it is different from Candidate key ?

23. What do you mean by Relational Algebra ? Write any two operation of it with example.

24. How is SELECT operation is different from PROJECT operation ? Write example also.

25. What is Data Redundancy ? What are the problems associated with it ?

UNIT – V (Communications and Open Source Concepts   )

01 mark / 02 Marks Questions :

1. What is GPRS ?

2. What is NFS ?

3. What is VoIP ?

4. What is W3C ?

5. What is ICMP ?

6. What is InterSpace ?

7. What is attenuation ?

8. What are Gateways ?

9. What are Active & Passive Hubs ?

10. What is Radio Wave Transmission ?

11. What is OSS ? Name any two OSS.

12. What is FDM ? give Example .

13. What is point-to-point Protocol ?

14. How gateway is different from Router ?

15. What are Repeaters? Explain its types .

16. What is the Role of Network administrator ?

17. What are various data Transmission modes ?

18. What are Datagrams ? How it is related to Packets ?

19. What is FSF? Who was the founder of FSF?

20. What is Intranet ? How it is different from Internet ?

21. Differentiate between Hub and Switch .

22. What is 80 – 20 Rule of Network design ?

23. Name two Video – Conferencing Protocols ?

24. What is Wi-Fi ? How it is different from WiMAX ?

25. What is the need for Networking the Computers ?

26. What do you mean by communication Protocol ?

27. List various Functions of Communication Protocol.

28. What is Protocol ? How many types of Protocol are there ?

29. Name certain Techniques applied for Network Security.

30. What is Linear Topology ? How it is different from Star Topology ?

31. In TCP/IP protocol , write functions of both protocols separately.

32. Write two points of difference between Guided and Un-guided Media.

33. Write one advantage and one disadvantage of Fibre Optic Cables.

34. What is Network Topology ? Write two points about Circular Topology ?

35. Write two points of difference between Circuit Switching and Message Switching.

36. In Which type(s) of Switching technique *"Store and Forward technique "* is used ?

37. In which type of Switching technique, *Physical Path* is established in advance ?

38. Write two points of difference between Wireless and Mobile Computing.

39. Write Full Form of :

       EDGE   WAIS   GNU   SMTP

HTML   CDMA   URL   TAP

40. What are Network Protocol ? Write any two Network Protocol .

41. Write two Points of difference between :

    a) LAN and PAN

    b) LAN and MAN

    c) Man and WAN

42. What do you mean by **Video Conferencing** ? How it is different from **Chatting** ?

43. What is Web Scripting ? Write two examples for each type of Web Scripting.

44. Name two Software from each Category :

Freeware   Proprietary Software

Shareware   OSI

45. What do you mean by Apache Server ?

46. Define following :

PostgreSQL   Pongo   OpenOffice

Tomcat   Python   PHP

47. What do you mean by MODEM ?

48. What is Client Server Architecture ?

49. Name different Network Security methods.

50. Name different Layer of the ISO OSI Model.

51. What is the differences between POP3 and IMAP Mail Server ?

52. What is the difference between Networking and remote Networking ?

53. What is the difference between Baseband and Broadband Transmission ?

54. What is the difference between Simplex and Half duplex transmission ?

55. Define following :

                   MOSAIC   USENET

56. When/Why are hubs and Switches required ?

57. What is Web Hosting ? What are the different types of Web Hosting ?

58. In Networking differentiate between Authorization and Authentication .

59. What are Cyber Crimes ? Is Child Pornography is Cyber Crime , if yes Justify your answer.

60. What are Spam ? How they are different from Viruses ?

DAV PS, Rajahara

Short Answer Questions(1 mark Questions)
Session 2019-20

Class 12th - COMPUTER SCIENCE (NEW-083)

1.   Name the modules to which the following functions belong:

uniform ( )   fabs ( )   sin ( )   tan( )   max( )

2. Out of the following find those identifiers, which can not be used for naming Variable or Functions in a Python Program:

   Days * Rent, For, A_price, Grand Total, do, 2Clients, Participantl, My city

3. Which string method is used to implement the following:

a) To count the number of characters in the string.

b) To change the first character of the string in capital letter.

c) To check whether given character is letter or a number.

d) To change lowercase to uppercase letter.

e) Change one character into another character.

4. How many times will Python execute the code inside the following while loop?

   ```
   i = 1
   while i < 10000 and i > 0 and 1:
       print " Hello ..."
       i = 2 * i
   ```

5. Write for statement to print the series 10,20,30, ……., 300

6. What are the logical operators of Python?

7. What is the difference between '/' and '//' ?

8. How can we import a module in Python?

9. What are default arguments?

10. Write the output from the following code:

    t=(10,20,30,40,50)

    print(len(t))

11. Write the output from the following code:

    t=('a','b','c','A','B')

    print max(t)

    print min(t)

13. **What are the built-in type does python provides?**

12. **In Python what is slicing?**

13. **What is negative index in Python?**

14. **What is module in Python?**

15. **Mention what are the rules for local and global variables in Python?**

16. **What is actual arguments ?**

17. **What is scope ?**

18. **What is the use of Urllib module ?**

19. **What is the use of tkinter library in python ?**

20. **What is package ?**

21. **What is site-packages in python ?**

22. **What is the utility of built-in function help( ) ?**

23. **What is docstrings ?**

24. **What is the difference between readline() and readlines() functions?**

25. **What is the difference between 'w' and 'a' ?**

26. **What is the significance of file-object ?**

27. **What are the advantages of saving data in : (i) binary file   (ii) text file**

28. **Write the statement in python to perform the following operations : to open a text file 'BOOK.TXT' in read mode.**

29. **What is base case ?**

30. **What is recursive case ?**

31. **How can you stop/resolve an infinite recursive ?**

32. **Reorder the following efficiencies from the smallest to the largest:**

    a) 2n   b) n!   c) n^5 d) 10,000   e) n $\log_2$(n)

33. **What is pyplot ? Is it Python library ?**

34. **Name some commonly used chart types.**

35. Identify the Domain name and URL from the following:
    http://www.income.in/home.aboutus.hml

36. What is web hosting?

37. Write two characterstics of Wi-Fi.

38. Which protocol is used to creating a connection with a remote machine?

39. Expand the following:

    GSM   GPRS

40. What is cloud computing?

41. Which type of network (out of LAN, PAN and MAN) is formed, when you connect two mobiles using Bluetooth to transfer a video?

