

KARNAL SHER KHAN CADET COLLEGE SWABI**Class X - Summer Vacations Homework 2026/27**

NOTE: All cadets are required to complete following tasks/home work during summer vacations. These tasks (homework) carry 25% marks of the exam that will be conducted after summer vacations. The exam will consist of course taught in college and homework assigned for summer vacations. So properly prepare homework and study the topics taught in the college.

Parents are required to sign each task after completion, otherwise will not be accepted.

BIOLOGY

Reading/Study Work	
1.	Thoroughly read/study Chapter 10, 11 and 16 (Man and his Environment)
Visual Work	
2.	Watch and study Video Lectures of Chapter 10, 11, 12 and 16 (Man and his Environment) on youtube.com and/or khanacademy.org.
Diagrammatic Work	
3.	Draw neat and label diagrams of Chapter 10, 11, and 12.
Written Assignments	
4.	Prepare 20 MCQS (open book) in Chapter 10 and 11. Complete practical notebooks. Past three years Board papers attempting practice and submission.
Projects/Models	
Note: Prepare a model/project from the following or prepare model/project on any biological topic/idea of your interest:	
5.	Design and prepare the following projects. a. Human respiratory system b. Human excretory system c. Neuron model d. Human Brain Model
Reckoners/ Flow Charts	
6.	Chapter wise (Chapter 10 &11) reckoners/flow charts are required to be prepared.

Contact no. Mr. Salman Jadoon 0312-0313015

CHEMISTRY**Assignment / Project Work**

1. Chemical Equilibrium

- Research and prepare a presentation on chemical equilibrium with examples and real-life applications.
- Solve numerical problems and past paper questions on chemical equilibrium.
- Write a short essay on the importance of chemical equilibrium in daily life.
- Complete the exercise on chemical equilibrium from the textbook.

2. Acids, Bases, and Salts

- Draw a chart or diagram of the pH scale showing examples of acidic, basic, and neutral substances.
- Test the acidity/basicity of common household items like lemon juice and baking soda through simple experiments.
- Research and write about the uses and importance of acids and bases in industries like food and pharmaceuticals.
- Solve the exercise on Acids, Bases, and Salts.

Note : prepare chapter 9 and 10 for the 1st term exam.

Project

Search a one project by each cadets which is included in course and write the procedure and daily life application as well

Additional Tips

- Use textbooks, online resources, and reference materials.
- Discuss topics with classmates or online study groups.
- Ask your teacher or mentor for guidance if needed.

Assistant prof: Mr. Niaz Bahadur | Contact: 03459705151

COMPUTER SCIENCE

2. Thoroughly study and understand Unit 7.
3. Practically try and implement HTML codes of Exercise questions at the end of Unit 7.
4. Prepare 30 MCQs from Unit 7 excluding exercise.
5. Watch the video lectures of the above topics by visiting <https://sabaq.pk/book-page.php?b=k&c=10&s=cs> and prepare notes of all topics in writing (in a separate notebook) and bring it along with after summer vacations.
6. As this is the era of technology, cadets are expected to learn at least one course (e.g., HTML) online or from YouTube.
7. Post Summer Exam will be conducted in the above topics.
8. **Presentation.** Prepare a presentation on the Topic **“Cyber Security and Cyber Crime Laws: Threats, Types, and Legal Safeguards.** Bring the Presentation in USB or email to jawad.cs83@gmail.com

Note: In case of any query please contact on 03369908747 through WhatsApp.

Mr. Jawad Ali Khan Assistant Professor

ENGLISH

1. Creative & Extended Writing: Write six essays (200–250 words each) on:
 - A) Discipline in a Cadet's Life, B) My Aim in Life, C) Importance of Physical Fitness, F) Life at a Cadet College.
2. **Letter & Application Writing:** Prepare in proper format:
 - A) Application to Principal for Fee Concession, B) Application to House Master for Sick Leave, C) Letter to Editor on Load Shedding, D) Application to Librarian for New Books,
3. **Translation & Comprehension:**
 - A) Translate five paragraphs from different units of Class X English textbook into Urdu.
 - B) Select five comprehension passages, frame six questions for each, and write answers.
4. **Grammar & Language Structure:**
 - A) Parts of Speech (definitions, explanations, five examples each),
 - B) Direct & Indirect Narration (rules, examples, conversion of 30 sentences),
 - C) Punctuation Marks (uses and examples).
5. **Stanza Paraphrasing:**
 - A) Select any two poems (including “Dreams”), B) Write stanza-wise paraphrases.
6. **Social Work:** Carry out any one of the following social work activities and write its report for submission)
 - A) Cleanliness Campaign, B) Plantation Drive, C) Charitable Activity.
7. **Book Review:** Select a book of your own choice and write its review. Consider the following points in your book review.
 - A) Introduction, B) Summary, C) Personal Opinion, D) Favorite Part, E) Turning Point, F) Lessons Learned, G) Conclusion. (Submit book along with review)
8. **Language Development Task:**
 - A) Carefully watch five BBC 6 Minute English episodes (YouTube) and practice its themes summary and key vocabulary.
9. Sherian Diary: Maintain Sherian Diary throughout the vacation on daily basis.

