



ਰਾਜ ਵਿੱਦਿਅਕ ਖੋਜ ਅਤੇ ਸਿਖਲਾਈ ਪ੍ਰੀਸ਼ਦ, ਪੰਜਾਬ ,

ਛੇਵੀਂ ਮੰਜਿਲ, ਬਲਾਕ- ਈ, ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ ਕੰਪਲੈਕਸ,

ਫੇਜ਼-8 (ਸੈਕਟਰ-62) , ਐਸ.ਏ.ਐਸ.ਨਗਰ।

ਫੋਨ ਨੰ: +91-0172-2212221, Email-directorscert@yahoo.in

ਵੱਲ.

ਸਮੂਹ ਜ਼ਿਲਾ ਸਿੱਖਿਆ ਅਫਸਰ (ਸੈ. ਸਿ.),
ਸਮੂਹ ਪ੍ਰਿੰਸੀਪਲ -ਸ.ਸ.ਸ.ਸ. (ਸਾਇੰਸ ਗਰੁੱਪ),
ਸਮੂਹ ਸਕੂਲ ਮੁਖੀ ,
ਪੰਜਾਬ।
(ਵੈੱਬ ਸਾਇਟ ਰਾਹੀਂ)

ਸੀਮੇ ਨੰ: 187186/2024110587

ਮਿਤੀ, ਐਸ.ਏ.ਐਸ.ਨਗਰ:- 03/05/2024

ਵਿਸ਼ਾ:- ਸੈਸ਼ਨ 2024-25 ਲਈ ਜਮਾਤ 11ਵੀਂ 12ਵੀਂ ਸਾਇੰਸ (ਫਿਜਿਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓਲੋਜੀ) ਵਿਸ਼ੇ ਦੇ ਸਿਲੇਬਸ ਦੀ Bi-monthly Distribution ਸਬੰਧੀ।

- 1.0 ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਵੱਲ ਧਿਆਨ ਦੇਣ ਦੀ ਖੋਚਲ ਕੀਤੀ ਜਾਵੇ।
- 2.0 ਸਕੂਲ ਸਿੱਖਿਆ ਵਿਭਾਗ ਵਲੋਂ ਸੈਸ਼ਨ 2024-25 ਲਈ ਜਮਾਤ 11ਵੀਂ 12ਵੀਂ ਸਾਇੰਸ (ਫਿਜਿਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓਲੋਜੀ) ਵਿਸ਼ੇ ਦੇ ਸਿਲੇਬਸ ਦੀ Bi-monthly Distribution ਤਿਆਰ ਕੀਤੀ ਗਈ ਹੈ। ਇਸ ਨੂੰ ਅਧਿਆਪਕਾਂ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸਹੂਲਤ ਲਈ www.ssapunjab.org ਦੀ website ਤੇ ਅਪਲੋਡ ਕਰ ਦਿੱਤਾ ਗਿਆ ਹੈ।

ਨੋਟ:- ਜਮਾਤ 11ਵੀਂ ਅਤੇ 12ਵੀਂ ਸਾਇੰਸ (ਫਿਜਿਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓਲੋਜੀ) ਵਿਸ਼ੇ ਦੇ ਸਿਲੇਬਸ ਦੀ Bio-monthly Distribution ਦੀ pdf ਫਾਈਲ ।

ਡਾਇਰੈਕਟਰ

ਐਸ.ਸੀ.ਈ.ਆਰ.ਟੀ.ਪੰਜਾਬ।

ਪਿੱਠ ਅੰਕਣ ਨੰ: ਉਕਤ

ਮਿਤੀ, ਐਸ.ਏ.ਐਸ.ਨਗਰ:-

ਉਪਰੋਕਤ ਪੱਤਰ ਦਾ ਉਤਾਰਾ ਹੇਠ ਲਿ

ਖਿਆ ਨੂੰ ਸੂਚਨਾ ਅਤੇ ਯੋਗ ਕਾਰਵਾਈ ਹਿਤ ਭੇਜਿਆ ਜਾਂਦਾ ਹੈ :

