

HOLIDAY HOMEWORK FOR SUMMER BREAK (2026-27)

CLASS XII

SUBJECT-PHYSICS

- **Complete the following questions in physics notebook-**

1. Why is electric potential of earth taken to be zero?
2. Derive an expression for work done in moving a charge in an electric field.
3. A gaussian surface does not enclose a charge .does it mean that electric field $E=0$ on the surface.
4. Eight dipoles of charges of magnitude e are placed inside a cube. the total electric flux coming out of the cube will be ?
5. Can two equipotential surfaces intersect each other? Explain.
6. Calculate the radius of a spherical conductor of capacitance 1 farad.
7. An isolated sphere has a capacitance of 50 micro farad. (1) Calculate its radius. (2) how much charge should be placed on it to raise its potential to 10^4 v.
8. A capacitor consisting of two parallel plates 0.5mm apart and each of effective area 500 cm^2 is connected to a 100V battery. Calculate (1)capacitance of the capacitor (2) charge on each plate.
9. The plates of a parallel plate capacitor are separated by a distance of 0.5cm. what must be the plate area if the capacitance of the capacitor is to be 2F.
10. **Complete the questions of chapter 1 and 2 from NCERT from textbook.**

ACTIVITY-

COMPLETE THESE ACTIVITIES IN ACTIVITY FILE -

1. *To assemble a household circuit comprising three bulbs ,three(on/off) switches ,a fuse and a power source.*
2. *To study the variation in potential drop with length of a wire for a steady current.*
3. *To assemble the components of a given electrical circuit.*

Saurabh K

4. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat , key , ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and circuit diagram.

Hint:- use OLAB for physics activity .

Kendriya Vidyalay Gumla

Class 12 Chemistry - Holiday Homework

Chapter 1: Solutions

Section A: Objective Type Questions (1 Mark Each)

Q1. Which of the following concentration terms is independent of temperature?

- (a) Molarity
- (b) Molality
- (c) Formality
- (d) Normality

Q2. The value of Henry's constant K_H is:

- (a) Greater for gases with higher solubility.
- (b) Greater for gases with lower solubility.
- (c) Constant for all gases.
- (d) Not related to the solubility of gases.

Q3. An unripe mango placed in a concentrated salt solution to prepare pickle shrivels because:

- (a) It gains water due to osmosis.
- (b) It loses water due to reverse osmosis.
- (c) It gains water due to reverse osmosis.
- (d) It loses water due to osmosis.

Q4. The van't Hoff factor (i) for a dilute aqueous solution of the strong electrolyte barium chloride (BaCl_2) is:

- (a) 1
- (b) 2
- (c) 3
- (d) 0

Q5. Which of the following solutions will have the highest boiling point at 1 atm pressure?

- (a) 0.1 M NaCl
- (b) 0.1 M Sucrose
- (c) 0.1 M BaCl_2
- (d) 0.1 M FeCl_3

Section B: Assertion-Reasoning Type (1 Mark Each)

For the following questions, two statements are given—one labeled Assertion (A) and the other labeled Reason (R).
Select the correct answer from the codes (a), (b), (c) and (d):

- (a) Both A and R are true and R is the correct explanation of A.
 (b) Both A and R are true but R is NOT the correct explanation of A.
 (c) A is true but R is false.
 (d) A is false but R is true.

Q6. Assertion (A): Molarity of a solution in liquid state changes with temperature.

Reason (R): The volume of a solution changes with a change in temperature.

Q7. Assertion (A): When NaCl is added to water, a depression in the freezing point is observed.

Reason (R): The lowering of vapour pressure of a solution causes depression in the freezing point.

Q8. Assertion (A): Osmotic pressure is a colligative property.

Reason (R): Osmotic pressure is directly proportional to the molarity of the solution.

Q9. Assertion (A): Non-ideal solutions always form azeotropes.

Reason (R): Boiling point of an azeotrope may be higher or lower than that of both components.

