

IMRAN IDREES GROUP

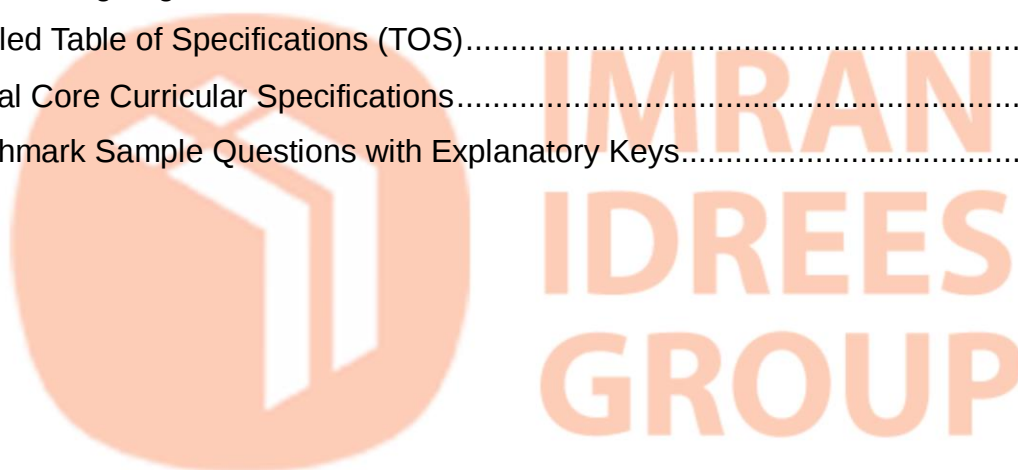
Undergraduate Admission Entrance Test

Department of Medical Education & Admissions Directorate

OFFICIAL ADMISSION TEST GUIDE & SYLLABUS (SESSION 2026–2027)

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Assessment Overview & Test Policy

This guide provides the official curriculum, test blueprint, and instructional framework for the Undergraduate Admission Entrance Test across IIG. The test evaluates scientific aptitude, analytical judgment, English language command, and general intellectual awareness expected of an Intermediate / FScPre-Medical graduate in Punjab.

- **Format:** 100 Single Best Answer Multiple Choice Questions (Four choices: A, B, C, D).
- **Duration:** 120 minutes (2 hours).
- **Scoring:** 1 mark per correct response; **no negative marking**.
- **Calculators:** Calculators and digital devices are **strictly prohibited**. Quantitative items are calibrated for direct mental calculation.
- **Cognitive Stratification:**
 - **Knowledge & Recall (C1):** 38%
 - **Comprehension & Application (C2/C3):** 50%
 - **Analysis & Problem-Solving (C4):** 12%

2. Subject Weightage Distribution

Subject Domain	Weightage	MCQs	Curricular Basis
Biology	20%	20	Punjab Textbook Board (PTB) FScPre-Medical
Chemistry	15%	15	Punjab Textbook Board (PTB) FScPre-Medical
Physics	15%	15	Punjab Textbook Board (PTB) FScPre-Medical
English Language	20%	20	Intermediate Functional & Communicative English
Logical Reasoning	20%	20	Critical Thinking & Pattern Analysis
General Knowledge	10%	10	Pakistan Studies, Current Affairs & General Science

3. Detailed Table of Specifications (TOS)

Content Domain	Sub-Topic Breakdown	C1 (Recall)	C2/C3 (App)	C4 (Analysis)	Total MCQs
1. BIOLOGY	Cell Biology & Biological Molecules	2	2	0	4
	Human Physiology & Coordination	3	5	1	9
	Support & Locomotion	1	1	0	2
	Acellular Life & Immunity	1	1	1	3
	Genetics & Molecular Inheritance	1	1	0	2
	<i>Domain Subtotal</i>	8	10	2	20
2. CHEMISTRY	Stoichiometry & Solutions	1	2	0	3
	Atomic Structure & Chemical Bonding	2	1	0	3
	Chemical Equilibrium, Acids, Bases & Buffers	1	1	1	3
	States of Matter (Gases & Liquids)	1	2	0	3
	Organic Chemistry & Biomolecules	1	1	1	3
	<i>Domain Subtotal</i>	6	7	2	15
3. PHYSICS	Mechanics, Work & Energy	1	2	0	3
	Fluid Dynamics	1	2	0	3
	Waves, Sound & Optics	2	1	0	3
	Electrostatics & Current Electricity	1	1	1	3
	Nuclear Physics & Radiation	1	1	1	3

