

Required materials for Entrance Exam 2024/2025

Grade 10 to Grade 11

اللغة العربية :

- الأدب ماهيته وعناصره
- الأدب في التعبير عن التقاليد والأخلاق
- الأدب بين التقليد والتجديد
- حب الوطن

English:

Reading:

- Demonstrate awareness of linguistic and organizational features of text.
- Identify appropriate lexical items to suit tone, style, mood, purpose, and theme.
- Identify main ideas
- Identify tone and mood.
- Infer implied meanings and assumptions.

Written communication:

- Produce a wide variety of essay forms showing further competence in using discourse modes.
- Develop by definition, classification, illustration, cause and effect, and comparison and contrast.
- Argue for/against an issue.
- Narrate incidents and experiences from different points of view.
- Demonstrate ability to produce the appropriate linguistic, stylistic, and organizational components of an essay.
- Utilize grammatical and lexical components pertinent to specific subject areas.
- Establish and maintain coherence using sequencing (temporal, spatial, and logical) and transitional words and expressions.
- Use grammatical components pertinent to scientific discourse (such as the passive voice, conditionals, verb tenses, articles and prepositions, complex sentence structures, etc.).

Math:

Real numbers

- Power formulas
- Nth roots (existence and simplification)

Absolute values

- Properties
- Equations in absolute values
- Absolute inequalities

Vectors

- Defining a vector
- Equal-opposite-sum vectors of 2 vectors
- Collinear vectors

Analytic geometry

- Cartesian-normal-orthogonal-orthonormal coordinate system
- Cartesian equation of lines in a directional vector frame
- Coordinates of a vector equal-opposite and collinear vectors

Inequalities

- of type $(ax+b)(cx+d) < 0$ and $(ax+b)/(cx+d) < 0$
- Inequality systems

Trigonometry

- Unit of measure of an angle
- Trigonometric ratios
- Associated arcs
- Trigonometric identities

Chemistry:

- Preparation of solutions by dissolution and dilution.
- Balancing reactions.
- Stoichiometry.

Biology:

1- Hormonal communication

- The thyroid
- Characteristics of an endocrine gland

2- Nervous communication

- Nervous system in vertebrates
- Histology of the nervous system
- Pathways and nervous centers
- Characteristics of the nervous message at the level of a fiber
- Synapses and drugs

Physics:

I- Electricity

- Resistors
- Generators and receivers
- Electrical circuits

II- Vibrations and waves

- Wave characteristics
- Period and frequency
- Speed of propagation
- Wave length
- Measurement of the speed of sound
- Wave tank

III-Mechanics

- Description of the movement
- Position, velocity and acceleration vectors
- Air tables
- Uniform and uniformly varied rectilinear motions-time equations