## **Class Nine** Academic Program-2024 (Online)

## This Routine is for English Version Students

## Math-Science Routine-01

Date & Day	Live Class-01 (3:30 pm - 4:30 pm)	Live Class-02 (4:40 pm - 5:40 pm)	Live Exam (10 AM to 10 PM)				
11 February 2024 (Sunday)	Science (S-01)	Math (M-01)					
13 February 2024 (Tuesday)	Science (S-02)	Math (M-02)	Live Exam (M-01) MCQ (10×1=10); 10 min Live Exam (S-01) MCQ (10×1=10); 10 min				
18 February 2024 (Sunday)	Science (S-03)	Math (M-03)	Live Exam (M-02) MCQ (10×1=10); 10 min Live Exam (S-02) MCQ (10×1=10); 10 min				
20 February 2024 (Tuesday)	Science (S-04)	Math (M-04)	Live Exam (M-03) MCQ(10×1=10);10min. Live Exam (S-03) MCQ (10×1=10);10min.				
25 February 2024 (Sunday)	Science (S-05)	Math (M-05)	Live Exam (M-04) MCQ(10×1=10);10min. Live Exam (S-04) MCQ (10×1=10);10min.				
27 February 2024 (Tuesday)	Science (S-06)	Math (M-06)	Live Exam (M-05) MCQ (10×1=10); 10 min Live Exam (S-05) MCQ (10×1=10); 10 min				
03 March 2024 (Sunday)	Science (S-07)	Math (M-07)	Live Exam (M-06) MCQ (10×1=10); 10 min Live Exam (S-06) MCQ (10×1=10); 10 min				
04 March 2024 (Monday) Chapterwise Exam-01 Science – Chapter 01 (Force, Pressure and Energy) MCQ (10×1=10); 10 min, written (30 marks); 40 min.							
05 March 2024 (Tuesday)	Science (S-08)	Math (M-08)	Live Exam (M-07) MCQ (10×1=10); 10 min Live Exam (S-07) MCQ (10×1=10); 10 min				
10 March 2024 (Sunday)	Science (S-09)	Math (M-09)	Live Exam (M-08) MCQ (10×1=10); 10 min Live Exam (S-08) MCQ (10×1=10); 10 min				
11 March 2024 (Monday) (	Chapterwise Exam-02 Math –	Chapter 01 (Sets in daily life) I	MCQ (10×1=10); 10 min, written (30 marks); 40 min.				
12 March 2024 (Tuesday)	Science (S-10)	Science (S-11)	Live Exam (M-09) MCQ (10×1=10); 10 min Live Exam (S-09) MCQ (10×1=10); 10 min				
All Classes	s & Exams will remain clo	sed on 17 <sup>th</sup> March 2024 (Sund	lay) Due to National Children's Day				
19 March 2024 (Tuesday)	Math (M-10)	Math (M-11)	Live Exam (S-10) MCQ (10×1=10); 10 min Live Exam (S-11) MCQ (10×1=10); 10 min				
24 March 2024 (Sunday)	Science (S-12)	Science (S-13)	Live Exam (M-10) MCQ (10×1=10); 10 min Live Exam (M-11) MCQ (10×1=10); 10 min				
All Clas	sses & Exams will remain clo	sed on 26 <sup>th</sup> March 2024 (Tues	day) Due to Independence Day				
31 March 2024 (Sunday)	Sci	ience (S-14)	Live Exam (S-12) MCQ (10×1=10); 10 min Live Exam (S-13) MCQ (10×1=10); 10 min				
01 April 2024 (Monday) Chapt	erwise Exam-03 Science – Cl	apter 02 (Temperature and He	at) MCQ (10×1=10); 10 min, written (30 marks); 40 min.				
02 April 2024 (Tuesday)	Math (M-12)	Math (M-13)	Live Exam (S-14) MCQ (10×1=10); 10 min				
03 April 2024 (Wednesday)	Sci	ience (S-15)	Live Exam (M-12) MCQ (10×1=10); 10 min Live Exam (M-13) MCQ (10×1=10); 10 min				
All Clas	ses & Exams will remain	closed from 4 <sup>th</sup> April to 15 <sup>th</sup>	April 2024 Due to 'Eid-Ul-Fitr'				
16 April 2024 (Tuesday)	Math (M-14)	Math (M-15)	Live Exam (S-15) MCQ (10×1=10); 10 min				
21 April 2024 (Sunday)	Science (S-16)	Science (S-17)	Live Exam (N-14) MCQ (10×1=10); 10 min Live Exam (M-15) MCQ (10×1=10); 10 min				
22 April 2024 (Monday) Cha	pterwise Exam-04 Math – Ch	apter 02 (Sequence and Series	) MCQ (10×1=10); 10 min, written (30 marks); 40 min.				
23 April 2024 (Tuesday)	Math (M-16)	Math (M-17)	Live Exam (S-17) MCQ (10×1=10); 10 min				
28 April 2024 (Sunday)	Science (S-18)	Science (S-19)	Live Exam (M-16) MCQ (10×1=10); 10 min Live Exam (M-17) MCQ (10×1=10); 10 min				
29 April 2024 (Monday) Ch	apterwise Exam-05 Science	- Chapter 03 (Modern Physics)	MCQ (10×1=10); 10 min, written (30 marks); 40 min.				
30 April 2024 (Tuesday)	Math (M-18)	Math (M-19)	Live Exam (S-19) MCQ (10×1=10); 10 min				
05 May 2024 (Sunday)	Science (S-20)	Science (S-21)	Live Exam $(M-19)$ MCQ $(10x1-10)$ , 10 min Live Exam $(M-19)$ MCQ $(10x1-10)$ , 10 min				
06 May 2024 (Monday) Ch	apterwise Exam-06 Science -	Chapter 04 (States of Matter)	Live Exam (S-20) MCO $(10 \times 1 = 10)$ ; 40 mm, written (30 marks); 40 mm.				
07 May 2024 (Tuesday)	Math (M-20)	Math (M-21)	Live Exam (S-21) MCQ (10×1=10); 10 min Live Exam (M-20) MCQ (10×1=10): 10 min				
12 May 2024 (Sunday)	Science (S-22)	Science (S-23)	Live Exam (M-21) MCQ ( $10\times1=10$ ); 10 min				
14 May 2024 (Tuesday)	Math (M-22)	Math (M-23)	Live Exam (S-22) MCQ (10×1=10); 10 min				
19 May 2024 (Sunday)	Science (S-24)	Science (S-25)	Live Exam (S-23) MCQ (10×1=10); 10 min Live Exam (M-22) MCQ (10×1=10); 10 min Live Exam (M-22) MCQ (10×1=10); 10 min				
20 May 2024 (Monday) Char	oterwise Exam-08 Science – C	hapter 05 (Structure of Matter	r) MCQ (10×1=10); 10 min, written (30 marks); 40 min.				

