The Open University of Sri Lanka
B.Sc Degree Programme – Level 03
Department of Mathematics and Computer Science
Final Examination 2015/2016
PCU1159 / PCU1160 / PCU1162: Computer Skills / ICT Skills

47

Duration: Two **hours only (2 hours)**

Date: 13.07.2016 **Time: 9.30 am – 11.30 am**

Answer Four (04) Questions

Q1.

i. What are the four (04) **functional components** of a **Personal Computer**?
ii. Briefly describe the following computer components
   a) System Unit
   b) Modem
   c) Mother board
   d) Display devices
iii. What is **Von-Newman's computer architecture**? Briefly explain with a suitable diagram.
iv. What are the differences between **Super Computer** and **Personal Computer**?

Q2.

i. As we turn on a computer, the **BIOS** performs several tasks. List them.
ii. Complete the following table. (Copy the table to your answer script)

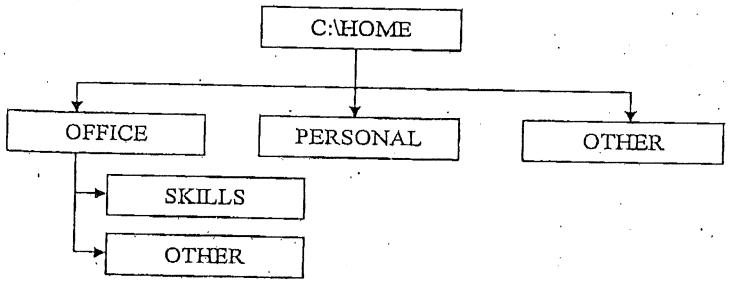
	Windows 98	MS-DOS	Windows Vista	Linux
User type (Single/Multi)				
Task (Single/Multi)				
Network facilities (Yes/No)				
GUI (Yes/No)				
Bit Rate (16/32/64)				

iii. In the Linux Shell the **root** user types the following command.

chmod 756 /home/myfile.txt

What are the file **access permissions** of the **Owner**, **Group**, and **Other** to myfile.txt document?

iv. Create the following directory structure using **MS-DOS** commands

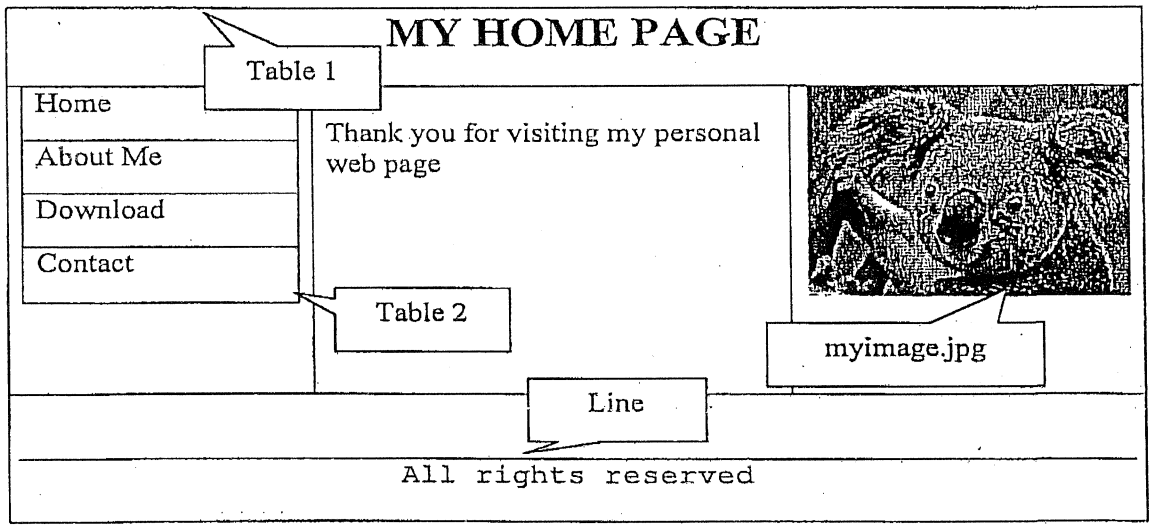


Q3.

i. List five (05) different **types of websites** available on the web.

ii. What is the general structure of a **HTML** document?

iii. Write HTML code to display the following output on your web browser.



iv. Write HTML code to generate the following List.

- Home
- Download
    1. Software
        - Anti-virus
        - Game
        - Dictionary
    2. Device Divers
    3. Manuals
    4. Videos
- AboutUS
- Contact US

Q4.

i. Classify computer networks according to its **topology**. (Draw diagrams)

ii. Name four (04) **internet protocols** and specify their usage.

iii. Briefly describe the following **network hardware** components.

