

O. P. JINDAL SCHOOL, ANGUL
Month-Wise detailed Syllabus: 2022-23
CLASS-12 Science)

ENGLISH

Month	Lesson
April	1. My Mother at sixty-six (Poem) / 2. The Last Lesson (Prose) 2. Writing Skills-Notice writing/ 4. The Tiger King
May	1. The Third Level (prose) / 2. Keeping Quiet (Poem) / 3. Lost Spring 4. Writing Skills: Letter to Editor
June	1. Deep water (Prose)/ 2. Journey to End of Earth / 3. Unseen Passage 4. Writing Skills-Article Writing
ASSESSMENT (April to June) Periodic Test-1	
1. My Mother at sixty-six (Poem) / 2. The Last Lesson (Prose) / 3. Writing Skills-Notice writing 4. The Third Level (prose) / 5. The Tiger King / 6. Deep water (Prose) / 7. Unseen Passage Writing Skills-Article Writing/ 9. Keeping Quiet, 10. Journey to End of Earth, 11. Letter to Editor, 12. Lost Spring	
July	1. Enemy (Prose) 2. Poets & Pancakes 3. Writing Skills-Formal/ Informal Invitation
August	1. A Roadside Stand (Poem) 2. The Interview, 3. Writing Skills- Job Application
September	1. Rat Trap (Prose)
ASSESSMENT (Apr to Sept) Half Yearly	
1. My Mother at sixty-six (Poem) 2. The Last Lesson (Prose) 3. Writing Skills-Notice writing 4. The Third Level (prose) 5. The Tiger King 6. Journey to End of Earth 7. Deep water (Prose) 8. Unseen Passage 9. Writing Skills-Article Writing, Letter to Editor, Formal/ Informal Invitation, Job Application 10. Enemy (Prose) 11. Lost Spring (Poem) 12. A Road Side Stand (Poem) 13. Keeping Quiet 14. Poets & Pancakes, 15. The Interview	
October	1. Indigo - Prose 2. Writing Skills- Report Writing 3. Unseen Passage
November	1. A Thing of Beauty (Poem) 2. Going Places (Prose) 3. On the face of it (Prose)
ASSESSMENT (Oct to Nov) Periodic Test-2	
1. Going Places (Prose) 2. Indigo (Prose) 3. A Thing of Beauty (Poem) 4. On the face of it (Prose) 5. Writing Skill- Report Writing 6. Unseen Passage	
December	1. Memories of Childhood (Prose)/ 2. Aunt Jennifer's Tigers (Poem)
January	Revision
February	Revision
ASSESSMENT (Apr to Feb) Annual	
January Preboard 1- 100% syllabus February Preboard 2- 100% syllabus	

PHYSICS

Month	Lesson
April	1.Electrostatic Charge and Field. 2.Electrostatic Potential and Capacitance.
May	3.Current Electricity.
June	3.Current Electricity.
ASSESSMENT (April to June) Periodic Test-1	

July	4.Magnetic Effects of Electric Current and Magnetism., 5.Magnetism and Matter.
August	6.Electromagnetic Induction., 7.Alternating Current.
September	8.Electromagnetic Waves.
ASSESSMENT (July to Sept) Half Yearly	
July-Periodic Test 1-Chapter 1,2,3., September-Half Yearly Examination -Chapter 1,2,3,4,5,6,7	
October	9.Ray Optics and Optical Instruments., 10.Wave Optics. 11.Dual nature of Matter and Radiation.
November	12.Atom., 13.Nuclei.
ASSESSMENT (Oct to Nov) Periodic Test-2	

December	14.Semiconductor Physics.
January	Revision
February	Revision.
ASSESSMENT (Dec to Feb) Annual	
December-Periodic Test 2-Chapters 8,9,10,11 January-Preboard 1- 100% syllabus February-Preboard 2- 100% syllabus	

CHEMISTRY

Month	Lesson
April	Solutions
May	
June	Solutions contd
ASSESSMENT (April to June) Periodic Test-1	
July	Chemical kinetics, d-and f-block elements
August	Coordination compounds, Haloalkanes & Haloarenes
September	Alcohols, Phenols, Ethers, Biomolecules
ASSESSMENT (July to Sept) Half Yearly	
October	Aldehydes, ketones, carboxylic acids
November	Amines, Electrochemistry
ASSESSMENT (Oct to Nov) Periodic Test-2	
December	Biomolecules
January	Revision
February	Revision
ASSESSMENT (Dec to Feb) Annual	

