KendriyaVidyalayaSangathan, Dehradun Region

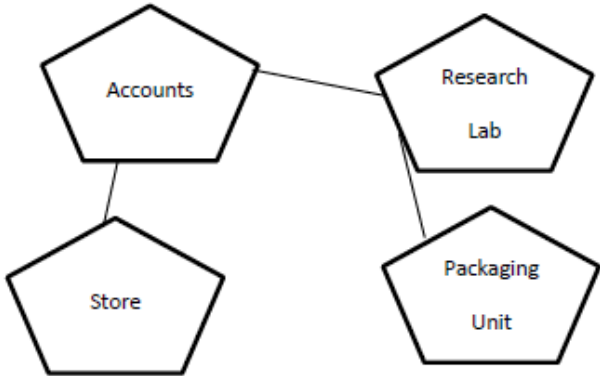## 1stPreboard Examination Class- XII (Session 2019-20)
Marking Scheme- Computer Science

Time Allowed:3Hrs   **Max. Marks:70**

	General Instructions- (i) All questions are compulsory *(ii) Programming Language: Python.*	
(a)	Inconsistent indent.	1
b	(i) Hexadecimal Integer literal (ii) Octal Integer literal	1
c	(i) remove (ii) append() (½ mark for each correct answer)	1

d	List1= [2,4,6,8,10]
	 <u>for </u>i in range<u>(0, 6)</u>:
	    if i%2= =<u>0:</u>
	      print(i, " is even")
	 <u>else</u>:
	      print(I, "is odd")
	
	 (½ mark for each correction)
		2

e	cmm** **(2 marks for correct output)** Note: Partial marking can also be given	2
f	6000 * 0 6000 $ 30 600 * 0 6000 $ 600 120000 * 0 120000 $ 600 ½ marks for each correct line of output Deduct ½ marks for not writing '*'and '$' symbol correctly	3
g	(i) & (iv) (1 mark for each correct answer)	2
Q2(a)	A legal empty value. (1 mark for correct answer)	1
(b)	3 (1 mark for correct answer)	1
(c)	The item to be followed by comma. Correct code- t= (8,) (1 mark for correct answer or correct code)	1
(d)	{(1, 2, 3): 8} (1 mark for correct answer)	1
(e)	10 1 (1/2 mark for each correct output)	1
(f)	Part of the program in which a particular piece of code or variable can be accessed. global statement is used to access a global variable within a function (1 mark for scope definition and 1 mark for correct reason of global variable's use)	2

| (g) | ```
import matyplotlib.pyplot as plt
con=[25, 18,26,33,38]
country= ["Nepal", "Pakistan", "Bangladesh", "China", "Rassia"]
plt.axix("equal")
plt.axis(con, labels= country, explode= [0,0,,0.2,0,0], autopct= "%1.2f%%")
plt.show()
``` | 2 |
| (h) | ```
defcountwords():
    S=open("Mydata", "r")
    f=S.read()
    z=f.split()
    count=0
    for I in z:
        count=count+1
    print("Total number of words", count)
```<br><br>(½ mark for reading the file using read)<br>(½ mark for correctly using split())<br>(½ mark for the correct loop)<br>(½ mark for displaying the correct value of count) | 2 |
| (i) | ```
            defrecur_sum(n):
                if n <= 1:
                    return n
                else:
                    return n + recur_sum(n-1)
            num = 16
              if num< 0:
                    print("Enter a positive number")
                else:
                    print("The sum is",recur_sum(num))
``` | 3 |
| (j) | ```
defqins(Qu, item):
    Qu.append(item)
    if len (Qu)==1:
    front=rear=0
    else:
    rear=len(Qu)-1

defqdel(Qu):
    if isEmpty(Qu):
    return 'Underflow'
    else:
    item=Qu.pop(0)
    if len(Qu)==0:
    front=rear=None
    return item
```<br><br>½ mark for function header of each and 1.5 mark for correct logic of each | 4 |
Q3	Questions 3 (a) to 3 (c) : Fill in the blanks	
a	Encryption	1
b	Bandwidth	1
c	Collission	1

