XII Practical syllabus (2021-22)
Term I

Chemistry

(1) Volumetric analysis

Determination of concentration/ molarity of KMnO4 solution by titrating it against a standard solution of:

    i. Oxalic acid,

    ii. Ferrous Ammonium Sulphate (Students will be required to prepare standard solutions by weighing themselves).

(2) Salt analysis (Qualitative analysis)

Determination of one cation and one anion in a given salt.

    Cations- Pb^{2+}, Cu^{2+}, As^{3+}, Al^{3+}, Fe^{3+}, Mn^{2+}, Ni^{2+}, Zn^{2+}, Co^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+}, Mg^{2+}, NH_4^+

    Anions – $(CO_3)^{2-}$, S^{2-}, NO_2^{-}, SO_3^{2-}, SO_4^{2-}, NO_3^{-}, Cl^-, Br^-, I^-, PO_4^{3-}, $C_2O_4^{2-}$, CH_3COO^- (Note: Insoluble salts excluded)

(3) Content Based Experiments

A. Chromatography

    i. Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of Rf values.

    ii. Separation of constituents present in an inorganic mixture containing two cations only (constituents having large difference in Rf values to be provided).

B. Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.

Biology

Section A

1. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.

2. Prepare a temporary mount to observe pollen germination.

Section B

B.1 Flowers adapted to pollination by different agencies (wind, insects, birds).

B.2 Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).

B.3 Meiosis in onion bud cell or grasshopper testis through permanent slides.

B.4 T.S. of blastula through permanent slides (Mammalian).

Physics

1. To determine resistivity of two / three wires by plotting a graph between potential difference versus current.

2. To verify the laws of combination (series) of resistances using a metre bridge.

3. To determine the internal resistance of given primary cell using potentiometer.

4. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.

Physical Education

Project File (About one sport/game of choice)

XII Practical syllabus (2021-22)
Term II

Chemistry

<u>1) Volumetric analysis</u>

Determination of concentration/ molarity of KMnO4 solution by titrating it against a standard solution of:

i. Oxalic acid,

ii. Ferrous Ammonium Sulphate.

<u>2) Salt analysis (Qualitative analysis)</u>

Determination of one cation and one anion in a given salt.

Cations- Pb^{2+}, Cu^{2+}, As^{3+}, Al^{3+}, Fe^{3+}, Mn^{2+}, Ni^{2+}, Zn^{2+}, Co^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+}, Mg^{2+}, NH_4^+

Anions – $(CO_3)^{2-}$, S^{2-}, NO_2^-, SO_3^{2-}, SO_4^{2-}, NO_3^-, Cl^-, Br^-, I^-, PO_4^{3-}, $C_2O_4^{2-}$, CH_3COO^-

(Note: Insoluble salts excluded)

<u>3) Content based experiment</u>

A. Preparation of Inorganic Compounds

Preparation of double salt of Ferrous Ammonium Sulphate or Potash Alum.

Preparation of Potassium Ferric Oxalate.

B. Tests for the functional groups present in organic compounds:

Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) groups.

Biology

<u>Section A</u>

3. Prepare a temporary mount of onion root tip to study mitosis.

4. Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organism.

5. Collect and study soil from at least two different sites and study them for texture, moisture content, pH and water holding capacity. Correlate with the kinds of plants found in them.

<u>Section B</u>

B.6 Common disease - causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images. Comment on symptoms of diseases that they cause.

B.7 Two plants and two animals (models/virtual images) found in xeric conditions. Comment upon their morphological adaptations.

B.8 Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.

Physics

1. To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and1/v.

2. To find the focal length of a convex mirror, using a convex lens.

3. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.

4. To draw the I-V characteristic curve for a p-n junction diode in forward bias and reverse bias.

Physical Education

Project File (Yoga and General Motor Fitness Test)

+2 (Economics)

Dear Students,

- This is your practical syllabus of term I and II. Kindly keep it safe and complete it.

- Make only one practical file.(A-4sheets)

- You can choose any topic from the CBSE syllabus

- Topics will be sent to you, can choose from the same also:

 1.Poverty

 2.Aggregate demand and aggregate supply

 3.Government budget and the economy

 4.Green revolution

 5.Indian economy on the eve of independence

Subject - Accountancy(055)

Syllabus for project work

Prepare a project file on

- Comprehensive study of a specific company

Subject- Business Studies

Prepare a project file on Marketing Mix

Students can choose any product (only one)

1 Hair oil   2 Shampoo

3 Chocolate   4 Coffee

5 Jams   6 Kurti

7 Noodles   8 Tea

9 Car   10 DTH

          Or

Principles of management