**HOLIDAYS HOMEWORK, 2026-27**
**CLASS X (ENGLISH)**

**GENERAL INSTRUCTIONS:**

a) Focus on **originality, neatness,** and **content relevance**.
b) Include your **name, class-section,** and **school number** on the first page.
c) Homework to be submitted in file folder.

1. **POSTER MAKING ACTIVITY** : (A3 / A4 chart paper) as per the following :-

| Sr No. | Class Sr No. | Topic |
|---|---|---|
| 1. | Roll No. 01-10 | Create a poster titled **"Power of Faith and Acts of Kindness"**, showing how Lencho's faith and the postmaster's kindness teach us about **trust**, **empathy**, and **selfless service**. |
| 2. | Roll No. 11-20 | **Mandela Quote Poster**: Choose 2-3 powerful quotes from Nelson Mandela and design a poster around them. Add short paragraphs on what values they reflect (e.g., **freedom**, **forgiveness**, **sacrifice**, **peace**). |
| 3. | Roll No. 21-30 | **Pet Care Awareness Poster** titled **"Love Your Pet, Care the Right Way"** showing how overfeeding pets can be harmful. Highlight values of **responsibility**, **awareness**, and **compassion** through Tricky's story. |
| 4. | Roll No. 31 till last | **Smart Thinking Poster** titled **"Think Smart, Not Hard"** showing how Ausable used **wit, calmness, and presence of mind** to outsmart Max without violence. |

2. Read a novel of your choice and write a book review with the theme and summary, characterization, rating etc. in 200-250 words. (No two book reviews to be on same novel)
3. a) With reference to poem **"Dust of Snow"**, write about a moment when a small gesture or event changed your mood, reinforcing the value of **positivity**, **gratitude**, and **not judging situations too quickly**. (Word limit 200) (Roll No. 1-20)
   b) Write an essay in 200 words titled **"The Fire and Ice Within Us"**, connecting the poem's theme of desire and hatred with Mandela's journey and message of **reconciliation**, **self-control**, and **restraint**. (Roll No. 21 till last)
4. a) **Value Reflection Chart** : Draw a chart showing three key characters (Tricky, Dr. Herriot, Mrs. Pumphrey) and the values each one represents or learns through the story. (Roll No. 1-20)
   b) **Value Reflection Chart**: Draw a two-column chart listing the values depicted in the story "A Letter to God" and the poem "Dust of Snow" (e.g., *Faith*, *Hope*, *Empathy*, *Nature's healing power*) with examples from the texts. (Roll No. 21 till last)
5. **Speech Writing**: Write a motivational speech in 250 words titled **"Kindness Can Change Lives"**, using Anil's behaviour towards the thief as a real-life example of how trust and compassion can reform someone.
6. To revise the syllabus completed in the class for Pre-Mid Term exam.

**विषय : हिन्दी गृह कार्य – पद परिचय**

विद्यार्थियों को निर्देशित किया जाता है कि वे "पद परिचय" विषय पर एक सुंदर, रचनात्मक एवं सुव्यवस्थित हस्तलिखित पुस्तिका तैयार करें।

पुस्तिका में निम्न बिंदु अनिवार्य रूप से शामिल किए जाएँ:

1. पद परिचय की मूल जानकारी, पद परिचय की परिभाषा, पद परिचय का महत्व

पद परिचय की आवश्यकता

**2. पद परिचय के अंतर्गत आने वाले प्रमुख प्रकरण**

निम्न सभी प्रकरणों को विस्तार से लिखें:

संज्ञा सर्वनाम विशेषण क्रिया क्रिया विशेषण संबंधबोधक समुच्चयबोधक विस्मयादिबोधक काल लिंग वचन पुरुष कारक वाच्य आदि।

**3. प्रत्येक प्रकरण में निम्न बिंदु लिखें:**

परिभाषा, प्रकार, उदाहरण, वाक्य प्रयोग, पद परिचय सहित व्याख्या

**4. प्रश्नपत्र अभ्यास**

पिछले तीन वर्षों के प्रश्नपत्रों में "पद परिचय" से पूछे गए सभी प्रश्नों को खोजकर हल कीजिए।

