



University of Kelaniya – Faculty of Social Sciences
Academic Year 2016/2017
Bachelor of Arts (Special) Degree First Year
First Semester Examination, August 2018

Social Statistics
SOST 21444 - Introduction to Computer Science

Answer only four (04) questions

No. of Questions: 07

Time: 03 hours

01. (a) i. What was the computer invented Attanssoff and Clifford.
- | | |
|-----------|------------------|
| a. Mark I | b. ABC |
| c. Z3 | d. None of above |
- ii. Which was the first commercially successful mechanical calculator ?
- | | |
|----------------------|----------------------|
| a. Ferranti Mark 1 | b. Analytical Engine |
| c. Difference Engine | d. Arthrometer |
- iii. Who invented the punch card ?
- | | |
|---------------------|--------------------------|
| a. Charles Babbage | b. Semen Korsakov |
| c. Herman Hollerith | d. Joseph Marie Jacquard |
- iv. Abacus was the first
- | | |
|--------------------------|--------------------------|
| a. electronic computer | b. mechanical computer |
| c. electronic calculator | d. mechanical calculator |

- v. What was the name of first computer designed by Charlse Babbage ?
- a. Analytical Engine
 - b. Difference Engine
 - c. Colossus
 - d. ENIAC
- vi. EDSAC stands for
- a. Electronic Delay Storage Automatic Calculator
 - b. Electronic Delay Storage Automatic Computer
 - a. Electronic Data Storage Automatic Calculator
 - a. Electronic Data Storage Automatic Computer
- vii. Which of the following statement is true ?
- a. Lady Augusta is the first programmer
 - b. William Oughtred developed the slide rule
 - c. first workable mechanical calculating machine invented by Schickard
 - d. All the above
- viii. Which electronic components are used in First Generation Computers ?
- a. Transistors
 - b. Integrated Circuits
 - c. Vacuum Tubes
 - d. VLSI Microprocessor
- ix. ENIAC Computer belongs to
- a. First Generation Computers
 - b. Second Generation Computers
 - c. Third Generation Computers
 - d. Fourth Generation Computers

- x. Which of the following statement is false ?
- a. Blaise Pascal invented the Pascalene
 - b. Semen Korsakov invented the Arthrometer
 - c. Gottfried Leibniz introduced the Step Reckoner
 - d. All the above
- (10 marks)
- b. If you are in a IT related occupation, briefly describe physical aspects need to be considered in a good working environment.
- (06 marks)
- c. Discuss the significance of Information Technology in the day to day activities of a University student.
- (09 marks)
02. a. Briefly explain the elements of computer system.
- (03 marks)
- b. Explain two input devices and two output devices used in modern generation.
- (04 marks)
- c. "Both application software and system software are essential to function a computer" discuss with the differences between application software and system software.
- (08 marks)
03. a. Explain Analog Computers, Digital Computers and Hybrid Computers.
- (03 Marks)
- b. Discuss about the Micro Computer, Mainframe Computer, Super Computer and Mini Computer with its respective characteristics.
- (06 Marks)
- c. Briefly explain advantages of portable computers when compared to stationary computers.
- (06 Marks)

04. a. State the essential elements of Computer Hardware ?
(02 Marks)
- b. Discuss the main features of primary memory and secondary memory of a computer.
(05 Marks)
- c. Distinguish the use Processor (Central Processing Unit - CPU) and Memory of a Computer.
(08 Marks)
05. a. Briefly explain the basic components of a data communication system.
(05 Marks)
- b. Explain the importance of protocol in effective data communication.
(03 Marks)
- c. Describe Local Area Network (LAN), Metropolitan Area Network (MAN) and Wide Area Network (WAN) with respective characteristics and applications.
(07 Marks)
06. a. What are the main purposes of computer networking ?
(02 Marks)
- b. Explain the advantages and disadvantages of a Computer Network.
(03 Mark)
- c. Discuss the characteristics of Bus Topology, Tree Topology and Ring Topology.
(10 Marks)
07. a. Do the following number conversion
- i. 540_{10} into Binary
 - ii. 628_{10} into Octal
 - iii. 9125.225_{10} into Hexadecimal
- (03 Marks)

b. Convert following Binary, Octal and Hexadecimal numbers into Decimal numbers.

i. 10101100101_2

ii. 3574.256_8

iii. $9ABC_{16}$

(03 Marks)

c. i. Convert 1010101_2 into Octal number

ii. Convert 101110.0111_2 into Hexadecimal number

iii. Convert 246_8 into Binary number (by either method)

iv. Convert $65DE_{16}$ into Binary number (By either method)

(06 marks)

d. What are the main differences between High Level Languages and Low Level Languages.

(03 Marks)

