1710E596

Candidate's Seat No :_____

B.Sc. (F. & S.) Sem.-1 (Supple.) Examination

CC-102

Applied Chemistry

Time : 2-30 Hours] **October-2024** **[Max. Marks : 70**

Q.1 Answer the following

(i) Explain the phenomenon of Auto ignition between glycerine and $KMnO_4$ (7)

(ii) write a note on spontaneous combustion. (7)

OR

(i) Describe the chain reaction phenomenon in detail. (7)

(ii) Explain the candle flame phenomenon in detail with the diagram (7)

Q.2 Answer the following

(i) Explain the heat transfer process by radiation. (7)

(ii) Describe the experiment to determine the specific heat of copper with appropriate calculation (7)

OR

(i) Explain the heat transfer by conduction (7)

(ii) What is thermal equilibrium? Explain using a suitable example. (7)

Q.3 Answer the following

(i) Write a note on explosion phenomenon (7)

(ii) Write down the chemical properties and industrial use of H_2SO_4 (7)

OR

(i) Describe the mechanism of combustion of Carbon in detail (7)

(ii) Write a note on Hydrogen's characteristics and application (7)

Q.4 Answer the following

(i) Describe the Arrhenius equation (7)

(ii) Derive the equation of First order reaction with its half life (7)

OR

(i)Write a note on factors affecting rate of chemical reaction (7)

(ii) Differentiate between Homogenous and heterogenous reaction (7)

Q.5 Attempt any seven out of twelve (2 marks each) (14)

1Define Fire triangle and tetrahedron

2 What is a catalyst? Name few

3 Give definition of activation energy

4How can we define fire prone areas? Give examples.

5The crucible in bomb calorimeter is made up of what material?

6 What are the medicinal uses of Chloroform?

7 Define upper and lower flammability limit.

8 Define Latent heat of fusion and vaporisation.

9 Define flash point and fire point

10 Define and Give uses of antioxidants

11Which gas is used as Rocket fuel?

12 What is half life period?