Q10. Assertion (A): Elevation in boiling point is inversely proportional to the molar mass of the non-volatile solute.

Reason (R): Colligative properties depend only on the number of solute particles.

Section C: Long Answer Type Questions (5 Marks Each)

Q11. (a) Define Raoult's law for a solution containing volatile liquids. Explain with a suitable diagram the positive deviation from Raoult's law. (3)

(b) Calculate the mass of ascorbic acid (Vitamin C, $C_6H_8O_6$) to be dissolved in 75 g of acetic acid to lower its melting point by 1.5°C . ($K_f = 3.9 \text{ K kg/mol}$). (2)

Q12. (a) State Henry's law and mention two of its important applications. (3)

(b) The boiling point of water at 750 mm Hg is 99.63°C . How much sucrose is to be added to 500 g of water such that it boils at 100°C ? (K_b for water = 0.52 K kg/mol). (2)

Q13. (a) Why is osmotic pressure considered the best colligative property for determining the molar mass of biomolecules? (2)

(b) A 5% solution (by mass) of cane sugar in water has a freezing point of 271 K. Calculate the freezing point of a 5% glucose in water if freezing point of pure water is 273.15 K. (3)

Q14. (a) What is meant by reverse osmosis? Give its one practical application. (2)

(b) 2 g of benzoic acid (C_6H_5COOH) dissolved in 25 g of benzene shows a depression in freezing point equal to 1.62 K. Molal depression constant for benzene is 4.9 K kg/mol . What is the percentage association of acid if it forms dimer in solution? (3)

Q15. (a) Explain the terms: (i) Azeotrope (ii) Ebullioscopic constant. (2)

(b) An aqueous solution containing 12.48 g of barium chloride in 1.0 kg of water boils at 373.0832 K. Calculate the degree of dissociation of barium chloride. (Given: K_b for water = 0.52 K kg/mol , Molar mass of $BaCl_2$ = 208.34 g/mol). (3)

Chapter 2: Electrochemistry

Section A: Objective Type Questions (1 Mark Each)

Q16. The standard electrode potentials of four elements A, B, C and D are -3.05, 1.66, -0.40 and 0.80 V respectively. The highest chemical reactivity will be exhibited by:

- (a) A
- (b) B
- (c) C
- (d) D

Q17. The unit of cell constant is:

- (a) $\text{ohm}^{-1} \text{cm}^{-1}$
- (b) cm^{-1}
- (c) ohm cm
- (d) cm

Q18. According to Kohlrausch's law, the limiting molar conductivity of an electrolyte, Λ_m , can be represented as:

- (a) Sum of the limiting molar conductivities of the individual cations and anions.
- (b) Difference of the limiting molar conductivities.
- (c) Product of the limiting molar conductivities.
- (d) Ratio of the limiting molar conductivities.

Q19. Which of the following is an example of a secondary cell?

- (a) Leclanche cell
- (b) Dry cell
- (c) Lead storage battery
- (d) Mercury cell

Q20. The amount of substance deposited at an electrode is directly proportional to:

- (a) Quantity of electricity passed
- (b) Voltage applied
- (c) Resistance of the solution
- (d) Temperature of the solution

Section B: Assertion-Reasoning Type (1 Mark Each)

Q21. **Assertion (A):** Conductivity of an electrolyte decreases with a decrease in concentration.

Reason (R): Number of ions per unit volume decreases on dilution.

Q22. **Assertion (A):** E_{cell} should have a positive value for the cell to function.

Reason (R): $E_{\text{cathode}} < E_{\text{anode}}$ implies a spontaneous reaction.

- Q23. Assertion (A):** Rusting of iron is faster in saline water than in ordinary water.
Reason (R): Saline water increases the electrical conductivity of the electrolyte solution on the iron surface.
- Q24. Assertion (A):** Kohlrausch law can be used to find the limiting molar conductivity of weak electrolytes.
Reason (R): Weak electrolytes completely dissociate at infinite dilution.
- Q25. Assertion (A):** Copper sulphate can be stored in a zinc vessel.
Reason (R): Zinc is more reactive than copper.

