MOTHER INDIA PUBLIC SCHOOL
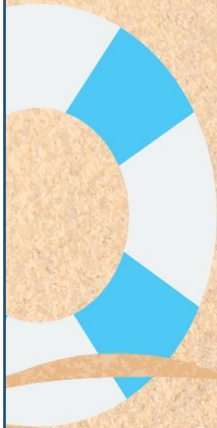
BAZPUR

SUMMER
HOLIDAY HOMEWORK

ENJOY

WWW.MIPSBAZPUR.ORG

CLASS – X(A+B)

GUIDELINES

Wishing you a joyful and refreshing summer break!
May this holiday be filled with laughter, discovery, and quality time with loved ones. Take time to relax, explore your interests, and enjoy every moment.

Along with fun, use this time to engage in your holiday homework—designed to spark creativity, deepen understanding, and make learning enjoyable. Complete it with sincerity, originality, and pride.

Stay safe, stay curious, and come back recharged, ready for new beginnings!

SOCIAL STUDIES

OBJECTIVE –

- To revise and reinforce key concepts from all completed chapters through creative and visual learning.
- To enhance students' understanding and retention through mind mapping techniques.
- To improve map reading and location identification skills essential for board examinations.
- To encourage self-study, time management, and presentation skills.

INSTRUCTIONS/GUIDELINES FOR STUDENTS –

- Each student must prepare a **scrapbook** dedicated to the subject of Social Science.
- **Create one mind map** for each chapter completed in class till now (total 19 chapters in syllabus; only completed chapters to be done).
- Each mind map should be clear, colorful, and cover all the key points of the chapter: important terms, dates, events, concepts, and subtopics.
- Students will also be given **maps** to practice location and identification of important places as per chapters covered.
- The maps should be neatly marked and labeled with relevant information.
- All work must be original. Copy-pasting from books or internet will not be accepted in Mind-Map.

CRITERIA
Creativity and Presentation(5)
Content Accuracy and Coverage(5)
Map Marking and Accuracy(5)
Personal Reflection(5)
On Time(5)
Total-25

NOTE –This holiday homework is designed to support your preparation for the board examinations. Make sure your work reflects your understanding and effort. Enjoy your holidays and use this time productively!

INFORMATION TECHNOLOGY

1. Do the following PYQ's and additional Questions in your notebook. Most of the given questions are one word answer questions. To complete this whole homework 20 – 30 minutes of everyday is needed.

1) Which of the following type of communication involves interchanging messages only through images or picture?
2) Which of the following features allows one to apply a group of format at the same time?
3) In Writer, style and formatting option is available under _____ menu.
4) Resizing a _____ may badly affect the resolution of an image.
5) In Writer, you can create your own template in _____ way(s).
6) In Writer, _____ function key is used to see the databases while implementing mail merge.
7) How can cultural difference be a barrier to effective communication?
8) Write the main steps to group drawing objects in Writer.
9) What is the concept of mail merge in word processing software? Give ant two major benefits of using mail merge.
10) _____ controls all aspects of a paragraph's appearance, such as test alignment, tab stops, line spacing, and border, and can include character formatting.
11) How many levels of headings does Open Office Writer evaluate to build the table of Content?
12) Which of the following Graphic filter is used to increase the contrast of an image in a document?
13) Which of the following is not used when creating a mail merge document?
14) Which mode is used to apply a style to many different areas of a document quickly without going back to styles and formatting window in Writer?
15) Give any two characteristics of templates in Open Office Writer.
16) Explain with respect to positioning a) Arrangement   b) Text Wrapping.
17) What are various elements of communication cycle?
18) Why are communication skills important in our daily life?
19) What are good feedback in communication skills?
20) Why do we use styles and formatting?

2. Using your computer system/ mobile create a document showing the use of style, image, and paste it in notebook
3. Project work/file:
o   Guidelines:
☐   The file should consist of Introduction page, Acknowledgement page, Index, and 6 to 8 pages of proper explanation.
☐   A
•   Roll No – 1 to 10 ICT
•   Roll No – 11 to 20 Digital Documentation
•   Roll No – 21 to 30 Electronic Spreadsheet
•   Roll No – 31 to 41 Green Skills
☐   B
•   Roll No – 1 to 10 Digital Documentation
•   Roll No – 11 to 20 Electronic Spreadsheet
•   Roll No – 21 to 30 Green Skills
•   Roll No – 31 to 40 ICT
4.   Marks Distribution:-25

Neatness(5)

Proficiency   (5)

On Time(5)

Accurate Data(5)

Personal effect(5)

HINDI

सभी प्रश्नों को हल करना अनिवार्य हैं

प्रश्न 1** G 20 सम्मेलन में भारत की उत्कृष्ट भूमिका को उभरते हुए इस सम्मेलन में शामिल देशों की सांस्कृतिक विरासत पर आधारित एक फाइल तैयार कीजिए।   5

