

KARNAL SHER KHAN CADET COLLEGE SWABI

SYLLABUS FOR O-LEVEL W.E.F. SEPTEMBER 2026/2027

There will be 4-components for the entry test of O-level w.e.f. September 2026. The syllabi of Mathematics, English, Islamiat, Urdu and General Science is appended below;

PAPER	DURATION	PAPER	DURATION	Break	PAPER	DURATION
English	45 Min	Math/Gsc	45 Min	30 Min	Urdu/Isl	45 Min

MATHEMATICS SYLLABUS

A. Syllabus Aim

The Mathematics syllabus for the entry test is revised & designed to provide candidates a target of preparation to acquire minimum of the foundation of Mathematics before getting admission in KSKCCS. The foundation requires a balance between knowledge, understanding and skills to enable students to become effective learners to continue their educational journey.

B. Assessment Objectives

Candidates should be able to:

- Recognize the appropriate mathematical procedures for a given situation
- Perform calculations by suitable methods without a calculator
- Understand systems of measurement in everyday use and make use of them in the solution of problems
- Estimate, approximate and work to degrees of accuracy appropriate to the context and convert between equivalent numerical forms
- Organize, interpret and present information accurately in written, tabular, graphical and diagrammatic forms
- Use mathematical instruments to measure and to draw figures in a given situation
- Interpret, transform and make appropriate use of mathematical statements expressed in words or symbols
- Recall, apply and interpret mathematical knowledge in the context of everyday situations.
- Analyze a problem, select a suitable strategy and apply an appropriate technique to obtain its solution
- Apply combinations of mathematical skills and techniques in problem solving
- Study and draw graphs and infer results

C. Syllabus:

Question, in the entry test, shall be Concept based, appropriate for Class 7 students of Cambridge Examination System.

1. Arithmetic:

- Numbers and operation
- fractions and simplification
- Ratio and Proportion
- Percentage

- Profit, loss, tax and discount etc.
- Variations – direct and inverse
- Time, distance and speed
- Conversion of units

2. Sets:

- Types of sets
- Forms of sets - descriptive, tabular & set builder and their usage in problem solving
- Operation and properties of sets – Union, Intersection, Difference & Complement
- Laws of union, intersection and complement
- Venn diagram

3. Algebra:

- Expressions, equations and exponents
- Forming expression and equations from daily life problems
- Substitution of values & Manipulation of the subject in equation
- Algebraic fractions and operations between them
- Graphs of linear equations

4. Mensuration:

- Area, Perimeter and Volume of different figures/objects Similar figures and their areas.
- Concept of right prism, its surface area, volume and perimeter of any face
- Pythagoras Theorem
- Polygons: A polygon and its elements, Interior and Exterior angles, Sum of interior angles of a polygon

5. Geometric properties and Practical Geometry:

- Construction of plane figures
- Construction of medians, angle bisectors, right bisectors, altitude and diagonals
- Alternate and corresponding angles, Tangent, sectors, arc and chord etc.
- Cyclic quadrilateral and its properties
- Transformation - Reflect an object and find the line of reflection by construction; Translate an object, Identify and give precise description of transformation connecting given figures

6 Information handling:

- Frequency distribution
- Study and drawing to line graph, Bar graph, Pie graph
- Calculation of probability of simple events
- Mean, Median and Mode of Un-grouped data

NOTE: Use of calculator, set-square, and protractor is NOT ALLOWED.

نصاب برائے داخلہ امتحان اُردو، جماعت ہشتم (او۔ لیول)

اغراض و مقاصد: اُردو ہماری قومی زبان ہے، یہ ہمارے نصاب کا لازمی حصہ ہے۔ داخلے کے تحریری امتحان کے اُردو نصاب میں طلبہ کی تخلیقی صلاحیتوں، ان کے ذخیرہ الفاظ، جملوں کی ساخت، املا، اندازِ تحریر اور اُردو زبان و قواعد سے ان کی آشنائی، درست املا کو جانچنا، شعر فہمی اور ذخیرہ الفاظ کے مناسب استعمال کے ذریعے طلبہ کی صلاحیتوں کو پرکھنا، بنیادی مقاصد میں شامل ہے۔

پہلا حصہ (لازمی سوالات)

- 1- مضمون نگاری: کسی علمی، معاشرتی، مہماتی، تاریخی، تشریحی، تجزیاتی، شخصی اور واقعاتی موضوع پر ایک مدلل اور جامع مضمون۔
یہ مضمون 250 سے 400 الفاظ پر مشتمل ہونا چاہیئے۔
- 2- تفہیم: دی گئی عبارت میں سے کچھ سوالات کے اپنے الفاظ میں جوابات (یا) عبارت میں سے محاورات اور ضرب الامثال کا انتخاب اور اپنے جملوں میں استعمال (یا) عبارت میں سے بنیادی قواعد کے سوالات مثلاً فعل، حرف، اسم کا انتخاب اور مختلف الفاظ کی قواعد کے مطابق مرکبات کی شناخت

