

Course Code: CS118	Course Name: Programming Fundamentals
Instructor Name: M. Shahzad / Dr. Farooque / Shoaib Rauf / Tania Iram	
Student Roll No:	Section No:

Instructions:

- Return the question paper and make sure to keep it inside your answer sheet.
- Read each question completely before answering it. There are **3 questions and 1 page**.
- In case of any ambiguity, you may make assumption. But your assumption should not contradict any statement in the question paper.
- You are **not allowed to write** anything on the question paper (except your ID and group).

Time: 60 minutes.

Max Marks: 15 Points

Question 1: Observe and try to understand the following programs. Write errors if there are any available or write outputs if the programs are fine. **[12 points = 6 * 2]**

<pre>(i) void main() { int i = 2, k=1; while (i< 5) { for (int j = 1; j <= i; ++j) do{ printf("i=%d, j=%d, k=%d\n", i, j, k); k++; }while(k<2); ++i; } }</pre>	<pre>(ii) void main() { int k; for(int j = 1; j <= 5; ++j) { k=0; do { printf("#"); k++; if(k==j-1) { printf("-"); } }while(k<j); printf("\n"); } }</pre>
<pre>(iii) void main() { int i = 0; switch (i) { case '0': printf("Hello"); break; case '1': printf("World"); break; default: printf("Hello World"); } }</pre>	<pre>(iv) void main() { int i = 1, j = 1; for(; ;) { if(i>5) break; else j+=i; printf("\n %d", j); i+=j; } }</pre>
<pre>(v) void main() { int a, b, c; a=7; b=2; c=b+a/b%2-1; printf("%d", c); }</pre>	<pre>(vi) void main() { int i; if (printf("0")) i = 3; else i = 5; printf("%d", i); }</pre>

Question 2: Akram is participating in Olympics and he is on a diet. His breakfast contains porridge or cornflakes. If he takes porridge on one day, he can only have cornflakes on the next. Write a program of breakfast planner for a month using control structures.

Question 3: Regent Towers compound has 3 residential towers. Each building has 6 floors. Each floor has 4 apartments of which 2 are road facing. The ground floor is dedicated for 8 shops, each on a rent of 50,000 per month.

- First floor residents have to pay 40,000 monthly if they have a possession of road facing apartment, others have to pay 35,000 rupees.
- 2nd floor till 6th floor has a rent of 30,000, additional 5,000 is paid by owners of road facing flats.

Write a program to display the floor wise rent collected for all 3 buildings, expected output is as under

Tower number	Floor Number	Rent Collected
=====	=====	=====
Tower 1	Floor 0	400000
Tower 1	Floor 1	150000
Tower 1	Floor 2	130000
Tower 1	Floor 3	130000
Tower 1	Floor 4	130000
Tower 1	Floor 5	130000
Tower 1	Floor 6	130000
Tower 2	Floor 0	400000
Tower 2	Floor 1	150000
Tower 2	Floor 2	130000
Tower 2	Floor 3	130000
Tower 2	Floor 4	130000
Tower 2	Floor 5	130000
Tower 2	Floor 6	130000
Tower 3	Floor 0	400000
Tower 3	Floor 1	150000
Tower 3	Floor 2	130000
Tower 3	Floor 3	130000
Tower 3	Floor 4	130000
Tower 3	Floor 5	130000
Tower 3	Floor 6	130000

BEST OF LUCK!