d	Internet	1
e	Ping, whois lookup ½ mark for each tool	1
f	(i) Voice Over Internet Protocol (ii) Time Division Multiple Access (iii) Simple Mail Transfer Protocol (iv) Transmission Control Protocol/ Internet Protocol	2
g	URL stands for uniform resource locator. It is address of a file on the Internet. The parts are: (1) http:// is type of server (2) encycle.msn.com is address of server (3) getinfo.styles.asp path of file from where it is to be retrieved.	2
h	Just like in road congestion, Network Congestion occurs when a network is not able to adequately handle the traffic flowing through it. While network congestion is usually a temporary state of a network rather than a permanent feature, there are cases where a network is always congested signifying a larger issue is at hand. Symptoms: Excessive packet delay, Use of data packets, Retransmission 1 mark for definition and 1 mark for symptoms	2
i	(i) **(1 mark for drawing any correct layout)** (ii)The most suitable place/ building to house the server of this organization would be building Research Lab, as this building contains the maximum number of computers. **(1 mark for correct answer)** (iii) a) In the above, since the cabling distance between Accounts to Store is quite large, so a repeater would ideally be needed along their path to avoid loss of signals during the course of data flow in this route. b) A Hub/Switch each would be needed in all the buildings to interconnect the group of cables from the different computers in each building. **(½ mark for each correct answer)** (iv) Firewall **(1 mark for correct answer)**	4
Q4(a)	count(*) **(1 mark for correct answer)**	1
(b)	SELECT * FROM Sales WHERE TOTAL_SALE IS Null; (1 mark for correct answer)	1
(c)	Database connectivity refers to connection and communication between an application and the database system. 1 mark for definition and	1
(d)	Package for connectivity: Mysql.connector	1

	1 mark for correct answer		
(e)	Primary key- One or more than one attributes in a table that can uniquely identify a record in the table. Foreign key- An attribute in a table that draws values from primary key field of another table. (1 mark each for correct answer)	2	
(f)	A Django template is a string of text that is intended to separate the presentation of a document from its data. A template defines placeholders and various bits of basic logic (template tags) that regulate how the document should be displayed. 2 marks for correct answer	2	

(g) — 3

   (vi) count(*) city

   3 DELHI
   2 MUMBAI
   1 MADRAS

   ½ mark for writing correct output

   (vii) MIN(PRICE) MAX(PRICE)

   50000 70000
   ½ mark for writing correct output

   (viii) AVG(QTY)

   12
   ½ mark for writing correct output

(h) — 4

   (i) select name from customer where price <30000;

   ½ mark for writing correct select clause or 1 mark for writing correct query

   (ii) select name from company order by name desc.

   ½ mark for writing correct select clause or 1 mark for writing correct query

   (iii) update customer set price=price+1000 where name like "S%";

   ½ mark for writing correct update clause or 1 mark for writing correct query

   (iv) alter table customer add totalprice decimal(10,2);

   ½ mark for writing correct alter clause or 1 mark for writing correct query

Q5 (a)	Proprietary Software (1 mark for correct answer)	1
b	**Open-source software** (OSS) is a type of computer **software** in which **source** code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the **software** to anyone and for any purpose. **Open-source software** may be developed in a collaborative public manner. (1 mark for correct definition)	1
c	Identity theft, also known as identity fraud, is a crime in which an imposter obtains key pieces of personally identifiable information, such as Social Security or driver's license numbers, in order to impersonate someone else. (2 marks for correct answer)	2

d	e-waste/e-scrap/Electronic waste/WEEE(Waste Electrical and Electronic Equipment) describes discarded electrical or electronic devices like discarded computers, office electronic equipment, entertainment devices, mobiles etc. e-waste recycling allows for recovery of valuable precious metals, Protects public health and water quality, Saves landfill space etc. (1 Mark for each correct answer)	2
e	(i) This is a case of Plagiarism (Stealing) (ii) The producer may have to face huge fine and penalties in this case. (1 mark each for correct answer)	2
f	(i) XYZ is a shareware. (ii) No, it is not possible for Sumit to see the source code and edit the software. (1 mark each for correct answer)	2

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