



Class Ten Academic Program - 2024

Syllabus

Serial	Subject	Chapter	Lecture	
01	Physics	9, 10, 11, 12, 13, 14	28	
02	Chemistry	9, 10, 11, 12	24	
03	Mathematics	3, 8, 10, 11, 12, 13, 14, 15, 16, 17	52	
04	Higher Mathematics	5, 6, 7, 8, 9, 10, 11, 12, 13, 14	44	
05	Biology	9, 11, 12, 13, 14	22	
06	ICT	5, 6	10	
		Total Lecture	180	

PHYSICS		
Chapter	Lecture	Lecturewise Topics
	P-01	Refraction of light, Laws of Refraction, relative and absolute refractive Index
	P-02	Critical angle, Total internal reflection, and mathematical problems
Chapter 09	P-03	Rainbow, Mirage, Uses of reflection, Optical fiber, Periscope and Binocular, Prism
(Refraction of Light)	P-04	Lens, Types of lenses (convex and concave lens), Expressions related to lens, Sign convention for lens
	P-05	Convex lens (At a distance less than Focal Length, At focal length, outside the focal length)
	P-06	Power of lens, Function of the Eye, Perception of colored objects
	P-07	Charge, Static Electricity by friction, Electrical induction
	P-08	Electroscope and electric force
Chapter 10	P-09	Mathematical problems on Electric Force, Electric Field, and Electric Potential
(Static Electricity)	P-10	Potential difference and mathematical problems
	P-11	Capacitor and related problems, Uses of static electricity
	P-12	Revision of electric force, Electric potential, Potential difference, and capacitor
	P-13	Electric current, force and potential difference, Conductor, insulator and semiconductor, Direction of electric flow
	P-14	Relation between potential difference and electricity, Ohm's Law, Resistance, Specific resistance, and related
Chapter 11	P-14	mathematical problems
(Current Electricity)	P-15	Circuit, Equivalent resistance (Series circuit and parallel circuit)
(Current Electricity)	P-16	Mathematical problems on circuit and equivalent resistance
	P-17	Electric power, electrical supply, mathematical problems on electric Power
	P-18	Safe use of electricity, Design of circuit in residence, review of mathematical problems
Chapter 12	P-19	Magnet, magnetic effects of current, Solenoid
(Magnetic Effects of	P-20	Electromagnet, effect of magnet on a current carrying wire
Current)	P-21	DC motor, electromagnetic induction, Generator
Currenty	P-22	Transformer and mathematical problems
	P-23	Radioactivity, Characteristics of Alpha, Beta and Gamma ray, half life
Chapter 13	P-24	Uses of radioactivity, Cautions about radioactivity, Development of electronics, Analog and Digital electronics,
(Modern Physics and	1 24	Semiconductor
Electronics)	P-25	Diode, Transistor
	P-26	Working procedure of microphone, Speaker, Radio, Telephone and Fax, Effective use of ICT
Chapter 14	P-27	Contribution of Jagadish Chandra Bose, X-Ray, Ultrasonography, CT scan
(Physics to Save Life)	P-28	MRI, Angiography, Endoscopy, ECG, ETT, Radio Therapy, Isotopes











MATHEMATICS		
Chapter	Lecture	Lecturewise Topics
	M-01	Resolving into factors, Techniques for determining factors, work, Exercise-3.3 (1-15)
	M-02	Exercise-3.3 (16-25)
	M-03	Exercise-3.3 (26-31), concept of remainder theorem, concept of factorization theorem, example, exercise
	M-04	Exercise-3.4 (1-16)
Chapter-03 (Algebraic Expressions)	M-05	Forming and applying algebraic formulae in solving real life problems (Related to payable and attainable, time and work, time and distance), Exercise-3.5 (14-19)
	M-06	Forming and applying algebraic formulae in solving real life problems (related to pipe and water tank, profit-loss), Exercise – 3.5 (20-25)
	M-07	Formulation of Algebraic Formulas (Investment-Profit), Exercise-3.5 (26-33)
	M-08	Exercise – 3.5 (34-38)

Important reactions and working mechanisms (Revision)

Preservative, Glass Cleaner, Toilet Cleaner

Chapter-12

(Chemistry in Our Lives)



C-22

C-23

C-24

industry



Laboratory production of ammonia gas & Industrial production ammonia gas, Chemistry in agriculture &