Section C: Long Answer Type Questions (5 Marks Each)

- Q26.** (a) State Kohlrausch's law of independent migration of ions. Write its one application. (2)
 (b) The electrical resistance of a column of 0.05 M NaOH solution of diameter 1 cm and length 50 cm is 5.55×10^3 ohm. Calculate its resistivity, conductivity, and molar conductivity. (3)
- Q27.** (a) Formulate the galvanic cell in which the following reaction takes place:
 $\text{Zn(s)} + 2\text{Ag}^+(\text{aq}) \rightarrow \text{Zn}^{2+}(\text{aq}) + 2\text{Ag(s)}$. State which electrode is negatively charged. (2)
 (b) Calculate the emf of the cell in which the following reaction takes place at 298 K:
 $\text{Ni(s)} + 2\text{Ag}^+(0.002 \text{ M}) \rightarrow \text{Ni}^{2+}(0.160 \text{ M}) + 2\text{Ag(s)}$
 Given that $E_{\text{cell}}(\text{standard}) = 1.05 \text{ V}$. (3)
- Q28.** (a) Define fuel cell. Write the electrode reactions occurring in a Hydrogen-Oxygen fuel cell. Why are fuel cells preferred over conventional cells? (3)
 (b) How much charge is required for the reduction of 1 mol of MnO_4^- to Mn^{2+} ? (2)
- Q29.** (a) What are the reactions occurring at the cathode and anode of a lead storage battery during discharging? (2)
 (b) A solution of $\text{Ni(NO}_3)_2$ is electrolysed between platinum electrodes using a current of 5 amperes for 20 minutes. What mass of Ni is deposited at the cathode? (Molar mass of Ni = 58.7 g/mol). (3)
- Q30.** (a) State Faraday's first and second laws of electrolysis. (2)
 (b) Three electrolytic cells A, B, C containing solutions of ZnSO_4 , AgNO_3 and CuSO_4 , respectively, are connected in series. A steady current of 1.5 amperes was passed through them until 1.45 g of silver deposited at the cathode of cell B. How long did the current flow? What mass of copper and zinc were deposited? (3)

Chapter 3: Chemical Kinetics

Section A: Objective Type Questions (1 Mark Each)

Q31. For a reaction $A + B \rightarrow \text{Product}$, the rate law is given by $r = k[A]^{1/2}[B]^2$. What is the order of the reaction?

- (a) 1.5
- (b) 2.5
- (c) 2
- (d) 3

Q32. The unit of rate constant for a zero order reaction is:

- (a) s^{-1}
- (b) $L \text{ mol}^{-1} s^{-1}$
- (c) $\text{mol L}^{-1} s^{-1}$
- (d) $\text{mol}^{-1} L s^{-1}$

Q33. Which of the following statements about a catalyst is true?

- (a) It changes the equilibrium constant.
- (b) It increases the activation energy.
- (c) It provides an alternate path with lower activation energy.
- (d) It increases the enthalpy of the reaction.

Q34. The half-life period of a first order reaction is 10 minutes. What percentage of the reaction will be completed in 30 minutes?

- (a) 50%
- (b) 75%
- (c) 87.5%
- (d) 100%

Q35. In the Arrhenius equation $k = A * e^{(-E_a/RT)}$, the factor ' $e^{(-E_a/RT)}$ ' represents:

- (a) Collision frequency
- (b) Fraction of molecules having energy equal to or greater than activation energy
- (c) Activation energy
- (d) Steric factor

Section B: Assertion-Reasoning Type (1 Mark Each)

Q36. **Assertion (A):** Order of a reaction can be zero or fractional.

Reason (R): Order of a reaction is determined experimentally.

Q37. **Assertion (A):** For a first order reaction, the half-life is independent of the initial concentration of the reactant.

Reason (R): Rate of reaction is directly proportional to the concentration of the reactant.

