PM SHRI KV NO.1 JHANSI CANTT, AGRA REGION

Class – 10

Holiday homework

Hindi

1. सूरदास के प्रथम दो पदों की अपने शब्दों में व्याख्या कीजिए।
2. संज्ञा,सर्वनाम,विशेषण,कारक,क्रिया,कर्म,लिंग,वचन का अध्ययन कर वर्णन कीजिए।
3. आपका मित्र दादाजी का देहांत होने के कारण शोक संतृप्त है, उसे सांत्वना देते हुए पत्र लिखिए।
4. आप सरस्वती विद्या मंदिर के विद्यार्थी राधा/मोहन है। आगामी बोर्ड परीक्षाओं की तैयारी हेतु अपने प्राचार्य महोदय को हिंदी विषय की अतिरिक्त कक्षाएं लगवाने हेतु प्रार्थना पत्र लिखिए।
5. ग्रीष्म अवकाश के दौरान आपके द्वारा सहपरिवार की गई किसी यात्रा का वृतांत लिखिए।

6 रचना के आधार पर वाक्य भेद कितने प्रकार के होते हैं उदाहरण सहित लिखिए.

7 क्षितिज पुस्तक के प्रथम तीन पाठ का अध्ययन करें।

English

1) Write the summaries of first five poetries from the book First flight.

2) Write 2 analytical paragraph from KVS Study material.

3) Solve Grammar portion only from 5 sample papers of Language and Literature.

4) Write 5 long answer questions from KVS Study material of first 5 lessons from both books(3 questions from first flight 2 questions from Moments)

This work has to be completed only in Fair notebook of English.

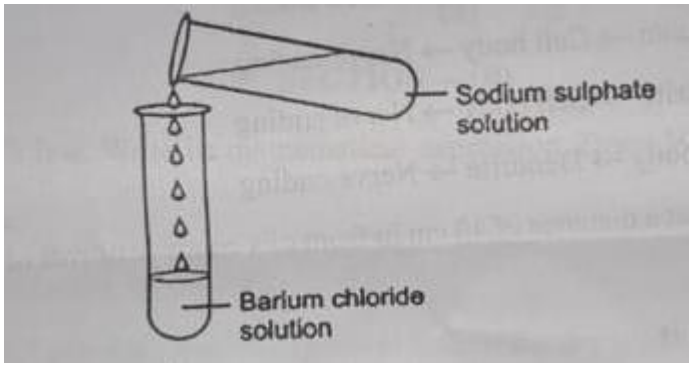
Portfolio has to be prepared separately in file papers with proper format and cover page.

Science

1. **Prepare a project based on Ch – Management of natural resources.**
2. **Complete first 10 practicals from the list in science practical file.**

SECTION -A

1. Identify the product which represents the solid state in the above reaction.



a. Barium chloride
b. Barium sulphate.
c. Sodium chloride
d. Sodium sulphate

2 The colour of the solution observed after 30 minutes of placing zine metal to copper sulphate solution is

(a) Blue. (b) Colourless. (c) Dirty green. (d) Reddish Brown

3. Generally food is broken and absorbed within the body of organisms. In which of the following organisms is it done outside the body?

(a) Amoeba. (b) Mushroom. (c) Paramecium. (d) Lice

4. 12. A sportsman, after a long break of his routine exercise, suffered muscular cramps during a heavy exercise session. This happened due to

a. lack of carbon dioxide and formation of pyruvate

b. presence of oxygen and formation of ethanol,

c. lack of oxygen and formation of lactic acid.

d. lack of oxygen and formation of carbon dioxide

5. Which of the following is an example of a decomposition reaction.

(a) Burning of paper. (b) Rusting of iron

(c) Formation of water from hydrogen and oxygen

(d) Decomposition of hydrogen peroxide into water and oxygen

6. Which of the following is NOT a function of the liver?

(a) Detoxification of harmful substances

(b) Production of bile for digestion

(c) Regulation of blood sugar level

(d) Production of red blood cells

7. The correct path of urine flow in our body as follows:

(a) Kidney ------→Ureter ------→Urethra---------- →Urinary bladder

(b) Kidney------→ Urinary bladder-------→ Urethra---------- →Ureter

(C) Kidney --------→Ureter --------→Urinary bladder------→ Urethra

(d) Urinary bladder -------→Kidney -------→Ureter ---------- →Urethra

8. During deficiency of oxygen in tissues of human beings pyruvic acid is converted into lactic acid in:

a. Mitochondria b.Cytoplasm c.Chloroplast d. Golgi body

9. A person experiences stomach discomfort after consuming a meal high in fat content. Which of the following explanations could best account for this discomfort?