42. Write one characterstic each for 2G and 3G mobile technologies.

43. What is the difference between Packet switching and circuit switching techniques?

44. Give one suitable example of each URL and Domain Name.

45. What are repeaters?

46. What is VoIP?

47. Which device is used to connect all computers to the internet using telephone wire?

48. Who is a hacker?

49. Define firewall.

50. What is the difference between E-mail & chat?

51. Write names of any two popular open source software, which are used as operating systems.

52. Which out of the following comes under cyber crime ?

      a.   Operating someone's internet banking account, without his knowledge.

      b.   Stealing a keyboard from someone's computer.

      c.   Working on someone's Computer with his/ her permission.

53. Name two proprietary software along with their application.

54. Compare open source software and proprietary software.

55. If someone has hacked your website, to whom you lodge the complaint ?

56. What do you mean by spam mails ? How can you protect your mailbox from spams ?

57. How trojan horses are different from worms? Mention any one difference.

58. Give the full form of :   FOSS   HTTP

59. Name some cyber offences under the IT Act.

60. Differentiate between DELETE and DROP table commands ?

1. Identify the type of topology on which every node is directly connected to the server, a large amount of cable is needed which increases the installation cost of the network.
   Ans: Star Topology

2. Identify the type of topology on which, It has a single common data path connecting all the nodes.

   Ans: Bus Topology

   29. Expand the following: a. VOIP   b. SMTP

       Ans: a. Voice Over Internet Protocol   b. Simple Mail Transfer Protocol

3. Who is a hacker?

   Ans: A computer enthusiast, who uses his computer programming skills to intentionally access a computer without authorization is known as hacker

4. The following is a 32 bit binary number usually represented as 4 decimal values, each representing 8 bits, in the range 0 to 255 (known as octets) separated by decimal points. 140.179.220.200 what is it?

   Ans: It is an IP Address. It is used to identify the computers on a network.

5. (Daniel has to share the data among various computers of his two offices branches situated in the same city. Name the network (out of LAN, WAN, PAN and MAN) which is being formed in this process.

   Ans MAN

6. Define cookies.

   Ans: When the user browses a website, the web server sends a text file to the web browser.

   This small text file is a cookie.

7. How is 4G different from 3G?

Ans: 3G technology adds multimedia facilities such as video, audio and graphics applications whereas 4G will provide better than TV quality images and video-links.

Consider the following tables FACULTY and COURSES. Write SQL commands for the statements (36) to (39) and give outputs for SQL queries (40) to (41)

8. To display details of those Faculties whose salary is greater than 12000.
   Ans: Select * from faculty   where salary > 12000 ;

9. To display the details of courses whose fees is in the range of 15000 to 50000 (both values included).
   Ans: Select * from Courses   where fees between 15000 and 50000 ;

10. To increase the fees of all courses by 500 of "System Design" Course.
    Ans: Update courses set fees = fees + 500   where Cname = "System Design";

11. To display details of those courses which are taught by 'Sulekha' in descending order of courses.
    Ans: Select * from faculty fac,courses cour where fac.f_id = cour.f_id and

    fac.fname = 'Sulekha'

    order by cname desc ;

12. Select COUNT(DISTINCT F_ID) from COURSES;
    Ans: 4

13. Select MIN(Salary) from FACULTY,COURSES   where COURSES.F_ID = FACULTY.F_ID;
    Ans: 6000

   Write SQL queries for (42) to (45) and find outputs for SQL queries (46) to (49), which are based   on the tables.

ItemNo	Item	Mcode	Qty	Rate	
1001	Nib pen	11	20	10	
1002	Eraser	11	10	5	**Table:**
1003	Pencil	12	30	2	**Material**

1004	Notebook	13	25	20
1005	Sharpner	12	15	2
1006	Colors	11	5	15

Table: Suppliers

Mcode	Sname
11	Rotomac
12	Natraj
13	Rainbow

14. To display detail of all the items in the table Material in ascending order of Qty.

Ans: Select * from material order by qty asc;

15. To display ItemNo, Item name of those items from table Material whose rate is more than Rs. 15.

Ans: Select ItemNo, Item from material   where rate > 15;

16. To increase the rate by 5% of all those items whose quantity is either 10,   5 or   25.

Ans: Update material

Set rate= rate+rate*0.05   where Qty IN(10,5,25);

17. To display minimum Rate of items for each item, grouped as per Mcode from the table Material.

Ans: Select Mcode, min(rate) from material

group by mcode;

18. SELECT COUNT (DISTINCT Mcode) FROM Material;

Ans: 3

19. SELECT Rate*Qty FROM Material WHERE ItemNo = 1001;

Ans: 200

48. SELECT Item , Sname from Material M, Suppliers S

WHERE M.Mcode =   S.Mcode AND ItemNo = 1006;

Ans: Colors   Rotomac

49. SELECT MAX(Rate) from Material;   Ans: 20