- 3- شعر کی تشریح: عام فہم اور مشہور اشعار میں سے کسی ایک کا انتخاب اور تشریح

دوسرا حصہ (اختیاری سوالات)

- 4- جملوں کی بناوٹ: مختلف جملوں کو دی گئی ہدایت کے مطابق تبدیل کرنا۔ مثلاً فعل کی تبدیلی، تذکیر و تانیث کی تبدیلی، واحد و جمع کی تبدیلی، سوالیہ، منفی اور بیانیہ، تبدیلیاں، مترادف و متضاد الفاظ کی تبدیلیاں
- 5- خالی جگہیں پُر کرنا: ضرب الامثال، روزمرہ اور محاورات کے مطابق جملوں کی تکمیل
- 6- غلط فقرات پر مبنی عبارت کو درست کرنا
- 7- دی گئی عبارت کی تلخیص کرنا
- 8- ہم آواز الفاظ لکھنا

SYLLABUS OF ENGLISH

AIMS & OBJECTIVES: A candidate is supposed to express himself clearly and correctly in essay writing. He should be able to build up his essay coherently, using appropriate vocabulary along with correct use of grammar and spellings. Likewise, in comprehension passage, he is expected to handle a variety of comprehension questions from the given passage.

Syllabus:

- a. Essay Writing: Candidates will write on any ONE of the TWO given topics in English. One of the topics will be a Narrative essay and the other one Descriptive. Assessment objectives of essay writing are as under:
- Relevant content of the essay
 - Writing a well-connected essay having coherence and cohesion
 - Introducing characters and dialogue especially in Narrative Essay
 - Using types and variety of sentences
 - Developing paragraphs
 - Employing correct use of grammar/spellings/punctuation
 - In DESCRIPTIVE Essays, the candidates will focus on the description of the scene, sounds, feelings of character and the environment; it is encouraged to avoid narration (telling stories) if they choose to write descriptive essays.
- b) Reading Comprehension: Candidates will also read a passage of about 300-400 words and answer the questions. Assessment objectives of this task are as under:
- Showing understanding of explicit and implicit information
 - Effect and understanding of a specific word/phrase/sentence
 - Questions on synonyms and one word substitution
 - Handling analytical questions
 - Inferring meaning from the given text
- c) Grammar (DO as directed): Candidates will also be judged on their ability to use tenses, grammar, punctuation, articles, active and passive voice, the narration, pairs of words and the use of preposition etc.

SYLLABUS OF GENERAL SCIENCE

Aim & Objectives:

- a. To Bridge Primary Science with Secondary Science education to help candidates obtain baseline scientific literacy and to equip them with a strong foundation to support their further studies.
- b. KSKCCS requires proficiency in Pre Secondary General Science before students pursue the disciplinary subjects of Physics, Chemistry and Biology at O-levels. This approach will support students in making connections across disciplines and comprehend interdisciplinary problems.

Assessments:

- a. KSKCCS entrance exam to contain MCQs for assessment of concepts and applications of basic sciences (Biology, Chemistry and Physics)
- b. Second stage evaluations (Interviews etc.) may also contain relevant questions of basic applied concepts of Every-day Science.

Syllabus:

- Model of Cell – The Basic Unit of Life
- Human Digestive System
- Transport systems in Living Things
- Reproduction in Plants
- Environment and Feeding Relationships
- Model of Matter – The Particulate Nature of Matter
- Model of Matter - Atom and Molecules
- Exploring Diversity of Matter by its Chemical Composition
- Chemical Changes
- Exploring Diversity of Matter by its Physical Properties
- Application of Forces and Transfer of Energy
- Transmission of Heat Energy and its Effects
- Sound and Light
- Earth, Space and Oceans
- Solar System

SYLLABUS OF ISLAMIYAT

Aims

The aims of the syllabus are to enable candidates to:

- Acquire a knowledge of the biography of the Prophet (SAW) a source of Islam,
- Develop an enquiring approach to the study of Islam
- Identify and explore the religious, historical and moral questions raised in the material they study.

Assessment objectives

Candidates should be able to demonstrate that they have closely studied the topics set.

They should be able to:

Recall, select and present relevant facts from the main elements of the history of Islam, and

Demonstrate understanding of their significance in the teachings of Islam and in the lives of Muslims.

Syllabus:

Questions will be set from the life story of the Prophet (PBUH).

- 1- Story of the 1st revelation
- 2- Persecution of the Prophet at the hands of the Quraish
- 3- Migration to Madinah
- 4- Battle of Badr
- 5- Battle of Uhad
- 6- Battle of Trench
- 7- Treaty of Hudaibiyah
- 8- Conquest of Makkah
- 9- Farewell Hajj and address
- 10- Four outstanding qualities of the Prophet:
 - 1- humility
 - 2-Truthfulness and honesty
 - 3- fulfilment of promises
 - 4- forgiveness