AIIMS Bathinda Faculty Form 2026: Apply for 55 Posts

Comprehensive NEET UG revision pack covering high-yield concepts across Physics, Chemistry, and Biology. Packed ...

1. EXAM / NOTIFICATION KEY FACTS & DATES

Post / Course Name	Professor, Additional Professor, Associate Professor, Assistant Professor
Total Vacancies	55 Posts
Minimum Qualification	Post Graduate
Application Start Date	9 Nov 2026
Last Date to Apply	30 Nov 2026
Selection Process	Single National Level Entrance Exam (NEET UG) followed by MCC & State Couns...
Exam Mode & Duration	Pen and Paper (Offline OMR), 200 Minutes (3 Hours 20 Minutes)
Key Subjects	Biology (Botany + Zoology), Physics, Chemistry
Negative Marking	+4 for Correct Answer, -1 for Incorrect Answer

2. 4-STEP SMART PREPARATION PLAN

1. Phase 1: Master NCERT Biology line-by-line along with core diagrams and direct text tables.
2. Phase 2: Strengthen Chemistry concepts focusing on Organic reaction mechanisms, Inorganic NCERT facts, and Physical formulas.
3. Phase 3: Solve high-frequency Physics numericals focusing on speed, accuracy, and unit conversions.
4. Phase 4: Practice full-length 3-hour 20-minute timed mock tests with strict OMR filling discipline.

3. SAMPLE GOLDEN SHORTCUTS & FORMULAS

* Shortcut 1: Bond Order Quick Formula for 8-20 electrons: BO = 3 - 0.5 * |14 - N|, where N is total number of electrons.
* Shortcut 2: De Broglie wavelength of electron accelerated by voltage V: Lambda = 12.27 / sqrt(V) Angstroms.
* Shortcut 3: Projectile Motion relation between max height H and horizontal range R: tan(Theta) = 4H / R.
* Shortcut 4: Hybridization steric number Z = 0.5 * [V + M - C + A] (V = valence electrons of central atom, M = monovalent atoms, C = positive charge, A = negative charge).

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4. TOP 10 HIGH-WEIGHTAGE SYLLABUS TOPICS (QUICK SUMMARY)

1. Human Physiology - Circulation & Excretion
Weightage: High (5-7 Qs)

Human circulatory system features double circulation maintaining separate systemic and pulmonary circuits. The cardiac cycle takes 0.8 seconds, divided into atrial systole (0.1s), ventricular systole (0.3s), and joint...

2. Genetics - Molecular Basis of Inheritance
Weightage: High (6-8 Qs)

DNA structure consists of antiparallel polynucleotide chains linked by 3'-5' phosphodiester bonds. Replication occurs semi-conservatively in the 5' to 3' direction synthesized by DNA polymerase. Transcription forms RN...

3. Plant Physiology - Photosynthesis & Respiration
Weightage: High (4-6 Qs)

Photosynthesis involves light reaction in thylakoid membranes producing ATP and NADPH via non-cyclic photophosphorylation. Dark reaction occurs in stroma where RuBisCO fixes CO2 into 3-PGA in C3 plants, while C4 plant...

4. Ecology - Ecosystem & Biodiversity
Weightage: High (5-7 Qs)

Ecosystem dynamics depend on primary productivity, energy flow, nutrient cycling, and decomposition. Energy transfer between trophic levels follows Lindeman's 10 percent law, making energy pyramids always upright. Bio...

5. Cell Biology & Cell Division
Weightage: High (4-6 Qs)

Cells feature organelles like mitochondria and chloroplasts containing 70S ribosomes and circular DNA. Endomembrane system includes ER, Golgi body, Lysosomes, and Vacuoles. Mitosis produces genetically identical diplo...

6. Chemical Bonding & Molecular Structure
Weightage: High (4-5 Qs)

VSEPR theory predicts molecular shapes based on electron pair repulsion around central atoms. Hybridization determines geometry: sp3d gives trigonal bipyramidal while sp3d2 yields octahedral shape. Molecular Orbital T...

7. Organic Chemistry - Hydrocarbons & Reaction Mechanisms
Weightage: High (5-7 Qs)

Electrophilic addition to alkenes follows Markovnikov's rule where positive part attaches to carbon with more hydrogens, except in presence of peroxides (Kharasch effect for HBr). SN1 reactions proceed via carbocation...