দশম শ্রোণ এক		
	M-09	Cylinder, Exercise- 16.4 (14-21)
	M-10	Exercise – 3.1, 3.2
	M-11	Exercise – 3.3, 3.4 (Re-discussion)
	M-12	Exercise – 3.5 (Re-discussion)
	M-13	Circle arc, inscribed angle, central angle, Theorem- 20, 21, 22
	M-14	Exercise – 8.2
	M-15	Theorem related to quadrilateral inscribed in a circle (23, 24), Exercise-8.3 (1, 2)
Chapter-08	M-16	Exercise – 8.3 (3-7)
(Circle)	M-17	Secants of Circle, Tangents, Common Tangents, Theorems (25, 26, 27)
	M-18	Exercise – 8.4 (1-6)
	M-19	Constructions related to Circle (6-11), Exercise- 8.5 (12, 13, 14)
	M-20	Exercise- 8.5 (9-11, 15-19)
Chapter-10	M-21	Angle of elevation and angle of declination, Example, Exercise-10 (1-13)
(Distance and Elevation)	M-22	Exercise-10 (14-21), Work
Chapter-11	M-23	Continued Proportions, Ratio, Exercise-11.2 (1-14)
(Algebraic Ratio and Proportion)	M-24	Exercise-11.2 (15-25)
. ,	M-25	Simple simaltaneous equations, Compatibility for the solutions of simple simaltaneous equations in two variables, Exercise-12.1
Chapter-12	M-26	Solving Simple Equations (Substitution Method, Elimination Method), Exercise-12.2 (1-6)
(Simple Simultaneous	M-27	Solving Simple Simultaneous Equations (Cross Multiplication Method), Exercise-12.2 (7-12)
Equations in Two	M-28	Graphical Method, Exercise – 12.3
Variables)	M-29	Formation of simaltaneous equations from real life problems and solution. Exercise-12.4(10-19)
	M-30	Exercise – 12.4 (20-24)
	141-30	Sequences, Series, Arithmetic series, Determination of general term of arithmetic series, Sum of n terms of
	M-31	arithmetic series, Examples (1-6), Exercise- 13.1(1-7, 9-18)
Chapter-13	M-32	Exercise 13.1(8, 19-24)
(Finite series)	1-1 02	Finding the sum of the squares and cubes of the first n natural numbers, Exercise 13.2 (18, 19, 20, 21) Work,
(i iiiice series)	M-33	Examples, Geometric series, Common terms, Examples, Exercise-13.2 (1-5, 7, 8-11)
	M-34	Determining sums of terms in geometric series, Exercise 13.2 (6, 12-17, 22-25) HW: (Example-12)
	M-35	Properties of Ratios and Proportions, Geometric Proportions, Theorems: 28, 29, 30, 31
	M-36	Exercise – 14.1 (1-5)
Chapter-14	M-37	Exercise-14.1 (6-9), Congruence (Equiangular Polygons, Similar Polygons), Theorem: (32-34)
(Ratio, Similarity and	M-38	Exercise-14.2(5,6,7); Theorem: 35, Concept of Division of Line Segments in Fixed Ratio, Construction-12
Symmetry)	M-39	Exercise-14.2(8-13)
-	M-40	Symmetry, Lines of Symmetry of Regular Polygons, Rotational Symmetry and Line Symmetry, Exercise-14.3
	M-41	Area of a Plane, Theorem-36, 37, 38, Exercise- 15 (1-7)
Chapter-15	M-42	Exercise-15 (8-12)
(Area Related Theorem and Construction)		Theorem-39 (Pythagorean Theorem), Construction: 13, 14, 15
	M-43	
	M-44	Exercise 15 (13-18) Circumforance of a circle length of are cognocity area of a circle example, work exercise, 16.3 (10) complete.
Chamban 4.	M-45	Circumference of a circle, length of arc segment, area of a circle, example, work, exercise - 16.3 (10) complete
Chapter-16 (Mensuration)	M-46	Exercise – 16.3 (1-9)
	M-47	Rectangular Solids, Cubes, Exercise - 16.4 (8-13)
	M-48	Cylinder, Exercise- 16.4 (14-21)
	M-49	Cumulative frequency, frequency distribution table, Mass Polygons, Ogive curve
Chapter-17	M-50	Determination of mean, Determination of arithmatic mean in short cut method
(Statistics)	M-51	Concept of median, Examples, Exercises- 17
	M-52	Concept of mode, Examples, Exercises - 17