Content Domain	Sub-Topic Breakdown	C1 (Recall)	C2/C3 (App)	C4 (Analysis)	Total MCQs
	<i>Domain Subtotal</i>	6	7	2	15
4. ENGLISH	Communicative Grammar & Tenses	3	4	1	8
	Vocabulary in Healthcare Context	3	3	0	6
	Sentence Structure, Punctuation & Correction	2	3	1	6
	<i>Domain Subtotal</i>	8	10	2	20
5. REASONING	Number & Alphabet Series (Pattern Recognition)	3	3	0	6
	Logical Deductions & Syllogisms	2	4	1	7
	Healthcare Cause/Effect & Situational Critical Thinking	3	3	1	7
	<i>Domain Subtotal</i>	8	10	2	20
6. GEN. KNOWLEDGE	Pakistan Studies & Historical Milestones	2	1	0	3
	National & International Current Affairs	1	2	0	3
	Everyday Science, Global Bodies & Public Health	1	3	0	4
	<i>Domain Subtotal</i>	4	6	0	10
GRAND TOTAL	Consolidated Evaluation	38	50	12	100 MCQs

4. Official Core Curricular Specifications

Domain 1: Biology (20 MCQs — Strictly PTB FSc Pre-Medical)

- **Cell Biology & Biological Molecules (4 MCQs):** Carbohydrates, lipids, proteins, enzymes, plasma membrane structure and transport, cell organelles (mitochondria, endoplasmic reticulum, Golgi apparatus, lysosomes).
- **Human Physiology & Coordination (9 MCQs):** Digestion and absorption, cardiac cycle, blood pressure and ABO/Rh grouping, respiratory gas exchange, nephron structure and urine formation, nerve impulse transmission, reflex arcs, major endocrine hormones.
- **Support & Locomotion (2 MCQs):** Axial and appendicular skeleton, skeletal muscle contraction, joint classifications.
- **Acellular Life & Immunity (3 MCQs):** Bacteriophage structure, bacterial cell wall and Gram staining, innate and adaptive immunity, antibodies, active and passive immunization.
- **Genetics & Molecular Inheritance (2 MCQs):** Mendel's laws, sex-linked traits (hemophilia, color blindness), DNA replication, transcription, and translation.

Domain 2: Chemistry (15 MCQs — Strictly PTB FSc Pre-Medical)

- **Stoichiometry & Solutions (3 MCQs):** Mole calculations, molarity, molality, mole fraction, solution dilutions.
- **Atomic Structure & Chemical Bonding (3 MCQs):** Electronic configuration, ionic and covalent bonding, coordinate bonds, hydrogen bonding, intermolecular forces.
- **Chemical Equilibrium, Acids, Bases & Buffers (3 MCQs):** Dynamic equilibrium, Le Chatelier's principle, pH/pOH calculations, buffer solutions and action.
- **States of Matter: Gases & Liquids (3 MCQs):** Ideal gas equation ($PV = nRT$), Graham's law, vapor pressure, surface tension, viscosity.
- **Organic Chemistry & Biomolecules (3 MCQs):** Functional groups and nomenclature, amino acids and peptide bonds, structure of glucose and simple lipids.

Domain 3: Physics (15 MCQs — Strictly PTB FSc Pre-Medical)

- **Mechanics, Work & Energy (3 MCQs):** Vectors, torque and equilibrium, Newton's laws of motion, momentum, work, kinetic and potential energy, conservation of energy.
- **Fluid Dynamics (3 MCQs):** Viscosity and Stokes' law, terminal velocity, equation of continuity, Bernoulli's theorem.
- **Waves, Sound & Optics (3 MCQs):** Speed of sound, Doppler effect, interference and diffraction of light, thin lenses, simple/compound microscopes, vision defects and optical corrections.
- **Electrostatics & Current Electricity (3 MCQs):** Coulomb's law, electric potential, capacitance, Ohm's law, series and parallel circuits, electrical power.
- **Nuclear Physics & Radiation (3 MCQs):** Radioactive decay and half-life, properties of alpha, beta, and gamma radiation, mass defect and binding energy, radiation hazards and shielding.

