



MONAD UNIVERSITY HAPUR (UP)

Programme: B.Sc.

Semester: V

Course: REAL ANALYSIS

Assignment No: 1

Due date of submission: 11.09.2017

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, Program me, and Enrolment No. clearly at the top of the page.

Q.1

- (a) As you are aware of the fundamental theorem, compute the following definite integral:

$$\int_1^3 x^3 dx.$$

- (b) State and prove Archimedean property.

Q2.

- (a) As you are aware of the sequence and series, estimate the value of

$$\frac{1}{\sqrt{2\pi}} \int_{-1}^1 e^{-x^2/2} dx.$$

- (b) Verify $\int_0^x \sin t dt = 1 - \cos x$ using the series expansion.

Elements of quantum mechanics atomic and molecular spectra

Assignment: 1

Due date of submission: 11/09/201

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). Explain how the moment of inertia of the molecule may be determined from such studies.

Q1 (b). Explain photoelectric effect from Einstein equation.

Q2 (a). Discuss in detail how the fine structure of infrared spectra can be explained by considering molecule as vibrating rotator.

Q2 (b). Discuss the vibrational frequency and force constant for enharmonic oscillator.



Department of Chemistry

ASSIGNMENT-1

Course- B.Sc(PCM)/(ZBC)

Sub-Inorganic Chemistry

Last date of Submission-11/09/2017

Sub code-CHE-311

Year- IIIrd year/Vthsem

Instruction

- 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, program and Enrollment nu clearly at the top of the page.

Q1.

- a) Give the postulates of VBT and explain with proper example.
- b) What is crystal field splitting theory? What are the factor effecting CFT.

Q2.

- a) Draw the energy diagram of octahedral and tetrahedral complex. .
- b) How can you explain the variation and limitation of Crystal field theory ?



Department of Chemistry

ASSIGNMENT-1

Course- B.Sc(PCM)/(ZBC)

Sub code-CHE-312

Sub-Phycial Chemistry

Year- IIIrd year/Vthsem

Last date of Submission-11/09/2017

Instruction

- 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, program and Enrollment nu clearly at the top of the page.

Q1.

- a) What is chromatography? Explain different types of chromatography.
- b) Define and explain RF value.

Q2.

- a) Explain the working of paper chromatography.
- b) How the components are separated using thin layer chromatography technique?