



ਰਾਜ ਵਿੱਦਿਅਕ ਖੋਜ ਅਤੇ ਸਿਖਲਾਈ ਪ੍ਰੀਸ਼ਦ, ਪੰਜਾਬ
 ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ ਕੰਪਨੀਕਸ, ਵਿੱਦਿਅਕ ਭਵਨ, ਬਲਾਕ-ਈ, ਫੋਰੀ ਮੰਜਿਨ, ਫੇਰੋੜ,
 ਐਸ.ਏ.ਐਸ. ਨਗਰ (ਮੋਹਾਲੀ)

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ਸੇਵਾ,

ਸਕੂਲ ਸਿੱਖਿਆ ਅਫ਼ਸਰ (ਸੈ.ਸਿ.), (ਵੈੱਬਸਾਈਟ ਰਾਹੀਂ)
 ਸਕੂਲ ਪ੍ਰਿੰਸੀਪਲਜ਼ ਸ.ਸ.ਸ.ਸ. (ਸਾਹਿਬ ਗਰੁੱਪ ਫੰਕਸ਼ਨਲ ਸਕੂਲ)
 ਪੰਜਾਬ।

ਸੋਮੇ ਨੰ. E-187186/2026170167 ਮਿਤੀ: 23-06-2026

ਵਿਸ਼ਾ: ਸੈਲਨ 2026-27 ਲਈ ਜਮਾਤ 11ਵੀਂ ਅਤੇ 12ਵੀਂ ਸਾਇੰਸ (ਵਿਜੀਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓਲੋਜੀ) ਵਿਸ਼ੇ ਦੇ ਸਿਲੇਬਸ ਦੀ Bi-Monthly Distribution ਸੰਬੰਧੀ।

- 1.0 ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਵੱਲ ਪਿਆਰ ਦੇਣ ਦੀ ਬੇਨਤੀ ਕੀਤੀ ਜਾਂਦੀ ਹੈ।
- 2.0 ਸਕੂਲ ਸਿੱਖਿਆ ਵਿਭਾਗ ਵਲੋਂ ਸੈਲਨ 2026-2027 ਲਈ ਜਮਾਤ 11ਵੀਂ ਅਤੇ 12ਵੀਂ ਸਾਇੰਸ (ਵਿਜੀਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓਲੋਜੀ) ਵਿਸ਼ੇ ਦੇ ਸਿਲੇਬਸ ਦੀ Bi-Monthly Distribution ਤਿਆਰ ਕੀਤੀ ਗਈ ਹੈ। ਇਸ ਨੂੰ ਅਧਿਆਪਕਾਂ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸਹੂਲਤ ਲਈ www.sicpunjab.org ਦੀ [website](http://www.sicpunjab.org) ਅਤੇ Punjab Education App ਤੇ ਸਾਂਝਾ ਕੀਤਾ ਜਾ ਰਿਹਾ ਹੈ।

ਨੋਟ: ਜਮਾਤ 11ਵੀਂ ਅਤੇ 12ਵੀਂ ਸਾਇੰਸ (ਵਿਜੀਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓਲੋਜੀ) ਵਿਸ਼ੇ ਦੇ ਸਿਲੇਬਸ ਦੀ Bi-Monthly Distribution ਦੀ pdf ਫਾਈਲ।

ਡਾਇਰੈਕਟਰ
 ਐਸ.ਏ.ਐਸ.ਸੀ., ਪੰਜਾਬ।

ਪਿਠ ਅੰਕਣ ਨੰ. ਉਘੜ
 ਉਪਰੋਕਤ ਦਾ ਉਤਰਾ ਹੇਠ ਸਿੱਖਿਆ ਨੂੰ ਸੁਰੱਖਿਅਤ ਅਤੇ ਯੋਗ ਬਾਕਰਾਈ ਵਿੱਚ ਭੇਜਿਆ ਜਾਂਦਾ ਹੈ।

1. ਪ੍ਰਿੰਸੀਪਲ ਸਿੱਖਿਆ ਮੈਟਰਜ਼ (ਵਿਜੀਕਸ, ਕਮਿਸਟਰੀ, ਬਾਇਓ ਅਤੇ ਸੈਪ)।
2. ਐਸ.ਏ.ਐਸ. ਵਿਭਾਗ ਨੂੰ SSA ਦੀ ਵੈੱਬਸਾਈਟ ਤੇ ਅਪਲੋਡ ਕਰਨ ਵਿੱਚ।