प्रत्येक प्रश्न का उत्तर पूर्ण पद परिचय विधि के अनुसार लिखें।

प्रश्नों को क्रमवार एवं स्पष्ट रूप से प्रस्तुत करें।

**रचनात्मक लेखन कार्य**

विद्यार्थी "पद परिचय पुस्तिका" में निम्नलिखित विषयों में से किसी एक पर 300–400 शब्दों का सुंदर एवं मौलिक अनुच्छेद लिखेंगे:

" आधुनिक शिक्षा में डिजिटल बोर्ड का योगदान।" **अथवा** " मैं और मेरा विद्यालय।"

**विशेष निर्देश**

पुस्तिका हस्तलिखित एवं स्वनिर्मित होनी चाहिए। कार्य साफ-सुथरी एवं सुंदर लिखावट में करें।

रंगीन शीर्षक, चित्र, चएवं सजावट का प्रयोग किया जा सकता है।

कार्य पूर्णतः मौलिक होना चाहिए। विद्यालय खुलने के प्रथम सप्ताह में पुस्तिका जमा करना अनिवार्य होगा।

प्रिय विद्यार्थियों,अवकाश का सदुपयोग करें, नियमित अध्ययन करें तथा भाषा ज्ञान को समृद्ध बनाएं।

## MATHEMATICS (2026–27)

### Chapter 1: Real Numbers (20 Questions)

1. Find the HCF of 96 and 404 using Euclid's Division Algorithm.
2. Find the LCM of 18 and 24.
3. Check whether 221 is a prime number.
4. Write the prime factorization of 360.
5. Find the HCF of 135 and 225.
6. Show that √5 is irrational.
7. Find decimal expansion of 7/8.
8. Determine whether 13/125 has terminating decimal expansion.
9. Find HCF and LCM of 45 and 75.
10. Express 0.375 as a rational number.
11. Verify Euclid's Division Lemma for 85 and 12.
12. Find prime factorization of 504.
13. Write prime numbers between 30 and 50.
14. Find HCF of 144 and 180.
15. Convert 11/16 into decimal form.
16. State Fundamental Theorem of Arithmetic.
17. Determine whether 17/250 is terminating or non-terminating.
18. Find LCM of 36 and 48.
19. Express 0.625 as a fraction.
20. Find HCF of 867 and 255 using Euclid's Algorithm.

### Chapter 2: Polynomials (20 Questions)

1. Find degree of $5x^3 + 2x^2 - 7$.
2. Identify zeroes of $x^2 - 5x + 6$.

3. Divide $x^2 + 5x + 6$ by $x + 2$.
4. Verify relationship between zeroes and coefficients for $x^2 - 7x + 12$.
5. Find remainder when $x^3 + 2x^2 + x + 5$ is divided by $x-1$.
6. Find zeroes of $x^2 - 9$.
7. Factorize $x^2 + 8x + 15$.
8. Find value of polynomial $p(x)=x^2+3x+2$ at $x=2$.
9. Determine whether $x+1$ is a factor of $x^3+x^2-x-1$.
10. Divide $2x^3+3x^2-5x+6$ by $x-2$.
11. Find degree of $9x^4-2x+1$.
12. Factorize $x^2-16$.
13. Find zeroes of $2x^2-8x$.
14. Verify Remainder Theorem for $p(x)=x^2+4x+3$.
15. Form polynomial whose zeroes are 2 and 5.
16. Factorize $x^2-11x+30$.
17. Find sum and product of zeroes of $x^2+6x+8$.
18. Divide $x^3-1$ by $x-1$.
19. Find remainder when $x^2+3x+5$ is divided by $x+1$.
20. Find zeroes of $x^2-4x+4$.

