



# CLASS X SUMMER VACATION HOMEWORK

SESSION 2026-27



**ST. ANDREWS SCOTS SR. SEC. SCHOOL**

9th Avenue I.P Extension Delhi-92

THEME

*Integrated Learning Through Subjects*

## SUBJECTS INCLUDED



**MATHEMATICS**

Logical thinking  
& problem  
solving



**SCIENCE**

Discovery &  
innovation



**SOCIAL SCIENCE**

Understanding  
society &  
history



**ENGLISH**

Communication  
& creativity



**HINDI /  
SANSKRIT**

Language &  
culture



**AI / IT**

Future  
skills



“ *Success is the sum of small efforts,  
repeated day in and day out.* ”



## OBJECTIVE



To enhance creativity, critical thinking, and practical knowledge through fun and meaningful holiday assignments.

LEARN • EXPLORE • GROW • ACHIEVE

# ENGLISH

## Instructions:

- \* Do the Worksheets in your English registers.
- \* Revise the syllabus done till now.

## Part-I

1. Design a Scrapbook on "My School Life Memories"

### Instructions:

- \*Use A-4 size sheets ( minimum 5 pages ) for designing your scrapbook including the cover page.
  - \*Choose the best memories of your school life and attach relevant photographs along with a write-up in about two sentences and add a caption to it.
  - \*Design the Scrapbook cover page as well.
2. Make a project on **SIKKIM** including the following points:



- Study of calligraphic strokes of Devanagari and Roman alphabets
- Collect photographs of great musicians and musical instruments
- Historical places and monuments
- Brief history of dance forms and community songs
- Create or collect prose/poetry related

3. Social networking sites like Facebook, Twitter, and Instagram etc. connect you with the people who are not known to you and disconnect you from the people around you. Make a poster on an A3 sheet depicting the same message.

## PART-II

### Worksheet -7 Literature

Q1. Read the given extract and answer the following questions:

"Dumbstruck sat the gaping frog.  
And the whole admiring bog Stared  
towards the sumac, rapt,  
And, when she had ended, clapped."

- (i) Name the poet of the poem.
- (ii) Why was the frog dumbstruck?
- (iii) Who admired the nightingale's song?
- (iv) What was the reaction of the birds and animals towards the nightingale's song?

Q2. Answer the following in about 40 to 50 words.

- (i) How were the two boys, Nicola and Jacopo, useful for the narrator?
- (ii) Why does the narrator refer to the young boys, Nicola and Jacopo as 'Gentlemen'?
- (iii) Do you think the tiger shooting organized by the villagers was a serious affair? Explain it.
- (iv) What message does the poet wish to give in the poem 'The frog and the Nightingale'?

Q3. Answer the following in about 80-100 words.

- (i) Imagine Nicola writes a diary. Now write a diary page on his behalf describing how you discharged your responsibilities towards your sister Lucia?
- (ii) How was Louisa Mebbin able to buy a week-end cottage near Darking? Explain.

### **Worksheet -8 GRAMMAR & WRITING SKILLS**

#### **GRAMMAR :**

Q1. Fill in the blanks with the correct form of the verbs given in the brackets:

1. Please give me your pen. I \_\_\_\_\_ mine at home. (forget)
2. The hungry child \_\_\_\_\_ for ten minutes. (cry)
3. He \_\_\_\_\_ along the road when suddenly he \_\_\_\_\_ an old man. (walk, meet)
4. I praised him for what he \_\_\_\_\_ for the poor. (do)
5. When I was at school. I \_\_\_\_\_ part in cultural activities. (take)
6. You cannot go out till you \_\_\_\_\_ your homework. (complete)
7. He \_\_\_\_\_ there and ran away. (not stop)
8. When I reached the house I \_\_\_\_\_ that thieves \_\_\_\_\_ into it. (find, break)
9. My mother \_\_\_\_\_ food, when she \_\_\_\_\_ a noise. (cook, hear)
10. There is going to be a bus strike. Everyone \_\_\_\_\_ (look) for auto rickshaws and rickshaws next.
11. He is a very rude person. I \_\_\_\_\_ him. (not help)
12. When you reach there, he \_\_\_\_\_ a book. (read)

#### **WRITING SKILLS :**

Q1. You are Anu/ Anil. You happened to take part in a medical camp organized by Health Club of your school in a remote village near Delhi. You are surprised to find that most of the people there have no awareness of basic health and hygiene. As a concerned citizen, you decide to take up their cause and organize camps to make the villagers aware of the importance of hygiene. Write a letter to the editor of a newspaper, expressing your concern and encouraging youngsters to take part in such campaigns.

