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DAV Centre for Academic Excellence
DAV College Managing Committee
Chitra Gupta Road, Paharganj, New Delhi-55

Ref. No. DAVCAE/2021-22/110 Date: 19/08/2021

Dr.(Mrs.) Nisha Peshin
Director (Academics)

Annual Examination of Class XI: Academic Session 2021-22

Dear Sir/Madam,

1. Further to our letter no. DAVCAE/2021-22/105 dated 12.08.2021.

2. The detailed Syllabus of Annual Examination of Class XI to be held in March/April, 2022 is enclosed herewith for your necessary action..

Yours sincerely,

(Dr. Nisha Peshin)

Hindi Core (XI)

Code No. (302)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks - 40

परीक्षा भार विभाजन द्वितीय सत्र				
		विषयवस्तु	उप भार	कुलभार
1		कार्यालयी हिंदी और रचनात्मक लेखन		20
	1	दी गई स्थिति / घटना के आधार पर रचनात्मक लेखन (विकल्प सहित) (निबंधात्मक प्रश्न) (5 अंक x 1 प्रश्न)	05	
	2	औपचारिक/अनौपचारिक पत्र (निबंधात्मक प्रश्न) (5 अंक x 1 प्रश्न)	05	
	3	व्यावहारिक लेखन (प्रतिवेदन, प्रेस-विज्ञप्ति, परिपत्र, कार्यसूची/कार्यवृत्त से संबंधित दो लघु उत्तरीय प्रश्न - एक तीन व एक दो अंक का) (विकल्प सहित) (3 अंक x 1 प्रश्न) + (2 अंक x 1 प्रश्न)	05	
	4	जनसंचार माध्यम और पत्रकारिता के विविध आयामों पर से संबंधित दो लघु उत्तरीय प्रश्न-एक तीन व एक दो अंक का) (विकल्प सहित) (3 अंक x 1 प्रश्न) + (2 अंक x 1 प्रश्न)	05	
2		पाठ्यपुस्तक आरोह भाग – 2 तथा अनुपूरक पाठ्यपुस्तक वितान भाग-2		20
	1	काव्य खंड पर आधारित तीन प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर (लगभग 50-60 शब्दों में) (3 अंक x 2 प्रश्न)	6	
	2	गद्य खंड पर आधारित चार प्रश्नों में से किन्हीं तीन प्रश्नों के उत्तर (लगभग 50-60 शब्दों में) (3 अंक x 3 प्रश्न)	9	
	3	अनुपूरक पाठ्यपुस्तक वितान भाग-2 के पठित पाठों पर तीन अंक का एक तथा दो अंक का एक प्रश्न पूछा जाएगा (विकल्प सहित) (1 X 3)+(1 X 2)	5	
3		आंतरिक मूल्यांकन		10
		परियोजना कार्य	10	
कुल अंक				50

सत्र-2 2021-22 में निम्नलिखित पाठ सम्मिलित किए गए हैं –

पाठ्यपुस्तक - आरोह भाग – 1

काव्य खंड	गद्य खंड
भवानी प्रसाद मिश्र - घर की याद	कृष्णनाथ - स्पीति में बारिश
दुष्यंत कुमार - गज़ल	कृश्नचंदर - जामुन का पेड़
निर्मला पुतुल - आओ, मिलकर बचाएँ	जवाहरलाल नेहरू - भारत माता

अभिव्यक्ति और माध्यम

1. कार्यालयी लेखन और प्रक्रिया
2. स्ववृत्त लेखन और रोजगार संबंधी आवेदन पत्र
3. जनसंचार माध्यम
4. पत्रकारिता के विविध आयाम

अनुपूरक पाठ्यपुस्तक - वितान भाग – 1

1. अनुपम मिश्र - राजस्थान की रजत बूँदें
2. बेबी हालदार - आलो - आँधारि

प्रस्तावित पुस्तकें:

1. **आरोह, भाग**-1, एन.सी.ई.आर.टी., नई दिल्ली द्वारा प्रकाशित
2. **वितान भाग–1,** एन.सी.ई.आर.टी., नई दिल्ली द्वारा प्रकाशित
3. **अभिव्यक्ति और माध्यम**, एन.सी.ई.आर.टी., नई दिल्ली द्वारा प्रकाशित

English (XI)

Code No. (301)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks - 40

SECTION		MARKS
A	**Reading Comprehension:** • Unseen passage (factual, descriptive or literary /discursive or persuasive) • Unseen passage for Note Making and Summarising	 8 5 13
B	**Creative Writing Skills and Grammar**: **Short Writing Tasks** • Posters **Long Writing Tasks** • Official Letters: e.g. to school/college authorities (regarding admissions, school issues, requirements / suitability of courses) • Debate **Grammar** • Determiners • Tenses • Re-ordering of Sentences **{MCQs on Gap filling/ Transformation of Sentences}**	 3 5 4 12

	Literature: Questions based on extracts/texts to assess comprehension and appreciation, analysis, inference, extrapolation **Book-Hornbill:** • The Voice of the Rain (Poem) • The Ailing Planet: The Green Movement's Role (*Prose*) • The Browning Version(Play) • Childhood (Poem) • Silk Road (Prose) **Book-Snapshots:** • Albert Einstein at School (Prose) • Mother's Day (Play) • Birth (Prose)	**9 Marks for Hornbill** **6 Marks for Snapshots** **15**
	TOTAL	**40**
	ALS	**10**
	GRAND TOTAL	**40+10=50 MARKS**

Mathematics(XI)

Code No. (041)

