



XII COMMERCE

SYLLABUS 2026-27



AGRASAIN BOYS' SCHOOL

[Affiliated to Council for the Indian School Certificate Examinations, New Delhi]

21/A, Agrasain Street, Liluah, Howrah-711204

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AGRASAIN BOYS' SCHOOL

Affiliated to the Council for the Indian School Certificate Examinations, New Delhi

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SYLLABUS : 2026-27

Class : XII (COMMERCE)

Class : XII

☐ **ENGLISH LANGUAGE:** _____

Total English-Class XII (Publisher: Morning Star)

❖ PERIODICAL I :

1. Composition
2. (a) Directed writing (article writing, book review, blog writing, report writing and statement of purpose) based on suggested points.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ ASSESSMENT-I:

1. Composition
2. (a) Directed writing (article writing, report writing, book review, blog writing, and statement of purpose) based on suggested points.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ ASSESSMENT-II EXAMINATION:

1. Composition
2. (a) Directed writing (article writing, report writing, book review, blog writing, and statement of purpose) based on suggested point.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ PRE-BOARD EXAMINATION:

1. Composition
2. (a) Directed writing (article writing, report writing, book review, blog writing, and statement of purpose) based on suggested points.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ English Language Project

1. Listening and speaking skills.
2. A piece of written work of about 500 words must be produced. List of suggested assignments for Project Work: (any one)
 - i. A product description
 - ii. A process description (a recipe)

INSTRUCTIONS TO THE CANDIDATES FOR ENGLISH PROJECTS :

- The Projects are for ISC Board.
- Handwriting should be neat and clear.
- Write relevant matter and make it very creative.
- Relevant pictures and quotations must be there. Pictures only on the non-ruled sheet and write on the ruled side.
- Proper heading should be written in BOLD.
- Significant lines, phrases and dialogues should be highlighted.
- Do not use red and green ink.
- Write relevant details on the first page itself.
- School logo Subject, topic, submitted by and submitted to should be clear and legible.

❑ ENGLISH LITERATURE : _____

❖ PERIODICAL-I EXAMINATION :

- I. **DRAMA:** Macbeth – William Shakespeare (Acts 3 till pages done)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
 2. The Cookie Lady – Philip K. Dick
- III. **RHAPSODY:** A Collection of ISC Poems (Evergreen Publications (India) Ltd. New Delhi)
 1. Telephone Conversation – Wole Soyinka
 2. Tithonus - Alfred, Lord Tennyson

❖ ASSESSMENT-I EXAMINATION:

- I. **DRAMA:** Macbeth – William Shakespeare Act 3 (full)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
 2. The Cookie Lady – Philip K. Dick
 3. There Will Come Soft Rains – Ray Bradbury
- III. **RHAPSODY:** A Collection of ISC Poems Evergreen Publications (India) Ltd. New Delhi)
 1. Telephone Conversation – Wole Soyinka
 2. Tithonus Alfred, Lord Tennyson
 3. Beethoven – Shane Koyczan

❖ ASSESSMENT-II EXAMINATION:

- I. **DRAMA: Macbeth** – William Shakespeare (Acts 3 & 4 till pages done)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)

1. Atithi/Guest – Rabindranath Tagore
2. Cookie Lady – Philip K. Dick
3. There Will Come Soft Rains – Ray Bradbury
4. Indigo Satyajit Ray

III. **RHAPSODY:** A Collection of ISC Poems (Evergreen Publications (India) Ltd. New Delhi)

1. Telephone Conversation – Wole Soyinka
2. Tithonus Alfred, Lord Tennyson
3. Beethoven – Shane Koyczan
4. Small Towns and the River – Mamang Dai

❖ **PRE-BOARD EXAMINATION:**

I. **DRAMA:** Macbeth – William Shakespeare (full)

II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)

1. Atithi/Guest – Rabindranath Tagore
2. Cookie Lady – Philip K. Dick
3. There Will Come Soft Rains – Ray Bradbury
4. Indigo Satyajit Ray
5. The Medicine Bag – Virginia Driving Hawk

III. **RHAPSODY:** A Collection of ISC Poems (Evergreen Publications (India) Ltd. New Delhi)

1. Telephone Conversation – Wole Soyinka
2. Tithonus Alfred, Lord Tennyson
3. Beethoven – Shane Koyczan
4. Small Towns and the River – Mamang Dai
5. Death be not Proud – John Donne

❖ **English Literature Projects**

With reference to the play Macbeth by William Shakespeare, discuss whether Macbeth was destined to become king or chose his own downfall. If Macbeth would have done differently, would he have had a different ending for himself?