\*Cause of ill health

\* Regular discussions and camps to be held

\*A small dispensary to be set up

\* Youngsters to volunteer

Q2. Given below is an extract from an article in News week.

'For years I ate fast food because it was efficient and cheap. I had no idea it could be damaging my health,' says Caesar Barbar, 56, a maintenance worker with heart disease. Write an article on the health hazards caused by junk food using your own ideas in about 150 words.

# हिंदी

## ग्रीष्मकालीन अवकाश कार्य

- 1 अपने परिवार के किसी भी सदस्य से वार्तालाप कीजिए और यह जानने का प्रयास कीजिए कि वह अपने जीवन में क्या बनना चाहते थे और वह अपनी इच्छा अनुसार उस मुकाम तक पहुंच पाए या नहीं। अगर हाँ तो कैसे और अगर नहीं तो क्यों? अपने परिवार के किसी भी सदस्य से इस संघर्ष की कहानी सुने और अपने शब्दों में लिखिए।
- 2 स्वतंत्रता आंदोलन में अनेक महिलाओं ने योगदान दिया उनमें से निम्न के बारे में संक्षिप्त जानकारी लिखिए-  
सरोजिनी नायडू  
अरुणा आसफ अली  
कस्तूरबा गांधी
- 3 स्वस्थ जीवन शैली अपनाना क्यों जरूरी है?
4. पाठ्यक्रम में निर्धारित मुहावरों (स्पर्श और संचयन भाग 2) में से कोई 20 मुहावरे लिखिए।
5. अनुच्छेद लेखन  
(1.) ई रिक्शा: पारंपरिक रिक्शा का आधुनिक रूप  
(2.) आत्मविश्वास
6. पत्र लेखन  
(1.) दिल्ली में बिजली संकट से उत्पन्न कठिनाइयों का वर्णन करते हुए दैनिक समाचार पत्र के संपादक को पत्र लिखिए।  
(2.) आपका नाम विमल है। अपने क्षेत्र में प्राथमिक उपचार केंद्र खुलवाने का निवेदन करते हुए नगर निगम अधिकारी को पत्र लिखिए।
7. लघु कथा लेखन  
(1.) अभ्यास की शक्ति ।  
(2.) केवल बुद्धिमान को सीख दो , मूढ़ को नहीं ।
8. निम्नलिखित बिंदुओं को ध्यान में रखते हुए लक्षद्वीप पर सचित्र परियोजना कार्य कीजिए -  
भौगोलिक स्थिति  
संस्कृति  
जनसंख्या  
भाषा  
त्योहार  
वेशभूषा
9. कक्षा में करवाया गया कार्य याद कीजिए।
10. दिया गया कार्य अलग फाइल में कीजिए।

# संस्कृतम्

प्रश्न 1 'मम दिनचर्या' इति विषयम् अधिकृत संस्कृते दश वाक्यानि लिखत ।

प्रश्न- 2 व्यंजनसंधि तथा विसर्ग संधि पृष्ठ संख्या 60,62,63,64  
(Together with) से A-4 साइज़ शीट पर लिखकर अभ्यास कीजिए।

प्रश्न -3 पत्र लेखनम् - पत्र संख्या 4, 9, 12, 14, 19(Together with) से A-4 साइज़ शीट पर लिखकर अभ्यास कीजिए।

प्रश्न - 4 पंच चित्राधारितं सरल संस्कृते पंच वाक्यानि लिखत् । (A -4 साइज़ शीट पर )