- 1) ਪ੍ਰਿੰਸੀਪਲ ਜਿਲਾ ਮੈਂਟਰ ।
- 2) ਡੀ ਐਮ (ਐਮ ਆਈ ਐੱਸ) ਨੂੰ ਵੈਬਸਾਈਟ ਤੇ ਅਪਲੋਡ ਕਰਨ ਲਈ ।


ਸਹਾਇਕ ਡਾਇਰੈਕਟਰ

BI MONTHLY DISTRIBUTION PHYSICS CLASS 11 SESSION 2024-25

MONTH	UNIT	PRACTICALS	ACTIVITIES
APRIL- MAY	1. Physical world and measurement 2. Kinematics	1. <u>Use of Vernier Callipers</u> (i) To measure diameter & volume and volume of a small spherical/cylindrical body. (ii) To measure internal diameter and depth of a given beaker/ calorimeter and hence find its volume. 2. <u>Use of screw gauge</u> (i) To measure diameter of a given wire, (ii) To measure thickness of a given sheet 3. To determine the volume of a irregular lamina using screw gauge 4. To determine radius of curvature of a given spherical surface by a spherometer. 5. To determine the mass of two different objects using beam balance. 6. To find the weight of a given body using parallelogram law of vectors.	1. To make a paper scale of given least count, e.g. 0.2cm, 0.5 cm. 2. To determine mass of a given body using a metre scale by principle of moments. 3. To plot a graph for a given set of data, with proper choice of scales and error bars. 4. To study the variation in range of a Projectile with angle of projection
JULY- AUGUST	3. Laws of motion 4. Work, Energy and Power 5. System of particles and Rotational Motion	7. To study the relationship between force of limiting friction and normal reaction and to find co-efficient of friction between a block and a horizontal surface. 8. To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination (θ) by plotting graph between force and $\sin \theta$. 9. Using a simple pendulum, plot its L-T ² graphs and use it to find the effective length of second's pendulum. 10. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.	5. To measure the force of limiting friction for rolling of a roller on a horizontal plane. 6. To study the conservation of energy of a ball rolling down on inclined plane (using a double inclined plane). 7. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.
SEPTEMBER	REVISION & EXAMINATIONS		
OCTOBER- NOVEMBER	6. Gravitation 7. Properties of	11. To determine young's modulus of a given wire by using Searle's apparatus.	8. To observe the decrease in pressure with increase in velocity of a fluid.

	Matter 8. Thermodynamics	<p>12. To find out the spring constant of a helical spring from its load-extension graph.</p> <p>13. To determine the surface tension of water by capillary rise method.</p> <p>14. To determine the coefficient of viscosity of a given liquid by measuring the terminal volume of spherical body.</p> <p>15. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.</p> <p>16. To determine the specific heat capacity of a given (i) solid (ii) liquid by method of mixtures.</p>	<p>9. To observe change of state and plot a cooling curve for molten wax.</p> <p>10. To observe and explain the effect of heating on a bi-metallic strip.</p> <p>11. To note the change in level of liquid in a container on heating and interpret the observations.</p> <p>12. To study the effect of detergent on surface tension of water by observing capillary rise.</p> <p>13. To study the factors affecting the rate of loss of heat of a liquid.</p>
DECEMBER	9. Behaviour of perfect gas and kinetic theory of gases 10. Oscillation & Waves	<p>17. To study the variation in volume (V) with pressure (P) for a sample of air at constant temp. by plotting graphs between P&V and between P & 1/V.</p> <p>18. To study the relation between frequency and length of a given wire under constant tension using sonometer.</p> <p>19. To study the relation between the length of a given wire and tension for constant frequency using sonometer.</p> <p>20. To find the speed of sound in air at room temperature using a resonance tube by two - resonance positions</p>	<p>14. To study the effect of load on depression of a suitably clamped metre scale loaded. (i) at its end (ii) in the middle.</p>
JANUARY- FEBRUARY	REVISION & EXAMINATIONS		
MARCH	FINAL EXAMINATIONS		

Class

11th

2024-25

**BI-MONTHLY DISTRIBUTION OF
SYLLABUS (CHEMISTRY)**

MONTH	CLASS	UNIT/CHAPTER	Experiments/ Activities
APRIL – MAY 2024	11th	CHAPTER 1: SOME BASIC CONCEPTS OF CHEMISTRY CHAPTER 2: STRUCTURE OF ATOM CHAPTER 3: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES	Basic Laboratory Techniques a. Cutting glass tube and glass rod b. Bending a glass tube c. Drawing out a glass jet d. Boring a cork. Quantitative Estimation • Using a chemical balance. • Preparation of standard solution of oxalic acid. • Determination of strength of a given solution of sodium hydroxide by titrating it against standard solution of oxalic acid. • Preparation of standard solution of sodium carbonate. • Determination of strength of a given solution of hydrochloric acid by titrating it against standard sodium carbonate solution.