Candidates are required to undertake a written Assignment of **1000-1500** words on the above topic which should be structured as given below:

The written assignment must follow the structure given below:

- Introduction:
 - Explanation of the question that has been framed
 - explanation of how the candidate intends to interpret the chosen text and Literary materials used in the process
- Main Body – organised and well-structured treatment of the question using appropriate sub-headings.
- Conclusion – comprehensive summary of the points made in the main body.

❖ **INSTRUCTIONS TO THE CANDIDATES FOR ENGLISH PROJECTS:**

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2. Handwriting should be neat and clear.
3. Write relevant matter and make it very creative.
4. Relevant pictures and quotations must be there. Pictures only on the non-ruled sheet and write on the ruled side.
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6. Significant lines, phrases and dialogues should be highlighted.
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9. School logo Subject, topic, submitted by and submitted to should be clear and legible.

❑ **MODERN ENGLISH :** _____

❖ **PERIODICAL-I EXAMINATION :**

- I. **DRAMA:** Pygmalion – George Bernard Shaw (Acts 3 till pages done)
- II. **PERSPECTIVES:** A Collection of ISC Short Stories
 1. The Doll's House – Katherine Mansfield
 2. Death by Scrabble – Charlie Fish
- III. **REFLECTIONS:** A Collection of ISC Poems
 1. My Grandmother's House – Kamala Das
 2. Refugee Blues – W. H. Auden

❖ **ASSESSMENT-I EXAMINATION:**

- II. **DRAMA:** Pygmalion – George Bernard Shaw (Acts 3 & 4 till pages done)
- III. **PERSPECTIVES:** A Collection of ISC Short Stories
 1. The Doll's House – Katherine Mansfield
 2. Death by Scrabble – Charlie Fish
 3. The Dreamer – 'Saki'
- III. **REFLECTIONS:** A Collection of ISC Poems
 1. My Grandmother's House – Kamala Das
 2. Refugee Blues – W. H. Auden
 3. Urban – Nissim Ezekiel

❖ **ASSESSMENT-II EXAMINATION:**

- I. **DRAMA:** Pygmalion – George Bernard Shaw (Acts 3,4 & 5 till pages done)
- II. **PERSPECTIVES:** A Collection of ISC Short Stories
 1. The Doll's House – Katherine Mansfield
 2. Death by Scrabble – Charlie Fish
 3. The Dreamer – 'Saki'
 4. Games at Twilight – Anita Desai
- III. **REFLECTIONS:** A Collection of ISC Poems
 1. My Grandmother's House – Kamala Das
 2. Refugee Blues – W. H. Auden
 3. Urban – Nissim Ezekiel
 4. Ode to Tomatoes – Pablo Neruda

❖ **PRE-BOARD EXAMINATION:**

- I. **DRAMA:** Pygmalion – George Bernard Shaw (full)
- II. **PERSPECTIVES:** A Collection of ISC Short Stories
 1. The Doll's House – Katherine Mansfield
 2. Death by Scrabble – Charlie Fish

3. The Dreamer – ‘Saki’
4. Games at Twilight – Anita Desai
5. The Father-thing – Philip K. Dick

III. REFLECTIONS: A Collection of ISC Poems

1. My Grandmother’s House – Kamala Das
2. Refugee Blues – W. H. Auden
3. Urban – Nissim Ezekiel
4. Ode to Tomatoes – Pablo Neruda
5. The Black Santa – Allison Joseph

❖ Projects

With reference to the play Pygmalion by George Bernard Shaw discuss how the relationship between Higgins and Eliza evolves into a struggle for equality and self-respect.