प्रश्न-5

परियोजना कार्य

लक्षद्वीप

जनसंख्या

भाषा

खान - पान

पहनावा

नृत्य

## MATHEMATICS

1. Find the value of  $k$  for which system of equation  $2x + 3y = 5$  and  $4x + ky = 10$  has infinite number of solutions.
2. Check the consistency of the pair of linear equations  $2x + 3y = 5$  and  $4x + 6y = 10$
3. Find the number of solutions of the pair of equations  $x + 2y + 5 = 0$  and  $-3x - 6y + 1 = 0$ .
4. Given the linear equation  $3x + 4y - 8 = 0$  write another linear equation in two variables such that the geometrical representation of the pair so formed is parallel lines.
5. Find whether the following pair of linear equations is consistent or in consistent:  $3x + 2y = 8$  and  $6x - 4y = 9$
6. Find the value of  $k$  for which the lines  $5x + 7y = 3$  and  $15x + 21y = k$  coincides.
7. If  $x = a$  and  $y = b$  is the solution of the pair of equations  $x - y = 2$  and  $x + y = 4$  find the values of  $a$  and  $b$ .
8. If the system of equations  $6x - 2y = 3$  and  $kx - y = 2$  has a unique solution, find  $k$ .
9. For what values of  $k$  will the following pair of linear equations have infinitely many solutions?  $kx + 3y - (k - 3) = 0$  and  $12x + ky - k = 0$
10. Determine the values of  $a$  and  $b$  for which the following system of linear equations has infinite solutions:  
 $2x - (a - 4)y = 2b + 1$ ;  $4x - (a - 1)y = 5b - 1$
11. For what value of  $k$  will the following system of linear equations have no solution?  $3x + y = 1$   $(2k - 1)x + (k - 1)y = 2k + 1$
12. For what value of  $k$  for which the following pair of linear equations have infinitely many solutions:  $2x + 3y = 7$ ;  $(k-1)x + (k+2)y = 3k$  is
13. For what value of  $k$ , do the equations  $3x - y + 8 = 0$  and  $6x - ky = 16$  represent coincident lines
14. Solve:  $2x + 3y = 11$  and  $2x - 4y = -24$ 
  15. Solve the following pair of linear equations:  $21x + 47y = 110$  and  $47x + 21y = 162$
  16. If  $217x + 131y = 913$   $131x + 217y = 827$  then find the value of  $x$  and  $y$
  17. Half the perimeter of a garden, whose length is 4 more than its width is 36 m. Find the dimensions of the garden.
  18. Draw the graphs of the equations  $x - y + 1 = 0$  and  $3x + 2y - 12 = 0$  Determine the co-ordinates of the vertices of the triangle formed by these lines and  $x$ -axis. Shade the triangular region.
  19. Draw the graph  $x - y + 1 = 0$  and  $2x + y - 10 = 0$  Shade the region bounded by these lines and  $x$ -axis. Find the area of the shaded region.
  20. A natural number, when increased by 12, equals 160 times its reciprocal. Find the number.
  21. Find a natural number whose square diminished by 84 is equal to thrice of 8 more than the given number.
  22. The sum of the digits of a two-digit number is 9. Also 9 times this number is twice the number obtained by reversing the order of the digits. Find the number.
  23. A train covered a certain distance at a uniform speed. If the train would have been 6 km/h faster, it would have taken 4 hours less than the scheduled time. And, if the train were slower by 6 km / hr it would have taken 6 hours more than the scheduled time. Find the length of the journey.

# SCIENCE

## General Instructions:

### **1. Do Assignment of Physics, Chemistry & Biology in the their respective subject register.**

#### **Physics**

Q1. Write any three cases where the image formed by a convex lens is real and inverted?

Q2. Two lenses of power +3.5 D and -2.5 D are placed in contact. Find the power and focal length of the lens combination.

Q3. Calculate the speed and wavelength of light:

1. In glass and

2. In air, when light waves of frequency  $6 \times 10^{14}$  Hz travel from air to glass of  $\mu=1.5$ .

Q4. State the cause and effect of refraction.

Q5. Explain refraction through a glass slab:

Q6. Refractive index of glass with respect to air is 1.5 and refractive index of water with respect to air is  $\frac{4}{3}$ . What will be the refractive index of glass with respect to water?

Q7. A ray of light is incident normally on a rectangular piece of glass. The value of angle of refraction will be :

Q8. Find the power of a convex lens which forms a real and inverted image of magnification -1 of an object placed at a distance of 20 cm from its optical centre.