30/6/26
 ਸਹਾਇਕ ਡਾਇਰੈਕਟਰ ਲਾਨ ਐਸ.ਏ.ਸੀ. (ਅਧਿਕਾਰਤ)
 ਅਤੇ
 ਸਟੇਟ ਸੀਨੀਅਰ ਸੈਕੰਡਰੀ ਸਾਇੰਸ ਬੈਚਲਰਜ਼ ਡਿਵੀਜ਼ਨ
 (ਵਿਜੀਕਸ, ਕਮਿਸਟਰੀ ਅਤੇ ਬਾਇਓ), ਪੰਜਾਬ।

ਦਫ਼ਤਰ ਸਿੱਖ ਸਿੱਖਿਆ ਅਫ਼ਸਰ (ਸੈ.ਸਿ.) 9/8/26

ਪਿਠ ਅੰਕਣ ਨੰ. 15-6/2026/6098 ਮਿਤੀ 30/06/26

ਉਪਰੋਕਤ ਅੰਕਣ ਵਿਸ਼ੇ ਦੇ ਸਬੰਧ ਵਿੱਚ ਸਕੂਲ ਸਕੂਲ ਸਕੂਲਾਂ ਨੂੰ ਸਿੱਖਿਆ
 ਕਾਲਾਂ ਤੋਂ ਹਿ ਉਹ ਪੱਕਾ ਅਨੁਸਾਰ ਕਾਰਵਾਈ ਕਰਨੀ ਧਿਆਨੀ ਦਿਖਾਈ ਜਾਵੇ।

30/06/26
 ਸਿੱਖ ਸਿੱਖਿਆ ਅਫ਼ਸਰ (ਸੈ.ਸਿ.)
 ਦਫ਼ਤਰ
 PIR
 30/07/26

		air at constant temp. by plotting graphs between P & V and between P & 1/V.	
DEC	10. Oscillation & Waves	18. To study the relation between frequency and length of a given wire under constant tension using sonometer. 19. To study the relation between the length of a given wire and tension for constant frequency using sonometer. 20. To find the speed of sound in air at room temperature using a resonance tube by two - resonance positions	
JAN - FEB	REVISION & SECOND TERM EXAMINATIONS		
MAR	FINAL EXAMINATIONS		

PHYSICS:-
CLASS 12th:-

BI MONTHLY DISTRIBUTION PHYSICS CLASS 12 SESSION 2026-27

MONTH	UNIT	PRACTICALS	ACTIVITIES
APRIL- MAY	1. Electrostatics 2. Current Electricity	1. To determine resistance per unit length of a given wire by plotting a graph of potential difference versus current. 2. To find resistance of a given wire using meter bridge and hence determine the specific resistance of its material.	1. To show that there are two kinds of charges and that like charges repel and unlike charges attract each other. 2. To assemble the components of a given electrical circuit. 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. 4. To assemble a household circuit comprising three, bulbs, three (uniflo) switches, a - fuse and a power source. 5. To study the variation in potential drop with length of a wire for a steady current. 6. To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter. 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.
JULY- AUGUST	3. Magnetic Effect of Current and Magnetism 4. Electro- magnetic Induction and Alternating Current 5. Electro-magnetic Waves	3. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. 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.	8. To demonstrate that a current measuring device has finite non-zero resistance. (measurement of resistance of an ammeter). 9. To demonstrate that a voltage measuring device has non-infinite resistance (measurement of resistance of a voltmeter). 10. To show the magnetic field lines with the help of iron filings of bar magnet solenoid. 11. To measure the resistance and impedance of an inductor with or without iron core. 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 from it.

Class 11th and 12th
2026-27

PHYSICS:-
CLASS 11th:-

BI MONTHLY DISTRIBUTION PHYSICS CLASS 11 SESSION 2026-27

MONTH	UNIT	PRACTICALS	ACTIVITIES
APR	0. Mathematical Tools		
MAY-JULY	1. Physical world and measurement 2. Kinematics	1. Use of Vernier Callipers (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. Use of screw gauge (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
AUG	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 squares of amplitude and time.
SEPT	REVISION & FIRST TERM EXAMINATIONS		
OCT-NOV	6. Gravitation 7. Properties of Matter 8. Thermodynamics 9. Behaviour of perfect gas and kinetic theory of gases	11. To determine young's modulus of a given wire by using Searle's apparatus. 12. To find out the spring constant of a helical spring from its load-extension graph. 13. To determine the surface tension of water by capillary rise method. 14. To determine the coefficient of viscosity of a given liquid by measuring the terminal velocity of spherical body. 15. To study the relationship between the temperature of a hot body and time by plotting a cooling curve. 16. To determine the specific heat capacity of a given (i) solid (ii) liquid by method of mixtures. 17. To study the variation in volume (V) with pressure (P) for a sample of	8. To observe the decrease in pressure with increase in velocity of a fluid. 9. To observe change of state and plot a cooling curve for molten wax. 10. To observe and explain the effect of heating on a bi-metallic strip. 11. To note the change in level of liquid in a container on heating and interpret the observations. 12. To study the effect of detergent on surface tension of water by observing capillary rise. 13. To study the factors affecting the rate of loss of heat of a liquid. 14. To study the effect of load on depression of a suitably clamped metre-scale loaded. (i) at its end (ii) in the middle.