Candidates are required to undertake a written Assignment of **1000-1500** words on the above topic which should be structured as given below:

The written assignment must follow the structure given below:

- Introduction:
 - Explanation of the question that has been framed
 - explanation of how the candidate intends to interpret the chosen text and Literary materials used in the process
- Main Body – organised and well-structured treatment of the question using appropriate sub-headings.
- Conclusion – comprehensive summary of the points made in the main body.

INSTRUCTIONS TO THE CANDIDATES FOR ENGLISH PROJECTS:

1. The Projects are for ISC Board.
2. Handwriting should be neat and clear.
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❑ 2ND LANGUAGE HINDI : _____

- पुस्तकें : १) काव्य मंजरी
 २) गद्य संकलन
 ३) सारा आकाश
 ४) हिन्दी व्याकरण मंजूषा

❖ PERIODICAL-I EXAMINATION:

काव्य मंजरी:

- 1) तुलसी के पद
- 2) जाग तुझको दूर जाना है

गद्य संकलन:

- 1) दासी
- 2) क्या निराश हुआ जाए?

सारा आकाश :-

उत्तरार्द्ध - (१,२,३,४)

व्याकरण :

- 1) निबंध
- 2) अपठित गद्यांश
- 3) अशुद्ध वाक्यों को शुद्ध करो (सम्पूर्ण पाठ्यक्रम)
- 4) मुहावरें (सम्पूर्ण पाठ्यक्रम)

❖ **ASSESSMENT-I EXAMINATION:**

काव्य मंजरी:

- 1) उद्यमी नर
- 2) बादल को घिरते देखा है
- 3) अंधेरे का दीपक

गद्य संकलन:

- 1) भक्तिन
- 2) संस्कृति क्या है?
- 3) मजबूरी

सारा आकाश:

उत्तरार्द्ध - (५,६,७,८)

व्याकरण :-

- 1) निबंध
- 2) अपठित गद्यांश
- 3) अशुद्ध वाक्यों को शुद्ध करो (सम्पूर्ण पाठ्यक्रम)
- 4) मुहावरें (सम्पूर्ण पाठ्यक्रम)

❖ **ASSESSMENT-II EXAMINATION:**

- काव्य मंजरी -**
- १) तुलसी के पद
 - २) जाग तुझको दूर जाना है
 - ३) उद्यमी नर
 - ४) बादल को घिरते देखा है।
 - ५) अंधेरे का दीपक

गद्य संकलन - १) दासी

२) क्या निराश हुआ जाए?

३) भक्तिन

४) संस्कृति क्या है?

५) मजबूरी

सारा आकाश - उत्तरार्द्ध - (१-१० खंड)

व्याकरण - सम्पूर्ण पाठ्यक्रम

❖ PRE-BOARD EXAMINATION:

काव्य मंजरी - १) तुलसी के पद

२) जाग तुझको दूर जाना है

३) उद्यमी नर

४) बादल को घिरते देखा है।

५) अंधेरे का दीपक

गद्य संकलन - १) दासी

२) क्या निराश हुआ जाए?

३) भक्तिन

४) संस्कृति क्या है?

५) मजबूरी

सारा आकाश - उत्तरार्द्ध - (१-१० खंड)

व्याकरण - सम्पूर्ण पाठ्यक्रम

निम्नलिखित विषयों में से किसी एक विषय पर हिंदी में लगभग 1000 से 1500 शब्दों में परियोजना तैयार कीजिए।

1. कहानी कला की दृष्टि से 'मजबूरी' कहानी पर परियोजना तैयार कीजिए।

2) 'बादल को घिरते देखा है' कविता को कहानी में रूपांतरित करते हुए परियोजना तैयार कीजिए।

Listening and speaking skill to be done in regular Hindi class.

