

### **TEST PATTERN**

- 1. <u>Topic Wise Test (TWT)</u>:- There are 67 topic wise test and time duration of each test is 1:00 Hour.
- 2. <u>Full Length Test (FLT)</u>:-These full length tests are as per CSIR-NET Exam pattern. There are 75 questions in each. Out of 75 questions, students have to attempt 55 questions. Total time duration is 03:00 Hour. Total number of test is **five**.
- 3. Student can attempt more than 1700 number of questions during this test series.

#### **Topic Wise Test (TWT) Schedule**

01 Mathematical Physics			
Status	Name of Test	Topics	
	TWT-01	Vector Analysis	
	TWT-02	Dirac Delta Function	
	TWT-03	Ordinary Differential Equation	
D 1 1	TWT-04	Linear Algebra and Matrices	
Released	TWT-05	Fourier Series	
	TWT-06	Complex Number and Functions	
	TWT-07	Complex Integration / Contour Integration	
	TWT-08	Fourier Transform and Laplace Transform	
	TWT-09	Special functions-Hermite, Bessel, Laguerre and Legendre functions	

02 Classical Mechanics			
Status	Name of Test Topics		
	TWT-01	Lagrangian Formalism	
	TWT-02	Small Oscillation, Phase Curve and Stability Analysis	
Released	TWT-03	Central Force	
Released	TWT-04	Hamiltonian Formalism	
	TWT-05	Poisson Bracket, generating function and canonical transformation	
1	TWT-06	Rotational Dynamics	
	TWT-07	Special Theory of Relativity	

	03 Electromagnetic Theory			
Status	Name of Test	Topics		
	TWT-01	Coulomb's Law, Gauss Law, Electrostatic Potential, Poisson's & Laplaces		
		Equations, Electrostatic Energy and Properties of Conductor		
	TWT-02	Electric Dipole, Polarisation, Electrostatic Boundary Conditions,		
		Multipole Expansion and Image Problem		
Released	TWT-03	Motion of Charged Particles in Electric and Magnetic Fields, Magnetic		
Keleaseu		Force Experienced by Current Elements, Biot Savart Law and Amperes		
		Law		
	TWT-04	Magnetic Vector Potential, Magnetic Dipole, Magnetisation,		
		Magnetostatic Boundary Conditions		
	TWT-05	Elecromagnetic Induction, Maxwell Equations		



## **Online CSIR-NET Test Series** Physics - December, 2023

# Physics by fiziks

TWT-06	E.M. Wave in Free Space, Dielectrics, Conductors, Reflection and	
	Transmission	
TWT-07	Rectangular Wave Guide, Potential Formulation for Time Varying Fields,	
	and Radiation from Moving Charges	

04 Quantum Mechanics				
Status	Name of Test	Topics		
TWT-01 Wave Particle Duality & Uncertainty		Wave Particle Duality & Uncertainty Principle		
	TWT-02	Tools of Quantum Mechanics Part - 1		
Released	TWT-03	Tools of Quantum Mechanics Part -2		
	TWT-04	Postulates of Quantum Mechanics		
	TWT-05	Free Particle, Potential barriers and Potential Well		
	TWT-06	1D Harmonic Oscillator, Dirac Function and 2D, 3D in Cartesian		
		Coordinate		
	TWT-07	Angular Momentum, Hydrogen Atom and Spin		
	TWT-08	Approximation Method		
	TWT-09	Scattering, Identical particles and Relativistic Quantum Mechanics		

05 Thermodynamic and Statistical Physics					
Status	Name of Test	of Test Topics			
	TWT-01	Kinetic Theory of Gases and Maxwell Boltzmann Distribution Law			
	TWT-02	Transport Phenomenon, Real Gases, First and Second Law			
	TWT-03	Entropy, Thermodynamic Potentials, Maxwell Relations			
Released	TWT-04	Blackbody Radiation and Elementary Statistical Mechanics			
	TWT-05	Random Walk Problem and Micro Canonical Ensemble			
	TWT-06	Canonical Ensemble			
	TWT-07	Quantum Statistics			
	TWT-08	Phase Transition and Grand Canonical Ensemble			