Mr. Iftikhar Ali Lect in English

Contact No. 0316-9892153

MATHS (Weightage: 25% of 1st term exam)

Dear Cadets, summer vacations provide an excellent opportunity to strengthen mathematical concepts, develop analytical thinking, and cultivate independent learning habits. Complete this task sincerely and creatively.

GENERAL INSTRUCTIONS

- Complete all work in a separate, neat and well-organized notebook.
- Write chapter titles, topic headings and dates clearly.
- Prepare **20 conceptual MCQs** from each chapter (excluding review exercises). Each MCQ must contain four options with one correct answer and three plausible distractors.
- Prepare colorful **formula charts** and display them neatly.
- Solve relevant **Board Past Paper questions** (2023, 2024 and 2025) from Chapters 1, 2 and 5.
- Use blue or black ink for writing and pencil for diagrams and graphs.
- Plagiarized or copied work will not be awarded full marks.
- **Submission date:** First working day after summer vacations.

ADDITIONAL ENRICHMENT ACTIVITIES.

- Make a formula booklet containing all important formulas.
- Write a one-page report on a famous mathematician.
- Create one Venn Diagram project using real-life examples.
- Prepare a 3–5-minute presentation on any topic from the syllabus.

YOUTUBE LEARNING RESOURCES

- Khan Academy Mathematics * The Organic Chemistry Tutor
- Math Antics * GCSE Maths Tutor
- KPK E-Learning Resources

CHAPTER-WISE TASKS

- * Unit 1: Quadratic Equations * Unit 2: Theory of Quadratic Equations
- * Unit 5: Sets and Functions

Complete all exercises, review exercises, summaries, MCQs, charts, and past-paper questions.

ASSESSMENT CRITERIA

Activity	Marks	Activity	Marks
Exercises & Review Work	30	MCQs Preparation	15
Past Papers	15	Formula Charts	10
Creative Projects	10	Research Report	10
Presentation, Neatness & Organization	10		
Total	100		

“Success in Mathematics comes through Practice, Persistence and Curiosity.”

Sartaj Ali, Lec in Mathematics WhatsApp # 03139053536 Email: sartajbs2@gmail.com

PHYSICS**Instructions:**

1. Answer all the following questions briefly and concisely.
2. Prepare a separate MCQ bank for each unit, containing at least 30 multiple-choice questions per unit.
3. Every cadet must design and develop at least one working project related to these units and be prepared to demonstrate its operation and explain the underlying physics concepts.

UNIT # 10: SIMPLE HARMONIC MOTION

1. Can a body move periodically without performing SHM? Give an example.
2. Explain the reason for maximum acceleration at the extreme positions of SHM.
3. What effect does doubling the length of a pendulum have on its time period?
4. What role does restoring force play in SHM?
5. Can SHM occur without a restoring force? Explain.
6. What effect does gravity have on the motion of a simple pendulum?
7. What is the significance of amplitude in SHM?
8. What happens to frequency when the time period decreases?
9. In what way are water waves considered mechanical waves?
10. What happens to wavelength when frequency increases while speed remains constant?

11. What is the importance of waves in communication systems?
12. What is meant by a wavefront?
13. What effect does tension have on the speed of waves in a string?
14. What is the reason soldiers break step while crossing a bridge?
15. How does damping reduce the amplitude of oscillations?

Numerical-Based Questions

16. A pendulum completes 20 oscillations in 40 s. Find its period.
17. A wave has frequency 10 Hz and wavelength 2 m. Find its speed.
18. The period of SHM is 0.5 s. Find its frequency.
19. A pendulum has a period of 2 s. How many oscillations will it complete in 1 minute?
20. A wave travels at 300 m/s and has frequency 50 Hz. Find wavelength.
21. A spring oscillator has frequency 5 Hz. Find its period.

UNIT # 11: SOUND

1. What prevents astronauts from talking directly in space?
2. How does distance from the source affect the loudness of sound?
3. Explain the reason sound travels faster in solids than in gases.
4. How does temperature affect the speed of sound in air?
5. What conditions are required for a clear echo to be heard?
6. How do sound-absorbing materials improve auditorium acoustics?
7. What causes empty rooms to produce more echoes?
8. How does a vibrating ruler generate sound?
9. What causes women generally to have higher-pitched voices than men?
10. Differentiate between loudness and pitch.
11. What makes ultrasonic waves useful in medical diagnosis?
12. How are dogs able to hear sounds that humans cannot?
13. Explain the use of SONAR by submarines.
14. How is SONAR more useful underwater than radar?
15. How is sound able to bend around corners?