❑ 2ND LANGUAGE BENGALI: _____

पुस्तक : ISC प्रवक्ता ३ गद्य संकलन, ISC प्रवक्ता ३ गद्य संकलन ३यार्कबुक, ISC कविता संकलन, कोनि, भाषा सोपान

❖ PERIODICAL-I EXAMINATION:

গল্প – না পাহারার পরীক্ষা, একটি তুলসী গাছের কাহিনী।

কবিতা- বাবরের প্রার্থনা, যদি নির্বাসন দাও।

কোনি –৯-১১

ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম ।

❖ **ASSESSMENT-I EXAMINATION:**

গল্প – লছমেনের মা, বীরশুঙ্কা, আদাব।

কবিতা- রাস্তা কারো একার নয়, স্বাধীনতা তুমি, নুন।

কোনি -১২-১৪

ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম ।

❖ **ASSESSMENT-II EXAMINATION: (80 + 20 Marks)**

গল্প – লছমেনের মা, বীরশুঙ্কা, আদাব, একটি তুলসী গাছের কাহিনী, না পাহারার পরীক্ষা।

কবিতা- বাবরের প্রার্থনা, যদি নির্বাসন দাও, রাস্তা কারো একার নয়, স্বাধীনতা তুমি, নুন।

কোনি – ৯-১৪

ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম।

❖ **PRE-BOARD EXAMINATION :**

গল্প, কবিতা, কোনি – নির্ধারিত পাঠ্যক্রম।

ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম ।

❑ **2ND LANGUAGE BENGALI PROJECT:**

1. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি কবিতাকে ছোট গল্পের রূপ দান করো।
2. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি ছোট গল্পকে কবিতার রূপ দান করো।
3. তোমার পাঠ্য পুস্তক এর অন্তর্গত যেকোনো একটি ছোট গল্প বা কবিতার বর্তমান সময়ের নিরিখে প্রাসঙ্গিকতা বিচার করো।
4. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি ছোটগল্পের চরিত্র বিশ্লেষণ কর অথবা যেকোনো একটি কবিতার প্রেক্ষাপট আলোচনা কর।
5. Listening and speaking skill will be held in regular classes.

❑ **MATHEMATICS :**

❖ **PERIODICAL-I EXAMINATION :**

Unit 1 (Relation & Function):

Relation: Types of relations: reflexive, symmetric, transitive and equivalence relations, Number of relations defined on a non-empty set. [3]

Function: One to one and onto functions, composite function and inverse of a function, Analysing graph of functions for one-one, onto, bijective. [5]

Inverse Trigonometry: Definition, domain, range, principal value branch. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions. [5]

Unit 2 (Algebra):

Matrix: Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Addition and

multiplication, their simple properties. Non-commutativity of multiplication, existence of divisors of zero. Invertible matrices and proof of the uniqueness of inverse. [5]

Determinants: Determinant of a square matrix, properties, minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse. Consistency, inconsistency and number of solutions of system of linear equations by examples, matrix method of solving system of linear equations. [3]

Unit 3 (Calculus):

Derivatives: Derivatives of trigonometric, exponential, logarithmic, inverse trigonometric functions. Derivatives of implicit functions, chain rule, Parametric functions, function with respect to another function, Logarithmic Derivative, Derivative up to 2nd order. [5]

Integrals: Integration as inverse process of differentiation. Integration of a variety of

functions by substitution. Integrals of the form $\int \frac{dx}{x^2 \pm a^2}$, $\int \frac{dx}{\sqrt{x^2 \pm a^2}}$, $\int \frac{(px+q)dx}{ax^2+bx+c}$, $\int \frac{(px+q)dx}{\sqrt{ax^2+bx+c}}$, $\int \frac{dx}{a \cos^2 x + b \sin^2 x + c}$, $\int \frac{dx}{a \cos x + b \sin x}$, $\int \frac{dx}{a + b \cos x}$, $\int \frac{dx}{a + b \sin x}$, $\int \frac{dx}{a \cos x + b \sin x + c}$, $\int \frac{a \cos x + b \sin x}{c \cos x + d \sin x} dx$. [5]

Application of Derivatives: Rate of change of bodies. [2]

❖ ASSESSMENT-I EXAMINATION:

Unit 3 (Calculus):

