

BSK College, Maithon  
Mathematics GE Assignment Topic (2015-18)

**SEMESTER I**

1. Explain and prove Leibnitz's theorem with a suitable example.
2. Describe Reduction formulae with a suitable example.

**SEMESTER II**

1. Derive the first order exact differential equations.
2. Describe Lagrange's method

**SEMESTER III**

1. Define and prove Cauchy's theorem on limits.
2. Define absolute and conditional convergence with example.

**SEMESTER IV**

1. Define groups with example.
2. Define subgroups with example.

- 1) Derive relation between different elastic constants.

Practical

- 1) Determine the value 'g' by Bar Pendulum.

Sem - II (Theory)

- 1) Give Faraday's law of ~~o~~ electromagnetic induction. Explain Lenz's law.

Practical

- 1) Compare Capacitances using De Sauty's Bridge.

Sem - III (Theory)

- 1) What is first law of Thermodynamics. Calculate the work done in an isothermal process.

Practical

- 1) Determine the temperature coefficient of resistance by platinum resistance thermometer.

Sem - IV (Theory)

- 1) Give the theory of Newton's Rings. How you will measure wavelength of Sodium light using Newton's rings.

Practical

- 1) Determine the wavelength of sodium light using Newton's Rings apparatus.

9.10.23

## Internal / Assignment questions

• chemistry

Sem - I

Q.1/ Write general characteristics of ionic bond.

OR,

What are Hydrocarbons. Explain the method of preparation of Alkanes

★ practical ★

Q.2. Estimate the sodium carbonate and sodium hydrogen carbonate present in a given mixture.

Sem - II

Q.1./ What are the laws of Thermodynamics.

OR,

What are phenols. How phenols are prepared from diazonium salts.

★ practical ★

Q.2. Determine the enthalpy of neutralization of hydrochloric acid ~~and~~ with sodium hydroxide.

### Sem III

Q1. Preparation of Amino acids

#### Practical

Q1. Qualitative analysis of COOH

### Sem IV

Q1. Kinetic Theory of Gases

#### Practical

Q1. Determination of the surface tension of a liquid using a stalagmometer.



BSK College, Maithon  
Botany GE Assignment Topic (2015-18)

**SEMESTER I**

**Theory**

General structure and nature of Viruses **Or** life cycle of Nostoc

**Practical**

Structure of Bacteriophages. **Or** Prepare a temporary slide of Puccinia

**SEMESTER II**

**Theory**

Pond Ecosystem **or** Ecological succession

**Practical**

Study of morphological adaptations of hydrophytes.

**Or**

Study of vegetative and floral characters of Solanaceae

**SEMESTER III**

**Theory**

Meristematic tissue **Or** Morphology and uses of wheat

**Practical**

T.S. of Boerhaavia stem **Or** Structure of embryo sac

**SEMESTER IV**

**Theory**

Mendel's law of inheritance **Or** Mechanism of Transpiration

**Practical**

Study of mitosis stages

**Or**

To study any physiological experiment given in syllabus



### **SEMESTER I**

#### **Theory**

Life cycle of obelia with suitable diagrams. **Or** Flight adaptation in Birds.

#### **Practical**

Comments on ANY Two (with diagrams)

- (a) Spicules of porifera
- (b) Meridiam
- (c) Tapeworm
- (d) Asterias
- (e) T.S of male & female Ascaris

### **SEMESTER II**

#### **Theory**

Structure & function of Plasma membrane **Or** Darwin's theory of natural selection

#### **Practical**

Preparation of stained squash of onion root tip to demonstrate mitosis.

Or

Study of homologous and analogous organs

### **SEMESTER III**

#### **Theory**

Structure and classification of carbohydrates. **Or** Transport of gases (O<sub>2</sub> & CO<sub>2</sub>)

#### **Practical**

Biochemical test for Glucose

Or

Comment on the following

- (a) T.S. of thyroid gland
- (b) WM of 24 hrs Chick Embryo

### **SEMESTER IV**

#### **Theory**

Food Chain & food Web & Ecological Pyramids

Or

Sericulture

#### **Practical**

Determination of pH in soil and water

Or

Common sugar cane Pest