



THE OPEN UNIVERSITY OF SRI LANKA  
 MA IN TEACHER EDUCATION DEGREE PROGRAMME  
 FINAL EXAMINATION – 2012/2013  
 CSC 1174 – INFORMATION TECHNOLOGY  
 DURATION: TWO HOURS

Date: 08<sup>th</sup> September, 2013

Time:- 10.00 am - 12.00 noon

Answer FOUR Questions ONLY.

Q1

- i)
  - a) What is the unique feature of a computer?
  - b) State the four essential components of a computer and explain briefly their functionality.
- ii) Explain briefly the advantage of having a “RAM” with more capacity.
- iii) Compare and contrast the following pairs.
  - a) RAM and ROM
  - b) MS Windows and DOS
  - c) Micro computer and Super Computer
- iv) “Computer is not an intelligent machine”. Comment on this statement.

Q2

- i) Convert the following binary values into decimal values.
  - a) 10010011<sub>2</sub>
  - b) 1111011<sub>2</sub>
  - c) 10101010<sub>2</sub>
- ii) Convert the following decimal values into binary values.
  - a) 75<sub>10</sub>
  - b) 100<sub>10</sub>
  - c) 1111<sub>10</sub>
- iii) State the four types of system software and explain how the Operating System differs from the others.
- iv)
  - a) “Both Application software and System software can directly communicate with Hardware”
  - b) “Low Level languages are much easier to understand than High Level languages”
 With justifications, state whether you agree or disagree with the above statements.
- v) Explain the following terms.
  - a) Assembler
  - b) Compiler

Q3

	A	B	C	D	E	F
1	Index No	Assignment1	Assignment2	Total	Eligibility Marks	Eligibility
2	1001	49	56			
3	1002	34	46			
4	1003	57	84			
5	1004	65	23			
6	1005	76	24			
7	1006	53	39			
8	1006	29	35			
9	1007	38	92			
10	1008	32	36			
11						

- i) Write a function or formula for cell D2 to find the **Total** marks of the 1<sup>st</sup> student.
- ii) Supposing all the values are found in column D
- Write a function to find the maximum **Total** marks
  - Write a function to find the minimum **Total** marks.
- iii) Write a formula for cell E2 to find the **Eligibility Marks** of the 1<sup>st</sup> student according to the following criteria.
- Eligibility marks = (greater value out of the marks of assignment1 and assignment2)\*60/100 + (smaller value)\*40/100
- iv) Write a formula for cell F2 to find the **Eligibility** according to the following criteria of the 1<sup>st</sup> student.

Eligibility marks	Eligibility
$\geq 40$	Yes
$< 40$	No

Q4

- i) Briefly explain the terms “**database**” and “**DBMS**”.
- ii) Explain the following terms in the context of database.
- Field
  - Record
  - Table
- iii) Name three types of databases.

- iv) Write down the most suitable data type for each of the fields of the following table.

ItemCode	ItemName	Quantity	UnitPrice	DatePurchased
0001	Pen	100	15	01/03/2012
0002	Pencil	200	10	08/03/2013

- v) The administration of SOLAR Institute is planning to recruit a batch of students for a particular course. And intend to keep records of student details, contact information and three subjects (subject1,subject2 and subject3).

- Identify at least 08 fields including the three subjects.
- Write down the most suitable data type for each of the fields.

### Q5

- Explain briefly what is meant by a “computer network”.
  - What is meant by a “node” in a computer network?
- Explain briefly the following terms
  - “client ” and “server”
  - “protocol ” and “TCP/IP”
- What are the three types of networks?
  - What is a network Topology? Explain briefly any three of them.

### Q6

- “ The word processor is a better replacement for the typewriter”. Do you agree with this statement? Justify your answer.
- What is the Internet?
- Explain briefly the following terms.
  - WWW
  - Hypertext document
  - HTML
  - Search engine
- “The information from the Internet is far better than information from a book”.
  - “ It is said that the Internet is a dual communication media”

Do you agree with these statements? Justify your answer.

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