Q38. Assertion (A): The rate of a chemical reaction generally doubles for every 10°C rise in temperature.
Reason (R): The number of collisions between the reacting molecules decreases with an increase in temperature.

Q39. Assertion (A): Molecularity of a reaction cannot be fractional.
Reason (R): Molecularity represents the number of molecules reacting in an elementary step.

Q40. Assertion (A): Hydrolysis of ethyl acetate in the presence of excess water is a pseudo first-order reaction.
Reason (R): The concentration of water remains almost constant during the reaction.

Section C: Long Answer Type Questions (5 Marks Each)

Q41. (a) Derive the integrated rate equation for a first order reaction. (3)
(b) A first order reaction has a rate constant of $1.15 \times 10^{-3} \text{ s}^{-1}$. How long will 5 g of this reactant take to reduce to 3 g? (2)

Q42. (a) Distinguish between order and molecularity of a reaction. (Any 3 points) (3)
(b) The decomposition of NH_3 on a platinum surface is a zero order reaction. What are the rates of production of N_2 and H_2 if $k = 2.5 \times 10^{-4} \text{ mol L}^{-1} \text{ s}^{-1}$? (2)

Q43. (a) What is the effect of temperature on the rate of a reaction? Explain using the Arrhenius equation. (2)
(b) The rate of a reaction quadruples when the temperature changes from 293 K to 313 K. Calculate the energy of activation of the reaction assuming that it does not change with temperature. ($R = 8.314 \text{ J K}^{-1} \text{ mol}^{-1}$). (3)

Q44. (a) Define 'activation energy' and 'threshold energy' of a chemical reaction. (2)
(b) The half-life for radioactive decay of ^{14}C is 5730 years. An archaeological artifact contained wood that had only 80% of the ^{14}C found in a living tree. Estimate the age of the sample. (3)

Q45. (a) Show that for a first order reaction, the time required for 99% completion is twice the time required for the completion of 90% of the reaction. (3)

(b) Identify the reaction order from each of the following rate constants:

(i) $k = 2.3 \times 10^{-5} \text{ L mol}^{-1} \text{ s}^{-1}$

(ii) $k = 3 \times 10^{-4} \text{ s}^{-1}$ (2)

Akumar
06/05/20

SUMMER VACATION HOLIDAY HOMEWORK CLASS –XII (2026-27)

(BIOLOGY)

A. Very Short Answer Questions .

1. What is reproductive health?
2. Expand: I. RCH II. MTP III. STD IV. ART
3. Name any two sexually transmitted diseases.
4. Which contraceptive method prevents both pregnancy and STDs?
5. What is amniocentesis?
6. Mention one advantage of lactational amenorrhea.
7. What are oral contraceptive pills?
8. Name the hormone present in most oral pills.
9. What is the legal age of marriage in India for boys and girls?
10. Define infertility.
11. Name one natural method of contraception.
12. What is IVF?
13. Which device is inserted into the uterus to prevent pregnancy?
14. Mention one side effect of uncontrolled population growth.
15. What is medical termination of pregnancy?

B. Short Answer Questions .

1. Explain the objectives of reproductive health.
2. Differentiate between spacing methods and terminal methods of contraception.
3. Write any three advantages of using condoms.
4. Explain the working of intrauterine devices (IUDs).
5. What are sexually transmitted diseases? Mention their symptoms.
6. Why is sex education important among adolescents?
7. Explain the rhythm method of contraception.
8. Differentiate between vasectomy and tubectomy.
9. Mention the causes of infertility in couples.
10. Explain the role of RCH programmes in India.
11. Why are oral contraceptive pills considered effective?
12. State the importance of prenatal diagnostic techniques.
13. Explain lactational amenorrhea as a contraceptive method.
14. Why are STDs more common among adolescents?
15. Explain any three artificial methods of contraception.
16. Which contraceptive method would you suggest?
17. Why is this method considered safer?
18. Mention one limitation of this method.