Q9. One student uses a lens of focal length +50 cm and another -50 cm. State the nature and find the power of each lens. Which of the two lenses will always give a virtual and diminished image irrespective of the position of the object?

Q10. State the law of refraction of light that defines the refractive index of a medium with respect to the other. Express it mathematically. How is the refractive index of any medium 'A' with respect to a medium 'B' related to the speed of propagation of light in two media A and B? State the name of this constant when one medium is vacuum or air. The refractive indices of glass and water with respect to vacuum are  $\frac{3}{2}$  and  $\frac{4}{3}$  respectively. If the speed of light in glass is  $3 \times 10^8$  m/s., find the speed of light in (i) vacuum, (ii) water

#### **BIOLOGY**

Q1. In human alimentary canal name the site of complete digestion of various components of food. Explain the process of digestion

Q2. what are stomata? Draw a labelled diagram of stomata. Write any two functions of stomata.

Q3. Why is there a difference in the rate of breathing between aquatic organisms and terrestrial organisms? Explain.

Q4. Draw a diagram of human respiratory system and label the following:

a) pharynx

b) trachea

c) lungs

d) diaphragm

e) alveolar sac

Q5. a) what is double circulation?

b) why is the separation of the right side and the left side of the heart useful? How does it help birds and mammals?

Q6. How is lymph an important fluid involved in transportation? If lymphatic vessels get blocked, how would it affect the human body? Elaborate.

Q7. Differentiate between

a) lymphatic capillaries and blood capillaries

b) auricles and ventricles

c) ascent of SAP and translocation

d) xylem and phloem

Q8. Describe double circulation of blood in human beings. Why is it necessary?

Q9. Compare the functioning of alveoli in the lungs and nephrons in the kidneys with respect to the structure and functioning.

Q10. In single cell organisms diffusion is sufficient to meet all their requirements of food, exchange of gases or removal of waste but it is not in case of multicellular organisms. Explain the reason for this difference.

### **CHEMISTRY:**

1. Why do we store P.O.P in moisture proof container?
2. A magnesium ribbon is burnt in oxygen to give a white compound 'X' accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burn and forms a compound Y.  
(a) Write the chemical formula of X and Y.  
(b) Write a balanced chemical equation, when X is dissolved in water.
3. Zinc liberated hydrogen gas when reacted with dilute hydrochloric acid where as copper does not. Explain why?
4. Write chemical equation representing the action of CO<sub>2</sub> present in atmosphere on bleaching powder left in open.
5. How is washing soda prepared from baking soda? Give its chemical equation. State the type of the salt.
6. Write the chemical equation involved in the preparation of Bleaching powder and Plaster of Paris.
7. What is baking powder? Give role of its constituents.
8. What is water of crystallization. Write any two hydrated salts.
9. A gas 'X' reacts with lime water and forms a compound 'Y' which is used as a bleaching agent in the chemical industry. Identify 'X' and 'Y'. Give the chemical equation of the reactions involved.
10. What happens when Carbon dioxide gas is passed through ammoniacal brine?

## **SOCIAL SCIENCE**

### **INSTRUCTIONS:**

- Do the Project in a project file.
- Do the Worksheet in any of your subject registers.
- Do the map work and paste it in your subject register.
- Complete the chapters done in class.
- Revise all the work done in class.

### **WORKSHEET**

1. India comes under which type of federation and why?
2. Describe the three-fold distribution of legislative power between the Union Government and State Governments of India.
3. How did the Silk Routes help in spreading religions across continents?
4. Explain any two effects of the discovery of America on the world economy.
5. What is the rationale for decentralization of power? Explain the structure of Rural local government in India.
6. Apart from the Central and the State governments, which is the third type of government practised in Belgium?
7. State one prudential reason and one moral reason for power-sharing with an example from the Indian context.
8. Explain the major factors which are responsible for the formation of soil.
9. Explain why two countries with the same per capita income may not have the same level of development.
10. How can excessive use of natural resources negatively affect development?

11. Explain the importance of employment opportunities in the process of development.
12. With reference to alluvial soil answer the following questions-
  - a. How is it classified on the basis of its age?
  - b. Alluvial soil as a whole is very fertile.  
Give reasons.