APRIL - MAY 2025	116	CHAPTER 1: SOME BASIC CONCEPTS OF CHEMISTRY	Basic Laboratory Techniques Cutting glass tube and glass rod Bending a glass tube Drawing out a glass jet Fitting a cork
		CHAPTER 2: STRUCTURE OF ATOM	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 2025	116	CHAPTER 3: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES CHAPTER 4: CHEMICAL BONDING AND MOLECULAR STRUCTURE	Any one of the following experiments: 1- 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. 2- Comparing the pH of solutions of strong and weak acid of same concentration. 3- Study the pH change in the titration of a strong base using Universal Indicator. 4- Study of pH change by common-ion effect in case of weak acids and weak bases.
SEPTEMBER 2026	116	REVISION AND EXAMINATION	
OCTOBER - NOVEMBER 2026	116	CHAPTER 5: THERMODYNAMICS 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+} , Cr^{+2} , Al^{3+} , Fe^{3+} , Mn^{2+} , NO_3^- , Zn^{2+} , Co^{2+} , Ca^{2+} , Na^+ , 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-} , $C_2O_4^{2-}$, CH_3COO^- (Some insoluble salts excluded) Detection of nitrogen, sulphur, chlorine in organic compounds
DECEMBER 2026 - JANUARY 2027	116	CHAPTER 6: EQUILIBRIUM CHAPTER 7: REDOX REACTIONS	B. Chemical Equilibrium One of the following experiments: Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either ion. Study the shift in equilibrium between $[Co(H_2O)_6]^{2+}$ and chloride ions by changing the concentration of either of the ions.

JULY- AUGUST	(BIMONTHLY CLASS TEST I SYLLABUS UPTO JULY 15th) UNIT II GENETICS AND EVOLUTION Chapter 6 : Molecular Basis of Inheritance Chapter 8 : Evolution UNIT III BIOLOGY IN HUMAN WELFARE Chapter 7 : Human Health and Disease Chapter 9 : Microbes in Human Welfare	Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc. Meiosis in onion bud cell or grasshopper testis through permanent slides. Prepared pedigree charts of any one of the genetic traits such as rolling tongue, blood groups, ear lobes, widow's peak and colour blindness. Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides or specimens. Comment on symptoms of diseases that they cause. * Study effect of different temperatures and three different pH on the activity of salivary amylase on starch.
SEPTEMBER	REVISION & TERM I EXAMINATIONS	
OCTOBER- NOVEMBER	(BIMONTHLY CLASS TEST 2 IN LAST WEEK OF NOVEMBER) UNIT IV BIOTECHNOLOGY Chapter 10 : Biotechnology : Principles and Processes Chapter 12 : Biotechnology and Its Applications UNIT V ECOLOGY Chapter 13 : Organisms and Populations Chapter 14 : Ecosystem	Collect 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. Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organisms. Study the plant population density by quadrate method. Study the plant population frequency by quadrate method. Two plants and two animals (models/virtual images) found in teric conditions. Comment upon their morphological adaptations. Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.
DECEMBER	UNIT V ECOLOGY Chapter 15 : Biodiversity and Conservation	Study the presence of suspended particulate matter in air at two widely different sites.
JANUARY	REVISION & PRE-BOARD EXAMINATIONS	
FEBRUARY	REVISION & PRE-BOARD EXAMINATIONS	
MARCH	BOARD EXAMINATIONS	

MONTH	CLASS	UNIT/CHAPTER	Experiments/ Activities
APRIL - MAY 2026	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 hydrogen peroxide 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 $\text{Zn/Zn}^{2+}/\text{Cu}^{2+}/\text{Cu}$ with change in concentration of electrolytes (CuSO_4 or ZnSO_4) at room temperature.
JULY - AUGUST 2026	12th	CHAPTER 4: s AND p 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+}, As^{5+}, Fe^{3+}, Mn^{2+}, Zn^{2+}, Co^{2+}, Ni^{2+}, Cr^{3+}, Sr^{2+}, Ba^{2+}, Mg^{2+}, NH_4^+ Anions- $(\text{CO}_3)^{2-}$, S^{2-}, $(\text{SO}_3)^{2-}$, $(\text{NO}_2)^-$, $(\text{SO}_4)^{2-}$, Cl^-, Br^-, I^-, PO_4^{3-}, $(\text{C}_2\text{O}_4)^{2-}$, CH_3COO^-, NO_3^- Experiment : Study of carbohydrates, fats and proteins in pure form and detection of their presence in given food stuffs
SEPTEMBER 2026	12th	REVISION AND EXAMINATION	
OCTOBER - NOVEMBER 2026	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 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 (anisond), Ajwain (carum) Illaichi (cardamom)