HIGHER MATHEMATICS		
Chapter	Lecture	Lecturewise Topics
	H.M-01	(System of quadratic equations with two variables, Example) Exercise-5.4
	H.M-02	(Application of quadratic equations, Example) Exercise-5.5
Chapter-05	H.M-03	(System of indicial equations with two variables, Example) Exercise-5.6
(Equation)	H.M-04	Solving quadratic equations using graphs, Exercise-5.7 (1-12)
	H.M-05	Exercise-5.7 (13-17)
	H.M-06	Chapter-5 (Re-discussion)
	H.M-07	Concepts of inequalities, Examples, Exercise-6.1 (Complete), Uses of inequalities, Examples of Exercise-6.2
Chapter-06	H.M-08	Exercise-6.2 (1-11)
(Inequality)	H.M-09	Graph of inequalities; Exercise-6.3 (9-11)
	H.M-10	Linear inequality with two variables, Example, Exercise 6.3 (12-17)
	H.M-11	Sequences, Infinitive series, Common terms, Examples, Exercise-7 (1-4, 6, 9, 10)
Chapter-07	H.M-12	Proof of the formula of sum of infinite series, Exercise-7 (5, 7, 8, 11)
(Infinite Series)	H.M-13	Exercise-7 (12, 13, 14)
	H.M-14	Exercise-7 (15, 16, 17)
	H.M-15	Trigonometric ratios, Signs of trigonometric ratios in different quadrants, Exercise-8.2 (1-6)
Chapter-08	H.M-16	Exercise-8.2 (7-13), Example, Exercise-8.3 (10, 12)
(Trigonometry)	H.M-17	Trigonometric ratios of different angles, Exercise-8.3 (7-9)
	H.M-18	Exercise-8.3 (11, 13-16)
Chantar 00	H.M-19	Examples (18-29), Work on page 211
Chapter-09 (Exponential and	H.M-20	Exercise-9.2 (a, b, c, d, e of 6 and 7)
Logarithmic Functions)	H.M-21	Exercise-9.2 (f, g, h of 7), Examples (31, 33), Exercise-9.2 (10, 11, 12)
Logaritimic Functions)	H.M-22	Logarithmic and absolute value functions, Graph of functions, Exercise-9.2 (8, 9, 13, 14, 15)
	H.M-23	Binomial expansion of $(1 + y)^n$, Use of Pascal's Triangle, Example $(1, 2, 3)$, Exercise- 10.1 $(1, 2, 4, 5, 6)$
Chapter-10	H.M-24	Relation between ${}^{\rm n}_{\cdot}C_r$ and ${\rm n!}$, Example (4), Exercise-10.1 (3), Binomial expansion of $(x+y)^{\rm n}$
(Binomial Expansion)	H.M-25	n! and finding the value of ${}^{\rm n}_{.}{\rm C}_{\rm r}$, finding the (r+1)th term, Exercise-10.2 (10-14); HW: Example (10)
	H.M-26	Exercise-10.2 (15-19)
	H.M-27	Slopes (Details of +ve and -ve slopes), Exercise-11.3 complete
Chapter-11	H.M-28	Equations of straight lines, graphs (graphs with different equations specially with +ve and -ve slopes), Exercise-11.4 (10-16)
(Coordinate Geometry)	H.M-29	Exercise-11.4 (17-24)
	H.M-30	Slope, Area, Equation of Straight Line (Review)
Chapter-12	H.M-31	Equality of vectors, inverse vectors, addition and subtraction of vectors, rules of addition of vectors, scalar multiplication of vectors, distributive law for scalar multiplication of vectors, law of triangle and parallelogram, Examples-1, 2
(Planar Vector)	H.M-32	(1-8, 10, 12) of Exercise-12, Example-4
(i tariai vector)	H.M-33	Position vectors, Example-3, 5, Exercise-12(9, 11)
	H.M-34	(13-16) of Exercise-12
		Some basic definitions, solids, volume and surface area of rectangular solids, cube, Exercise-13 (7-9), HW:
	H.M-35	Exercise-13 (31)
	H.M-36	Exercise-13 (10, 21-23), Right circular cone, Exercise-13 (11-13, 24) HW: Exercise-13 (32)
Chapter-13	H.M-37	Sphere, Exercise-13 (14-20)
(Solid Geometry)	H.M-38	Prism, pyramid, example
	H.M-39	Exercise-13 (25-28)
	H.M-40	Rectangular Solids, Exercise-13 (1-6 and 29, 30)
		5











