RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

BSc (General) Degree in Applied Sciences

First Year Semester I Examination- May/June 2016

FDN 1202 – Introduction to Computers/
CMP 1204 – Introduction to Computers

(Theory Paper)

Time allowed: 2 hours

Instructions for candidate

- This is a closed book examination.
- The paper contains 9 pages.
- Time allowed will be 2 hours.
- The question paper consists of TWO (2) parts. **PART A** and **PART B**.
- **ANSWER ALL QUESTIONS IN PART A AND PART B.**
- This exam accounts for 70% of the subject assessment.

PART A

Answer all questions

Q1. Underline the correct answer. **(10 marks)**

1. What is true about Napier's bones and logarithms?

   a. Multiplication and division computer
   b. Can perform addition and subtracting
   c. It is an electro mechanical
   d. Invented by Charles Babbage

2. Stepped Reckoner is invented by,

   a. Gottfried Liebniz
   b. Biaise Pascal
   c. Herman Hollerith
   d. Joseph-Marie Jacquard

3. Who is considered as the first computer programmer

   a. Charles Babbage
   b. Augusta Ada Byron
   c. Herman Hollerith
   d. Presper Eckert

4. Not an Electro mechanical computer

   a. Mark I
   b. Tabulating machine
   c. Differential analyzer
   d. Slide rule

5. Who found the first computer bug

   a. Lady Augusta
   b. Charles Babbage
   c. Grace Hopper
   d. Vannevar Bush

6. What is wrong about Analytical Engine?

   a. Invented by Charles Babbage programming in this machine
   b. Worked with punch cards
   c. Lady Ada Augusta helped in
   d. Use for math table calculation

7. Not a first generation computer

   a. UNIVAC
   b. ENIAC
   c. EDSAC
   d. Pascaline

8. Punch card loom was invented by

a. Pascal
b. Leibniz
c. Jacquard
d. Oughtred

9. How the data is stored in punch cards?

a. As magnetic spots
b. As presence of holes
c. With the use of scales
d. Ones and zeros

10. Pascaline was used for,

a. Find square root
b. For multiply only
c. Multiply and divide
d. Addition and subtracting

Q2. Following paragraphs describe some information regarding the computer generations. Carefully read each paragraph and fill in the blanks with suitable answers. **(20 marks)**

In first generation computers, ...are used as the equipment for information processing. They act as ..... and ..... . As the memory for storing information, in this generation computers, it has been used ..... . There the input is made through ..... And ..... But there were so many disadvantages in these computers such as..... ..... and ..... These machines relied on ....., which is the lowest-level programming language understood by computers, to perform operations.

In second generation computers, Technology that has been used for information processing is ..... For the memory they used ..... Not like in first generation computers, in this generation computers for programming they used ..... language. One of the example for second generation computers is ..... .

In third generation computers, they have used ..... as the technology for information processing. This device is made up of large number of ..... . In these machines there were ..... and ..... like input devices to feed the information to computer.

In fourth generation computers, they have used ..... For the processor and therefore the main advantage obtained was ..... of the computers other than in the other generation computers.

We are now in fifth generation of computers. Now we can see computing devices with applications, such as voice recognition, Natural Language processing. One of the technologies they have used to build such applications is .....

Q3. Match the followings with suitable answers **(10 marks)**

1. Computers can be classified based on	Super computer
2. Special purpose computer	Operates on data in the form of continuously variable physical quantities.
3. Digital computers	Functionality
4. Super computers	Use for earthquake exploration
5. VAX 8000	Has designed to handle a specific problem or a task
6. Micro computer	Mobile phone
7. Mainframes	Operated with data in numerical and digital form
8. Has designed to perform range of tasks	Mainframe Computer
9. Analog computer	General purpose computers
10. IBM's Mira in United States	Large in size

PART B

Answer all the questions in the paper itself.

1. State the four major functions of a computer and specify the basic component which is responsible for each function. **(8 marks)**

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2. Depict the memory hierarchy and state what happens when going downwards in the hierarchy and when going upwards in the hierarchy. **(8 marks)**

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3. Solve $ABE5_{16} + 356_{8}$ and keep the answer in binary form **(8 marks)**

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4. Solve using 2's complement 35 – 12 **(8 marks)**

5. Mention the difference between compiler and interpreter. **(4 marks)**

6. Write 4 functions done by Input Output module. **(4 marks)**

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7. What are the functions of an Operating system in a computer? **(8 marks)**

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8. Under the law of copyright, mention 3 things you are prohibited to do for a copyrighted material? **(3 marks)**

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9. Explain what software piracy is. **(3 marks)**

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10. Write a small essay on 'Role of IT in society' using not more than 1000 words. **(6 marks)**

End of the paper