Application of Derivatives: Tangents and normals, Increasing-Decreasing functions, maxima and minima- Critical points, Stationary/turning points, Extreme points, local maxima/minima, Absolute maxima/minima (first derivative test and second derivative test). Problems that illustrate basic principles and real-life situations. [8]

Integrals: Partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them: $\int \sqrt{a^2 \pm x^2} dx$, $\int \sqrt{x^2 - a^2} dx$, $\int \sqrt{ax^2 + bx + c} dx$, $\int (px + q)\sqrt{ax^2 + bx + c} dx$, $\int \frac{1+x^2}{1+x^4} dx$, $\int \frac{dx}{1+x^4}$, $\int \sqrt{\tan x} dx$, $\int \sqrt{\cot x} dx$. [5]

Differential Equation: Definition, order and degree, general and particular solutions. Solution of differential equations by method of separation of variables, reducible to separable forms. [3]

Revision units: All units in the previous examinations.

❖ ASSESSMENT-II EXAMINATION:

Unit 3 (Calculus):

Continuity & Differentiability: Continuity: at a point $x = a$, in an interval. Algebra of continuous function. Discontinuity. Types of discontinuity. Continuity and differentiability of $|x|$, $[x]$. [3]

Integrals: Fundamental Theorem of Calculus. Basic properties of definite integrals and evaluation of definite integrals. [5]

Application of Integrals: Application in finding the area bounded by simple curves and coordinate axes. Area enclosed between two curves. [2]

Differential Equations: Homogeneous and linear differential equations, Application based problems. [4]

Unit 4 (Vector Algebra):

Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector. Components of a vector, addition, multiplication of a vector by a scalar, point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product. [3]

Unit 5 (3D Geometry):

Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, intersection of two lines, coplanar and skew lines, shortest distance between two lines.

Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane. Intersection of two planes. [6]

Unit 7 (Probability):

Conditional probability, multiplication theorem, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable [7]

Revision units: All units in the previous examinations.

❖ **PRE-BOARD EXAMINATION:**

Unit 6 (LPP):

Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded and unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints). [3]

Revision units: All units in the previous examinations.

❖ **ISC MATHEMATICS PROJECT TOPICS:**

Two projects to be made from the following topics:

1. Using a graph demonstrate a function which is invertible.
2. Draw the graph of $y = \sin^{-1}x$ using the graph of $y = \sin x$. Demonstrate the concept of mirror line (about $y = x$) and find its domain and range.
3. For a dependent system (non-homogeneous) of three linear equations of three variables, identify infinite number of solutions.
4. Explain the concepts of increasing and decreasing functions, using geometrical significance of $\frac{dy}{dx}$. Illustrate with proper examples.
5. Explain the geometrical significance of point of inflexion with examples and illustrate it using graphs.
6. Explain and illustrate (with suitable examples) the concept of local maxima and local minima using graph.

7. Explain the conditional probability, the theorem of total probability and the concept of Bayes' theorem with suitable examples.
8. Using any suitable data, find the Optimum cost in the manufacturing problem by formulating a linear programming problem (LPP).
9. Demonstrate application of differential equations to solve a given problem (example, population increase or decrease, bacteria count in a culture, etc.).
10. Using vector algebra, find the area of a parallelogram/triangle. Also, derive the area analytically and verify the same.
11. Find the image of a line with respect to a given plane.
12. Find the area bounded by a circle and a parabola. (Any other pair of curves which are specified in the syllabus may also be taken.)

Date of Submission:

Project 1: Before 1st assessment examination.

Project 2: Before 2nd assessment examination.