Domain 4: English Language (20 MCQs)

- **Communicative Grammar (8 MCQs):** Subject-verb agreement, verb tense consistency, prepositions of time and place, conditionals (types 1, 2, 3), active and passive voice conversions.

- **Vocabulary in Healthcare Context (6 MCQs):** Contextual word meaning, medical prefixes/roots/suffixes (e.g., -itis, hypo-, hyper-, nephro-), contextual synonyms and antonyms.
- **Sentence Structure & Correction (6 MCQs):** Identifying and rectifying sentence fragments, run-on sentences, dangling modifiers, parallel structure, and standard punctuation (commas, semicolons, apostrophes).

Domain 5: Logical Reasoning (20 MCQs)

- **Series & Sequences (6 MCQs):** Number series, alphabet sequences, alphanumeric pattern recognition, and analogical sequences.
- **Logical Deductions & Syllogisms (7 MCQs):** Two-premise categorical syllogisms (valid conclusions), statement-assumption analysis, and conditional deductions.
- **Healthcare Situational Critical Thinking (7 MCQs):** Identifying cause-and-effect relationships, prioritizing actions in healthcare scenarios, and evaluating evidence-based statements.

Domain 6: General Knowledge (10 MCQs)

- **History & Pakistan Studies (3 MCQs):** Major constitutional landmarks (Objectives Resolution, 1973 Constitution basics), key independence milestones (1940 Resolution, 1947 partition), and national geographical facts.
- **Current Affairs (3 MCQs):** Significant domestic developments, international diplomatic summits, prominent global organizations, and contemporary environmental/climate updates.
- **Everyday Science & Public Health (4 MCQs):** Everyday biological and physical phenomena, major global health institutions (WHO, UNICEF, Red Cross/Crescent), global public health observances (e.g., World Health Day, World Diabetes Day), and common nutritional sciences.

5. Benchmark Sample Questions with Explanatory Keys

- **Biology (C1 - Direct Recall):**

Which chamber of the human heart pumps oxygenated blood directly into the systemic circulation via the aorta?

- (A) Right atrium
- (B) Right ventricle
- (C) Left atrium
- (D) Left ventricle*

Key: D | Explanation: The left ventricle is the thickest chamber that pumps blood through the aortic semilunar valve into the systemic arterial tree.

- **Chemistry (C3 - Quantitative Application):**

What mass of sodium hydroxide (NaOH, Molar Mass = 40 g/mol) is required to prepare 500 mL of a 0.5 M aqueous solution?

- (A) 5 g
- (B) 10 g*
- (C) 20 g
- (D) 40 g

Key: B | Explanation: Moles = $M \times V(L)$ = 0.5×0.5 = 0.25 moles. Mass = 0.25×40 g/mol = 10 g.

- **Physics (C2 - Comprehension):**

According to Bernoulli's principle, when blood flows through a localized stenosis (narrowed segment) of an artery, its linear velocity increases while its lateral pressure:

- (A) Increases
- (B) Decreases*
- (C) Remains unchanged
- (D) Becomes zero

Key: B | Explanation: By Bernoulli's equation, as kinetic energy density increases due to constriction velocity, static/lateral pressure decreases.

- **English (C2 - Applied Grammar):**

Neither the supervising physician nor the registered nurses _____ available during the emergency resuscitation.

- (A) was
- (B) were*
- (C) is
- (D) has been

Key: B | Explanation: In "neither... nor" correlative constructions, the verb agrees with the closer subject ("registered nurses" = plural were).

- **Logical Reasoning (C2/C3 - Deduction):**

Premise 1: All certified diagnostic imaging technologists have cleared the clinical safety board.

Premise 2: Bilal has not cleared the clinical safety board.

Valid Conclusion:

- (A) Bilal is a trainee technologist
- (B) Bilal has failed his university examination
- (C) Bilal is not a certified diagnostic imaging technologist*
- (D) Bilal will qualify for the board next year

Key: C | Explanation: Modus Tollens deduction: If $P \rightarrow Q$ and $\neg Q$, then $\neg P$.

- **General Knowledge (C1 - Institutional Recall):**

The headquarters of the World Health Organization (WHO) is situated in:

- (A) New York, United States
- (B) London, United Kingdom
- (C) Geneva, Switzerland*
- (D) Vienna, Austria

Key: C | Explanation: The WHO was established in 1948 as a specialized agency of the UN with primary headquarters in Geneva, Switzerland.