JULY - AUGUST 2024	11th	CHAPTER 4 : CHEMICAL BONDING AND MOLECULAR STRUCTURE CHAPTER 5 : THERMODYNAMICS CHAPTER 7: REDOX REACTIONS	Anyone of the following experiments: a. Determination of pH of some solutions obtained from fruit juices, solution of known and varied concentrations of acids, bases and salts using pH paper or universal indicator. • Comparing the pH of solutions of strong and weak acid of same concentration. • Study the pH change in the titration of a strong base using Universal indicator. b. Study of pH change by common-ion effect in case of weak acids and weak bases.
SEPTEMBER 2024	11th	REVISION AND EXAMINATION	
OCTOBER.- NOVEMBER. 2024	11th	CHAPTER 8 : ORGANIC CHEMISTRY : SOME BASIC PRINCIPLES AND TECHNIQUES CHAPTER 9: HYDROCARBONS	Qualitative Analysis Determination of one anion and one cation 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⁻ , SO ₃ ²⁻ , SO ₄ ²⁻ , NO ₂ ⁻ , NO ₃ ⁻ , Cl ⁻ , Br ⁻ , I ⁻ , PO ₄ ³⁻ , C ₂ O ₄ ²⁻ , CH ₃ COO ⁻ (Note: insoluble salts excluded) . Detection of nitrogen, sulphur, chlorine in organic compounds.
DECEMBER 2024.	11th	CHAPTER 6: EQUILIBRIUM	B. Chemical Equilibrium One of the following experiments: a) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either ions. b) Study the shift in equilibrium between [Co(H ₂ O) ₆] ²⁺ and chloride ions by changing the concentration of either of the ions.
JANUARY 2025	11th	REVISION AND PRE-BOARD EXAM	
FEBRUARY 2025	11th	REVISION AND FINAL EXAM	

Class 11th SYLLABUS

BI MONTHLY DISTRIBUTION BIOLOGY SESSION 2024-25

CLASS 11th		
MONTH	(UNIT/CHAPTER)	PRACTICALS
APRIL-MAY	UNIT I DIVERSITY IN THE LIVING WORLD Chapter 1: The Living World Chapter 2: Biological Classification. Chapter 3: Plant Kingdom Chapter 4 : Animal Kingdom	<ol style="list-style-type: none"> 1. Parts of a compound microscope. 2. Specimens/Slides/ models and Identifying features of - Bacteria, <i>Oscillatoria</i>, <i>Spirogyra</i>, <i>Rhizopus</i>, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledon plant, one dicotyledonous plant and one lichen. 3. Virtual Specimens/Slides/ models and Identifying features of- <i>Amoeba</i>, <i>Hydra</i>, liverfluke, <i>Ascaris</i>, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, Rohu, frog, lizard, pigeon and rabbit.
JULY- AUGUST	(BIMONTHLY CLASS TEST 1 SYLLABUS UPTO JULY 15th) UNIT II STRUCTURAL ORGANISATION IN PLANTS AND ANIMALS Chapter 5 : Morphology of Flowering Plants Chapter 6 : Anatomy of Flowering Plants Chapter 7 : Structural Organisation in Animals UNIT III CELL : STRUCTURE AND FUNCTIONS Chapter 8 : Cell : The Unit of Life Chapter 9 : Biomolecules Chapter 10 : Cell Cycle and Cell Division	<ol style="list-style-type: none"> 1. Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae, or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf arrangement, shape, venation, simple and compound). 2. Preparation and study of T.S. of Dicot and monocot roots and stems (primary). 3. Study of distribution of stomata on the upper and lower surface of leaves. 4. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials. 5. Mitosis in onion root tip cells and animal cells (grasshopper) from permanent slides. 6. Different types of Inflorescence (cymose and racemose).
SEPTEMBER	REVISION & TERM I EXAMINATIONS	
OCTOBER- NOVEMBER	(BIMONTHLY CLASS TEST 2 IN LAST WEEK OF NOVEMBER) UNIT IV PLANT PHYSIOLOGY Chapter 11 : Photosynthesis in Higher Plants Chapter 12 : Respiration in Plants Chapter 13 : Plant Growth and Development UNIT V HUMAN PHYSIOLOGY Chapter 14 : Breathing and Exchange of Gases Chapter 15 : Body Fluids and Circulation Chapter 16 : Excretory Products and their Elimination	<ol style="list-style-type: none"> 1. Study of osmosis by potato osmometer. 2. Study of plasmolysis in epidermal peels(e.g. Rhooolily leaves or fleshy scale leaves of onion bulb) 3. Comparative study of the rates of transpiration in the upper and lower surfaces of leaves. 4. Separation of plant pigments through paper chromatography. 5. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds. 6. Test for the presence of urea in urine. 7. Test for the presence of sugar in urine.