Numerical-Based Questions

16. A sound wave has frequency 500 Hz and speed 340 m/s. Find its wavelength.
17. An echo is heard 2 seconds after a shout. Calculate the distance of the reflecting wall (speed of sound = 340 m/s).
18. A wave has wavelength 0.8 m and frequency 400 Hz. Find its speed.
19. A sound source produces 1000 vibrations in 2 seconds. Find frequency.
20. A sound wave has speed 330 m/s and wavelength 1.1 m. Find frequency.
21. SONAR receives an echo after 4 s. Calculate the depth of water if sound speed in water is 1500 m/s.

NOTE: In case of any misunderstanding kindly contact 0314-9232008 Mr. Zohaib Kamal, Lec in Phy
PAKISTAN STUDIES

A) **Written work**

Note: Below Questions are mainly from chapters, (01, General Knowledge)

- Q-1. Reforms introduced by Zulfiqar Ali Bhutto Government. (CHAPTER NO=01)
- Q-2. Constitution of 1973. (CHAPTER NO=01)
- Q-3. General Zia-ul-Haq Regime and process of Islamization after 1977. (CHAPTER NO=01)
- Q-4. Benazir first term of government 1988-90. (CHAPTER NO=01)
- Q-5. Nawaz Sharif 2nd term in office 1997-99. (CHAPTER NO=01)

Memorising work:

Chapter 1 must be memorised .

B) **Map Orientation:**

- i) Draw OR download One-Belt Road (OBOR) map of CPEC (. General Knowledge)
- ii) Draw OR download map list of the World countries, capitals and flags. (General Knowledge)

C) **Assignment:**

i) Attempt these 5 papers as attached and will submit on arrival .

1. <https://youtube.com/@argstudios?feature=shared>
2. <https://youtube.com/@urdupages786?feature=shared>
3. <https://youtube.com/@bspoliticalscience92?feature=shared>
4. <https://youtube.com/@peacemongersoul?feature=shared>
5. <https://youtube.com/@aljazeeraenglish?feature=shared>

Mr. Ijaz Ahmad, Lec in PS, Contact No. 03459209043

گھر کا کام برائے تعطیلات موسم گرما جماعت دہم - سال ۲۰۲۶

1- سابقہ پرچے

گزشتہ 5 سال کے بورڈ امتحانات کے اردو پرچے حل کریں۔
ہر پرچہ مقررہ وقت میں حل کیا جائے تاکہ امتحانی مہارت بہتر ہو۔

2- نصابی اعادہ

تمام نثری اور شعری اسباق کا تفصیلی مطالعہ کریں۔
اہم اقتباسات اور اشعار کی تشریح کا زبانی اعادہ کریں۔
قواعد اور علم بیان کے تمام موضوعات کا جائزہ لیں۔

3- ایس ایل اوز کی بنیاد پر تیاری

فہم عبارت اور تنقیدی مطالعہ
خلاصہ اور مرکزی خیال
تشریح اشعار - تفہیم کے لئے کسی دوسری کتاب سے پیرا گراف لیں اور سوالات بنا کر جوابات تحریر کریں۔ اسی طرح کسی بھی شاعر کی نظم سے کوئی بند اٹھائیں اور اس پر سوالات بنا کر جوابات لکھیں۔
محاورات و ضرب الامثال
قواعد زبان
علم بیان (تشبیہ، استعارہ، کنایہ وغیرہ)
ادبی اصناف کی شناخت
تحریری و معروضی سوالات کے حل کی مشق

4- امتحانی تیاری

ہر پندرہ دن بعد ایک مکمل ماڈل پیپر حل کریں۔
کمزور ابواب کی نشاندہی کر کے دوبارہ مطالعہ کریں۔
ایس ایل او بیڈ سوالات کی مشق کو ترجیح دیں۔
اساتذہ کے لیے نوٹ:

یہ تعطیلاتی اسائنمنٹ کیڈٹس کو غیر ضروری لکھائی سے بچاتے ہوئے امتحان کی تیاری، مطالعہ کی عادت اور ایس ایل اوز کے حصول پر مرکوز ہے۔ تحریری کام صرف سابقہ امتحانی پرچوں کے حل تک محدود رکھا گیا ہے، جبکہ باقی تمام سرگرمیاں مطالعہ، اعادہ اور خود تشخیص پر مشتمل ہیں۔

مطالعه قرآن کریم / اسلامیات

MQ

1. Memorize:
 - a. Word meanings,
 - b. Introduction,
 - b. main themes and
 - c. Exercises of Surah Al-An'am and Surah Al-A'raf
2. Solve one old Mardan Board paper in writing.

Islamiyat

1. Memorize:
 - a. Word meanings
 - b. Main themes of Surah Al-Ahzab
 - c. History of Ghazwa Ahzab
 - d. All exercise questions and answers
2. Solve one old Mardan Board paper in writing.

Note: Students should complete all work neatly and revise it regularly during the summer vacation.

Mr. M. Zahid Ullah AP of Islamiyat

Contact No. 03348284319