Session – 2021-22

Annual Examination March/April, 2022

Max. Marks – 40

No.	Units	Marks
I	Sets & Functions	10
	(a) *Functions (02)	
	(b) Trigonometric function (08)	
II	Algebra	08
III	Coordinate Geometry	10
	(a) *Straight Line (02)	
	(b) Conic Sections, introduction to three dimentional geometry (08)	
IV	Calculus	08
	(a) *Limits (04)	
	(b) Derivatives (04)	
V	Statistics & Probability	04
	Total	40
	Internal Assessment	10
	Total	50

*** Topics from Term - I**

Unit – I: Sets and Functions

a) *Functions

Function as a special type of relation. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest interger functions, with their graphs.

b) **Trigonometric Functions**

Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity sin2x + cos2x = 1, for all x. Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing sin ($x \pm y$) and cos ($x \pm y$) in terms of sin$x$, sin$y$, cos$x$ & cos$y$ and their simple applications. Deducing identities like the following:

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x}$$

$$\sin\alpha \pm \sin\beta = 2\sin\frac{1}{2}(\alpha \pm \beta)\cos\frac{1}{2}(\alpha \mp \beta)$$

$$\cos\alpha + \cos\beta = 2\cos\frac{1}{2}(\alpha + \beta)\cos\frac{1}{2}(\alpha - \beta)$$

$$\cos\alpha - \cos\beta = -2\sin\frac{1}{2}(\alpha + \beta)\sin\frac{1}{2}(\alpha - \beta)$$

Identities related to sin2x, cos2x, tan2 x, sin3x, cos3x and tan3x.

Unit-II: Algebra

1. **Linear Inequalities**

Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Graphical method of finding a solution of system of linear inequalities in two variables.

2. **Permutations and Combinations**

Fundamental principle of counting. Factorial n. (n!) Permutations and combinations, formula for ${}^{n}P_{r}$ and ${}^{n}C_{r}$, simple applications.

Unit-III: Coordinate Geometry

1. ***Straight Lines**

Slope of a line and angle between two lines. Various forms of equations of a line: Parallel to axis, Point-slope form, Slope- interception form, two-point form, intercept form and normal form. General equation of a line. Distance of a point form a line.

2. Conic Sections

Sections of a cone: circles, ellipse, parabola, hyperbola. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.

3. Introduction to Three dimentional Geometry

Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula.

Unit – IV: Calculus

1. *Limits

Intutive idea of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions.

2. Derivatives

Derivative introduced as rate of change both as that of distance function and geometrically. Definition of Derivative, relate it to scope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.

Unit-V: Statistics and Probability

1. Probability

Random experiments; outcomes, sample spaces (set representation). Events; occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Probability of an event, probability of 'not', 'and' and 'or' events.

INTERNAL ASSESSMENT	10 MARKS
Periodic Test	5 Marks
Mathematics Activities: Activity file record +Term end assessment of one activity & Viva	5 Marks

Note: Internal Assessment will be carried out under the school arrangements.

Applied Mathematics(XI)

Code No. (241)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks - 40

No.	Units	Marks
II	Algebra (Continued)	04
IV	Calculus a) * Functions 4.1, 4.2, 4.3, 4.4 (02) b) 4.5, 4.6, 4.7, 4.8 (04)	06
V	Probability	08
VI	* Descriptive Statistics	06
VII	Basic of Financial Mathematics	11
VIII	Coordinate Geometry	05
	Total	40
	Internal Assessment	10
	Total	50

* Topics from Term –I

Sl. No.	Contents	Learning Outcomes: Students will be able to	Notes / Explanation
Permutations and Combinations			
2.15	Factorial	• Define factorial of a number • Calculate factorial of a number	• Definition of factorial: $n! = n(n-1)(n-2)\ldots3.2.1$ Usage of factorial in counting principles
2.16	Fundamental Principle of Counting	• Appreciate how to count without counting	• Fundamental Principle of Addition • Fundamental Principle of Multiplication
2.17	Permutations	• Define permutation • Apply the concept of permutation to solve simple problems	• Permutation as arrangement of objects in a definite order taken some or all at a time • Theorems under different conditions resulting in ${}^nP_r=\frac{n!}{(n-r)!}$ or n^r or $\frac{n!}{n_1!n_2!\ldots n_k!}$ arrangements
2.20	Combinations	• Define combination • Differentiate between permutation and combination • Apply the formula of combination to solve the related problems	-The number of combinations of n different objects taken r at a time is given by ${}^nC_r=\frac{n!}{r!.(n-r)!}$ Some results on combinations: • ${}^nC_0 = 1 = {}^nC_n$ • ${}^nC_a = {}^nC_b \Rightarrow a=b$ or $a+b=n$ • ${}^nC_r = {}^nC_{n-r}$ • ${}^nC_r + {}^nC_{r-1} = {}^{n+1}C_r$

UNIT – 4 CALCULUS			
4.1	Functions	• Identify dependent and independent variables • Define a function using dependent and independent variable	• Dependent variable and independent variable • Function as a rule or law that defines a relationship between one variable (the independent variable) and another variable (the dependent variable)
4.2	Domain and Range of a function	• Define domain, range and co-domain of a given function	• Domain as a set of all values of independent variable • Co-domain as a set of all values of dependent variable • Range of a function as set of all possible resulting values of dependent variable
4.3	Types of functions	• Define various types of functions • Identify domain, co-domain and range of the function	• Following types of functions with definitions and characteristics Constant function, Identity function, Polynomial function, Rational function, Logarithm function, Exponential function, Modulus function, Greatest integer function, Signum function, Algebraic function
4.5	Concepts of limits and continuity of a function	• Define limit of a function • Solve problems based on the algebra of limits • Define continuity of a function	• Left hand limit, Right hand limit, Limit of a function, Continuity of a function
4.6	Instantaneous rate of change	• Define instantaneous rate of change	• The ratio $\frac{\Delta y}{\Delta x} = \frac{f(x+\Delta x)-f(x)}{\Delta x}$ as instantaneous rate of change, where Δy is change in y and Δx is change in x at any instant
4.7	Differentiation as a process of finding derivative	• Find the derivative of the functions	• Derivatives of functions (non-trigonometric only)
4.8	Derivatives of algebraic functions using Chain Rule	• Find the derivative of function of a function	• If $y = f(u)$ where $u = g(x)$ then differential coefficient of y w.r.t x is $\frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx}$