19. What is IVF?

20. Where does fertilization occur in IVF?

21. Why is IVF called the "test tube baby" technique?

C. Long Answer Questions.

1. Describe different methods of contraception in detail with suitable examples.
2. Explain the causes, symptoms, prevention, and treatment of STDs.
3. What is population explosion? Describe the measures taken by the Government of India to control it.
4. Explain assisted reproductive technologies (ART). Mention different techniques used.
5. Describe the various contraceptive devices used by females.
6. Explain the importance of reproductive health in society.
7. Describe the surgical methods of contraception in males and females.
8. What is MTP? Discuss its advantages and disadvantages.
9. Explain IVF and test tube baby programme.
10. Describe natural, barrier, hormonal, and surgical methods of birth control.

D. Assertion-Reason Questions :-

1. Assertion: Condoms help in preventing STDs.
Reason: Condoms act as a physical barrier preventing exchange of body fluids.
2. Assertion: IUDs are widely used contraceptive devices.
Reason: They increase phagocytosis of sperms in the uterus.
3. Assertion: Lactational amenorrhea can prevent pregnancy.
Reason: Ovulation generally does not occur during intense breastfeeding.
4. Assertion: MTP should be performed only by qualified doctors.
Reason: Unsafe abortions may lead to serious health complications.
5. Assertion: ART techniques help infertile couples.
Reason: They assist fertilization and embryo development artificially.

E. Case-Based Questions :-

Case Study 1

A newly married couple wants to delay pregnancy for 2–3 years while also ensuring protection from sexually transmitted diseases.

Case Study 2

A couple has been unable to conceive even after several years of marriage. Doctors advised IVF treatment.

Amish
07/05/2026

KENDRIYA VIDYALAYA GUMLA

SUMMER HOLIDAY HOMEWORK (2026-27)

Class: XII

Subject: Mathematics

CHAPTER 1: RELATIONS AND FUNCTIONS

PART A: Standard Objective & Subjective Questions

- Q1. Show that the relation R in the set $\mathbb{Z}$ of integers given by $R = \{(a, b) : 2 \text{ divides } (a - b)\}$ is an equivalence relation.
- Q2. Let $A = \mathbb{R} - \{3\}$ and $B = \mathbb{R} - \{1\}$. Consider the function $f : A \rightarrow B$ defined by $f(x) = \frac{x-2}{x-3}$. Determine whether f is one-one and onto, justifying your answer.
- Q3. Check whether the relation R in $\mathbb{R}$ defined by $R = \{(a, b) : a \leq b^3\}$ is reflexive, symmetric, or transitive.
- Q4. Prove that the function $f : \mathbb{N} \rightarrow \mathbb{N}$, defined by $f(x) = x^2$, is one-one but not onto.
- Q5. Show that the modulus function $f : \mathbb{R} \rightarrow \mathbb{R}$, given by $f(x) = |x|$, is neither one-one nor onto.

PART B: Case Study Based Questions

Context: A school library maintains a digital catalog of all its books. Let A be the set representing all books available in the school library. A relation R is defined on set A such that $R = \{(x, y) : \text{book } x \text{ and book } y \text{ have the exact same number of pages}\}$. Based on this context, answer the following:

- Q6. Prove whether the relation R satisfies the condition for reflexivity.
- Q7. Prove whether the relation R satisfies the condition for symmetry.
- Q8. Prove whether the relation R satisfies the condition for transitivity.
- Q9. Based on your mathematical justification in the previous parts, classify the exact nature of relation R .
- Q10. If a designated Mathematics textbook M contains exactly 450 pages, mathematically define and describe the equivalence class $[M]$ for this relation.

CHAPTER 2: INVERSE TRIGONOMETRIC FUNCTIONS

- Q11. Find the principal value of $\sin^{-1}(\sin \frac{2\pi}{3})$.
- Q12. Evaluate the exact expression: $\tan^{-1}(1) + \cos^{-1}(-\frac{1}{2}) + \sin^{-1}(-\frac{1}{2})$.
- Q13. Determine the domain of the inverse trigonometric function defined by $f(x) = \sin^{-1}(2x - 3)$.

