

Class Test

Student ID	241-15-918	Program :Semester : Spring/ Summer/ Year :
Course Code	: Course 7	Title : Date :
Class Test No.		Signature of the Course Teacher :

At last I can say that if I need to deals with electrons then I work with quantum meeanmechanic or dynamic from which type I need to represent the equation meeane mechanically or est classically and if I need to work with atom them molicular mechanic or dynamic help me to do this But molicular dynamis is better than molecular mechanics.



work with only atom, in ignoring electrom. But ma lart dynamics is more efecent and less time cos ea ming from molicular mechanics. Mainly the difference between molicular dynamic and molicular mechanics is now I as want to represent the atom Mechanical or classicaly.

@ Quantum Mechanics:

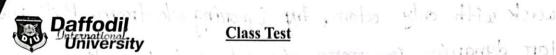
Quantum mechanics deals with electron. Quantum mechanics majer the electron speed, dencity, charged on not etc. If I mo need to deeper equation with the electron then I showed go for quantum mechanics. But a works with electron is very time eonsuming in Quantum mechanics. Quantum mechanics works with wave fuetion equation. Here is the equations

@ Quantum Dynamics:

Quantum dynamics is mainly of quantum mechanics with different type of representation. Quantum dynamics is also time consumings. It deals with electronic wave using schrodingen equation.

or or see is come come afron allocation of the and need

sta free brefacen colon, in there is his equation of po



Student ID 241–15-918 Program: CSE Semester: Spring/ Summer/ Year: 2024

Course Code: 115 Course Title: ICCC Section: K Date: 04/03/24

Class Test No. 02

Signature of the Course Teacher :.....

21 Compare and Contracting the efficacy, speed, accuracy and computational resources required for employing molecular mechanics, molicular dynamics, quantum mechan ies and quantum dynamics, is bellow:

O_molecular Mechanics:

Molecular mechanics equation is use to solve the classical physicas. It treats atoms siring, bonds, and it ingnormed electorns. If I showed not need to deep edeulation with electrons and calculate atom in mecha nically then molecular mechaniss help me to do it. It easume that the sum of Istal energy potential energy is cosm comes from attractive force and repl give force between atom. in Herre is the equation of pa molicular mechanies: E=EA+EB+ED+ENB*

1 Molecular dymamics:

Molecular dynamics is the molecular mechanics equation to mimie the movement of a atom. It also

country demonics is packetly a quantum mechanis



Daffodil International University
Faculty of Science & Information Technology
Quiz 2, Spring 2024
Course Code: CSE115

Course Title: Introduction to Chemistry and Biology for Computation vel: 1 Term: 1 Batch:66

Time: 40 minutes

Marks: 15

Answer ALL Questions

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

1.	Imagine you're exploring the intricacies of DNA replication while unraveling the structural nuances of adenine and uracil, essential nucleobases in RNA. Define the unique structures of Adenine (A), Cytosine (C) contribute to the fidelity of genetic information transfer and the dynamic process of DNA replication. Explain the DNA replication process?	[5]	CO1 PO2 L1
2.	Imagine you are tasked with simulating the behavior of a comp biomolecular system, such as a protein-ligand interaction crucial drug discovery. The system involves significant conformation changes and interactions at the atomic level. Compare and contractions are the efficacy, speed, accuracy, and computational resources required employing molecular mechanics, molecular dynamics, quant mechanics, and quantum dynamics approaches to study this system. Which method(s) would you recommend based on the balance of the factors? How do the methods differ in capturing essential features the system dynamics and providing insights for potential drug desor other applications?		CO2 PO4 L2