### Instructions for Project Work

1. The project should be neat and well-organized.
2. Use simple and clear language.
3. Include pictures, newspaper cuttings, or charts wherever possible.
4. Mention headings and subheadings properly.
5. Use only relevant and authentic information.
6. The project should preferably be handwritten.
7. Keep the project within **12-15 pages** excluding the cover page.

### Project Topic: The Great Economic Depression

**Project Question:** “What were the causes, effects, and global impact of the Great Economic Depression of 1929?”

#### **Project Outline**

##### **1. Cover Page**

**Include:**

- Project Title
- Student’s Name
- Class & Section
- Roll Number
- Subject
- School Name
- Academic Session

##### **2. Certificate**

**Sample Format:**

This is to certify that \_\_\_\_\_ of Class X has successfully completed the History project titled “*The Great Economic Depression*” under the guidance of the subject teacher during the academic session \_\_\_\_\_.

##### **3. Acknowledgement**

**Students may thank:**

- Subject teacher
- School
- Parents and friends
- Books, newspapers, and websites used for research

##### **4. Index**

**Suggested Index:**

1. Introduction
2. Background of the Great Depression
3. Causes of the Great Depression
4. Stock Market Crash of 1929
5. Effects on the United States

6. Global Impact of the Depression
7. Impact on India
8. Measures Taken for Recovery
9. Conclusion
10. References

## **5. Introduction**

- Meaning of economic depression
- Time period of the Great Depression (1929–1939)
- Why it is considered one of the worst economic crises in history

## **6. Background of the Great Depression**

- **Economic growth after World War I**
- Rise of industries and stock market
- Overproduction and unequal distribution of wealth

## **7. Causes of the Great Depression**

- Stock market speculation
- Overproduction in industries and agriculture
- Fall in demand
- Bank failures
- Unemployment
- Weak international trade

## **8. Stock Market Crash of 1929**

- Wall Street Crash
- “Black Tuesday” (29 October 1929)
- Panic selling of shares
- Collapse of businesses and banks

## **9. Effects on the United States**

- Massive unemployment
- Poverty and homelessness
- Closure of factories and banks
- Decline in production and trade

## **10. Global Impact of the Depression**

- Spread of economic crisis to Europe and other countries
- Fall in world trade
- Political instability in many nations

## **11. Impact on India**

- Fall in agricultural prices
- Problems faced by farmers
- Decline in exports
- Economic hardships under British rule

## **12. Measures Taken for Recovery**

- Franklin D. Roosevelt’s “New Deal”
- Government reforms
- Public works programmes
- Banking reforms

### 13. Conclusion

- The Great Depression affected millions of people worldwide.
- It changed economic policies and government roles.
- It highlighted the importance of financial stability and employment generation.

### 14. References

Students should mention sources used.

## ARTIFICIAL INTELLIGENCE

**All the following activities are part of the Internal Assessment. For this student will be assessed.**

- Activity 1: Write 15 Programs of Python in File on different topics, (ADDITION, SWAPPING,IF-ELSE ,FOR LOOP,WHILE LOOP etc.)
- Activity 2: Explain Stress Management Techniques (Draw or Paste the Pictures)
- Activity 3: Make a PPT on any topic of Employability Skills and Take Printout and paste in File.(6-7 Pages)
- Activity 4: Case Study - AI Project Cycle in Action .Make PPT and Take Printout Choose a Real-World AI Project (Smart Home, Smart Traffic Management or any other AI project Example you can used)
- Activity 5: Prepare an info graphics on "Cyber Security". No Printout please, draw yourself and color it
- Activity 6: Make something from waste Material (Green Skills)
- Activity 7: Make a Questionnaire and do survey on use of **ARTIFICIAL INTELLIGENCE**. ( 10 persons )
- a. Use at least 10 Objective Question

## ART AND CRAFT

1. Make a tablecloth by using white/any light colour thick cotton cloth, fabric colour and make it stitch a lace on the side of the clothe nicely.
  2. Make a landscape with pencil shading in your art file nicely.
- Note: Complete all the classwork (mother and child portrait, Madhubani painting,poster on- "say no to plastic "and" Beat the heat", animal study,bird study)nicely as instructed in the art file.

Submit all the art and Craft materials related to holiday homework positively first week of July month (after Summer vacation)