❑ **APPLIED MATHEMATICS :** _____

❖ **PERIODICAL-I EXAMINATION :**

Unit 1 (Relation & Function):

Relation: Types of relations: reflexive, symmetric, transitive and equivalence relations, Number of relations defined on a non-empty set. [3]

Function: One to one and onto functions, composite function and inverse of a function, Analysing graph of functions for one-one, onto, bijective. [5]

Inverse Trigonometry: Definition, domain, range, principal value branch. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions. [3]

Unit 2 (Algebra):

Matrix: Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Addition and multiplication, their simple properties. Non-commutativity of multiplication, existence of divisors of zero. Invertible matrices and proof of the uniqueness of inverse. [4]

Determinants: Determinant of a square matrix, properties, minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse. Consistency, inconsistency and number of solutions of system of linear equations by examples, matrix method/ Cramer's Rule of solving system of linear equations. [4]

Unit 3 (Calculus):

Derivatives: Derivatives of trigonometric, exponential, logarithmic, inverse trigonometric functions. Derivatives of implicit functions, chain rule, Parametric functions, function with respect to another function, Logarithmic Derivative, Derivative up to 2nd order. [5]

Integrals: Integration as inverse process of differentiation. Integration of a variety of functions by substitution. Integrals of the form $\int \frac{dx}{x^2 \pm a^2}$, $\int \frac{dx}{\sqrt{x^2 \pm a^2}}$, $\int \frac{(px+q)dx}{ax^2+bx+c}$, $\int \frac{(px+q)dx}{\sqrt{ax^2+bx+c}}$ [5]

Application of Derivatives: Rate of change of bodies.

[2]

❖ **ASSESSMENT-I EXAMINATION:**

Unit 3 (Calculus):

Application of Derivatives: Increasing-Decreasing functions, maxima and minima-Stationary/turning points, first derivative test and second derivative test. Problems that illustrate basic principles and real-life situations.

[4]

Application of Calculus in Commerce and Economics: C, AC, MC, demand function, R, MR. Rough sketches of AR, MR, R, C, AC, MC and their interpretation using Maxima-Minima & increasing-decreasing functions. Definite integral to find C.S. and P.S., TC from given MC by integral, Equilibrium price and equilibrium quantity.

[4]

Integrals: Partial fractions and by parts, Evaluation of simple integrals.

Differential Equation: Definition, order and degree, general and particular solution. Solution of differential equations by method of separation of variables, reducible to separable forms.

[3]

Revision units: All units in the previous examinations..

❖ **ASSESSMENT-II EXAMINATION:**

Unit 3 (Calculus):

Integrals: Fundamental Theorem of Calculus. Basic properties of definite integrals and evaluation of definite integrals.

[4]

Differential Equations: Homogeneous and linear differential equations, Application based problems.

[5]

Unit 4 (Probability):

Conditional probability, multiplication theorem, independent events, total probability, Bayes' theorem.

Probability Distribution, mean, variance of a random variable. Binomial Distribution: Bernoulli's trials, mean and variance. Poisson Distribution: Definition, characteristics, mean and variance. Normal Distribution: concept of continuous distribution, standard normal variate, mean and S.D., total area under curve, area relationship between mean and S.D.

[12]

Unit 6 (Financial Mathematics):

Perpetuity, Sinking funds, real life examples, Advantages, sinking fund vs. savings accounts. EMI: Flat rate method, reducing balance method, real life examples to calculate loans, purchase of assets. Rate of Return: Nominal rate of return. Compound Annual Growth Rate (CAGR). Linear method of Depreciation, advantages and disadvantages of linear method.

[6]

Unit 7 (Index Number and Moving Averages):

Moving Averages: Meaning and purpose, calculation of moving averages with the given periodicity and plotting them on a graph.

[2]

Revision units: All units in the previous examinations.

❖ **PRE-BOARD EXAMINATION:**

Unit 5 (LPP):

Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded and unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

[3]

Unit 7 (Index Number and Moving Averages):

Index Numbers: Price index and price relatives, simple average and weighted average of price relatives, simple and weighted aggregate method, advantages and disadvantages with reference to real life situations. [3]

Revision units: All units in the previous examinations.

