

CLASS 11 -HALF YEARLY EXAM PORTIONS-SCIENCE GROUP	
ENGLISH	Prose- The Adventure, Silk Road, Poem- Childhood, Voice of the Rain. Supplementary : Mother's Day, Birth,Address. Writing-classifieds advertisements,Poster,Debate,Speech. Grammar- Integrated grammar (inclusive of term 1&2) Note making and summarising
MATHS	1) Sequence and series 2) Complex numbers 3) Trigonometry 4)St.lines 5) Conics 6) Linear inequalities 7) Permutations and combinations 8) Binomial thm 9) Probability 10) Sets 11) Relation & Functions
PHYSICS	1. Heat and Thermodynamics 2. Kinetic theory of gases 3. Properties of solids 4. Properties of fluids 5. Gravitation 6. Systems of particles and rotational motion 7. Work – power and energy 8. Newtons law of motion 9. Motion on a plane
CHEMISTRY	Periodic classification of elements, Chemical bonding ,Redoxreactions, Basic concepts of organic chemistry and Hydrocarbons
COMPUTER SCIENCE	LOOPING, TUPLE, DICTIONARY, STRING & LIST
BIOLOGY	1. Excretory products and their elimination 2. Chemical coordination and integration 3. Anatomy of flowering plants 4. Cell: The unit of life 5. Plant growth and development 6. Animal Kingdom 7.Plant Kingdom
INFORMATICS PRACTICES	LOOPING, LIST, DICTIONARY, SQL
PHYSICAL EDUCATION	<b>Theory</b> <b>Unit I Changing Trends &amp; Career in Physical Education</b> ●Concept, Aims & Objectives of Physical Education ●Changing Trends in Sports- playing surface, wearable gears and sports equipment, technological advancements ●Career Options in Physical Education ●Khelo-India and Fit-India Program <b>Unit II Olympism</b> ● Ancient and Modern Olympics ● Olympism – Concept and Olympics Values (Excellence, Friendship & Respect)

- Olympics - Symbols, Motto, Flag, Oath, and Anthem
- Olympic Movement Structure - IOC, NOC, IFS, Other members
- Unit III Yoga**
- Meaning & Importance of Yoga
- Introduction to Ashtanga Yoga
- Introduction to Yogic Kriyas (Shat Karma)
- Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang)**
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- Concept of Disability and Disorder
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- Types of Disability, its causes & nature (Intellectual disability, Physical disability)
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- Aim & Objective of Adaptive Physical Education
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- Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & Special Educator)
- Unit V Physical Fitness, Health and Wellness**
- Meaning and Importance of Wellness, Health and Physical Fitness
- Components/Dimensions of Wellness, Health and Physical Fitness
- Traditional Sports & Regional Games for promoting wellness
- Unit VI Test, Measurement & Evaluation**
- Concept of Test, Measurement & Evaluation in Physical Education & sports.
- Classification of Test in Physical Education and Sports.
- Test administration guidelines in physical education and sports
- Unit VII Fundamentals of Anatomy, Physiology in Sports**
- Definition and Importance of Anatomy and Physiology in exercise and sports
- Functions of Skeletal system, classification of bone and types of joints.
- Function and Structure of Circulatory system and heart.
- Function and Structure of Respiratory system.
- Unit VIII Fundamentals of Kinesiology and Biomechanics in Sports**
- Definition and Importance of Kinesiology and Biomechanics in sports
- Principles of Biomechanics
- Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation
- Axis and Planes – Concept and its application in body movements
- Unit IX Psychology & Sports**
- Definition & Importance of Psychology in Physical Education & Sports
- Adolescent Problems & Their Management
- Team Cohesion and Sports
- Unit X Training and Doping in Sports**
- Concept and Principles of Sports Training
- Training Load: Over Load, Adaptation, and Recovery
- Concept of Doping and its disadvantages

