MONAD UNIVERSITY HAPUR (UP)

Programme: B.Sc. [PCM]/B.TECH (CS)
Semester: II

Course: **(SEMICONDUCTOR PHYSICS)**

Course code **BS-121-1**

Assignment No: 2
Due date of submission: 22 April 2019
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

(a) As you aware of semiconductor. Explain the n-p-n & p-n-p junction with suitable diagram.

b) Write short note on :
   (i) Intrinsic and extrinsic semiconductors
   (ii) Carrier generation
   (iii) and recombination
   (iv) optoelectronic devices

2

(a) As you aware of transistor. Explain the working and characteristics of transistor.
(b) Write short note on:
(i) BJT
(ii) Hybrid *h*-parameters.
(iii) MOSFET.

MONAD UNIVERSITY HAPUR (UP)

Programme: B.Sc. [PCM]/B.TECH (EE)
Semester: II

Course: **(WAVE OPTICS AND INTRODUCTION TO QUANTUM MECHANICS)**
Course code **BS-121-2**

Assignment No: 2
Due date of submission: 22 April 2019
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.

a) As you are aware of mass and energy equivalence. Show that both are equivalent to each other using example.
b) As you are aware of S.H.M. Obtain the differential equation of S.H.M and find its solution.

Q 2

(a) As you are aware of diffraction .Explain the Fraunhoffer diffraction from a single slit.
(b) Define short on :
   (i) Harmonic waves.
   (ii) Eigen frequencies.
   (iii) Electromagnetic wave.

CHEMISTRY-II, CHE-121

Assignment No: 02
Due Date of Submission: 22 April 2019
B.Sc. II ND SEM [PCM/ZBC]

Instructions:

- Write the responses to the assignment in your own handwriting.
- Submit the responses to your HOD with in the due date.
- Write your Name, Programme & Enrolment No. Clearly at the top of the page.

Question: 01

A. Give reaction mechanism of Diels Alder reaction.
B. What are liquid crystals? Explain different types of liquid crystals.

Question: 02

A. Explain the structure of benzene.
B. Write short notes on crystalline and amorphous solids.

MONAD UNIVERSITY HAPUR (UP)

Programme: **B.Sc.**

Semester: **II**

Course: **BS-122-2 MATHEMATICS-II**

Assignment No: **2**

Due date of submission: **22.04.2019**

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 Number clearly at the top of the page.

Q.1 a) State and prove Cauchy's fundamental theorem.

b) Obtain the Taylor's and Laurent's series which represent the function

$$f(z) = \frac{z^2-1}{(z+2)(z+3)} \text{ in the regions}$$

(i) $|z| < 2$ (ii) $2 < |z| < 3$ (iii) $|z| > 3$

Q.2

(a) Reduce the following equation to canonical form

$$\frac{\partial^2 z}{\partial x^2} = x^2 \frac{\partial^2 z}{\partial y^2}.$$

(b) Solve the following partial differential equation by separation of variables:

$$\frac{\partial^2 z}{\partial x^2} = x^2 \frac{\partial^2 z}{\partial y^2}.$$

Dated:-12/04/2019

Programme: **B.Sc.**

Semester: **II**

Course: **MC -121 Environmental Science**

Assignment No: 2

Due date of submission: 22/04/2019

Instructions

1. Write the responses to the assignment in your own handwriting & don't copy from other's assignment.
2. Submit the responses to your **"course faculty"** within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

Q.1

(a) What is the importance of water in our daily life?

(b) Write short notes on "CHIPKO MOVEMENT"

Q.2

(a) Write an essay on soil pollution .

(b) Describe details about Pond Ecosystem.