a. The salivary glands did not secrete enough saliva to initiate the digestion of fats.
b. The stomach did not produce sufficient gastric acid to break down the fats.
c. The pancreas did not release enough digestive enzymes to digest the fats.
d. The small intestine did not absorb the digested fats properly

Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

(a) Both A and R are true, and R is the correct explanation of A

(b) Both A and Rare true, and R is not the correct explanation of A

(c) A is true but R is false.

(d) A is false but R is true.

1. Assertion: Rusting of Iron is endothermic in nature.

Reason: As the reaction is slow, the release of heat is barely evident.

2. Assertion : Brown fumes are produced when lead nitrate is heated.

Reason : Nitrogen dioxide gas is produced as a by-product due to the decomposition of lead nitrate.

3. Assertion: Photosynthesis is considered as an exothermic reaction.

Reason: Photosynthesis is an endothermic reaction because sunlight energy is absorbed by green plants.

SECTION -B

1. What is the purpose of making urine in the human body? Name the organs that stores and releases the urine.
2. How do the guard cells regulate the opening and closing of stomatal pores ?
3. Identify the type of chemical reaction in the following statements and define each of them.
   (i) Digestion of food in the body.
   (ii) Rusting if iron.
4. Why do arteries have thick and elastic walls whereas veins have valves?

SECTION-C

5. The following diagram displays a chemical reaction. Observe carefully and answer the following question



   (i) Identity the type of chemical reaction that will take place and define it. How will the colour of the salt change?
   (ii) Write the chemical equation of the reaction that takes place.
   (iii) Mention one commercial use of this salt.

SECTION-D

1. Define a chemical reaction. State four observations which help us to determine that a chemical reaction has occurred. Write one example of each of the observations with a balanced chemical equation.

SECTION -E

1.

. The food material taken in dining the process of nutrition is used in cells to provide energy for various life processes. Diverse organisms do this in different ways some use oxygen to break down glucose completely into carbon dioxide and water, some use other pathways that do not involve oxygen. In all cases, the first step is the break-down of glucose, a six carbon molecule, into a three-carbon molecule called pyruvate. This process takes place in the cytoplasm. Further, the pyruvate may be converted into ethanol and carbon dioxide. This process takes place in yeast during fermentation. Since this process occurs in the absence of air (oxygen), it is called anaerobic respiration. Break down of pyruvate using oxygen takes place in the mitochondria. This process breaks up the three-carbon pyruvate molecule to give three molecules of carbon dioxide. The other product is water. Since this process takes place in the presence of air (oxygen), it is called aerobic respiration. The following process is carried out:

1. Take some freshly prepared lime water in a test tube.

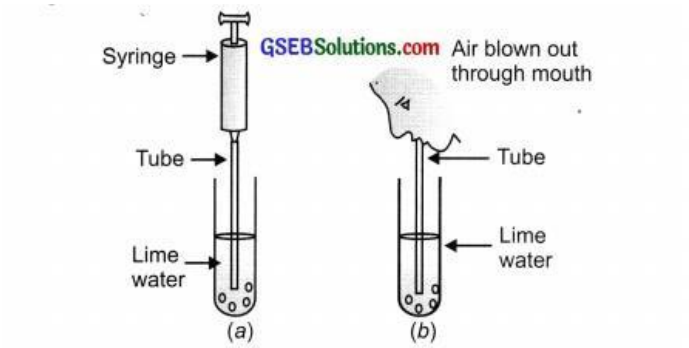
2. Blow air through this time water.

3 How long it takes for the lime water to tum milky.

4. Use a syringe or pichkari to pass air through some fresh lime water taken in another test tube

5. Note how long it takes for this lime water to turn milky.

6. It is observed that the syringe takes more time to turn lime water milky



(a) Air being passed into lime water with a pichkari/syringe, (b) Air being exhaled into lime water

(A) Explain why lime water turn milky instantaneously?

(B) Why syringe takes more time to turn lime water milky?

(C) Name the process through which carbon dioxide is released?

(D) Name the process in which carbon dioxide is absorbed?