Chapter-14 (Probability) H.M-43 Some concepts related to Probability, Logic Based Probability, Data based probability, Examples, Work, Exercise-14 (1-6) Exercise-14 (7-12), Sample space and probability determination of probability-by-probability Tree, Exercise-14 (13, 14) Mutually exclusive events, mutually non-exclusive events, Concept of exclusive events (When to multiply / add), Exercise-14 (15-18) H.M-44 Chapter review and creative questions related to probability

BIOLOGY		
Chapter	Lecture	Lecturewise Topics
Chantay 00	B-01	Introductions of human skeleton, Role of skeleton in firmness and locomotion
Chapter-09	B-02	Bone, Cartilage, Joint (Synovial joint, Types of joint)
(Firmness and	B-03	Muscles, Roles of bones and muscles in human locomotion, Tendon, and ligament
Locomotion)	B-04	Diseases of bones (Osteoporosis, Rheumatoid arthritis) (Review of the chapter)
	B-05	Concept of reproduction in organism and its significance, Plant reproduction (Reproductive organ: Flower, Different parts of a flower)
Chantan 44	B-06	Inflorescence, Pollination, Medium of pollination
Chapter-11	B-07	Microsporogenesis, Megasporogenesis
(Reproduction in	B-08	Fertilization, Development of new sporophyte, Origin of fruits
Organism)	B-09	Animal reproduction and fertilization, The basic significance of fertilization, Role of hormone in human reproduction
	B-10	Development of the embryo, Placenta, Fetal membrane, Reproduction related disease (AIDS)
	B-11	Heredity in organism, Components carrying (heredity materials) behavioral features to the offspring from generation to generation, Chromosome, DNA
Chapter-12	B-12	RNA, Gene, DNA replication
(Heredity in Organisms	B-13	DNA test, Determination of human sex
and Evolution)	B-14	Genetic disorder (Color blindness, Thalassemia)
	B-15	Theories of evolution of organisms, Origin of life
	B-16	Theory of Darwin and significance of evolution in surviving of species
	B-17	Ecosystem, Components of ecosystem, Ecosystem of a pond
	B-18	Food chain (Predator food chain, Parasitic food chain, Saprophytic food chain), Food web, Nutrition flow in ecosystem, Energy flow in ecosystem
Chapter-13 (Environment of life)	B-19	Relation of energy between trophic levels, Concept of energy pyramid, Effect of energy pyramid to keep food chain in limit, Biodiversity, Types of biodiversity, Effect of biodiversity on maintenance of stability in an ecosystem
	B-20	Interaction and interdependence among different organisms and balance of environment), Positive interaction, Negative interaction, Significance, and method of conserving environment
Chapter-14	B-21	Biotechnology, Stages of Tissue culture, Uses of tissue culture
(Biotechnology)	B-22	Genetic engineering, Stages of the preparation of GMO or DNA recombinant, Genetic engineering in use

ICT		
Chapter	Lecture	Lecturewise Topics
Chapter 05 (Multimedia and	ICT-01	Concept of Multimedia, Presentation Software, Opening Power Point and Creating a Slide, Saving Presentation, Adding New Slide, Slide Show, Changing Slide Background, Inserting Pictures, Adding Transition, Applying Transition Separately in Text, Adding video in slide
Graphics)	ICT-02	Graphics (Importance of Graphics, Opening the Photoshop Program, creating a new file), Introduction to the Photoshop Toolbox and Palette, Acquaintance of the Selection and Move tool