संकेत बिंदु।   *G20 की स्थापना कब हुई थी

*कौन कौन से देश आए थे
*सम्मेलन कहां हुआ था,
*किस कारण से हुआ था। आदि

प्रश्न 2**विद्यालय पत्रिका के लिए स्वरचित कोई एक लेख अथवा कविता 120 शब्दों में तैयार कीजिए ।5

प्रश्न **3 आपके शहर में गर्मियों की छुट्टियों में नृत्य सीखने का संस्थान खुला है इसके लिए अपने मन से कोई नाम देकर विज्ञापन तैयार कीजिए ।5

प्रश्न 4**पर्यावरण को बचाने के लिए आप कैसे योगदान दे सकते हैं इसे चित्र के माध्यम से स्पष्ट करते हुए A4 सीट में बनाइए । 5

प्रश्न **5 आपने किसी स्थान की यात्रा अवश्य की होगी । यात्रा के दौरान हुए खट्टे मीठे अनुभवों को सुंदर लेख में लिखिए ।5

SCIENCE

Total marks -16 marks

Physics

1.Short answer type questions (0.25 mark for each)

1. What is electric current?

2. Define resistance.

3. What is Ohm's law?

4. What is the unit of electric charge?

5. Define electric potential.

6. What is the difference between conductors and insulators?

7. What is electric power?

8. Define resistivity.

9. What is the unit of electric power?

10. What is a circuit diagram?

11. Define electric energy.

12. What is the function of a fuse?

13. What is the difference between AC and DC?

14. What is electric current measured in?

15. Define the term 'electric potential difference'.

16. What is the role of a switch in an electric circuit?

17. What is the unit of resistance?

18. Define electric conductivity.

19. What is the purpose of earthing?

20. What is the difference between live and neutral wires?

1.   Find the formula for equivalent resistance in series combination and parellel combination. (02 marks)

Chemistry

Short answer type questions (01 mark each)

1.   Name the type of chemical reaction that occurs when quicklime is added to water.
2.   Write the balanced chemical equation for the reaction between sodium hydroxide and hydrochloric acid.

Answer the following questions (02 marks each)
1.   What is observed when a piece of zinc is added to copper sulphate solution? Write the chemical equation for the reaction.
2.   Why is it important to balance chemical equations

Answer the following questions (3-Marks)

1.   Explain the following reactions with balanced chemical equations:

a.   Thermal decomposition of lead nitrate
b.   Action of water on quicklime
c.   Electrolysis of water

Biology (10 Marks)
Chapter: The Fundamental Unit of Life

Objective: To develop a clear understanding of cell structure, functions, and its organelles through creative and analytical activities

Instructions:

The assignment should be handwritten and well-organized.

Include diagrams, illustrations, and labeled figures wherever necessary.

Be creative and use colors to enhance presentation.

Ensure clarity and neatness throughout.

Submit the assignment in a file or notebook.

1. Assignment Tasks:

Theory and Concepts:

1. Short Answer Questions (2.5 Marks)

a) Why is the cell called the fundamental unit of life?

b) Differentiate between plant and animal cells.
c) What is osmosis? Explain with an example.
d) Why is the nucleus known as the control center of the cell?
e) Describe the structure and function of mitochondria.

Diagram-Based Questions:

1. Draw a well-labeled diagram of the following: (1.5 Marks)
- Plant cell
- Animal cell
2. Label the important organelles and write a brief description of their functions.
3. Use colors to distinguish different parts of the cell.
4.Draw diagrams on one chart paper
2. Bio-Sketch of a Scientist: (1 Marks)

Write a short biography of Robert Hooke or Anton van Leeuwenhoek highlighting their contribution to cell biology

Analytical Questions: (5 Marks)
1. Why are lysosomes known as the 'suicidal bags' of the cell?
2. Explain the difference between diffusion and osmosis with examples.
3. Why do plant cells have a large vacuole, while animal cells have small vacuoles?
4. How do ribosomes help in protein synthesis?
5. What would happen if the plasma membrane ruptures?

MATHEMATICS
For Section X-B

Instructions-
A) Q.1-15 carries 1 mark each.
B) Q. 16 & 17 carry 5 marks each.
C) Do this work in separate thin notebook.

1. Find the quadratic polynomial, the sum of whose zeroes is 8 and their product is 12. Hence, find the zeroes of the polynomial.
2. A train travels a distance of 90 km at a constant speed. Had the speed been 15km/hr more, it would have taken 30 minutes less for the journey. Find the original speed of the train.
3. Find the value of c for which quadratic equation

$(c+1) x2-6(c+1) x+3(c+9)=0$; $c \neq 1$

Has real and equal roots.