- Q14. Express the function $\tan^{-1} \left(\frac{\cos x - \sin x}{\cos x + \sin x} \right)$ in its simplest form, given that $0 < x < \pi$.
- Q15. Calculate the principal value of $\cos^{-1} \left(\cos \frac{7\pi}{6} \right)$.
- Q16. Find the exact numerical value of $\tan^{-1}(\sqrt{3}) - \sec^{-1}(-2)$.
- Q17. Find the domain of definition for the function $y = \sec^{-1}(x^2 - 1)$.
- Q18. Simplify the given expression mathematically: $\tan^{-1} \left(\frac{\sqrt{1-x^2}-1}{x} \right)$, where $x \neq 0$.
- Q19. Evaluate the following trigonometric composition: $\sin \left(\frac{\pi}{3} - \sin^{-1} \left(-\frac{1}{2} \right) \right)$.
- Q20. State the principal value branch (range) of the inverse function $f(x) = \operatorname{cosec}^{-1} x$.

CHAPTER 3: MATRICES

PART A: Standard Objective & Subjective Questions

- Q21. Construct a 3×2 matrix $A = [a_{ij}]$ whose elements are systematically given by $a_{ij} = \frac{1}{2}|i - 3j|$.
- Q22. Solve for the variables x, y , and z from the given matrix equation: $\begin{bmatrix} x+y & 2 \\ 5+z & xy \end{bmatrix} = \begin{bmatrix} 6 & 2 \\ 5 & 8 \end{bmatrix}$.
- Q23. Express the square matrix $B = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$ strictly as the sum of a symmetric matrix and a skew-symmetric matrix.
- Q24. Determine the matrix X that satisfies the equation: $X \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix} = \begin{bmatrix} -7 & -8 & -9 \\ 2 & 4 & 6 \end{bmatrix}$.
- Q25. Given $A = \begin{bmatrix} 3 & -2 \\ 4 & -2 \end{bmatrix}$ and identity matrix $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, calculate the scalar k such that $A^2 = kA - 2I$.

PART B: Case Study Based Questions

Context: Two regional farmers, Ram and Shyam, cultivate three distinct varieties of rice: Basmati, Permal, and Naura. The gross sales (in Rupees) of these rice varieties by both farmers during the months of September and October are represented by matrices A and B respectively. (Note: Columns 1, 2, and 3 represent Basmati, Permal, and Naura respectively).

September Sales (in Rs): $A = \begin{bmatrix} 10000 & 20000 & 30000 \\ 50000 & 30000 & 10000 \end{bmatrix}$ (Ram)
(Shyam)

October Sales (in Rs): $B = \begin{bmatrix} 5000 & 10000 & 6000 \\ 20000 & 10000 & 10000 \end{bmatrix}$ (Ram)
(Shyam)

Based on this agricultural data, compute the following:

- Q26. Calculate the combined total sales across both months (September and October) for each farmer and each rice variety.

- Q27. Formulate the matrix representing the exact decrease in sales from September to October for both farmers.
- Q28. Assuming Ram receives a flat 2% profit margin on gross sales, compute his exact profit for each variety sold during October.
- Q29. Assuming Shyam receives a flat 2% profit margin on gross sales, compute his exact profit for each variety sold during September.
- Q30. What is the aggregate gross sales amount of the 'Basmati' variety generated by both farmers combined in the month of September?

CHAPTER 4: DETERMINANTS

PART A: Standard Objective & Subjective Questions

- Q31. Evaluate the given 2×2 determinant: $\begin{vmatrix} \cos \theta & \sin \theta \\ \sin \theta & \cos \theta \end{vmatrix}$.
- Q32. Find all possible real values of x , if $\begin{vmatrix} 2 & 4 \\ 5 & 1 \end{vmatrix} = \begin{vmatrix} 2x & 4 \\ 6 & x \end{vmatrix}$.
- Q33. Calculate the exact area of the geometric triangle with vertices at coordinates (2, 7), (1, 1), and (10, 8) strictly using the determinant method.
- Q34. Derive the algebraic equation of the straight line joining the coordinate points (1, 2) and (3, 6) using determinants.
- Q35. Verify the fundamental matrix property $A(\text{adj } A) = (\text{adj } A)A = |A|I$ for the given matrix $A = \begin{bmatrix} 2 & 3 \\ -4 & -6 \end{bmatrix}$.