ISC MATHEMATICS PROJECT TOPICS:

Two projects to be made from the following topics:

1. Demonstrate application of differential equations to solve a given problem (example: population increase or decrease, bacteria count in a culture, etc.).
2. Explain the conditional probability, the theorem of total probability and the concept of Bayes' theorem with suitable examples.
3. Explain the types of probability distributions and derive mean and variance of binomial probability distribution for a given function.
4. Real life application of Binomial distribution, Poisson and Normal distribution in the field of medical, games, banking, election result etc.
5. Using any suitable data, find the Optimum cost in the manufacturing problem by formulating a linear programming problem (LPP).
6. Draw a rough sketch of Cost ($C(x)$), Average Cost (AC) and Marginal Cost (MC). Give their mathematical interpretation using the concept of increasing - decreasing functions and maxima-minima.
7. Draw a rough sketch of Revenue ($R(x)$), Average Revenue (AR) and Marginal Revenue (MR). Give their mathematical interpretation using the concept of increasing - decreasing functions and maxima-minima.
8. Different methods to calculate depreciation. Main inputs to calculate depreciation. Linear or straight line method to find depreciation with a suitable real life example.
9. Identify the purchasing power using the concept of cost of living index number.
10. Identify the purchasing power using the concept of weighted aggregate price index number.
11. Calculate moving averages with the given even Periodicity. Plot them and as well as the original data on the same graph.

Date of Submission:

Project 1: Before 1st assessment examination.

Project 2: Before 2nd assessment examination.

❑ COMMERCE :

Book : ISC COMMERCE VOL-II by CB Gupta

Publisher - S. Chand

❖ Periodical I

- 1. Business Environment
- 2. Finance : Capital fixed and working
- 3. Finance: Source of Finance
- 4. MARKETING concept and function, Marketing Mix, Consumer Protection.

❖ 1st Assessment

- 1. Management Introduction
- 2. Banking Trend
- 3. Principles of Management
- (Including all Previous chapters)

❖ **2nd Assessment**

- 1. Function of Management
- 2. Planning
- 3. Organising
- (Including all Previous chapters)

❖ **PRE – BOARD**

- 1. Staffing
- 2. Directing
- 3. Controlling
- (Including all Previous chapters)

Project Topics:

Project -1

Compare marketing strategies adopted by two different companies of the same industry (FMCG / Telecommunication / media / education industry etc.) keeping in mind the following:

- Product mix
- Price Mix
- Place Mix
- Promotion Mix

Project-2

Choose two companies of the same industry. Study their organizational structure. Also give information with regard to:

- (i) Hierarchy
- (ii) Centralization and delegation of authority
- (iii) Flow of information (scalar chain)
- (iv) Span of control
- (v) Channel of communication

❑ BUSINESS STUDIES :

Book- ISC Business Studies (Part-II) Class- XII BY by Author- CB Gupta
Publisher- Goyal Brothers Prakashan

❖ **Periodical I:**

- Chapter 1: Introduction to Human Resource Management
- Chapter 2: Job Analysis and Manpower Planning
- Chapter 3: Staff Recruitment
- Chapter 4: Staff Selection
- Chapter 5: Staff Training
- Chapter 6: Staff Morale

- Chapter 7: Staff Motivation
- ❖ **1st Assessment:**
 - Chapter 8: Staff Remuneration
 - Chapter 9: Staff Leadership
 - Chapter 10: Staff Appraisal
 - Chapter 11: Staff Promotion and Transfer
 - (Including all the previous chapters)
- ❖ **2nd Assessment:**
 - Chapter 12: Staff Separation
 - Chapter 13: Emerging Trends in Human Resources
 - Chapter 14: Business Communication
 - Chapter 15: Business Correspondence
 - Chapter 16: Reports and Report Writing
 - Chapter 17: Various Business Entities
 - Chapter 18: Sources of Business Finance
 - Chapter 19: Globalisation
 - (Including all the previous chapters)
- ❖ **Preboard Examination:**
 - Chapter 20: E-Business
 - Chapter 21: Outsourcing
 - Chapter 22: Business Regulators and Intermediaries
 - (Including all the previous chapters)

Project Topics

Topic 1

Consider any two successful business leaders. Give a brief account of their leadership styles. Explain the impact of their leadership styles in the achievement of the organizational goals of their respective organisations.

Topic 2

Make a comparative study of any two E-Businesses in terms of their Nature, Size, Products and Services offered, Functioning and Policies.