		8. Test for the presence of albumin in urine. 9. Test for the presence of bile salts in urine.
DECEMBER	UNIT V HUMAN PHYSIOLOGY Chapter 17 : Locomotion and Movement Chapter 18 : Neural Control and Coordination	1. Human skeleton and different types of joints with the help of virtual images/models only.
JANUARY	(TERM II EXAMINATIONS) UNIT V HUMAN PHYSIOLOGY Chapter 19 : Chemical Coordination and Integration	
FEBRUARY	REVISION	
MARCH	FINAL EXAMINATIONS	

BI MONTHLY DISTRIBUTION PHYSICS CLASS 12 SESSION 2024-25

MONTH	UNIT	PRACTICALS	ACTIVITIES
APRIL- MAY	1. Electrostatics 2. Current Electricity	<p>1. To determine resistance per unit length of a given wire by plotting a graph of potential difference versus current.</p> <p>2. To find resistance of a given wire using meter bridge and hence determine the specific resistance of its material.</p>	<p>1. To show that there are two kinds of charges and that like charges repel and unlike charges attract each other.</p> <p>2. To assemble the components of a given electrical circuit.</p> <p>3. To draw the diagram of a given open circuit comprising at least a battery, resistor rheostat, key ammeter and volt meter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.</p> <p>4. To assemble a household circuit comprising three, bulbs, three (on/off) switches, a – fuse and a power source.</p> <p>5. To study the variation in potential drop with length of a wire for a steady current.</p> <p>6. To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.</p> <p>7. To demonstrate (i) The use of an improvised fuse that melts with the flow of a certain current through it and (ii) Different kinds of fuses used in everyday life.</p>
JULY- AUGUST	3, Magnetic Effect of Current and Magnetism 4. Electro-magnetic Induction and Alternating Current 5. Electro-magnetic Waves	<p>3. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.</p> <p>4. To convert the given galvanometer of known resistance and figure of merit into an ammeter and voltmeter of desired range and to verify the same.</p>	<p>8. To demonstrate that a current measuring device has finite non- zero resistance. (measurement of resistance of an ammeter).</p> <p>9. To demonstrate that a voltage measuring device has non- infinite resistance (measurement of resistance of a voltmeter).</p> <p>10. To show the magnetic field lines with the help of iron fillings of bar magnet solenoid.</p> <p>11. To measure the resistance and impedance of an inductor with or without iron core.</p> <p>12. To show the production of induced emf. in a coil due to movement of (i) a magnet towards and away from it (ii) similar coil carrying current towards & away</p>

			<p>from it.</p> <p>13. To demonstrate that a large emf is induced when direct current is switched off in an inductive circuit.</p> <p>14. To demonstrate that a large emf is induced when direct current is switched off in an inductive circuit.</p> <p>15. Make a solenoid for study of its magnetic field.</p>
SEPTEMBER	REVISION & EXAMINATIONS		
OCTOBER-NOVEMBER	<p>6. Optics</p> <p>7. Dual Nature of Matter and Radiation</p> <p>8. Atoms and Nuclei</p>	<p>5. To find the value of v for different values of u in case of a concave mirror and find their focal length.</p> <p>6. To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$.</p> <p>7. To find the focal length of a convex mirror, using a convex lens.</p> <p>8. To find the focal length of a concave lens, using a convex lens.</p> <p>9. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.</p> <p>10. To determine the refractive index of a glass slab using a traveling microscope.</p> <p>11. To find refractive index of a liquid by using (i) Concave mirror. (ii) Convex lens and plane mirror.</p>	<p>16. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.</p> <p>17. To study the nature and size of the image formed by (i) convex lens (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).</p> <p>18. To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.</p> <p>19. To observe polarization of light using two Polaroids.</p> <p>20. To observe diffraction of light due to a thin slit.</p>
DECEMBER	<p>9. Electronic Devices</p>	<p>12. To draw the I-V characteristic curve of a p-n junction in forward bias and reverse bias.</p>	<p>21. To identify a diode, a resistor and a capacitor from mixed collection of such items.</p> <p>22. Use of multimeter to (i) identify base of transistor, (ii) distinguish between npn and pnp type transistors, (iii) see the unidirectional flow of current in case of a diode and an LED. iv) Check whether a given electronic component (e.g. diode, transistor or IC) is in working order.</p>
JANUARY-FEBRUARY	REVISION & PRE-BOARD EXAMINATIONS		
MARCH	FINAL EXAMINATIONS		