4. Find the zeroes of the quadratic polynomial $4x2 – 7$, and verify the relationship between zeroes and coefficients.
5. Prove that $\sqrt{5}$ is irrational and hence show that $3 + \sqrt{5}$ is also irrational.
6. Form a quadratic polynomial whose zeroes are $3 + \sqrt{2}$ and $3 – \sqrt{2}$.
7. Two tankers contain 850 liters and 680 liters of petrol. Find the maximum capacity of a container which can measure the petrol of each tanker in the exact number of times.
8. A circular field has a circumference of 360 km.Three cyclists starts to gather and can cycle 48,60 and 72 km a day, round the field. When will they meet again?
9. In a seminar the number of participants in Hindi, English and Mathematics are 60,84 and 108 respectively. Find the minimum rooms required if in each room the same number of participants are to be seated and all of them being in the same subject.
10. For what value of k , do the equations $3x – y + 8 = 0$ and $6x – ky = -16$ represents coincident lines.
11. Find the value of 'k' for which the quadratic equation $(k+1) x^2-2(3k+1)x+(8k+1)=0$ has real and equal roots.
12. A 2-digit number is such that the product of its digits is 18. When 63 is subtracted from the number, the digits interchange their places. Find the number.

13. Assertion (A): If one root of the quadratic equation $x^2 - x - k = 0$ is 2 , then the value of k is 2.

Reason (R): All quadratic equations $ax^2 + bx + c = 0$ where $a \neq 0$,has two real roots.
(A) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
(B) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
(C) Our Assertion is true but the Reason is false.
(D) The statement of the Assertion is false but the Reason is true.

14. Find the value of k for which the quadratic equation $2x^2 + kx + 3 = 0$ has two equal roots.
15. If $217x + 131y = 913$ and $131x + 217y = 827$, solve for x and y.

CASE STUDY
16.

Just before the morning assembly Sachin Pandey, is a Math lecturer and the school-coordinator of a convent school observes some clouds in the sky. So, he cancels the assembly. He also observes that the clouds have a shape of the polynomial. The mathematical representation of a cloud is shown in the figure. He decides to teach his students about this mathematical aspect in the nature.

Based on the above information answer the following questions

1- Find the zeroes of the polynomial represented by the graph
2- What will be the expression for the polynomial represented by the graph.
3- If a and b are the zeroes of the polynomial $x^2 + 2x - 8$, then find the value of $a^2 + b^2$.

17. Lavanya wants to organize her birthday party. She is very happy on her birthday. She is very health conscious, thus she decided to serve fruits only in her birthday party. She has 36 apples and 60 bananas at home and decided to serve them. She wants to distribute fruits among guests. She does not want to discriminate among guests, so she decided to distribute fruits equally among all.

(i)   How many maximum guests Lavanya can invite? (1M)
(ii)   How many apples and bananas will each guest get? (1M)
(iii)   Lavanya decide to add 42 mangoes also. In this case how many maximum guests Lavanya can invite? (2M)
(iv)   How many total fruits will each guest get?(1M)

For Section X-A

Instructions-A) Q.1-15 carries 1 mark each.
B) Q. 16 & 17 carry 5 marks each.
C) Do this work in separate thin notebook.

1.Find the quadratic polynomial, the sum of whose zeroes is 8 and their product is 12. Hence, find the zeroes of the polynomial
2. A train travels a distance of 90 km at a constant speed. Had the speed been 15km/hr more, it would have taken 30 minutes less for the journey. Find the original speed of the train.
3. Find the value of c for for which quadratic equation
$(c+1)x^2-6(c+1)x+3(c+9)=0$; $c \neq 1$
Has real and equal roots.
4. Find fourth vertex D of parallelogram ABCD whose three vertices are A(-2,3) ,B(6,7) and C(8,3)
5. Prove that $\sqrt{5}$ is irrational and hence show that $3 + \sqrt{5}$ is also irrational.
6. Form a quadratic polynomial whose zeroes are $3 + \sqrt{2}$ and $3 – \sqrt{2}$.
7. Two tankers contain 850 liters and 680 liters of petrol. Find the maximum capacity of a container which can measure the petrol of each tanker in the exact number of times.
8. A circular field has a circumference of 360 km.Three cyclists starts to gather and can cycle 48,60 and 72 km a day,round the field.When will they meet again?
9. In a seminar the number of participants in Hindi,English and Mathematics are 60,84 and 108 respectively.Find the minimum rooms required if in each room the same number of participants are to be seated and all of them being in the same subject.
10. The ratio of incomes of two persons is 9 : 7 and the ratio of their expenditures is 4 : 3. If each of them manages to save Rs. 2000 per month, find their monthly incomes.
11. Findthe value of 'k' for which the quadratic equation $(k + 1)x^2 − 2(3k + 1)x + (8k + 1) = 0$ has real and equal roots.

