

Course: MPHY111 Classical Mechanics

Assignment: 1

Due date of submission: 11/9/2017

Instructions:

1. Write the response to the assignment in your own handwritings.
2. Submit the response to your H.O.D. within the due date.
3. Write your name, program and enrollment no. clearly at the top of the page.

Q 1(A). Discuss the limitations of Newton's mechanics.

Q 1(B). Obtain Lagrange's equation of motion from D'Alemberts principle for non-conservative system.

Q 2 (A). Explain the concept of gyroscopic forces.

Q2 (B). Derive Hamilton Jacobi equation.

Course: MPHY112 ELECTRONICS

Assignment: 1

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Q 1(A) State the characteristics of the two-cavity klystron amplifier.

Q 1(B) Define and classify modulation with neat diagram.

Q 2 (A) Explain the principle and working of T.W.T with neat and clean diagram.

Q2 (B) Explain the generation of AM signals using the square law modulation.

Course: MPHY113 Quantum mechanics

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Q 1(a). Explain the binding energy curve for nuclei and its consequences.

Q 1(b). Explain the Fermi theory of beta decay.

Q 2 (a). Explain postulates of quantum mechanics. "Quantum mechanics is based on certain approximations even it explains microscopic system". Explain this statement.

Q2 (b). Explain time –independent perturbation theory for non-degenerate case.

Course: MPHY114 Mathematical Physics

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Q 1(A).State and prove the Helmholtz theorem.

Q 1(B). Define the Redrigue's formula.

Q 2 (A) Find the solution of Legendre's differential equation.

Q2 (B) Define complex function and give its use to explain harmonicity.

Course: Computer Fundamentals and its Applications (MCA-112)

Submission Date: 11 September 2016

Instructions:

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3. Write your name ,Programme and enrollment number clearly at the top of the Pages

Q.1

a) As you know that computer is an electronic machine. So, draw the block diagram of computer? Also explain each component of it?

b) Define Primary & Secondary Memory?

Q.2

a) What do you mean by operating system? Explain in brief.

b) Define the terms

i) Software

ii) Hardware

iii) Algorithm

Course: PHY115 Fundamental of Renewable Energy Technologies

Assignment: 1

Due date of submission: 11/09/2017

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Question 1

- (a) Describe the various renewable resources of energy that have the potential to fulfill the needs of the society.
- (b) Why a Manitoba Biomass Energy Support Program (MBESP)?

Question 2

- a) You are aware of solar energy. Describe the basic principles of solar energy.
- b) You know objectives of solar water heaters. Discuss advantages and disadvantages of solar water heaters.