



MONAD UNIVERSITY HAPUR (UP)

Programme: M.Sc.

Semester: II

Course: CONDENSE MATTER PHYSICS / Code: - MPHY 121

Assignment No: 2

Due date of submission: 20 April 2018

Instructions:

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme and Enrolment No. clearly at the top of the page.

Q1.

- (i) As you are aware of quantum theory of magnetism. Explain how it is different from classical one.
- (ii) What is hysteresis curve? Explain the residual magnetism and coercive force hysteresis loss.

Q 2

- (i) As you are of dielectrics. Explain Ferro and Piezo electricity.
- (ii) Explain the term “critical temperature” of a super conductor.



MONAD UNIVERSITY HAPUR (UP)

Programme: M.Sc.

Semester: II

Course: ATOMIC AND MOLECULAR PHYSICS / Code: - MPHY 122

Assignment No: 2

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Q1.

- (i) As you are familiar of Raman Effect using quantum theory. Explain it.
- (ii) Explain equivalent and non-equivalent electrons. Give example.

Q 2

- (i) Write notes on Born-Oppenheimer approximation
- (ii) Write short note on :
 - (a) Paschen effect.
 - (b) Franck-Condon Principle.
 - (c) Stark effect.



MONAD UNIVERSITY HAPUR (UP)

Programme: M.Sc.

Semester: II

Course: ELECTRODYNAMICS AND PLASMA PHYSICS/ Code: - MPHY 123

Assignment No: 2

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Q1.

- (i) Discuss second adiabatic invariants and hence explain mirror effect.
- (ii) As you are aware of refraction electromagnetic wave. Discuss the phenomenon of total internal reflection

Q 2

- (i) What do you mean by electric quadropole and electric dipole fields?
- (ii) Write short note on :
 - (a) Rectangular wave guide.
 - (b) TE, TM& TEM.



MONAD UNIVERSITY HAPUR (UP)

Programme: M.Sc.

Semester: II

Course: DIGITAL ELECTRONICS AND MICRO PROCESSOR/ Code: - MPHY 124

Assignment No: 2

Due date of submission: 20 April 2018

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Q1.

- (i) As you are aware of microprocessor. Explain how it works.
- (ii) You are aware of K mapping. With example show how it is implemented.

Q 2

- (i) Explain the concept of bus and memory transfer.
- (ii) As you are of digital system. Explain asynchronous and synchronous counter.



MONAD UNIVERSITY HAPUR (UP)

Programme: M.Sc.

Semester: II

Course: STATISTICAL PHYSICS/ Code: - MPHY 125

Assignment No: 2

Due date of submission: 20 April 2018

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Q1.

- (i) Discuss the applications of Liouville's theorem.
- (ii) As you are of thermodynamics. Explain the third law of thermodynamics with examples.

Q 2

- (i) As you are aware of Ideal Bose system. Explain the property an ideal Bose gas.
- (ii) Write note on ;
 - (a) Micro-canonical ensembles.
 - (b) Canonical ensembles.
 - (c) Grand canonical ensembles.