

MONAD UNIVERSITY HAPUR

Course: MPHY231 PHYSICS OF NANO MATERIAL

Assignment: 2

Due date of submission: 10/11/2016

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.

Q1 (a) Discuss in Detail C.N.T (Carbon Nano Tube)

Q1 (b) Explain with Diagram Scanning Tunneling microscope in detail.

Q2 (a) Discuss in Detail Physical Technique of synthesis of Nano material.

Q2 (b) Explain Moor's Law in detail.

MONAD UNIVERSITY HAPUR

Course: MPHY232 NUCLEAR PHYSICS

Assignment: 2

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Q1 (a) Classify Nuclear reactions and Discuss in detail various conservation laws in nuclear reaction.

Q1 (b) what is the evidence for the shell structure of the nucleus . Explain Shell model of nucleus.

Q2 (a) Describe Quartz model of elementary particle.

Q2 (b) Explain nuclear reaction and Describe how electricity is generated in it.

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Course: MPHY233 SEMI CONDUCTOR PHYSICS

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Q1 (a) Explain principle of light transmission in a fiber

Q1 (b) Explain the various methods of generating SSB signal.

Q2 (a) define group velocity and phase velocity give their physical significance .

Q2 (b) Discuss in detail the effect on index profile on Propagation.

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Course: MPHY234 Advance Quantum Mechanics

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Q1(a). Dirac Equation of the particle interacting with E.M.F is Parity invariant is it true if yes Elaborate.

Q1(b). Show how Schrödinger wave Equation becomes Gordon's Equation.

Q2(a). Solve dirac Equation with central force

Q2(b) Describe the algebra of commutation rule of annihilation and creation operators of Bosonic system leads to Bose Einstein statistics .