UNIT – 5 PROBABILITY			
5.1	Introduction	• Appreciate the use of probability in daily life situations	• Probability as quantitative measure of uncertainty • Use of probability in determining the insurance premium, weather forecasts etc.
5.2	Random experiment and sample space	• Define random experiment and sample space with suitable examples	• Sample space as set of all possible outcomes
5.3	Event	• Define an event • Recognize and differentiate different types of events and find their probabilities	• Types of Event: Impossible and sure event, Independent and dependent event, mutually exclusive and exhaustive event
5.4	Conditional Probability	• Define the concept of conditional probability • Apply reasoning skills to solve problems based on conditional probability	• Conditional Probability of event E given that F has occurred is: $P(E\|F) = \frac{P(E\cap F)}{P(F)}$, $P(F) \neq 0$
5.5	Total Probability	• Interpret mathematical information and identify situations when to apply total probability • Solve problems based on application of total probability	• Total Probability: Let $E_1, E_2 \ldots, E_n$ be a partition of the sample space S, then probability of an event A associated with S is: $P(A) = \sum_{j=1}^{n} P(E_j)P(A\|E_j)$
5.6	Bayes' Theorem	• State Bayes' theorem • Solve practical problems based on Bayes' Theorem	• Bayes' Theorem: If $E_1, E_2, \ldots, E_n$ be n non empty events which constitute a partition of a sample space S and A be any event with non zero probability, then: $P(E_i\|A) = \frac{P(E_i)P(A\|E_i)}{\sum_{j=1}^{n} P(E_j)P(A\|E_j)}$

Physics (XI)
Code No. (042)
Session -2021-22

Annual Examination March/April, 2022

Max Marks: 35

Unit		Marks
Unit–VII	**Properties of Bulk Matter**	**18**
	Chapter–9: Mechanical Properties of Solids	
	Chapter–10: Mechanical Properties of Fluids	
	Chapter–11: Thermal Properties of Matter	
Unit–VIII	**Thermodynamics**	
	Chapter–12: Thermodynamics	
Unit–IX	**Behaviour of Perfect Gases and Kinetic Theory of Gases**	
	Chapter–13: Kinetic Theory	
Unit–X	**Oscillations and Waves**	**10**
	Chapter–14: Oscillations	
	Chapter–15: Waves	
*	Elementary concepts of differentiation and integration with example Unit vector; resolution of a vector in a plane, Scalar and Vector product of vectors and their applications in specific cases like work done by a force, torque and angular momentum Motion in a plane - projectile motion and circular motion	**05**
*	Conservative and non-conservative forces Equilibrium of rigid bodies Gravitational potential energy and gravitational potential	**02**
	Total	**35**

***Topics from Term –I Syllabus**

Unit VII: Properties of Bulk Matter

Chapter–9: Mechanical Properties of Solids

Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus

Chapter–10: Mechanical Properties of Fluids

Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure.

Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its applications.

Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.

Chapter–11: Thermal Properties of Matter

Heat, temperature, (recapitulation only) thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity.
Heat transfer-conduction, convection and radiation (recapitulation only), thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law, Greenhouse effect.

Unit VIII: Thermodynamics

Chapter–12: Thermodynamics

Thermal equilibrium and definition of temperature (zeroth law of thermodynamics), heat, work and internal energy. First law of thermodynamics, isothermal and adiabatic processes.

Second law of thermodynamics: reversible and irreversible processes

Unit IX: Behaviour of Perfect Gases and Kinetic Theory of Gases

Chapter–13: Kinetic Theory

Equation of state of a perfect gas, work done in compressing a gas.
Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.

Unit X: Oscillations and Waves

Chapter–14: Oscillations

Periodic motion - time period, frequency, displacement as a function of time, periodic functions.

Simple harmonic motion (S.H.M) and its equation; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period. Free, forced and damped oscillations (qualitative ideas only), resonance.

Chapter–15: Waves

Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, Beats

PRACTICALS

Class XI Syllabus for TERM II

The record, to be submitted by the students, at the time of their annual examination, has to include:

Record of at least 4 Experiments, to be performed by the students

Record of at least 3 Activities [with 3 each from section A and section B], to be demonstrated by teacher.

Two experiments one from each section	**8Marks**
Practical record (experiment and activities)	2Marks
Viva on experiments, and activities	**5** Marks
Total	**15 Marks**

Experiments

1. To determine Young's modulus of elasticity of the material of a given wire.

   OR

   To find the force constant of a helical spring by plotting a graph between load and extension.
2. To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V, and between P and 1/V.
3. To determine the surface tension of water by capillary rise method.

   OR

   To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
4. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
5. To determine specific heat capacity of a given solid by method of mixtures.
6. To study the relation between frequency and length of a given wire under constant tension using sonometer.

   OR

   To study the relation between the length of a given wire and tension for constant frequency using sonometer.
7. To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

Activities

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.