Maths

CHAPTER -1 REAL NUMBERS

Graded worksheet - 1

Student's name :	Class: 10, section:	Date:
Duration : 30 Min	Max marks : 15	Estimated weightage of chapter in CBSE exam: 6 marks

Q1.	State Fundamental Theorem of Arithmetic.	1 mark
Q2.	If $p^2 = \frac{21}{140}$, then p is a /an a) whole number b) integer c) rational number d) irrational number	1mark
Q3.	Which of the following is not an irrational number? a) π b) 3.070070007…… c) $\frac{\sqrt{5}}{\sqrt{20}}$ d) $\sqrt{0.4}$	1 mark
Q4.	Assertion (A) : $2 + \sqrt{3}$ is an irrational number. Reason (R) : The sum of a non-zero rational number and an irrational number is always an irrational number. **Choose the correct options given below :** (a)Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). (b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true.	1 mark
Q5.	If two positive integers a and b are written as $a = x^3 y^2$ and $b = xy^3$, x, y are prime numbers, then find LCM(a,b) and HCF (a, b).	2 marks
Q6.	Given that HCF (36, a) = 9, and LCM (36, a) = 108 , then find the value of a.	2 marks
Q7.	A school plans to seat 252 girls and 198 boys in equal number of rows. What is the maximum number of students that can sit in each row if only one type of student is allowed in a row?	2 marks

Q8.	A student wrote a fraction with denominator $7 \times 13 \times 11^2$ and said its decimal expansion would terminate. Do you agree? Why or why not?	2 marks
Q9.	A factory produces whistles every 36 minutes, horns every 48 minutes, and sirens every 60 minutes. If all three are operated together at 10 a.m., at what time will they next operate together again? How many times will each operate till then?	3 marks

CHAPTER – 1 REAL NUMBERS

Graded worksheet 2

Student's name :	Class: 10, section:	Date:
Duration : 30 Min	Max marks : 15	Estimated weightage of chapter in CBSE exam: 6 marks

Q1.	The decimal expansion of the rational number 14587/1250 will: a) terminate after 2 decimal places b) terminate after 3 decimal places c) terminate after 4 decimal places d) non-terminate but repeating	1 mark
Q2.	Explain why $5 \times 7 \times 11 \times 13 + 13$ is a composite number.	1mark
Q4.	Check whether 15^n can end with the digit 0 for any natural number n.	2 marks
Q5.	If the HCF of 55 and 154 is expressible in the form 55m – 154, then find the value of m.	2 marks
Q6.	Prove that $3 - 2\sqrt{5}$ is an irrational number. It is given that $\sqrt{5}$ is an irrational number.	2 marks
Q7.	Prove that $\sqrt{3}$ is an irrational number.	3 marks
Q8.	Amar, Akbar and Anthony are playing a game. Amar climbs 5 stairs and gets down 2 stairs in one turn. Akbar goes up by 7 stairs and comes down by 2 stairs every time. Anthony goes 10 stairs up and 3 stairs down each time.Doing this they have to reach to the nearest point of 100th stairs and they will stop once they find it impossible to go forward. They can not cross 100th stair in anyway. (i) Who reaches the nearest point? (ii) How many times can they meet in between on same stair? (iii) Who takes least number of steps to reach near hundred? OR (iii) What is the first stair where any two out of three will meet together?	4 marks

CHAPTER 2 POLYNOMIALS

Graded worksheet 1

Student's name :	Class: 10, section:	Date:
Duration : 30 Min.	Max marks : 15	Estimated weightage of chapter in CBSE exam: 4 to 6 marks

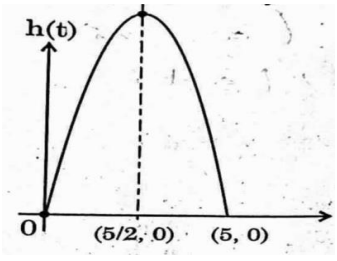
Q1.	The value of k for which (-4) is a zero of the polynomial $x^2-x-(2k+2)$ is (a)3 (b)9 (c)-3 (d) -9	1mark
Q2.	Assertion (A): The degree of a polynomial is the highest power of variable involved. Reason (R) : The number of terms in a polynomial may be (n+1) , if the highest power of the variable is n. **Choose the correct options given below :** (a)Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). (b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true.	1mark
Q3.	If one of the zeroes of the polynomial $f(x)=(k^2+4)x^2+13x+4k$ is the reciprocal of the other then k is equal to (a)2 (b)1 (c) -1 (d) -2	1 mark
Q4.	If the zeroes of the polynomial $ax^2+bx+\frac{2a}{b}$ are the reciprocal of each other, then the value of b is (a) -2 (b) $-\frac{1}{2}$ (c) $+\frac{1}{2}$ (d) 2	1 mark
Q5.	Zeroes of the polynomial P(x)= $x^2-3\sqrt{2}x+4$ is (a) 2 &$\sqrt{2}$ (b) $2\sqrt{2}$ & $\sqrt{2}$ (c) $4\sqrt{2}$ & $-\sqrt{2}$ (d) $-\sqrt{2}$ & 2	1 mark