MATHEMATICS

Month	Lesson
April	CH-1 RELATIONS AND FUNCTIONS CH-2 INVERSE TRIGONOMETRIC FUNCTIONS
May	CH-3 MATRICES
June	CH-4 DETERMINANTS
ASSESSMENT (April to June) Periodic Test-1	
CHAPTERS-1, 2, 3, 4	
July	CH-5 CONTINUITY AND DIFFERENTIABILITY
August	CH- 6 APPLICATIONS OF DERIVATIVES
September	INTEGRALS
ASSESSMENT (July to Sept) Half Yearly	
CH-1, 2, 3, 4, 5, 6, 7	
October	CH 8- Application of the Integrals
November	CH-9 DIFFERENTIAL EQUATIONS CH-10 VECTORS, CH 11- 3-D Geometry
ASSESSMENT (Oct to Nov) Periodic Test-2	
CHAPTERS- 8, 9, 10, 11	
December	CH-12: LINEAR PROGRAMMING CH-13 PROBABILITY
January	Pre-Board Examinations/ revision
February	Revision
ASSESSMENT (Dec to Feb) Annual	
CH-7, 8, 9, 10, 11, 13	

BIOLOGY

Month	Lesson
April	Chapter 2 Sexual reproduction in flowering plants Chapter 3 Human reproduction
May	Chapter 4 Reproductive health
June	Chapter 5 Principle of inheritance
ASSESSMENT (April to June) Periodic Test-1	
Chapter 1 to 4	
July	Chapter 6 Molecular basis of inheritance
August	Molecular Basis of inheritance end, CH 7- Evolution
September	Chapter 8 Human health and disease
ASSESSMENT (July to Sept) Half Yearly	
Chapter 1 to 7	
October	Chapter 10 Microbes in human welfare Chapter 11 Principles of Biotechnology Chapter 12 Application of biotechnology
November	Chapter 13 Organisms and population
ASSESSMENT (Oct to Nov) Periodic Test-2	
Chapter 8, 10, 11 & 12	
December	Chapter 15 Biodiversity, Ch-14 Ecosystem
January	Revision
February	Revision
ASSESSMENT (Dec to Feb) Annual	
Full syllabus- Ch- 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15	

INFORMATICS PRACTICES

Month	Lesson
April	Unit 1: Data Handling using Pandas and Data Visualization Data Handling using Pandas -I <ul style="list-style-type: none"> · Introduction to Python libraries- Pandas, Matplotlib. · Data structures in Pandas - Series and Data Frames. · Series: Creation of Series from – ndarray, dictionary, scalar value; mathematical operations; Head and Tail functions; Selection, Indexing and Slicing.
May	<ul style="list-style-type: none"> · Data Frames: creation - from dictionary of Series, list of dictionaries,
June	Text/CSV files; display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels, Boolean Indexing; Joining, Merging and Concatenation. Importing/Exporting Data between CSV files and Data Frames.
ASSESSMENT (April to June) Periodic Test-1	
Unit 1: Data Handling using Pandas Data Handling using Pandas -I	
July	Data visualization, Data frame
August	Data Visualization <ul style="list-style-type: none"> · Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph, histogram
September	<ul style="list-style-type: none"> · Customizing plots: color, style (dashed, dotted), width; adding label, title, and legend in plots.
ASSESSMENT (July to Sept) Half Yearly	
Data Visualization, Pandas-I	
October	Unit 2: Database Query using SQL <ul style="list-style-type: none"> · Math functions: POWER (), ROUND (), MOD (). · Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (),LTRIM(),RTRIM(),TRIM (). · Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().Aggregate Functions: MAX (), MIN (), AVG (), SUM(), COUNT (); using COUNT (*).
November	<ul style="list-style-type: none"> · Querying and manipulating data using Group by, Having, Order by. Unit 3: Introduction to Computer Networks <ul style="list-style-type: none"> · Introduction to networks, Types of network: LAN, MAN, WAN. · Network Devices: modem, hub, switch, repeater, router, gateway • Network Topologies: Star, Bus, Tree, Mesh. ·Introduction to Internet, URL, WWW and its applications- Web, email, Chat, VoIP. · Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. · Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.
ASSESSMENT (Oct to Nov) Periodic Test-2	
Unit 2: Database Query using SQL <ul style="list-style-type: none"> · Math functions: POWER (), ROUND (), MOD (). · Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (),LTRIM(),RTRIM(),TRIM (). · Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().Aggregate Functions: MAX (), MIN (), AVG (), SUM(), COUNT (); using COUNT (*). 	
December	<ul style="list-style-type: none"> · Querying and manipulating data using Group by, Having, Order by. Unit 3: Introduction to Computer Networks <ul style="list-style-type: none"> · Introduction to networks, Types of network: LAN, MAN, WAN.