□ ACCOUNTANCY: _____

BOOK: • Double Entry Book Keeping & ISC Accountancy (T.S. Grewal).

Paper Distribution: Theoretical – 80 Marks | Project - 20 Marks

❖ PERIODICAL 1

- Fundamental Of Partnership
- Goodwill Valuation
- Comparative and Common Size Financial Statements
- Issue of Shares and Issue of Debenture (introduction)
- Ratio Analysis (Liquidity and Solvency Ratios)
- Admission Of Partners

❖ FIRST ASSESSMENT

- Admission Of Partners (continue)

- Issue of Debenture (continues)
- Retirement And Death of a Partner
- Ratio Analysis (Activity Ratios)
- Including all the Previous Topics

❖ **SECOND ASSESSMENT**

- Dissolution Of Partnership Firm
- Redemption OF Debenture
- Company Final Account.
- Ratio analysis. (Profitability Ratio)
- Including All the Previous Topics

❖ **PRE- BOARDS.**

- Cash Flow Statement
- (Full Book)

SUBJECT – ACCOUNTS PROJECT.

TOPIC 1

Preparation of Common Size and Comparative Statements – by taking Income statement and Balance Sheet of the company. By taking into account its audited and unaudited financial results of 2 consecutive accounting years. “Comparison to be made in the form of common size and comparative income statement and balance sheet with graphical presentation”.

TOPIC 2

Taking the audited financial result of any leading company and compute the ratio analysis of the company. Compute its liquidity solvency activity and profitability ratio of 2 consecutive accounting years and the comparison of the ratio should be shown graphically.

❑ ECONOMIC APPLICATIONS:

❖ **Periodical-1:**

- Demand and law of demand
- Elasticity of demand
- Supply
- Money: meaning and functions
- Fiscal policy
- Government Budget

❖ **1st Assessment:**

- Theory of Consumer Behaviour
- Market mechanism
- Laws of returns
- Banks: Commercial bank and Central bank
(Including Periodical-1 Syllabus)

❖ **2nd Assessment:**

- Cost and Revenue analysis
- Forms of market
- Producer's equilibrium
- Determination of Equilibrium under perfect competition
- Balance of Payments and Exchange rate
- Theory of Income and employment
(Including Periodical-1 and 1st Assessment Syllabus)

❖ **Pre-Board:**

- National income and Circular flow of income
- National Income aggregates
- Methods of measuring national income
(Including Periodical-1, 1st and 2nd Assessment Syllabus)

Project topics:

Fiscal policy
Laws of returns

❑ **SUPW : _____**❖ **ASSESSMENT-II EXAMINATION:****Subsidiary Service**

1. THERMOCOL DESIGN SCROLL.
2. CALENDER MAKING.
3. WALL HANGING.
4. DUSTER MAKING.

❖ **PRE-BOARD EXAMINATION :****Main craft service**

5. CHALK MAKING.
6. FOOD SALAD.
7. TIE AND DIE

❑ **PHYSICAL TRAINING (PT) : _____**❖ **ASSESSMENT-II EXAMINATION:**

1. March Past.
2. Jogging & General Warming-up
3. Cardio Exercises:
 - a) Sprinting
 - b) Distance Running
 - c) Jumping Jack
 - d) Box Jump
4. Fitness Training:
 - a) Push-ups
 - b) Jump Squats

- c) Bend knee sit-ups
- d) Mountain Climbers
- e) Plank Jacks
- f) Sit & Reach
- Indoor Games

❖ **PRE-BOARD EXAMINATION :**

1. Tug-O-War
2. Team sports:
 - a) Soccer
 - b) Basketball
 - c) Handball
 - d) Kho-Kho
 - e) Kabaddi

Class : XII

□ **YOGA (MEDITATION) :** _____

❖ **ASSESSMENT-II EXAMINATION:**

- Calvicular breathing
- Abdominal breathing
- Thoracic Breathing
- Anulom -vilom
- Bhastrika
- Simhasana
- Trikonasana
- Hastottanasana
- Dhanurasana
- Ushtrasana
- Kapalbhati
- Uddyan
- Meditation