PART B: Case Study Based Questions

Context: Three local schools—A, B, and C—organized a collaborative mela to generate relief funds for the rehabilitation of regional flood victims. The students sold handmade utility items: fans, mats, and plates crafted from recycled materials, priced at Rs. 25, Rs. 100, and Rs. 50 per unit, respectively. The production and sales volume for each school is recorded as follows:

- School A: 40 fans, 50 mats, 20 plates.
- School B: 25 fans, 40 mats, 30 plates.
- School C: 35 fans, 50 mats, 40 plates.

Let the total funds accumulated by schools A, B, and C be mathematically represented by variables x , y , and z respectively.

Applying matrix algebra, answer the following:

- Q36. Construct the appropriate matrices and represent the entire situation using matrix multiplication to determine the funds collected by each individual school.

- Q37. Calculate the total relief fund amount generated exclusively by School A (value of x).
- Q38. Calculate the total relief fund amount generated exclusively by School B (value of y).
- Q39. Calculate the total relief fund amount generated exclusively by School C (value of z).
- Q40. Compute the grand total of the relief funds successfully collected by the combined efforts of all three schools.

845 6/5/26

KENDRIYA VIDYALAYA GUMLA
HOLIDAY HOME WORK FOR SUMMER VACATION 2026-27
COMPUTER SCIENCE (083)
CLASS-XII

Write and learn all the questions with answers in your CS copy.
Note: All answers must be written along with Question.

1. What is the difference between keyword and identifiers? Give examples.
2. Write down the rules for valid identifiers naming.
3. What are literals in Python? How many types of literals are allowed in python?
4. What are data types? What are python's built-in core data types?
5. What is the role of comments and indentation in the program?
6. What is a statement? What is the significance of an empty statement?
7. What is the use of if statement? What is its type?
8. Write a program that asks to the user to input number of seconds and then express it in terms of minutes and seconds.
9. Write a program that accepts three integers and print the largest number of them.
10. What are tokens in python? How many types of tokens allowed in python? Exemplify each.
11. How are strings literals represented and implemented in Python?
12. What are operators? What is their function?
13. What is an expression? What are their types?
14. What do you mean by a comment in python? Explain each type with example.
15. What are variables in python? How are they important in python?
16. What are mutable and immutable data types? List mutable and immutable types in python.
17. What do you mean by a looping statement? What types of loop used in python?
18. Write a program to print word 'zero', 'negative' or 'positive' according to the entered values.
19. Write a user defined function that returns 'true' if entered number is even otherwise 'false'.
20. Write a program that reads a string and check whether it is a palindrome or not.
21. Write the output if, L=[10,20,30,40,50,60] : (a) L[3:6] (b) L[-2:] (c) L[:4] (d) L[:5:2]
22. Give the output of the following
Sum = 0
for k in range(6):
 Sum = Sum+k
print(Sum)
23. Rewrite the correct code and underline the corrections made.
def max_num(L) :
 max=L(0)
 for a in L :
 if a>max
 max=a
 return max
24. What will the following expression be evaluated to in python?
print(4+3*5/3-5%2)
25. Write the output for given code:
L=["Aman","Ankit","Rajan","Ashish"]
print(L[-1:-4:-1])

***** ALL THE BEST *****


(J.P. Joshi)
PGT (CS)

