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Daffodil International University

Faculty of Science & Information Technology

Department of Software Engineering

Final Examination, Spring 2026

Course Code: SE 111; Course Title: Computer Fundamentals

Sections & Teachers: SI (A,B), MKH (C,D,E), FC (F), AG (G), AAS (H)

Time: 2:00 Hrs **Marks: 40**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	***a)***	A courier company uses an automated system to calculate delivery charges based on a product's weight and the distance to the delivery location. If the product weights 5 kg or less then no extra charge is applied. For weights above 5 kg an additional 10 taka is charged for each kilogram beyond the first 5 kg. Similarly, if the delivery distance is within 5 km, no extra charge is added. For distances greater than 5 km an extra 20 taka is charged for each kilometer beyond the first 5 km. The total delivery charge is the sum of the weight-based and distance-based charges. **i. Construct** an algorithm to find the total delivery charge **ii. Draw** a flowchart based on your algorithm.	**[Marks-10+10]**	
	b)	**Solve** errors in the following C code, update it after correcting the errors and then write down the corrected version. Also, **trace** the exact expected output. 1. #include <studio.h> 2. inl main() 3. int m = 20 n = 10 o = 1; 4. m = m / 2; 5. n = n + 3; 6. m = m * 4; 7. n = n - 5; 8. o = o + m - n; 9. print("Updated values: m = %d, n = %d, o = %d, x, y, z"); 10. retorn 0	**[Marks-5]**	**CLO-3** ***Level-3***

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	c)	**Employee_Info (Primary_Table):** **Determine** the problem occurred in the **Employee_Info** table and **illustrate** how these issues can be resolved through proper database design.	**[Marks-5]**	
2.	*a)*	A fan-based web application dedicated to **Lionel Messi** that allows users to submit comments and upload short scripts to customize their profile pages. The system processes user inputs directly without proper validation or filtering. An attacker exploits this weakness by submitting a malicious code disguised as a harmless customization. When the application executes the input, the code runs on the server and alters stored data such as changing **Lionel Messi's** match statistics and accessing sensitive user information. **Detect** the type of vulnerability mentioned in the above scenario briefly and **explain** the steps (at least 5) that website administrators should follow to prevent such vulnerabilities.	**[Marks-10]**	**CLO-4** ***Level-4***

Emp_ID	Emp_Name	Emp_Address	Emp_phone
EMP01	Mbappe	Mirpur	01731002100, 01731025121
EMP02	Neymar	Savar	01821254458, 01521549115
EMP03	Haaland	Dhanmondi	01723457155, 01721007457
EMP04	Vini jr.	Savar	01929957555, 01823545571

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