IMPORTANT TOPICS...

MATHS

No.	Units	Marks
I.	Relations and Functions	08
II.	Algebra	10
III.	Calculus	35
IV.	Vectors and Three-Dimensional Geometry	14
V.	Linear Programming	05
VI.	Probability	08
	Total	**80**

Chapter Name	Important Topics
Relations and Functions	• Relations types • Invertible functions • Composite of two functions
Inverse Trigonometric Functions	• Inverse Trigonometric functions properties
Matrices	• Matrices Multiplication • Properties of Symmetric and Skew Symmetric • Finding a matrices inverses using elementary transformation
Determinants	• Determinants Properties • Matrix inverse and Adjoint • System of linear equations solutions
Continuity and Differentiability	• Continuity • Second-order derivatives • Logarithmic Differentiation • The parametric form of functions -Differentiation
Application of Derivatives	• Rate of change • Tangents and Normal to Curves • Increasing and decreasing functions • Finding Local maxima and minima using first and second-order test

Integrals	• Integration Methods
	  • Substitution
	  • Partial Fractions
	  • Parts
	• Properties of Definite Integrals
	• Definite Integral as Limit of a sum

Application of Integrals	• Area under curves • The area bounded by two Curves • The area bounded by a curve and a line
Differential Equations	• Differential equation Formation • Linear differential equation • Solving Differential Equation with variable separable methods • Homogeneous Differential Equation
Vector Algebra	• Scalar Product of Vectors • Projection of Vectors on a line • Vector Product of Vectors

3-D Geometry	• Direction Cosines • Direction Ratio of line • Line Equation • The angle between two lines • Coplanarity of line • The shortest distance between two skew lines • The angle between 2 planes • The distance of a point from a plane • The angle between a line and a plane • Equation of plane in normal form • Equation of plane perpendicular to the provided vector and it passes through a given point • Equation of plane passing through the three non-collinear points • The plane passing through the intersection of two planes
Linear Programming	• Linear programming problems Graphical Solution
Probability	• Probability Multiplication theorem • Independent Events • Bayes' Theorem • Binomial Distribution • Random Variable and its probability distribution • Mean and Variance of Random Variable

CHEMISTRY

The important topics of class 12 chemistry board exam are:
1)Solid State - Packing
2)Solutions- All the Colligative Props
3)Electrochem- Nernst eqn and all the formulae
4)Chem Kinetics- Corresponding equations of all the orders and Activation Energy
5)Surface Chem- All definitions; and Colloids
6)Metallurgy- Remember all the ores of all metals and extraction processes
7)P block- trends in each group, uses of all compounds and reactions
8) D and F block- same as above
9)Coordination Chemistry- All definitions; CFT; Isomerism
10) RX ArX - All mechanisms (SN1 ,2, SE, NA)
11) ROH,ArOH,ROR- Rxns(Kolbe, Reimer-Teimann , Williamson synth) and mechanisms
12)RCHO, RCOR,RCOOH- All types of synthesis rxns and rxn of NH3 derivatives with carbonyl group
13)Amines-Hoffmann Bromamide, Gabriel Phthalamide, Carbylamine and Diazonium grp
14) Biomolecules- All rxns of Glucose, Hydrolysis products of polysaccharides and all protein structures
15)Polymers- Uses and monomers of all polymers, reactions
16)CIEL- Definitions of all medicinal compounds and atleast 2 eg of each; Soaps

PHYSICS

Some important topics are as follows,

1. Wheatstone's network
2. Metre bridge and potentiometer numericals
3. Ampere's circuital law and applications
4. Biot-Savarts law
5. Moving coil galvanometer
6. Cyclotron
7. Gauss' law and applications
8. LCR circuit in resonance
9. Power dissipated in a series LCR circuit
10. Block diagrams from communication systems
11. All the theories of semiconductor chapter
12. Lens makers formula
13. Ray optics numericals (image formation)
14. Interference through single slit
15. Young's double slit experiment
16. AC generator
17. Mutual induction due to solenoid
18. Transformer
19. Derivations from electrostatics
20. De-broglie wavelength
21. Atoms and nuclei derivations of radius

1. Galvanometre
2. Transformer
3. Amplifier
4. Transistor
5. Biot savart law and its derivation
6. Dipole derivations are most important. You will definitely found one of them easily.
7. AC generator.
8. Electric field due to an infinite wire.
9. Work done in moving a test charge from infinite to a certain distance of ŕ.
10. LC , LR and LCR circuits and their phase diagrams.
11. Energy level diagram for hydrogen
12. Microscope, telescope
13. Spectral series
14. Huygens principle and young double slit experiment.
15. Theory of fringes

16. Lens maker formula

17. Potentiometer and meter bridge.

#Rest of plan for numerical (12-16 marks)

1.Ray optics numerical from NCERT.
2.Current electricity numerical from NCERT.
3. Try to solve at least previous 5 years numericals.
4. Radioactive Decay life numericals from S.L Arora.