	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, wool and Nylon. Activity 8: Study of adsorption and absorption.
JANUARY 2027	12th	REVISION AND PRE-BOARD EXAM	
FEBRUARY 2027	12th	REVISION AND FINAL EXAM	

**BIOLOGY:-
CLASS 11th:-
BI MONTHLY DISTRIBUTION SESSION 2026-27 BIOLOGY**

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	Parts of a compound microscope. Specimens/slides/ models and identifying features of Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledon plant, one dicotyledonous plant and one lichen. 3. Virtual Specimens/slides/ models and identifying features of- Amoeba, Hydra, liverfluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, Rohu, frog, lizard, pigeon and rabbit.
JULY-AUGUST	(BIMONTHLY CLASS TEST I SYLLABUS UPTO JULY 15 th) 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	Study and describe locally available common flowering plants, from family Solanaceae (Jowara, Asteraceae, or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, mother and every to show number of whorls (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf arrangement, shape, venation, simple and compound). Preparation and study of T.S. of Dicot and monocot roots and stems (primary). Study of distribution of stomata on the upper and lower surface of leaves. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials. Observe in onion root tip cells and animal cells (grasshopper) from permanent slides. Different types of Invertebrates (coelomate and acoelomate).
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	Study of osmosis by potato osmometer. Study of plasmolysis in epidermal peels (e.g. Rhoeo/lily leaves or fleshy scale leaves of onion bulb). Comparative study of the rates of transpiration in the upper and lower surfaces of leaves. Separation of plant pigments through paper chromatography. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds. Test for the presence of urea in urine. 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	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	

**BIOLOGY
CLASS 12 th:-**

CLASS 12th

MONTH	(UNIT/CHAPTER)	PRACTICALS
APRIL-MAY	UNIT I REPRODUCTION Chapter 1 : Sexual Reproduction in Flowering Plants Chapter 2 : Human Reproduction Chapter 3 : Reproductive Health UNIT II GENETICS AND EVOLUTION Chapter 4 : Principles of Inheritance and Variation	Study pollen germination on a slide. (Make temporary mount). Pollen germination on stigma through a permanent slide. Prepare a temporary mount of onion root tip to study mitosis. Flowers adapted to pollination by different agencies (wind, insects, and birds). Identification of stages of gamete development. i.e. T.S of testis and T.S of ovary through permanent slides (from grasshopper/testis). T.S of histone through permanent slides (Mammalian). Controlled pollination – vasectomy, bagging and bagging. Mendelian inheritance using seeds of different colour/size of any plant.

(BIMONTHLY CLASS TEST 1 SYLLABUS UPTO JULY 15th)

UNIT II GENETICS AND EVOLUTION

Chapter 5 : Molecular Basis of Inheritance

Chapter 6 : Evolution

UNIT III BIOLOGY IN HUMAN WELFARE

Chapter 7 : Human Health and Disease

Chapter 8 : Microbes in Human Welfare

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

Make inulin bud cell or grasshopper testis through permanent slides.

Prepared pedigree charts of any one of the genetic traits such as rolling tongue, blood groups, ear lobes, widow's peak and colour blindness.

Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides or specimens. Comment on symptoms of diseases that they cause.

* Study effect of different temperatures and three different pH on the activity of salivary amylase on starch.

SEPTEMBER

REVISION & TERM I EXAMINATIONS

OCTOBER-NOVEMBER

(BIMONTHLY CLASS TEST 2 IN LAST WEEK OF NOVEMBER)

UNIT IV BIOTECHNOLOGY

Chapter 9 : Biotechnology : Principles and Processes

Chapter 10 : Biotechnology and its Applications

UNIT V ECOLOGY

Chapter 11 : Organisms and Populations

Chapter 12 : Ecosystem

Collect 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.

Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organisms. Study the plant population density by quadrat method. Study the plant population frequency by quadrat method.

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

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

DECEMBER

UNIT V ECOLOGY

Chapter 13 : Biodiversity and Conservation

Study the presence of suspended particulate matter in air at two widely different sites.

JANUARY

REVISION & PRE-BOARD EXAMINATIONS

FEBRUARY

MARCH

BOARD EXAMINATIONS