ा । ज ।		
		Revision of Selection and Move Tool, Shifting Selection, Fill Color in the Floating Selection, the use of Feather,
	ICT-03	Selection using Lasso Tool and Polygonal Lasso Tool Stroke, Saving New File, Layer, adding new Layer,
		Thumbnail Icon, Clustering, Integrating and Segregating Palette, Making Layer Object, creating a Text Layer,
		Transferring Pictures from One file to Another, Fixing Target Layer, Changing the Opacity of the Layer,
		Removing Layer, Combining or Merging Layers.
	ICT-04	Cut, Copy, Paste and Paste into, the use of Crop tool, cropping up Tilted Picture, Use of Eraser Tool, creating
		Blend with Gradient tool, Creating Linear Blend, Editing Gradient, Adding and Removing New color and Color
Chantay OF		Stops, Adjusting Brightness and Contrast of Picture
Chapter 05		Illustrator, Open Illustrator Program, open File in Illustrator, work Tools, names of the necessary tools of the
(Multimedia and		Toolbox, Filling color on Object, Color, Gradient and None, Increasing and Reducing the size of Object,
Graphics)	ICT-05	Changing the Positioning of Page by Hand Tool, Mode of Viewing Object, Creating Object, Selecting Object and
		Erasing borderline or Path, Path, Selection Tool, Direct Selection Tool, Grouping object, Lock the Objects, Use of
		Cut, Copy and Paste Command
	ICT-06	Layer, creating New Layers, Cancelling Layer, Merging Layers, Use of Color in Object, Color Palette, Fill Color,
		The use of Stroke, Pen and Pencil Tool, Closed path and Opened path, Pencil Tool and Pen tool, Editing Path,
		Adding Anchor Point, Removing Anchor Point, Editing Curve Path, Writing Job, Point Text, Editing Writing,
		Selecting Letters, Changing color of Letters, Deleting Letters, Enlarging and Reducing Font Size, Increasing or
		Decreasing Font Size Vertically and Horizontally, Baseline Shift, The Leading, Area Text, Trying in the Pat,
		Trying outside circular Object, Creating Outline of Letters, Placement of Image in Illustrator
		The concept of Database, Characteristics of Database Program, the concept of Database and Access,
	ICT-07	Preparation for Starting work in Access Program, Opening Access Program, Creating Database Table, Data
		Entry, Changing Font size, Correctio of spelling error
	ICT-08	Closing and Opening of a Database File, to open a closed file, inserting new field and column to Table, Delete
Chapter 06		Field or Column, Deleting Records or Rows
(The Use of Database)		Alphabetical and Cardinal sorting of Data, Searching Information, Searching Conditional Information,
	ICT-09	Searching Information based on Village name, Viewing Records of More Villages, Searching Information based
		on Male/Female, Query and Report
	ICT 10	Collecting and Saving Information in Query Method, Collecting Information Based on Villages and Union in
	ICT-10	Query Process, Adding Gridlines to Report

For any information regarding the program contact the number below

Branches in Dhaka:

Mirpur-01713-236705, Rupnagar-01713-236734, Cantonment-01713-236724, Uttara-01713-236707, Mohammadpur-01713-236701, Science Lab.-01713-236706 Farmgate (Green Road)-01713-236710, Farmgate (Malek Tower)-01713-236711, Shantinagar-01713-236857, Malibagh-01713-236702, Motijheel-01713-236908 Basabo - 01713-236722, Banshree - 01713-236723, Laxmibazar - 01713-236720, Jatrabari - 01713-236719, Dania - 01713-236718, Savar - 01713-236721 Gazipur - 01713-236746, Narayanganj - 01713-236717, Konapara - 01713-236757, Tongi - 01713-236759, Bakshibazar - 01713-236712, Khilgaon - 01713-236768

Branches outside Dhaka:

Mymensingh (Natun Bazar)-01713-236716, Mymensingh (KB)-01713-236769, Kishoreganj-01713-236739, Netrokona- 01713-236767, Jamalpur-01713-236740 Sherpur-01713-236749, Tangail-01713-236737, Sirajganj-01713-236742, Bogura-01713-236727 Gaibandha-01713-236755, Rangpur (Medical Mor)-01713-236726 Kurigram-01713-236753 Lalmonirhat-01713-236777, Saidpur-01713-236741, Dinajpur-01713-236733, Thakurgaon-01713-236748, Panchagarh-01713-236778 Joypurhat-01713-236754, Naogaon-01713-236756, Chapainawabganj-01713-236747, Rajshahi-01713-236713, Natore-01713-236751, Pabna-01713-236736 Kushtia - 01713-236735, Meherpur - 01313-368670, Chuadanga - 01713-236764, Jhenaidah - 01713-236761, Magura - 01713-236752, Jashore - 01713-236731 Norail- 01713-236788, Khulna- 01713-236715, Satkhira- 01713-236750, Pirojpur -01713-236790 Barishal-01713-236730, Rangpur (Khamar Mor)-01713-236783 Shariatpur -01713-236782, Gopalganj-01713-236760, Faridpur-01713-236732, Rajbari-01713-236786 Manikganj-01713-236763 Munshiganj-01713-236762 Brahmanbaria- 01713-236743, Narsingdi-01713-236738, Cumilla-01713-236728 Chandpur-01713-236765, Noakhali-01713-236745, Feni-01713-236744 Cox's Bazar-01713-236766, Chittagong (Chawkbazar)-01713-236714 Chittagong (Halisahar)-01713-236758, Sylhet-01713-236729, Habiganj-01713-236773 Moulvibazar-01713-23678, Sunamganj-01713-236779, Patukhali-01713-236784