Class

12th

2024-25

**BI-MONTHLY DISTRIBUTION OF
SYLLABUS(CHEMISTRY)**

MONTH	CLASS	UNIT/CHAPTER	Experiments/ Activities
APRIL – MAY 2024	12th	CHAPTER 1: SOLUTION CHAPTER 2: ELECTROCHEMISTRY CHAPTER 3 : CHEMICAL KINETICS	Volumetric Analysis Experiment :Determination of Concentration/ Molarity of KMnO_4 , solution by titrating it against a standard Solution of Oxalic acid. Experiment : Determination of concentration/ Molarity of KMnO_4 , solution by titrating it against a standard Solution of Ferrous ammonium sulphate Chemical Kinetics Experiment :Effect of concentration and temperature on the rate of reaction between sodium thiosulphate and hydrochloric acid. Experiment :Study of reaction rates of any one of the following:- i.) Reaction of iodide ion with hydrogenperoxide at room temperature using different concentration of iodide ions .ii.) Reaction between potassium iodate, KIO_3 , and sodium sulphite: (Na_2SO_3) using starch solution as indicator (clock reaction) Electrochemistry Experiment: Variation of cell potential in $\text{Zn}/\text{Zn}^{+2}//\text{Cu}^{+2}/\text{Cu}$ with change in concentration of electrolytes (CuSO_4 or ZnSO_4 at room temperature.

JULY - AUGUST 2024	12th	CHAPTER 4: d AND f BLOCK ELEMENTS CHAPTER 5 : COORDINATION COMPOUNDS CHAPTER 10: BIOMOLECULES	Preparation of Inorganic Compounds Experiment : Preparation of double salt of Ferrous Ammonium Sulphate or potash alum. Experiment : Preparation of potassium ferric oxalate. Qualitative analysis: Experiment : Determination of one cation and one anion in a given salt. Cations- Pb^{2+} , Cu^{2+} , As^{3+} , Al^{3+} , Fe^{3+} , Mn^{2+} , Zn^{2+} , Co^{2+} , Ni^{2+} , Ca^{2+} , Str^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+ Anions- : $(CO_3)^{2-}$, S^{2-} , $(SO_3)^{2-}$, $(NO_2)^-$, $(SO_4)^{2-}$, Cl^- , Br^- , I^- , PO_3^- , $(C_2O_4)^{2-}$, CH_3COO^- , NO^- Experiment : Study of carbohydrates, fats and proteins in pure form and detection of their presence in given food stuffs
SEPTEMBER 2024	12th	REVISION AND EXAMINATION	
OCTOBER.- NOVEMBER. 2024	12th	CHAPTER 6 : HALOALKANES AND HALOARENES CHAPTER 7: ALCOHOL, PHENOL AND ETHERS CHAPTER 8 : ALDEHYDE, KETONES AND CARBOXYLIC ACID	Experiment : Test for the functional groups present in organic compounds: Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (primary) groups Activity 1 . Study of quantity of casein present in different samples of milk. Activity 2 . Preparation of soyabean milk and its comparison with the natural milk with respect to curd formation, effect of of temperature etc. Activity 3 . Study of common food adulterants in mashed potatoes or sweet potatoes ,Ghee and Milk. Activity 4 . Extraction of essential oils present in saunf (aniseed), Ajwain (carum) illaichi (cardamom)
DECEMBER 2024.	12th	CHAPTER 9: ORGANIC COMPOUNDS CONTAINING NITROGEN	Activity 5 . Study of acidity of fruit and vegetable juices. Activity 6 . To study the difference between primary and secondary cell. Activity 7 . To study the effect of acids and bases on the tensile strength of cotton, wood and Nylon Activity 8 . Study of adsorption and absorption
JANUARY 2025	12th	REVISION AND PRE-BOARD EXAM	
FEBRUARY 2025	12th	REVISION AND FINAL EXAM	