4. To study the effect of detergent on surface tension of water by observing capillary rise.
5. To study the factors affecting the rate of loss of heat of a liquid.
6. To study the effect of load on depression of a suitably clamped metre scale loaded at (i) its end (ii) in the middle.
7. To observe the decrease in pressure with increase in velocity of a fluid.

Practical Examination for Visually Impaired Students Class XI

Note: Same Evaluation scheme and general guidelines for visually impaired students as given for Class XII may be followed.

A. Items for Identification/Familiarity of the apparatus for assessment in practicals (All experiments)

Spherical ball, Cylindrical objects, vernier calipers, beaker, calorimeter, Screw gauge, wire, Beam balance, spring balance, weight box, gram and milligram weights, forceps, Parallelogram law of vectors apparatus, pulleys and pans used in the same 'weights' used, Bob and string used in a simple pendulum, meter scale, split cork, suspension arrangement, stop clock/stop watch, Helical spring, suspension arrangement used, weights, arrangement used for measuring extension, Sonometer, Wedges, pan and pulley used in it, 'weights' Tuning Fork, Meter scale, Beam balance, Weight box, gram and milligram weights, forceps, Resonance Tube, Tuning Fork, Meter scale, Flask/Beaker used for adding water.

B. List of Practical's

1. To measure diameter of a small spherical/cylindrical body using vernier calipers.
2. To measure the internal diameter and depth of a given beaker/calorimeter using vernier calipers and hence find its volume.
3. To measure diameter of given wire using screw gauge.
4. To measure thickness of a given sheet using screw gauge.
5. To determine the mass of a given object using a beam balance.
6. To find the weight of given body using the parallelogram law of vectors.
7. Using a simple pendulum plot L-T and L-T^2 graphs. Hence find the effective length of second's pendulum using appropriate length values.
8. To find the force constant of given helical spring by plotting a graph between load and extension.
9. (i) To study the relation between frequency and length of a given wire under constant tension using a sonometer.
   (ii) To study the relation between the length of a given wire and tension, for constant frequency, using a sonometer.
10. To find the speed of sound in air, at room temperature, using a resonance tube, by observing the two resonance positions.

Note: The above practicals may be carried out in an experiential manner rather than recording observations.

Chemistry (XI)

Code No. (043)

Session – 2021-22

Annual Examination March/April, 2022

Max .Marks - 35

S. No.	Unit	Marks
1. 2. 3.	States of Matter : Gases and Liquid Chemical Thermodynamics Equilibrium	12
4. 5.	s-Block Elements Some p-Block Elements	7
6.	Hydrocarbons	9
7.	* Redox Reactions	2
8.	* Organic Chemistry : Some basic principles and techniques	5
	Total	35 Marks

*** Topics from Term-I**

States of Matter: Gases and Liquids: Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws in elucidating the concept of the molecule, Boyle's law, Charles law, Gay Lussac's law, Avogadro's law, ideal behaviour, empirical derivation of gas equation, Avogadro's number, ideal gas equation and deviation from ideal behaviour.

Chemical Thermodynamics: Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions.
First law of thermodynamics -internal energy and enthalpy, measurement of ΔU and ΔH, Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction)
Introduction of entropy as a state function, Gibb's energy change for spontaneous and non-spontaneous processes.
Third law of thermodynamics (brief introduction).

Equilibrium: Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, buffer solution, solubility product, common ion effect (with illustrative examples).

s -Block Elements: Group 1 and Group 2 Elements -General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens, uses.

Some p -Block Elements: General Introduction to p -Block Elements
Group 13 Elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group, Boron - physical and chemical properties.
Group 14 Elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first elements. Carbon-catenation, allotropic forms, physical and chemical properties.

Hydrocarbons: Classification of Hydrocarbons Aliphatic Hydrocarbons:
Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions.

Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.
Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.

Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.

* **Redox Reactions:**

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number.

* **Organic Chemistry : Some basic Principles and Techniques :** General introduction, classification and IUPAC nomendature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electrometric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.

PRACTICALS

Term II: At the end of Term II, **a 15-mark Practical** would be conducted under the supervision of subject teacher. This would contribute to the overall practical marks for the subject.
OR

In case the situation of lockdown continues beyond December 2021, a *Practical Based Assessment (pen-paper) of 10 marks and Viva 5 marks* would be conducted at the end of Term II by the subject teacher. This would contribute to the overall practical marks for the subject.

TERM-II Evaluation Scheme

S. No	Practical	Marks
1.	Salt Analysis	8
2.	Content Based Experiment	2
3	Project Work and Viva(Internal)	5
	TOTAL	15

A. Qualitative Analysis(Marks 8)

a. 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-}, 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)

b. Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.

B. Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid. **(Marks 2)**

PROJECTS scientific investigations involving laboratory testing and collecting information from other sources.

Guidelines on Syllabus for Visually Handicapped students.

Schools are expected to rationalise and divide the syllabus of practicums for visually handicapped students into two halves on the basis of collective guidelines given for the same in the complete syllabus and as per the convenience of their students. This flexibility is given in view of the special condition of visually handicapped students. They will, however, be assessed on 15 marks in practical examination in both the terms as rest of their peers

Biology (XI)

Code No. (044))

Session – 2021-22

Annual Examination March/April, 2022

Max .Marks - 35

Theory	EVALUATION SCHEME	
Unit		**Marks**
II	* Structural Organisation in Animals (Animal Tissues only) : Chapter 7	2
III	* Cell : The Unit of Life - Chapter 8 * Biomolecules – Chapter 9 05 Cell: Structure and Function : Chapter-10 04	9
IV	Plant Physiology: Chapter 13,14 and 15	9
V	Human Physiology : Chapter 17, 18, 19, 20, 21 and 22	15
	Total	35

*** Topics from Term-I**

Chapter-7: Structural Organization in Animals

Animal tissues.

