

RAJARATA UNIVERSITY OF SRI LANKA FACULTY OF APPLIED SCIENCES, MIHINTALE

B.Sc. (General) Degree in Information and Communication Technology First Year Semester I Examinations – April/ May 2015

ICT1201 - FUNDAMENTALS OF COMPUTER SYSTEMES

Time: TWO (02) hours

31

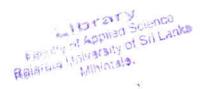
Answer ALL questions. Part 1 should be answered in the question paper itself. Part 2 should be answered in separate answer sheets provided.

Part 1

A. Circle the correct answer.

(2 Marks for each question)

- i. Who is the inventor of "Difference Engine"?
 - a. Alan Turing
 - b. Charles Babbage
 - c. Remington Rand
 - d. Augusta Ada
- ii. First generation computers were programmed using
 - a. assembly languages
 - b. source codes
 - c. decimal codes
 - d. machine languages
- iii. Main components of second generation computers were
 - a. Vacuum Tubes
 - b. Transistors
 - c. Integrated Circuits
 - d. Large Scale Integrated Circuits
- iv. In which type of computer, data are represented as discrete signals?
 - a. Analog computer
 - b. Digital computer
 - c. Both (a) and (b)
 - d. None of these



v.	Which type of operating system allows metaking turns using the resources of the commeta. Real-time processing b. Batch processing c. Multi tasking d. None of these	ultiple tasks to run at the same time, each puter?
vi.	Convert the decimal number 151.75 to bins a. (10000111.11) ₂ b. (11010011.01) ₂ c. (00111100.00) ₂ d. (10010111.11) ₂	ary.
vii.	Convert the binary number 1001.0010 to do a. 9.125 b. 12.5 c. 125 d. 90.125	ecimal.
viii.	A group of wires running parallel to each parts and which transfers information is cal a. track b. cable c. bus d. none of the above	n other between two connected computer led
B. Show	w how the following expressions are evalu the given spaces for your answers.	ated using 8-bit 2s complement notation. (5 Marks)
i.	-79 +23	
ii.	-7 -15	(4 Marks)

Part 2

2.		
a.	Give the full form of the abbreviations: VGA, ENIAC, VLSI, EEPROM.	4 Marks)
b.	Explain why modern computers contain both Dynamic RAM (DRAM) and Sta (SRAM).	tic RAM
	· ·	(7 Marks)
c.	What are registers? List out the commonly found registers in the CPU and exp functions.	lain their
		7 Marks)
d.	Describe the access time of a hard disk using a suitable example. (7 Marks)
3.		
a.	For any FIVE of the following, explain its purpose, give an example of its use, whether it is a particular type of peripheral (input, output etc.):	and state
	 CD-ROM. Hard disk drive. Joystick. Keyboard. Light pen. 	5 Marks)
	• Plotter.	
b.	What are the key features to consider when buying a printer? (5 Marks)
c.	State the major functions of operating systems. Briefly describe the different operating systems.	types of 8 Marks)
d.	State the types of application software. Briefly describe the categories of ERP solution (tions. 7 Marks)
4. a.	What are the advantages and disadvantages of using information technology in: -society -education -business	6 Marks)
b.	What is computer ethics? State at least 5 Commandments of Computer Ethics de	efined by
	·	Marks)
c.	·	5 Marks)
d.	How ICT graduates can contribute to develop the economy of Sri Lanka and t poverty?	
	*****************	7 Marks)
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