Q6.	If α and β are the zeroes of the quadratic polynomial p(x) = $4x^2+3x+7$, then find the value of $\frac{1}{\alpha}+\frac{1}{\beta}$	2 marks
Q7.	If the product of zeroes of the quadratic polynomial p(x) =$(k-2)x^2-4x+k$ is 3. Then find the value of the k?	2 marks
Q8.	Find the Zeroes of polynomial $\sqrt{2}x^2-3x-2\sqrt{2}$ and verify the relation between the zeros and the coefficients.	3 marks
Q9.	If α and β are the zero of the quadratic polynomial $f(x)=x^2-1$, find a quadratic polynomial whose zeroes are $\frac{2\alpha}{\beta}$ and $\frac{2\beta}{\alpha}$.	3 marks

CHAPTER 2 POLYNOMIALS

Graded worksheet 2

Student's name :	Class: 10, section:	Date:
Duration : 30 Min	Max marks : 15	Estimated weightage of chapter in CBSE exam: 4 to 6 marks

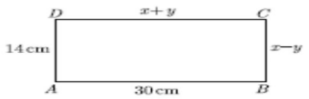
Q1.	If α and β (α>β) are the zeros of the polynomial $-x^2+8x+9$, then (α-β) is (a) -10 (b) +10 (c) ±10 (d) 8	1 mark
Q2.	The zeros of the quadratic polynomial P(x)= $2x^2-3x-9$ are (a) 3 & $-\frac{3}{2}$ (b) -3 & $-\frac{3}{2}$ (c) -3 & $+\frac{3}{2}$ (d) 3 & $\frac{3}{2}$	1 mark
Q3.	If α and β are the zeros of the polynomial $3x^2+6x+k$ such α + β+αβ = $-\frac{2}{3}$, then the value of k is equal to (a) -8 (b) +8 (c) -4 (d) +4	1 mark
Q4.	If α and β are the zeroes of the polynomial $p(x) = x^2-p(x+1)-q$, then find the value of (α+1)(β+1)	2 marks
Q5.	Find the Zeroes of the polynomial P(x)=$3x^2-4x-4$. Hence write a polynomial whose each of the zeros is 3 more than the zeros of the P(x).	3 marks
Q6.	If α and β are the Zeroes quadratic polynomial $f(x)=6x^2+x-2$ then find the value of (A) $\alpha\beta^2+\beta\alpha^2$ (B) $\alpha^3+\beta^3$	3 marks
Q7.	A ball is thrown in air so that t-seconds after it is thrown, its height h metre above its starting point is given by the polynomial $h=25t-5t^2$  Observe the graph of the polynomial and Answer the following questions: (i) Write the zeroes of the polynomial? (ii) Find the maximum height achieved by the ball?	4 marks (1+1+2)

	(iii)(a) After throwing upward, how much time did the ball take to reach the height of 30 metre. Or (iii) Find two different values of t when the height of the ball is 20 metres?	