Unit-III Cell: Structure and Function

Chapter-8: Cell-The Unit of Life

Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus.

Chapter-9: Biomolecules

Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids; Enzymes- types, properties, enzyme action.

Unit-III Cell: Structure and Function

Chapter-10: Cell Cycle and Cell Division

Cell cycle, mitosis, meiosis and their significance

Unit-IV Plant Physiology

Chapter-13: Photosynthesis in Higher Plants

Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.

Chapter-14: Respiration in Plants

Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.

Chapter-15: Plant - Growth and Development

Growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.

Unit-V Human Physiology

Chapter-17: Breathing and Exchange of Gases

Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.

Chapter-18: Body Fluids and Circulation

Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure.

Chapter-19: Excretory Products and their Elimination

Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in

excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.

Chapter-20: Locomotion and Movement
Skeletal muscle, contractile proteins and muscle contraction.

Chapter-21: Neural Control and Coordination
Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse.

Chapter-22: Chemical Coordination and Integration
Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease.
Note: Diseases related to all the human physiological systems to be taught in brief.

PRACTICALS

Max. Marks: 15 for Term-II

Evaluation Scheme		
	Term-II	**Marks**
Part I		
One Major Experiment	Experiment No. - 1, 2	**4**
One Major Experiment	Experiment No. - 3, 4 & 5	**3**
Part B		
Spotting (3 Spots of 1 Mark each)	B. 1 & 2	**3**
Practical Record + Investigatory Project & Record +Viva Voce		**5**
Total		**15**

Practicals should be conducted alongside the concepts taught in theory classes.

A: List of Experiments

1. Separation of Plant pigments through paper chromatography.
2. Study of distribution of stomata in the upper and lower surfaces of leaves.
3. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds.
4. Test for presence of sugar in urine.
5. Test for presence of albumin in urine.

B. Study/Observation of the following (spotting) :

B.1. Tissues and diversity in shape and size of animal cells (squamous epithelium, smooth, skeletal and cardiac muscle fibers and mammalian blood smear) through temporary/permanent slides.

B.2. Mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides.

Practical Examination for Visually Impaired Students Class XI

Note: The 'Evaluation schemes' and 'General Guidelines' for visually impaired students as given for Class XII may be followed.

Practicals should be conducted alongside the concepts taught in theory classes.

A. **Items for Identification/Familiarity with the apparatus /equipments/animal and plant material / chemicals etc. for assessment in practicals (All experiments)**

- Mushroom, Succulents such as *Aloe vera*/*Kalanchoe*, Raisins, Potatoes.
- Honey comb, Mollusc shell, Model of cockroach, Pigeon and Star fish.
- Chromatography paper, Chromatography chamber, Alcohol.

B. **List of Practicals:**

1. Identify the given specimen of a fungus – Mushroom, gymnosperm-pine cone.
2. Study honey-bee/butterfly, snail shell, Starfish, Pigeon (through models).

Note: The above practicals may be carried out in an experiential manner rather than recording observations.

Accountancy(XI)

Code No. (055)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks - 40

Units			Marks
2	Accounting Process *Recording of transactions (Journal + Cash Book without GST) Trial Balance and Rectification Accounting for Bills of exchange	 08 06 04	 18
3	Financial Accounting Financial statements of sole Proprietorship Incomplete records	 12 06	 18
4	Computers Accounting	04	04
	Total		40
	Project Work		10
	Total		50

* Topics from Term –I

Unit-2: Accounting Process

- *Entry Journal
- *Cash Book : simple, Cashbook with bank column

Accounting for Bills of Exchange • Bill of exchange and Promissory Note: Definition, Specimen, Features, Parties. • Difference between Bill of Exchange and Promissory Note • Terms in Bill of Exchange: i. Term of Bill ii. Accommodation bill (concept) iii. Days of Grace iv. Date of maturity v. Discounting of bill	• acquire the knowledge of using bills of exchange and promissory notes for financing business transactions. • understand the meaning and distinctive features of these instruments and develop the skills of their preparation. • state the meaning of different terms used in bills of exchange and their implication in accounting. • explain the method of recording of bill transactions.

vi. Endorsement of bill vii. Bill after due date viii. Negotiation ix. Bill sent for collection x. Dishonour of bill • Accounting Treatment ***Note: excluding accounting treatment for accommodation bill*** **Trial balance and Rectification of Errors** • Trial balance: objectives and preparation **(Scope:** *Trial balance with balance method only*) • Errors: types-errors of omission, commission, principles, and compensating; their effect on Trial Balance. • Detection and rectification of errors; preparation of suspense account.	• state the need and objectives of preparing trial balance and develop the skill of preparing trial balance. • appreciate that errors may be committed during the process of accounting. • understand the meaning of different types of errors and their effect on trial balance. • develop the skill of identification and location of errors and their rectification and preparation of suspense account.

Part B: Financial Accounting - II

Unit 3: Financial Statements of Sole Proprietorship

Units/Topics	Learning Outcomes
Financial Statements Meaning, objectives and importance; Revenue and Capital Receipts; Revenue and Capital Expenditure; Deferred Revenue expenditure. Trading and Profit and Loss Account: Gross Profit, Operating profit and Net profit. Preparation. Balance Sheet: need, grouping and marshalling of assets and liabilities. Preparation. Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss, goods taken for personal use/staff welfare, interest on capital and managers commission.	**After going through this Unit, the students will be able to:** • state the meaning of financial statements the • purpose of preparing financial statements. • state the meaning of gross profit, operating profit and net profit and develop the skill of preparing trading and profit and loss account. • explain the need for preparing balance sheet. • understand the technique of grouping and marshalling of assets and liabilities. • appreciate that there may be certain items other than those shown in trial balance which may need adjustments while preparing financial statements.