Math Syllabus				
Chapter	Lecture	Lecture wise Discussed Topics		
<b>Chapter-01</b> Sets in daily life	M-01	Importance of sets in mathematics, Expressing of sets, Methods of writing sets, Methods of expressing sets		
	M-02	Roaster Method or Tabular Method, Set Builder Method		
	M-03	Types of sets, Universal Set, Finite Set, Infinite Set, Empty Set		
	M-04	Subset, Equal set, Proper subset, Sets of sets, Power set, Number of elements of a set		
	M-05	Operation of sets, Union of Sets, Intersection of Sets, Difference of two sets		
	M-06	Complement of a Set, Disjoint Set, De Morgan's Law		
	M-07	Solving Sports Problems with Diagrams, Venn Diagram, Set operations using Venn Diagrams		
	M-08	Venn Diagram in real life problems, Cartesian Product of sets		
<b>Chapter-02</b> Sequence and Series	M-09	Sequences and Series, Two interesting Games, Classification of Sequences, Arithmetic Sequence		
	M-10	Finding the general term or nth term of an arithmetic sequence		
	M-11	Geometric Sequence, Case-01: Lily's Weekly Savings Sequence, Case-02: Spreading of virus, Geometric		
		Sequence, Sum of first n terms of a geometric sequence		
	M-12	Fibonacci Sequence, Fibonacci Sequence in Nature, Fibonacci Rectangle		
	M-13	Sum of arithmetic series, formula for finding sum of arithmetic series		
	M-14	The sum of infinite terms of a geometric series		
Chapter-03	M-15	Concept of exponent, formula, nth root, concept of log, limitation of base of log		
	M-16	Types of logarithms, Formulas related to Logarithm Formula (1) Formulas related to Logarithm Formula (2, 3, 4,5)		
Concept and	M-17	Formulas related to Logarithm Formula (6, 7,8,9,10)		
Application of	M-18	Uses of logarithm, logarithm in measuring magnitude of earthquakes		
Logarithm	M-19	Group Work/ Application of logarithm		
	M-20	Measuring intensity of sound using logarithm		
Chapter-04	M-21	Variables, Constants and Polynomials, Forming of Polynomial Expressions from Real Problems, Polynomial		
		Expressions, Draw the graph of a Polynomial Expression with one variable, Graph of a Linear Polynomial		
in Nature and		Expression, Linear Polynomial Expressions in Nature and Technology		
	M-22	Graphs of Quadratic Polynomial Expressions, Quadratic Polynomial Expressions in Nature and Technology		
Technology	M-23	Graphs of Cubic polynomial Expressions, Cubic polynomials in Nature and Technology,		