12. A 2-digit number is such that the product of its digits is 18. When 63 is subtracted from the number, the digits interchange their places. Find the number.

13. Assertion (A): Mid-point of a line segment divides the line segment in the ratio 1:1.

Reason (R): The ratio in which the point (-3, k) divides the line segment joining the points (-5, 4) and (-2, 3) is 1: 2

(A) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(B) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(C) Our Assertion is true but the Reason is false.

(D) The statement of the Assertion is false but the Reason is true.
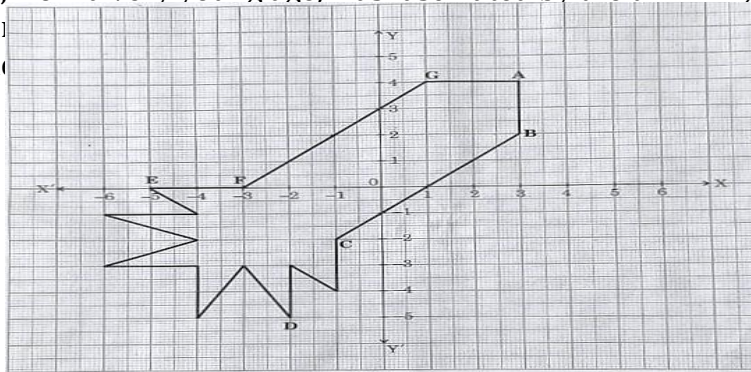
14. The area of the triangle formed by the line $\frac{x}{a} + \frac{y}{b} = 1$ with the coordinate axes is:

   a) ab
   b) $\frac{1}{4}ab$
   c) $\frac{1}{2}ab$
   d) 2ab

15. Show that the (-2, 3), (8, 3) and (6, 7) are the vertices of a right-angled triangle.

CASE STUDY(5 marks)

16. Ryan, from a very young age, was fascinated by the twinkling of stars and the vastness of space. He always dr[...] sketch his own rocket designs on the graph sh[...]

Based on the above, answer the following questions:

(i) Find the midpoint of the segment joining F and G.

(ii)   (a) What is the distance between the points A and C?

        (b) Find the coordinates of the point which divides the line segment joining the points A and B in the ratio 1:3 internally.

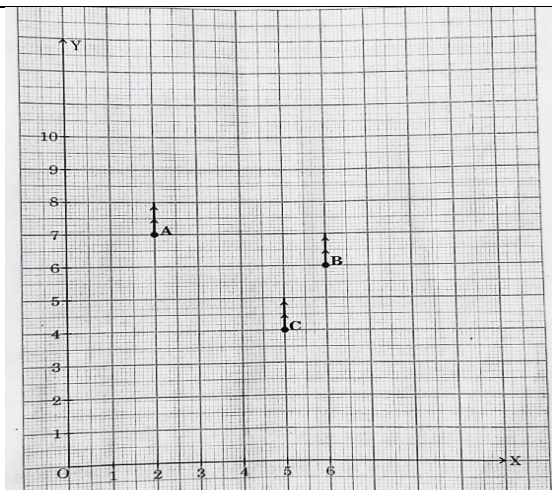(iii) What are the coordinates of the point D?

CASE STUDY(5 marks)

17. Resident Welfare Association (RWA) of Gulmohar Society in Delhi, have installed three electric poles A, B and C in the society's common park. Despite these three poles, some parts of the park are still in the dark. So. RWA decides to have one more electric pole D in the park. The park can be modelled as a coordinate system given below.

i) What is the distance of the pole B from the corner O of the park?

ii) Find the coordinates of the fourth pole D so that the points A,B,C and D taken in order form a parallelogram.

iii) Find the relation between x and y such that E (x,y) is equidistant form A and C.

iv) What is distance between pole A and C.

ENGLISH

Homework Instructions

Dear Students,
Please go through the following instructions and complete the given work during the summer vacation. This homework carries 25 marks and will be assessed after the break**.**

1. Words and Expressions Workbook
Complete the exercises from the chapters covered before the summer vacation.
Solve all comprehension, vocabulary, and writing-based activities from those chapters.

2. Previous Year Question Papers Practice
Solve the Reading, Writing, and Grammar sections from all three sets of CBSE English (Language & Literature) question papers for the years:
2023–24
2024–25

Focus Areas:
Reading: Unseen passages
Writing: Formal letter, analytical paragraph, etc.
Grammar Topics:
Tenses
Reported Speech
Determiners
Modals

Write your answers neatly in your English notebook.

Homework Assessment: 25 Marks
1.Words and Expressions workbook: 10 marks
2.Previous year question paper practice: 15 marks

Note:
Ensure neatness and clarity in your work.
Use proper formats where required.

Enjoy your break and stay consistent with your revision!

English Department

SUBJECT 8