Preparation of Trading and Profit and Loss account and Balance Sheet of a sole proprietorship with adjustments. **Incomplete Records** Features, reasons and limitations. Ascertainment of Profit/Loss by Statement of Affairs method.	• develop the understanding and skill to do adjustments for items and their presentation in financial statements like depreciation, closing stock, provisions, abnormal loss etc. • develop the skill of preparation of trading and profit and loss account and balance sheet. • state the meaning of incomplete records and their uses and limitations. • develop the understanding and skill of computation of profit / loss using the statement of affairs method.

Unit 4: Computers in Accounting

Units/Topics	Learning Outcomes
• Introduction to computer and accounting information system (AIS): Introduction to computers (elements, capabilities, limitations of computer system)	**After going through this Unit, the students will be able to:** • state the meaning of a computer, describe its components, capabilities and limitations. • state the meaning of accounting information system.
Scope: *(i) The scope of the unit is to understand accounting as an information system for the generation of accounting information and preparation of accounting reports.* *(ii) It is presumed that the working knowledge of any appropriate accounting software will be given to the students to help them learn basic accounting operations on computers.*	• appreciate the need for use of computers in accounting for preparing accounting reports. • develop the understanding of comparing the manual and computerized accounting process and appreciate the advantages and limitations of automation. • understand the different kinds of accounting software.

Part C: Project Work :

PARTICULARS	MARKS
Project (Financial statements and depiction using diagrammatic / graphical tools)	10

Note: Please refer CBSE Project guidelines for project as given vide CBSE Cir. No. A cad-53/2021.

Economics (XI)

Code No. (30)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks - 40

Units		Marks
Part A	**Statistics for Economics**	
	Statistical Tools and Interpretation – Measures of Dispersion Correlation, Index Number	17
Part B	**Introductory Microeconomics**	
	*Meaning of micro economics and macro economics, Central problem of economy: what, how and for whom to produce	03
	*Demand and Elasticity of demand	03
	Producer Behaviour and Supply	10
	Forms of Market and Price Determination under perfect competition with simple application	07
	Total	40
	Project work	10
	Total	50

* **Topics from Term –I**

Part A: Statistics for Economics

Unit 3: Statistical Tools and Interpretation

Measures of Dispersion - absolute dispersion standard deviation); relative dispersion co-efficient of variation)

Correlation – meaning and properties, scatter diagram; Measures of correlation - Karl Pearson's method (two variables ungrouped data)

Introduction to Index Numbers - meaning, types - wholesale price index, consumer price index, uses of index numbers; Inflation and index numbers.

Part B: Introductory Microeconomics

*Unit 4: Introduction

Meaning of micro economics and macro economics, Central problem of economy: what, how and for whom to produce.

*Unit 5: Demand

Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method.

Unit 6: Producer Behaviour and Supply

Meaning of Production Function – Short-Run and Long-Run Total Product, Average Product and Marginal Product.

Returns to a Factor

Cost: Short run costs - total cost, total fixed cost, total variable cost; Average cost; Average fixed cost, average variable cost and marginal cost-meaning and their relationships.

Revenue - total, average and marginal revenue - meaning and their relationship.

Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply - percentage-change method.

Unit 7: Forms of Market and Price Determination under Perfect Competition with simple applications.

Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply.

Simple Applications of Demand and Supply: Price ceiling, price floor.

Part C: Project in Economics

Note: Please refer CBSE Project guidelines for project as given vide CBSE Cir. No. A cad-53/2021.

Bussiness Studies(XI)

Code No. (054)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks - 40

Units		Marks
1	Sources of Business Finances Small Business and Entrepreneurship Development	20
2	Internal Trade International Business — 12 *Objective of Business *Company- Concept, merits and limitation *Types : i) Public and Private — 08 ii) One Person Company - Concept	20
	Total	40
	Project Work	10
	Total	50

* Topics from Term –I

Part B: Finance and Trade

Unit 7: Sources of Business Finance

Business finance: Concept and Importance	• State the meaning, nature and importance of business finance.
Owners' funds- equity shares, preferences share, retained earnings, Global Depository receipt (GDR), American Depository Receipt (ADR) and International Depository Receipt (IDR) – concept	• Classify the various sources of funds into owners' funds. • State the meaning of owners' funds. • Understand the meaning of Global Depository receipts, American Depository Receipts and International Depository Receipts.
Borrowed funds: debentures and bonds, loan from financial institution and commercial banks, public deposits, trade credit	• State the meaning of borrowed funds. • Discuss the concept of debentures, bonds, loans from financial institutions and commercial banks ,public deposits&Trade credit • Distinguish between owners' funds and borrowed funds.

Unit 8: Small Business and Entrepreneurship Development

Entrepreneurship Development (ED): Concept and Need. Process of Entrepreneurship Development: Start-up India Scheme, ways to fund startup. Intellectual Property Rights and Entrepreneurship	• Understand the concept and need of Entrepreneurship Development (ED), Intellectual Property Rights • Understand the process of Entrepreneurship Development
Small scale enterprise – Definition	• Understand the definition of small enterprises
Role of small business in India with special reference to rural areas	• Discuss the role of small scale business in India with special reference to rural areas
Government schemes and agencies for small scale industries: National Small Industries Corporation (NSIC) and District Industrial Centre (DIC) with special reference to rural, backward areas	• Appreciate various schemes of NSIC and DIC with special reference to rural, backward area.