ग्रीष्मकालीन अवकाश गृहकार्य 2026

विषय - हिन्दी

कक्षा - 12 वीं

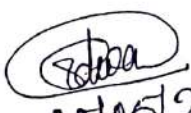
1. कक्षा में पढ़ाए गए सभी अध्यायों की पुनरावृत्ति करें।
2. किन्हीं दो विषयों पर 200 शब्दों में लेख लिखें।
(क) नई शिक्षा नीति 2020
(ख) भारतीय संस्कृति
(ग) कैरियर और संघर्ष
3. आपके क्षेत्र में बढ़ती बेरोजगारी की समस्या गंभीर रूप ले चुकी है। इस समस्या के कारण युवाओं में निराशा और असंतोष बढ़ रहा है। इस विषय पर चिंता व्यक्त करते हुए किसी समाचार पत्र के संपादक को एक विस्तृत पत्र लिखिए और अपने सुझाव प्रस्तुत करते हुए सरकार से ठोस कदम उठाने की मांग कीजिए।
4. सूचना और संचार माध्यमों की बढ़ती लोकप्रियता के कारण पत्र लेखन पीछे छूट गया है। पत्र लेखन के महत्व को दर्शाते हुए अपने मित्र को एक पत्र लिखिए।
5. "इंटरनेट पत्रकारिता ने पारंपरिक पत्रकारिता को नई दिशा दी है।" इस विषय पर अपने विचारों को विस्तार से प्रस्तुत कीजिए और इसके सकारात्मक तथा नकारात्मक प्रभावों का विश्लेषण कीजिए।
6. पठित अध्याय (आरोह -2) में से किसी एक कवि का चयन कर उनके जीवन परिचय व साहित्यिक योगदान पर विस्तृत परियोजना तैयार कीजिए तथा उनके द्वारा लिखी पाठ पर अपनी राय प्रस्तुत कीजिए। (A4 Size file में)

दिव्यज्योति

विषय शिक्षिका

KENDRIYA VIDYALAYA GUMLA
SUMMER VACATION ASSIGNMENT-2026
SUBJECT – ENGLISH
CLASS-XII

1. Complete the investigatory project work assigned.
2. Revise all the chapters taught in the class and read all the chapters of both the books.
3. Write a notice to be displayed on the school notice board as your school is going to be closed from 9th May 2025 on account of Summer Vacation. Give all the necessary details.
4. On 30th November, your school is going to hold its annual sports day. You want Mr. Dhanraj Pillai, a noted hockey player to give away the prizes to the budding sportspersons of the school. Write a formal invitation in about 50 words requesting him to grace the occasion as chief guest. You are Karuna/ Karan, Sports Secretary, Sunrise Global School, Agra.
5. Bal Vidya Public School, Ranchi, urgently requires a post-graduate teacher to teach political science for which they have placed an advertisement in The Indian Express. You are Sanjay/Sanjana Sharma from 21, Ratu Road, Ranchi. Draft a letter including a CV, applying for the advertised post. (120 – 150 words)
6. You are Karan/ Kirti of L.M. Memorial Public School, Dwarka. Your school has adopted a village as a social responsibility. Students are being taken to teach the children of that village on a regular basis. Write an article on the theme 'Social work for good cause' in 120 – 150 words.

Subject Tr. 
05/05/26

KENDRIYA VIDYALAYA GUMLA
HOLIDAY HOMEWORK FOR SUMMER VACATION 2026-27
Class XII (PAT)

A. Long Answer Questions-I

- i. Discuss the significance of having trained professional in the sports sector.
- ii. Explain the relationship between physical education and lifelong fitness.
- iii. What is the role of technology in modern sports and physical education ?
- iv. Analyze the impact of involvement in sports on youth development.
- v. Describe how sports can contribute to community building.

B. Long Answer Questions-II

- i. Illustrate the importance of life skills in sports and how they translate to everyday situations.
- ii. Describe the differences and similarities between physical education ,sports and recreation.
- iii. Evaluate the influence of sports on mental health and Emotional well-being .
- iv. Discuss the importance of inclusivity in physical education and sports program.
- v. Elaborate on the responsibilities of a physical educator in a school setting.

***** ALL THE BEST *****