



TAMIL NADU OPEN UNIVERSITY

Chennai - 15

School of Sciences

Department of Chemistry

HOME / SPOT ASSIGNMENT

Programme Code No : 182

Programme Name : B.Sc. Chemistry

Course Code & Name : BCHE - 11 & General Chemistry - I

Batch : AY 2019-20 [1st Year]

No. of Assignments : 4 [One Assignment for each 2 credits]

Maximum CIA Marks : 25 [Average of total no. of Assignments]

ASSIGNMENT-1

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Explain about the characteristic features of f-Block elements.
- 2) Discuss in details about the Ideal gas laws and van der Waals forces.
- 3) Describe the following
 - (i) Surface energy
 - (ii) Capillary rise
 - (iii) Surface tension and its molecular theory

ASSIGNMENT-2

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Discuss in detail about the classification of Organic compounds based on the Carbon Skeleton and Functional groups.

- 2) Describe the following with examples.
- (i) Inductive effect
 - (ii) Electromeric effect
 - (iii) Resonance or Mesomeric effect
 - (iv) van der Waals forces

- 3) Discuss about the following.
- (i) Pauling scale of electronegativity
 - (ii) Mulliken scale of electronegativity
 - (iii) Polarizing power
 - (iv) Polarizability

ASSIGNMENT-3

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Explain in details about the naming of organic compounds.
- 2) Discuss in details about the classification of s, p and d-Block elements.
- 3) Write the notes on following with examples.
 - (i) Hyperconjugation
 - (ii) Steric effect
 - (iii) Fajan's rule
 - (iv) Octet rule

ASSIGNMENT-4

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Explain about the following with examples.
 - (i) Atomic radii
 - (ii) Ionic radii
 - (iii) Ionization energy

(iv) Electronegativity

(v) Electron affinity

2) Describe about the principles involved in naming the Organic compounds.

3) Discuss in details about the Octet rule and Fajan's rule with examples.



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HOME / SPOT ASSIGNMENT

Programme Code No : 182

Programme Name : B.Sc. Chemistry

Course Code & Name : BCHE - 12 & General Chemistry - II

Batch : AY 2019-20 [1st Year]

No. of Assignments : 4 [One Assignment for each 2 credits]

Maximum CIA Marks : 25 [Average of total no. of Assignments]

ASSIGNMENT-1

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Discuss in detail about the chemistry of Addition reactions.
- 2) Explain about the important compounds and Uses of
 - (i) Surface tension
 - (ii) Viscosity
 - (iii) Refraction
- 3) Describe in details about the Fertilizers and its classifications.

ASSIGNMENT-2

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Describe the following theories.
 - (i) VSEPR
 - (ii) MO
- 2) Discuss in details about the Petrochemicals.

3) Discuss about the following with examples.

- (i) Wittig reaction
- (ii) Mannich reaction
- (iii) Benzoin condensation
- (iv) Stobbe condensation

ASSIGNMENT-3

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

1) Describe the following with examples.

- (i) Atomic orbitals
- (ii) Inert pair effect
- (iii) Quantum numbers

2) Explain in details about the Pesticides.

3) Discuss in details about the following reactions with examples.

- (i) Michael addition
- (ii) Wurtz reaction
- (iii) Wittig reaction
- (iv) Mannich reaction

ASSIGNMENT-4

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

1) Discuss in detail about the principle and types of hybridization.

2) Explain about the important compounds and uses of

- (i) Hydroxylation
- (ii) Hydroboration
- (iii) 1,3-dipolar addition
- (iv) Michael addition

3) Write about the following reactions with examples.

(i) Chugaev and Cope elimination

(ii) Cycloaddition

(iii) Dehalogenation

(iv) Diels Alder



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HOME / SPOT ASSIGNMENT

Programme Code No : 182

Programme Name : B.Sc. Chemistry

Course Code & Name : BCHEA - 01 & General Physics (Ancillary paper)

Batch : AY 2019-20 [1st Year]

No. of Assignments : 2 [One Assignment for each 2 credits]

Maximum CIA Marks : 25 [Average of total no. of Assignments]

ASSIGNMENT-1

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) What is Cantilever? Derive an expression for bending moment.
- 2) Derive an expression for decay of sound using Sabine's formula.
- 3) State and verify Newton's law of cooling.

ASSIGNMENT-2

Max: 25 marks

Answer ANY ONE of the question not exceeding 1000 words

- 1) Explain the determination of refractive index of material by using spectrometer.
- 2) What is Raman effect? Derive an expression for Raman shift with necessary theory.
- 3) Explain Principle of Capacitor. Derive an expression for energy stored in a capacitor.

Important Instructions

1. Date of Publication : 07.01.2020
2. Last date of submission of answer script by the student to the study centre /LSC : 05.04.2020
3. Last date of submission of marks by the examiner to the study centre/LSC : 12.04.2020
4. Last date of submission of marks by the study centre/LSCs to the office of C.O.E. on or before : 25.04.2020