CHAPTER – 3 PAIR OF LINEAR EQUATION IN TWO VARIABLES

Graded worksheet 1

Student's name :	Class: 10, section:	Date:
Duration : 30 Min	Max marks : 15	Estimated weightage of chapter in CBSE exam: 5 to 6 marks

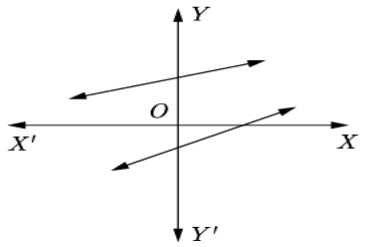
Q1.	If x=1 and y=2 is a solution of the pair of linear equations 2x-3y + a=0 and 2x+3y-b=0, then: (I) a=2b (II) 2a=b (III) a+2b=0 (IV) 2a+b=0	1 mark
Q2.	For which value(s) of k, will the lines represented by the following pair of linear equations be parallel 3x-y-5=0 , 6x-2y=k a)All real values b)Only 10 c)All real values except 10 d)All natural values	1mark
Q3.	**Assertion**: x +y -4 = 0 and 2x + ky – 3 = 0 has no solution if k = 2 . **Reason** : $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ are consistent if $\frac{a1}{a2} \neq \frac{b1}{b2}$ (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A). (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A) (c) Assertion (A) is true but reason (R) is false. (d) Assertion (A) is false but reason (R) is true	1 mark
Q4.	Sum of two numbers is 105 and their difference is 4. Find the numbers.	2 marks
Q5.	In Figure, ABCD is a rectangle. Find the values of x and y 	2 marks
Q6.	The sum of the numerator and denominator of a fraction is 12. If 1 is added to both the numerator and the denominator the fraction becomes 3/4. Find the fraction.	2 marks
Q7.	Solve the equations graphically: 2x + y = 2; 2y-x = 4 What is the area of the triangle formed by the two given lines and the line y = 0?	3 marks

Q8.	Determine the values of m and n so that the following system of linear equation have infinite number of solutions : (2m-1)x + 3y -5 =0 , 3x + (n-1)y – 2 = 0	3 marks

Chapter- 3 PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

Graded worksheet 2

Student's name :	Class: 10, section:	Date:
Duration : 30 Mins	Max marks : 15	Estimated weightage of chapter in CBSE exam: 5 to 7_ marks

Q1.	The system of equations y+a=0 and 2x=b has a). no solution b). (-a, b/2) as its solution c). (b/2,-a) as its solution d). Infinite solutions	1 marks
Q2.	In the given figure, graphs of two linear equations are shown. The pair of these linear equations is:  a). consistent with unique solution. b). consistent with infinitely many solutions. c). inconsistent. d). inconsistent but can be made consistent by extending these lines.	1 mark
Q3.	If 2x+y = 13 and 4x-y=17, find (x-y)	2 marks
Q4.	Solve for x and y : 99x + 101y = 499 101x + 99y = 501	3 marks
Q5.	Solve graphically : 2x -3y =13=0 and 3x-2y+12=0 Also write the coordinates of triangle formed between the lines and x-axis.	3 marks
Q5.	The sum of the digits of a two-digit number is 12. The number obtained by interchanging the two digits exceeds the given number by 18. Find the number.	5 marks

Artificial Intelligence

Note: write all the answers in your AI fair copy.

1. What is Artificial Intelligence?
2. What is Python Programming Language?
3. What are the domains of AI?
4. Write a program of addition of two numbers in python.
5. What are the keywords in python.
6. What is natural language processing?
7. Define the terms - pixel, resolution, image .
8. What are variables and datatypes in python?
9. What is cyber safety and security?
10. Explain different types of cyber attacks.

Social Science

Class X SST Holiday Homework.

1. Make a project on 'Consumer Rights'.(Prepare it in a file)
2. Read Chapter 1st and 2nd of History and make a flow chart of each. (Write In the Note book)
3. Must Improve your handwriting skill.
4. Improve your writing skill in the English language so you can opt for any practice i.e. daily diary writing.
5. Make 10 competency based questions from the 1st chapter of each book. (In the notebook)

Social Science by Abhishek Sir (Class 10A)

1. Go through the CBSE Curriculum (https://cbseacademic.nic.in/web_material/CurriculumMain27/SecPart1/SocialScience_SecP1X_2026-27.pdf) and Prepare the maps of all given in the list.

2. Prepare an Interdisciplinary Project on Consumer Rights OR Social Issues OR Sustainable Development. (Use ANNEXURE IV given in the above link)

Rubrics for Interdisciplinary Project:

Rubrics	Marks allocated
a. Research Work	1
b. Collaboration & Communication	1
c. Presentation & Content relevance	1
d. Competencies- Creativity, Analytical skills, Evaluation, Synthesizing	2
Total	**5**

3. If time permits you can watch some of the following movies:

Gandhi (1982), Newton, Article 15 (With Parents), Peepli Live, Marudhara documentary (News Pinch).