8. Coordination Compounds & d-block Elements
Weightage: High (4-5 Qs)

IUPAC nomenclature of coordination entities requires naming ligands alphabetically before central metal ion with oxidation state in Roman numerals. Werner's theory distinguishes primary (ionizable) and secondary (coor...

9. Thermodynamics & Equilibrium
Weightage: High (4-6 Qs)

First law of thermodynamics states Delta U = q + w. Work done in reversible isothermal expansion is w = -2.303 nRT log(V2/V1). Gibbs free energy equation Delta G = Delta H - T Delta S determines spontaneity; process i...

10. Electrostatics & Current Electricity
Weightage: High (5-6 Qs)

Coulomb's Law calculates electrostatic force between charges in medium. Electric field of point charge is E = k Q / r^2 while potential is V = k Q / r. Gauss's Law states net electric flux through closed surface equal...

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5. 10 SAMPLE EXAM-STYLE PRACTICE MCQS (WITH ANSWERS)

Q1. Which of the following cellular organelles is enclosed by a single membrane?
(A) Mitochondria (B) Lysosome (C) Nucleus (D) Chloroplast
Ans: (B) | Lysosomes, peroxisomes, and vacuoles are single membrane-bound organelles. Mitochondria, chloroplasts, and nucleus are double membrane-bound.

Q2. During which sub-stage of Prophase-I of meiosis does crossing over take place?
(A) Zygotene (B) Pachytene (C) Diplotene (D) Diakinesis
Ans: (B) | Crossing over between non-sister chromatids of homologous chromosomes occurs during Pachytene stage, facilitated by enzyme recombinase.

Q3. What is the phenotypic ratio of a classic Mendelian dihybrid cross in F2 generation?
(A) 3:1 (B) 1:2:1 (C) 9:3:3:1 (D) 9:7
Ans: (C) | A Mendelian dihybrid cross involving two heterozygous traits yields a 9:3:3:1 phenotypic ratio in the F2 generation.

Q4. In C4 plants, the primary CO2 acceptor molecule present in mesophyll cells is:
(A) RuBP (B) PGA (C) PEP (D) OAA
Ans: (C) | In C4 plants, phosphoenolpyruvate (PEP) is the primary 3-carbon CO2 acceptor present in mesophyll cells, catalyzed by PEP carboxylase.

Q5. Which hormone is responsible for triggering ovulation and development of corpus luteum?
(A) FSH (B) LH (C) Estrogen (D) Progesterone
Ans: (B) | A rapid surge in Luteinizing Hormone (LH surge) around mid-cycle (14th day) induces rupture of Graafian follicle and releases the ovum (ovulation).

Q6. The functional unit of human kidney involved in urine formation is:
(A) Neuron (B) Nephron (C) Glomerulus (D) Alveoli
Ans: (B) | Nephron is the structural and functional unit of the kidney. Each human kidney contains approximately 1 million nephrons.

Q7. According to Lindeman's law, what percentage of energy is transferred from one trophic level to the next higher level?
(A) 1% (B) 5% (C) 10% (D) 50%
Ans: (C) | Only 10% of energy is transferred to each trophic level from the lower trophic level; the remaining 90% is lost as heat during respiration.

Q8. Which nitrogenous base is present in RNA but absent in DNA?
(A) Adenine (B) Thymine (C) Uracil (D) Guanine
Ans: (C) | RNA contains Uracil instead of Thymine. DNA contains Adenine, Thymine, Guanine, and Cytosine.

Q9. What is the bond order of Oxygen molecule (O2) according to Molecular Orbital Theory?
(A) 1.0 (B) 1.5 (C) 2.0 (D) 2.5
Ans: (C) | Total electrons in O2 = 16. Using BO formula = 3 - 0.5*|14 - 16| = 3 - 1 = 2.0. O2 has a double bond and is paramagnetic.

Q10. Which of the following carbocations is most stable?
(A) CH3+ (B) (CH3)1 CH2+ (C) (CH3)2 CH+ (D) (CH3)3 C+
Ans: (D) | Tertiary carbocation (CH3)3C+ is most stable due to maximum hyperconjugation structures (9 alpha-hydrogens) and positive inductive effect (+I) of 3 methyl groups.

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