## Science Syllabus

Chapter	Lecture	Lecture wise Discussed Topics	
<b>Chapter-01</b> Force, Pressure and Energy	S-01	Newton's First Law: Static inertia and Dynamic Inertia, Newton's first law: Definition and Explanation	
	S-02	Newton's Second Law: Concept of momentum, Rate of change, Newton's second law: Definition and Explanation	
	S-03	Concept of fundamental force, Newton's Third Law	
	S-04	Gravitational Force: From information to law, Definition and Explanation of Newton's law of gravitation, Concept of weight	
	S-05	Pressure: Definition and Expression and units, Archimedes' Principle and Buoyancy, Floating or sinking of objects	
	S-06	Energy: Kinetic and potential energy, Conservation of mechanical energy, Solving various mathematical problems	
	S-07	Heat: Heat conduction, Convection, Radiation, Specific heat, Heat flow, Temperature and internal energy: Concept of Thermal Energy, Motion of Molecules and Temperature, Concept of Internal Energy	
	S-08	Thermal Expansion of matters: Expansion of solids	
Chapter-02	S-09	Expansion in liquids	
Temperature and Heat	S-10	Diffusion of gaseous substances	
	S-11	Calorimetry: Principles of Calorimetry, Effect of heat on change of State of Matter	
	S-12	Thermodynamics, Scientist Joule's Experiment	
<b>Chapter-03</b> Modern Physics	S-13	Quantum mechanics, Wave-particle duality, De Broglie Wavelength, Heisenberg's Uncertainty Principle	
	S-14	Particle Physics, Atoms are not the Last Word, Standard Model	
	S-15	Theory of relativity, Time dilation, Space Contraction, Relative Momentum and Energy	
<b>Chapter-04</b> States of Matter	S-16	Kinetic Theory of Particles	
	S-17	Diffusion, Effusion	
	S-18	Distillation	
	S-19	Sublimation	
<b>Chapter-05</b> Structure of Matter	S-20	Particles of an atom, Atomic Model	
	S-21	Rutherford's Atomic Model	
	S-22	Bohr's Atomic Model	
	S-23	Electron configuration of atoms, Concept of orbital	
	S-24	Principles of Electronic Configuration in atoms, Exceptions to the general rules of Electronic Configuration	
	S-25	Atomic Mass and Relative Atomic Mass, Relative Molecular Mass	

উর্দ্ধাম
একাডেমিক এন্ড এডমিশন কেয়ার

For Classes & Exams Please Visit https://online.udvash-unmesh.com

and the set of the se