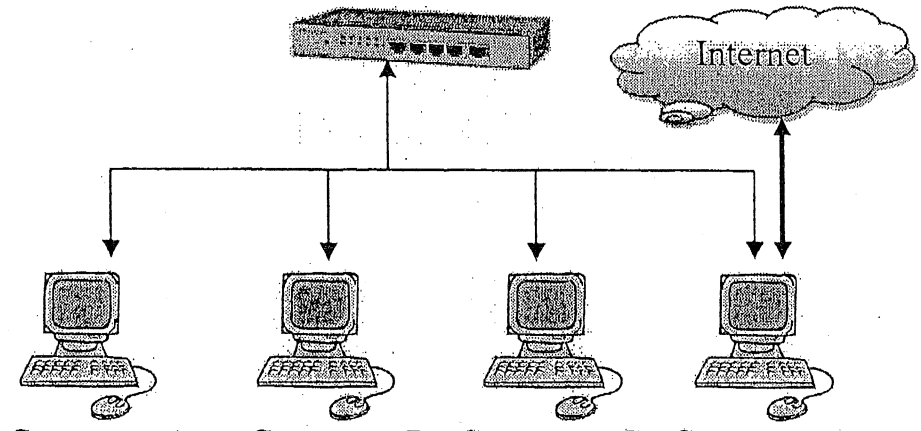
a) Network Hub

b) Search engine

c) Network router

d) Email Server

iv. Consider the following network diagram and answer the questions below.



Computer	IP address	Subnet Mask
A	192.168.1. 1	255.255.255.0
B	192.168.2.2	255.255.255.0
C	192.168.2.1	255.255.255.0
D	192.168.1.2	255.255.255.0

a) What are the other computers that are available in the computer A's network?

b) What is/are the network class/es of each network?

c) Considering the functionalities give another name for computer D.

Q5.

i. Describe the differences between **Linux** and **Windows** Operating Systems. (give three points)

ii. What are the components available in **Open Office. Org 2.x** office suite? Describe the mapping of the above components with **Microsoft Office** components.

iii. Briefly explain what **mail merge** is, and why it is useful to an organization.

iv. Consider the following dataset and answer the question given bellow.

The following table shows the result sheet of PCU1160 CAT1, CAT2 and Exam marks on column B,C and D respectively.

	A	B	C	D	E	F
1	PCU1160 ICT Skill					
2	Result sheet 2014					
3	IndexNo	Cat1	Cat2	Exam	Final	Grade
4	10001	34	56	45		
5	10002	45	23	34		
6	10003	67	56	56		
7	10004	87	78	78		
8	10005	89	56	43		
9	10006	23	79	47		
10	10007	45	43	67		
11	10008	67	56	89		
12	10009	87	78	90		
13	10010	89	65	32		
14	10011	34	34	45		
15	10012	56	58	67		
16						

a) What is the **selected cell range**?

b) Write an Excel formula to calculate the average CAT marks of the first student.

c) Final marks are calculated out of 40% of the average CAT marks and 60% of Exam result. Write an Excel formula to calculate the final marks of the first student.

d) Write an Excel formula to add 5% of the final marks to the first student's final marks.

e) Write an Excel formula to print student's Grade according to the final marks by using the following criteria.

Mark < 40 : Print F

Mark <70 : Print C

Mark <100 : Print A

f) Write an Excel formula to get the total number of students, who scored final marks more than 50.

Q6.

i. Compare the differences between **Vector images** and **Raster images**.

ii. Briefly describe the following terms.

a) Nanotechnology

b) e-library

c) Agent Technology

d) Man-Machine co-ordination

iii. Consider the following dataset and answer the questions below.

User table

User Id	User name	Password
1001	Sam01	xx
1002	Ruw02	xxxx

Student table

Id	name	Address
1001	Saman Kumara	Colombo 3
1002	Ruwan Silva	Nawala

Course table

Id	name	Credit
PCU1160	ICT Skills	3
PCU1140	Computer Fundermantals	1

Result Table

Id	IndexNo	Course	Marks
1	1001	PCU1160	90
2	1001	PCU1140	78

a) Specify two (02) table names which have one-to-one relationship.

b) Specify two (02) table names which have one-to-many relationship.

c) Specify two (02) table names which have many-to-many relationship.

d) What are the suitable MS-Access data types for each field on the Result table?

e) Using an example, explain what is a Primary key and a Secondary Key.

iv. Briefly describe why a **DBMS** is useful to handle data easily.

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