<b>CLASS 12 -HALF YEARLY EXAM PORTIONS-SCIENCE GROUP</b>	
ENGLISH	Prose - Indigo, Poets and Pancakes,Going places,The Interview. Poetry: Aunt Jennifer’s Tigers, The Roadside stand Supplementary : On the face of it, Memories of my childhood Writing - Job Application letter , Report Writing, Notice, Invitation and reply.
MATHS	Matrices, Determinants, Linear Programming, Definite Integrals, Vectors, 3D Geometry, Probability, Application of integrals, Differential equations
PHYSICS	1. Electro Magnetic Induction 2. Alternating current 3. Dual nature of radiation 4. Atoms 5. Nuclei 6. Semiconductor Devices 7. Ray optics 8. Wave optics
CHEMISTRY	Electrochemistry,Chemical kinetics, d and f block elements, Coordination compounds, Amines and Biomolecules
COMPUTER SCIENCE	CSV FILES ,STACK, SQL & NETWORKING
BIOLOGY	1. Human Reproduction 2. Reproductive Health 3. Molecular basis of inheritance. 4. Human health and Disease 5. Biotechnology : Principles and processes 6. Biotechnology and applications 7. Organisms and Populations 8. Ecosystems
INFORMATICS PRACTICES	DATAFRAME ,MY-SQL ,NETWORKING,SOCIETAL IMPACTS
PHYSICAL EDUCATION	<b>Unit I Management of Sporting Events</b> ● Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling) ● Various Committees & their Responsibilities (pre; during & post) ● Fixtures and its Procedures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic) <b>Unit II Children &amp; Women in Sports</b> ● Common Postural Deformities - Knock Knee; Bow Legs; Flat Foot; Round Shoulders; Lordosis, Kyphosis, and Scoliosis and their corrective measures ● Special consideration (Menarche & Menstrual Dysfunction) ● Female Athletes Triad (Osteoporosis, Amenorrhea, Eating Disorders) <b>Unit III Yoga as Preventive measure for Lifestyle Disease</b> ● Obesity: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana,

Dhanurasana, Ushtrasana, Suryabedhan pranayama.

- Diabetes: Procedure, Benefits & Contraindications for Katichakrasana, Pavanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati.
- Asthma: Procedure, Benefits & Contraindications for Tadasana, Urdhwahastottansana, UttanMandukasana, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalabhati, Gomukhasana Matsyaasana, Anuloma-Viloma.
- Hypertension: Procedure, Benefits & Contraindications for Tadasana, Katichakransan, Uttanpadasana, Ardha Halasana, Sarala Matyasana, Gomukhasana, UttanMandukasana, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi shodhanapranayam, Sitlipranayam.

**Unit IV Physical Education & Sports for CWSN (Children with Special Needs - *Divyang*)**

- Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics)
- Advantages of Physical Activities for children with special needs.
- Strategies to make Physical Activities assessable for children with special needs.

**Unit V Sports & Nutrition**

- Concept of balance diet and nutrition
- Macro and Micro Nutrients: Food sources & functions
- Nutritive & Non-Nutritive Components of Diet

**Unit VI Test & Measurement in Sports**

- Fitness Test – SAI Khelo India Fitness Test in school:
  - Age group 5-8 yrs/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test
  - Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit & Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls).
- Computing Basal Metabolic Rate (BMR) • Rikli & Jones - Senior Citizen Fitness Test
  - I. Chair Stand Test for lower body strength
  - II. Arm Curl Test for upper body strength
  - III. Chair Sit & Reach Test for lower body flexibility
  - IV. Back Scratch Test for upper body flexibility
  - V. Eight Foot Up & Go Test for agility
  - VI. Six Minute Walk Test for Aerobic Endurance

**Unit VII Physiology & Injuries in Sports**

- Physiological factors determining components of physical fitness
- Effect of exercise on Muscular System
- Effect of exercise on Cardio-Respiratory System
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Sports injuries: Classification (Soft Tissue Injuries -Abrasion, Contusion, Laceration,

Incision, Sprain & Strain; Bone & Joint Injuries - Dislocation, Fractures - Green Stick,

Comminuted, Transverse Oblique & Impacted)

**Unit VIII Biomechanics & Sports**

- Newton's Law of Motion & its application in sports
- Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports
- Friction & Sports
- Projectile in Sports

**Unit IX Psychology & Sports**

- Personality; its definition & types (Jung Classification & Big Five Theory)
- Meaning, Concept & Types of Aggressions in Sports
- Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting

**Unit X Training in Sports**

- Concept of Talent Identification and Talent Development in Sports
- Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle.
- Types & Method to Develop – Strength, Endurance and Speed
- Types & Method to Develop – Flexibility and Coordinative Ability