06 Electronics and Experimental Methods			
Status	Name of Test Topics		
	TWT-01	Network Analysis	
	TWT-02	Semiconductor Physics	
	TWT-03	PN Junction Diode and their Applications	
Released	TWT-04	Bipolar Junction Transistors, DC and AC Analysis	
	TWT-05	Operational Amplifier	
	TWT-06	Digital Electronics Part-1	
	TWT-07	Digital Electronics Part-2	

07 Atomic & Molecular Physics				
Status	Name of Test Topics			
	TWT-01	Bohr's Theory and Sommerfeld Model		
	TWT-02	Fine Structure		
	TWT-03	L-S & J-J Coupling		
Released	TWT-04	Zeeman Effect		
Released	TWT-05	Paschen Back Effect & Hyperfine Structure		
	TWT-06	Rotational Spectroscopy		
	TWT-07	Vibrational and Raman Spectra		
	TWT-08	Laser		



### Online CSIR-NET Test Series Physics - December, 2023

## Physics by fiziks

08 Solid State Physics				
Status	Name of Test	Topics		
	TWT-01	Crystal Structure		
	TWT-02	XRD and Reciprocal Lattices		
	TWT-03	Lattice Vibrations		
Released	TWT-04	Specific Heat of Solid		
	TWT-05	Free Electron Theory		
	TWT-06	Band Theory of Solid		
	TWT-07	Superconductor		

09 Nuclear and Particle Physics				
Status	Name of Test	Topics		
	TWT-01	General properties of nuclei		
	TWT-02	Liquid Drop Model		
	TWT-03	Shell Models and Collective Models		
Released	TWT-04	Nuclear Forces		
Released	TWT-05	Radioactivity		
	TWT-06	Alpha beta and gamma decay		
	TWT-07	Nuclear Reactions, Fission and Fusion		
	TWT-08	Particle Physics		

#### Full Length Test (FLT) Pattern And Schedule

Total Number of Questions: **75 Questions**Part A Questions (2.0 Marks): **20 Questions**Part B Questions (3.5 Marks): **25 Questions**Part C Questions (5.0 Marks): **30 Questions** 

Status	Name of Test	Syllabus
	FLT – 01	Complete Syllabus of NET-JRF
	FLT – 02	Complete Syllabus of NET-JRF
Released	FLT – 03	Complete Syllabus of NET-JRF
	FLT – 04	Complete Syllabus of NET-JRF
	FLT – 05	Complete Syllabus of NET-JRF

#### **Fee Structure of Test Series**

The enrolment fee for CSIR-NET Test Series is Rs. 2000/-

#### **How to Join in Our Online Test Series:**

- 1. Visit online test portal <a href="http://www.physicsbyfiziks.org/">http://www.physicsbyfiziks.org/</a> or on our website <a href="http://www.physicsbyfiziks.com">www.physicsbyfiziks.com</a>.
- 2. Download Application Form.
- 3. Duly filled Application form along payment receipt/ transaction number should be sent by Email on fiziks.physics@gmail.com or by registered post / courier to our address

### Online CSIR-NET Test Series Physics - December, 2023

## Physics by fiziks

Fiziks by Physics, House No. 40 D, Ground Floor, Jia Sarai Near IIT, Hauz Khas, New Delhi.-110016 Phone No.: +91 - 11 – 26865455

#### **Mode of Delivery**

You can get test papers and their solutions and QIP files from Google class room from your allotted batch.

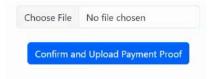
Mobile No.: +91-9871145498, +91 – 9560523636

#### **Mode of Payments**

 You can pay concerned amount of money through QR Code Scanner on the payment provided on our website and portal.



2. Save payment details and upload it in the given box and then complete registration process.



3. You can also pay in cash directly at Delhi centre in Jia Sarai.