	<ul style="list-style-type: none"> · Network Devices: modem, hub, switch, repeater, router, gateway • Network Topologies: Star, Bus, Tree, Mesh. · Introduction to Internet, URL, WWW and its applications- Web, email, Chat, VoIP. <p>Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website.</p> <p>Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.</p> <p>Unit 4: Societal Impacts</p> <ul style="list-style-type: none"> · Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management. · Awareness about health concerns related to the usage of technology.
January	Revision
February	Revision
ASSESSMENT (Dec to Feb) Annual	
<ul style="list-style-type: none"> · Data structures in Pandas - Series and Data Frames. · Querying and manipulating data using Group by, Having, Order by. <p>Database query using MYSQL Functions</p> <p>Unit 3: Introduction to Computer Networks</p> <ul style="list-style-type: none"> · Introduction to networks, Types of network: LAN, MAN, WAN. · Network Devices: modem, hub, switch, repeater, router, gateway <p>Network Topologies: Star, Bus, Tree, Mesh.</p> <ul style="list-style-type: none"> · Introduction to Internet, URL, WWW and its applications- Web, email, Chat, VoIP. · Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. · Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies. <p>Unit 4: Societal Impacts</p> <p>Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management.</p> <ul style="list-style-type: none"> · Awareness about health concerns related to the usage of technology. 	

PHYSICAL EDUCATION

Month	Lesson
April	Management of sporting events
May	Children and woman in sports
June	Yoga and lifestyle
ASSESSMENT (April to June) Periodic Test-1	
Planning in sports: *Objective of planning / *Various committees / *Tournament / *Draw fixtures / *Sports programme Sports and nutrition : *Balanced diet / *Eating for weight control / *Nutritive and Non - nutritive components Yoga and lifestyle : Chapter :- 1,2,3	
July	Physical Education and sports for CWSN
August	Sports and Nutrition /Test and measurement
September	Physiology and injuries in sports
ASSESSMENT (Apr to Sept) Half Yearly	
*Concept of disability and disorder / *Children and women in sports *Motor development and factors affecting it. / * Common posture *Sports participation of women in India . / *Test and measurement in sports / *Effect of exercise of system /Chapter:- 1,2,3,4	
October	Biomechanics and sports
November	Psychology and sports
ASSESSMENT (Oct to Nov) Periodic Test-2	
*Types of movements / *Major muscles involved in sports *Newton's law of motion and its application in sports /Chapter:- 5,6,7	
December	Training in sports
January	Revision
February	Revision
ASSESSMENT (Dec to Feb) Annual	
*All physical component of physical fitness / * Circuit training / *All Syllabus	

PSYCHOLOGY

Month	Lesson
April	Variations in Psychological Attributes./Self and Personality
May	Self and personality
June	Meeting life changes
ASSESSMENT (April to June) Periodic Test-1	
Variations in Psychological Attributes. /Self and Personality /Meeting life changes	
July	Psychological disorders
August	Therapeutic approaches
September	Therapeutic approaches, attitude and social cognition
ASSESSMENT (July to Sept) Half Yearly	
	Chapter 1 to 4
October	Attitude and social cognition
November	Social influence and group process
ASSESSMENT (Oct to Nov) Periodic Test-2	
Attitude and social cognition, social influence and group process	
December	Psychology of life
January	Developing psychological skills.
February	Revision
ASSESSMENT (Dec to Feb) Annual	
Chapter 5-9	