Bangladesh Army University of Science and Technology

Department of Computer Science and Engineering

Referred/Improvement/Backlog Examination, Winter 2018-19 **Level-1** **Term-I**

Course No: CSE 1101 **Course Title: Introduction to Computer System**

Time: 03 (Three) hours **Full Marks: 140**

N.B. (i) Answer any three questions from each PART	(ii) Use separate answer script for each PART
(iii) Marks allotted are indicated in the margin	(iv) Special Instruction (if any)---------N/A----------

PART A

(Answer any three questions)

1. a) Draw and explain in details a block diagram of computer organization. 11

   b) Define peripherals of computer system. What are the differences between input and output peripheral of Computer system? $12\frac{1}{3}$

2. a) Explain with proper diagram how an ink-jet printer works. $11\frac{1}{3}$

   b) Explain the impact of computer technology on education. 12

3. a) Explain the types of software. Write the function of a driver software. 10

   b) Briefly discuss about application software. $13\frac{1}{3}$

4. a) Differentiate between RAM and ROM. 8

   b) Write short note on mainframe and super computer. 10

   c) What is the difference between digital and analog computer? $5\frac{1}{3}$

PART B

(Answer any three questions)

5. a) Convert the following numbers to the indicated bases. 18

   i) $(AECF)_{16} = (?)_{10}$

   ii) $(226)_{10} = (?)_{16}$

   iii) $(101010110100110)_2 = (?)_8$

   b) What is radix? Write the bases of the different number systems. $5\frac{1}{3}$

6. a) What is structured programming? 4

   b) Define algorithm. Write an algorithm and draw a flowchart to find the largest number among three numbers. $14\frac{1}{3}$

   c) Differentiate between compiler and interpreter. 5

7. a) Write a C program that takes a temperature (in Fahrenheit) from the user in a float variable and then prints the Celsius equivalent. (Hint: $C = \frac{5}{9} \times (F - 32)$) 16

   Sample Execution:

```
Enter the temperature in Fahrenheit: 100.5
The Celsius equivalent is: 38.055556
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   b) Write a C program to calculate the sum of the following series: $7\frac{1}{3}$

   $2 + 4 + 6 + \ldots + 98$

8. a) A year will be a leap year if it is divisible by 4 but not by 100. If a year is divisible by 4 and by 100, it is not a leap year unless it is also divisible by 400. Now write a C program that takes a year as input and prints "Leap year" or "Not a leap year" based on the above definition. 11

   b) Write a C program that tests whether a user given number is prime or not. $12\frac{1}{3}$

   Sample Execution:

```
Enter the number: 23
It is a prime number.
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