Daffodil International University

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Final Examination, Summer 2021 @ DIU Blended Learning Center
Course Code: CSE112, Course Title: Computer Fundamental
Level: 1 Term: 1 Section: ALL
Marks: 40, Modality: Open Book Exam
Date: Thursday, September 2, 2021. Time: 09:00 AM-12:30 PM

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1. (a) Write an algorithm for finding the sum, subtract, product and average of five inputting numbers. 5

   (b) Mr. Akbar Ali has bought three jackfruits of different weights (kg) from the market. Now draw a flowchart for finding the jackfruit of the maximum weight. 5

2. Find the output of the following C programs and justify your answer with necessary explanation. Also identify all the program segments with their purposes. 2.5 x 4 = 10

(a)
```
//    program a
#include <stdio.h>
void main()
{
float age, AgeInSeconds;
printf("Enter your age:");
scanf("%f", &age);
AgeInSeconds = 365 * 24 * 60 * 60 * age;
printf("You have lived for %f seconds", AgeInSeconds);
}
```

(b)
```
#include <stdio.h>
int main()
{
   int k = 14, l = 12;
   if (l >= k)
   {
      l = k;
      k = l;
      printf("%d, %d\n", k, l);
   }
   return 0;
}
```

(c)
```
#include <stdio.h>
int main()
{
   int i;
   for(i=1; -1; i++)
      printf("%c ",i);
           return 0;
}
```

(d)
```
#include <stdio.h>
int main()
{
   int i;
   for(i=5; i<=20;i++);
   printf("i=%d\n",i);
            return 0;
}
```

3. (a) Write a complete C program that finds real roots of a quadratic equation. 5

   (b) Identify each of the identifiers of the program that you have written in 3(a) with reason. 5

4. (a) International University maintains a unified grading system available in **Table1** for their students result processing. Prepare a program in C programming language for result calculation of the 10 students in a class for finding the grades of all courses taken in a semester. 5

(b) Write the syntax, flow-diagram and purpose of the selection control structure that is used in the C program written for 4(a). 5

Table 1: Unified Grading System

Numerical Grade	Letter Grade	Grade Point
80 – 100	A+	4.00
75 – 79	A	3.75
70 – 74	A-	3.50
65 – 69	B+	3.25
60 – 64	B	3.00
55 – 59	B-	2.75
50 – 54	C+	2.50
45 – 49	C	2.25
40 – 44	D	2.00
Less than 40	F	0.00