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Daffodil International University

Faculty of Science & Information Technology

Final Examination, Spring 2023

Course Code: CSE233

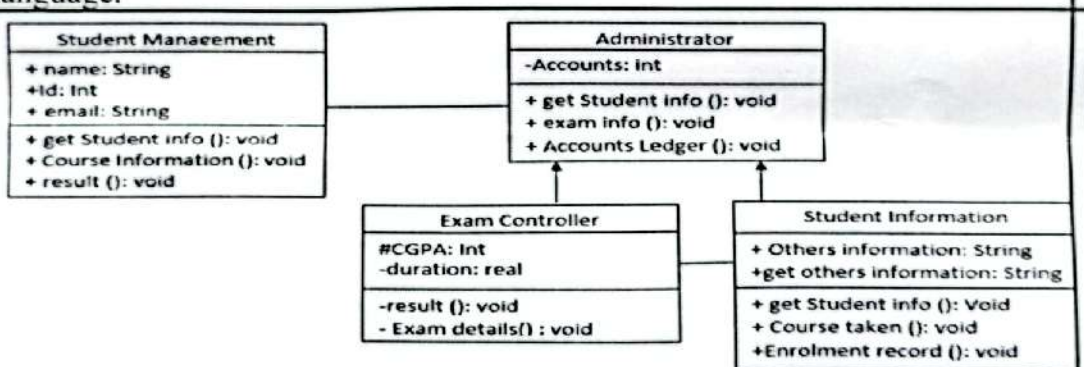
Course Title: Object Oriented Programming II

Level: L2 Term: T1,T2 Batch: 59 & 60

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)*	Define Object Oriented Programming and the main features of OOP in python with proper examples.	[5]	CO3
	b)	Create built-in and user-defined polymorphism with Python programming language.	[5]	
2.		 Develop the functionalities given below: • Identify all the attributes and methods. Now you have to build base class and subclass from the UML with those attributes and methods. • Develop an appropriate OOP method where authority decides to waive 20% of the tuition fee if the student's CGPA is over 3.5 and 25% of tuition fee if the student's CGPA is over 3.75. Display their tuition fee after waiver using your method. • Illustrate which methods have overloading and overriding relations into different entities.	[15]	CO3
3.		Analyze the pseudo code given below. If there is any error, rephrase it so that the compiler runs. You can't change arithmetic operations or any argument. number = 22 divider = 0 result = number/divider print (result)	[5]	CO2

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4.	Construct a 2D array using a 4X3 matrix where, first and third row will be 1 to 30 containing the same distance. Identify the following questions. i. Identify the shape of diagonal, above and below diagonal values. ii. Construct a 3X4 matrix from the previous one and identify mean, max, variance values of 2nd to 4th column. iii. Describe the difference between a numpy array can access previous memory or can not access.	**[10]**	**CO1**

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