Unit 9: Internal Trade

Internal trade - meaning and types of services rendered by a wholesaler and a retailer	• State the meaning and types of internal trade. • Appreciate the services of wholesalers and retailers.
Large scale retailers-Departmental stores, chain stores – concept	• Highlight the distinctive features of departmental stores, chain stores

Unit 10: International Trade

International trade: concept and benefits	• Understand the concept of international trade. • Describe the benefit of international trade to the nation and business firms.

*Unit 1: Evolution and Fundamentals of Business

Objectives of business	• Appreciate the economic and social objectives of business. • Examine the role of profit in business.

***Unit 2: Forms of Business Organizations**

Company - Concept, merits and limitations; Types: Private, Public and One Person Company – Concept	• Identify and explain the concept, merits and limitations. • Understand the concept of private and public companies and one person company. • Understand the meaning of one person company. • Distinguish between a private company and a public company.

Note: Please refer CBSE Project guidelines for project as given vide CBSE Cir. No. A cad-53/2021.

Computer Science(XI)

Code No. (083)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks -35

Units	Unit Name	Sub-Topics		Marks
II	Computational Thinking and Programming -1	• *Conditional Statements • *Iterative Statements • *Strings-Built-in functions • List • Tuples • Dictionary • Python Modules	07 20	27
III	Society Law and Ethics	• Digital Footprints • Digital society and Netizen • Data protection • Cyber-crime • Cyber safety • Safely accessing web sites • E-waste management • Indian Information Technology Act (IT Act) • Technology & Society		8
		Total		35

* Topics from Term –I

Unit II: Computational Thinking and Programming – 1

- *Conditional statements: if, if-else, if-elif-else, flowcharts, simple programs: eg.: absolute value, sort 3 numbers and divisibility of a number.
- * Iterative statements: for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc.
- * built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split()

- Lists: introduction, indexing, list operations (concatenation, repetition, membership & slicing), traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list
- Tuples: introduction, indexing, tuple operations (concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple
- Dictionary: introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions: len(), dict(), keys(), values(), items(), get(), update(), del(), clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them
- Introduction to Python modules: Importing module using 'import <module>' and using from statement, Importing math module (pi, e, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, randrange), statistics module (mean, median, mode)

Unit III: Society, Law and Ethics

- Digital Footprints
- Digital society and Netizen: net etiquettes, communication etiquettes, social media etiquettes
- Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache)
- Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime
- Cyber safety: safely browsing the web, identity protection, confidentiality, cyber trolls and bullying.
- Safely accessing web sites: malware, viruses, Trojans, adware
- E-waste management: proper disposal of used electronic gadgets
- Indian Information Technology Act (IT Act)
- Technology & Society: Gender and disability issues while teaching and using computers

Informatics Practices (XI)

Code No. (065)

Session – 2021-22

Annual Examination March/April, 2022

Max .Marks - 35

Theory	EVALUATION SCHEME	
Unit		**Marks**
II	* Introduction to Python : - List Operations 04 - Dictionary 03	07
III	Database Concepts & the Structured Query language	24
IV	Introduction To Emerging Trends	04
	Total	35

*** Topics from Term-I**

Unit 2:

Introduction to Python

- List operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions.: len(), list(), append(), extend(), insert(), count(), find(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum()

- Dictionary. concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions: len(), dict(), keys(), values(), items(), get(), update(), clear(), del()

Unit 3:

Database concepts and the Structured Query Language

- Database Concepts: Introduction to database concepts and its need, Database Management System. Relational data model: concept of attribute, domain, tuple, relation, candidate key, primary key, alternate key, foreign key.
- Structured Query Language: Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL: Creating a database, using database, showing tables using MySQL,
- Data Types : char, varchar, int, float, date.
- Data Definition Commands: CREATE, DROP, ALTER (Add and Remove primary key, attribute). Data Query Commands: SELECT-FROM- WHERE, LIKE, BETWEEN, IN, ORDER BY, using arithmetic, logical, relational operators and NULL values in queries, Distinct clause Data Manipulation Commands: INSERT, UPDATE, DELETE.

Unit 4:

Introduction to the Emerging Trends

- Artificial Intelligence, Machine Learning, Natural Language Processing,
- Immersive experience (AR, VR), Robotics
- Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities,
- Cloud Computing and Cloud Services (SaaS, IaaS, PaaS);
- Grid Computing, Block chain technology.

Distribution of Practical Marks

Topic	Marks
SQL Queries (pen and paper)	8
Practical File SQL Queries - 20 Queries	4
Viva	3
Total	15

Suggested Practical List :

Data Management: SQL Commands

1. To create a database
2. To create a student table with the student id, class, section, gender, name, dob, and marks as attributes where the student id is the primary key.
3. To insert the details of at least 10 students in the above table.
4. To delete the details of a particular student in the above table.
5. To increase marks by 5% for those students who have Rno more than 20.
6. To display the entire content of the table.
7. To display Rno, Name and Marks of those students who are scoring marks more than 50.
8. To find the average of marks from the student table.
9. To find the number of students, who are from section 'A'.
10. To add a new column email in the above table with appropriate data type.
11. To add the email ids of each student in the previously created email column.
12. To display the information of all the students, whose name starts with 'AN' (Examples: ANAND, ANGAD,..)
13. To display Rno, Name, DOB of those students who are born between '2005- 01-01' and '2005-12-31'.
14. To display Rno, Name, DOB, Marks, Email of those male students in ascending order of their names.
15. To display Rno, Gender, Name, DOB, Marks, Email in descending order of their marks.
16. To display the unique section available in the table.

INFORMATION TECHNOLOGY (XI)

CODE No. – (802)

Session - 2021-22

Annual Examination March/April, 2022

Max. Marks- 30

TERM-II	UNITS	MAX. MARKS for Theory
Employability Skills	Unit 4 : Entrepreneurial Skills-III	5
	Unit 5 : Green Skills-III	
Subject Skills	*Unit -2 : Networking And Internet	5
	Unit-4: RDBMS	10
	Unit-5: Fundamentals of Java	10
	TOTAL	30

* Topics from Term1

* UNIT 2: NETWORKING AND INTERNET

S. NO.	LEARNING OUTCOMES	THEORY
1.	Understand cybercrime and the need of Cyber Security	• Network safety concerns: (Digital Footprints, Threats, Virus, Worm, Trojan Horse, Spam, Malware, DoS Attacks, Eavesdropping, Adware, Spyware, Snooping) • Networking Security Measures (Antivirus, Firewall, Login ids and Password) • Cyber Crime (Phishing, Pharming, Spoofing, Cyber Bullying, Hacking, Cracking, Identity Theft, Cyber Stalking, Cyber Trolling, • Cyber Safety (Netiquettes, IT Act, Cyber Laws)

UNIT 4: RDBMS

S. NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Understand Relational Database Management System	• Database and its purpose • Components of a table • Relational Database Model Terminology (Relation, Tuple, Attribute, Cardinality) • Keys (Primary, Candidate, Alternate, Foreign)	• Installation of MYSQL • Simple calculations in MYSQL
2.	Introduction to MYSQL	• Introduction To MYSQL • Classification of MYSQL commands (DDL, DML) • Data Types in MYSQL (char, varchar, decimal, int, date, time) • Create database • Create table • View structure of a table • Add constraints in table • Modify structure • Show all tables created in a database • Delete structure	• CREATE DATABASE • USE • CREATE TABLE • DESCRIBE • SHOW TABLES • ALTER TABLE • DROP TABLE
3.	DML Commands	• Add rows to a table • Viewing content of a table • Display selected data depending on specific condition • Display data in a order • modify the data stored in a table • delete contents of a table	• INSERT INTO • UPDATE • DELETE • Using WHERE, ORDER BY, DISTINCT, LIKE, BETWEEN, IN

UNIT 5: FUNDAMENTALS TO JAVA PROGRAMMING

S. NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
1	Understand Integrated Development Environment (NETBEANS)	• Components of IDE • Understand and change Properties and methods of Components like jButton, jLabel, jTextField, jTextarea, jRadiobutton, jCheckbox, jPasswordField, jListBox, jComboBox	• Create a project • Create a JFrameForm container • Add a button component on JFrameForm and change properties like text, font, foreground etc using properties window • Add other container controls like jTextField , jTextarea, jRadiobutton, jCheckbox, jPasswordFieldjListBox, jComboBox and change their properties
2	JAVA Programming	• Introduction to Object Oriented Programming • To understand various data types (primitive) and purpose of each data type • To understand the need and usage of variables • To understand usage of operators (assignment, arithmetic, relational, logical, bitwise) • To understand how to attach a code with components like jButton, jLabel, jTextField and create a simple application on JFrame • To understand the use of various components like jTextarea, jRadiobutton, jCheckbox, jPasswordField, jListBox, jComboBox, JTable, JOptionPane, JPanel • To understand when to use selection statements (if, if else and switch case)	• Display message Using jlabel and jtextField • Join two text entries and display them • Write code to close the application • Using Joption Pane display a message "welcome to INFORMATION TECHNOLOGY" • Perform simple arithmetic calculation using operators and display the result • Write the code to find simple interest • Write code to perform an operation based on the criteria input by the user in a checkbox or radio button • change the background colour of jbutton based on the colour selected from the jListBox /jComboBox • accept marks in 5 subjects and find out the total, percentage. Also display grade depending on the total marks obtained. • Enter a character and find out it is vowel or consonant

Physical Education(XI)

Code No. (048)

Session – 2021-22

Annual Examination March/April, 2022

Max Marks – 35

S.No.	Name	Marks
1.	Physical Education & Sports for CWSN (Children With Special Needs- Divyang) • Aims & objectives of Adaptive Physical Education • Organization promoting Adaptive Sports (Special Olympics Bharat; Paralympics; Deaflympics) • Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & special Educator)	07
2.	Yoga • Meaning & Importance of Yoga • Elements of Yoga • Introduction - Asanas, Pranayam, Meditation & Yogic Kriyas • Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Shashankasana, Naukasana, Vrikshasana (Tree pose), Garudasana (Eagle pose)	05
3.	Physical Activity & Leadership Training • Leadership Qualities & Role of a Leader • Meaning, objectives & types of Adventure Sports (Rock Climbing, Tracking, River Rafting, Mountaineering, Surfing and Paragliding) • Safety measures to prevent sports injuries	04
4.	Psychology & Sports • Definition & Importance of Psychology in Phy. Edu. & Sports • Define & Differentiate Between Growth & Development. • Adolescent Problems & Their Management	06
5.	Training and Doping in Sports • Meaning & Concept of Sports Training • Principles of Sports Training • Concept & classification of doping • Prohibited Substances & their side effects	06
6.	*Components of Physical Fitness	07
7.	*Function of Respiratory System and Circulatory System	
8.	*Measurement of health related finess	
	Total	**35**

***Topics from Term –I Syllabus**

Practical

Project File (Yoga and General Motor Fitness Test)	05 Marks
Demonstration of Fitness Activity/Yoga	05 Marks
Viva Voce (From Viva Voce (From Project File; General MotorFitness; Yoga)	05 Marks