Chapter 3: Pair of Linear Equations in Two Variables (20 Questions)

1. Solve: $x+y=10$, $x-y=2$.
2. Solve by substitution: $2x+3y=12$, $x+y=5$.
3. Solve by elimination: $3x+2y=16$, $x-y=1$.
4. Find graphical solution of $x+y=6$, $x-y=2$.
5. Check consistency of $2x+4y=8$, $x+2y=4$.
6. Solve: $4x+5y=9$, $2x-y=3$.
7. Solve: $7x+3y=20$, $x+y=4$.
8. Find values of x and y: $5x-y=11$, $3x+y=9$.
9. Solve by cross multiplication: $2x+y=7$, $x-y=1$.
10. Cost of pens and pencils problem.
11. Solve: $6x+2y=14$, $x+y=4$.
12. Determine whether lines are parallel/intersecting/coincident.
13. Solve: $8x-y=15$, $2x+y=9$.
14. Father-son age problem.
15. Solve: $4x+3y=24$, $x+y=7$.
16. Solve graphically: $y=x+2$, $y=2x-1$.
17. Solve: $3x+4y=18$, $2x-y=5$.
18. Solve: $x+2y=8$, $3x-y=7$.19. Sum of two numbers is 45 and difference is 9.
20. Solve: $5x+2y=19$, $2x+3y=18$.

Chapter 4: Quadratic Equations (20 Questions)

1. Solve $x^2-5x+6=0$ by factorization.
2. Solve $x^2-9=0$.
3. Solve $x^2+7x+12=0$.
4. Find roots of $2x^2-8x=0$.
5. Solve using quadratic formula: $x^2-4x-5=0$.
6. Find discriminant of $x^2+6x+9=0$.
7. Determine nature of roots of $x^2+4x+8=0$.
8. Solve $3x^2-12x=0$.
9. Form quadratic equation whose roots are 3 and 4.
10. Rectangle dimension problem (area = 84 $m^2$).
11. Solve $x^2-11x+30=0$.
12. Find roots of $x^2-16=0$.
13. Solve $2x^2+5x+2=0$.
14. Find discriminant of $4x^2+4x+1=0$.
15. Solve $x^2+x-12=0$.
16. Form equation whose roots are -2 and 5.
17. Product of consecutive integers is 56.
18. Solve $x^2-10x+25=0$.
19. Find roots of $5x^2-20x=0$.
20. A rectangular garden has length 3 m more than its width and its area is 70 $m^2$. Find the dimensions.

Mathematics Lab Manual Activities

Activity 1: Draw graphs of $x+y=6$ and $x-y=2$ on graph paper. Identify whether the lines are intersecting, parallel, or coincident and write the solution.

Activity 2: Verify relationship between zeroes and coefficients of polynomial $x^2-7x+12$.

## HISTORY, CIVCS, ECONOMICS

## CLASS- X

1. Prepare MCQ's on topics covered in History (Chapter – 1 & 2 - 30 questions each), Civics (Chapter – 1,2 and 3 - 20 questions each), Economics ( Chapter – 1 & 2 - 30 questions each).

2. Make a project on Consumer Awareness covering meaning of consumer, consumer awareness, different methods of consumer exploitation, consumer movement in India and in world – (causes and events), international and national consumer days, Steps taken by government to protect consumers etc. Project should be of 15 – 20 pages. You can add information and data through charts, pictures etc.
3. Revise the topics covered till 16 May 2026.
4. Read book 'My Experiments with Truth" by Mahatma Gandhi and write a book review. You can download book as it is available.
5. Prepare for Pre Mid Term Exam as discussed in class. Syllabus is all topics covered before 16 May 2026.

## Geography

A. Map activity:
Chapter 1: Resources and development
On an outline (Political) map of India mark the areas of all the major types of soil.
Chapter 3: Water Resources
On an outline (Political) map of India locate the following dams with appropriate symbols
a) Salal, b) Sardar Sarovar, c) Bhakra Nangal, d) Hirakud, e) Tehri, f) Nagarjuna Sagar, g) Rana Pratap Sagarh) Tungabhadra
B. Prepare project on the topics given below as per your Roll Nos / Class Sr No.

| ROLL NUMBERS | TOPICS |
|---|---|
| 1 to 10 | Prepare a detailed project on **Earth Summit,** held at Rio de Janeiro (Brazil) covering the following heads: Historical background, Impacts and issues. |
| 11 to 20 | Prepare a detailed project on **soil resource of India,** covering the following heads: Factors of soil formation, Types of soils found in India, Factors of soil degradation and measures of soil conservations. |
| 21 to 30 | Prepare a detailed projecton **Role of geography in disaster management** |
| 31till last | Prepare a detailed project on **Land resource of India,** covering the following heads: Land use of India, factors of land degradation and measures of land conservation. |

**NOTE** : i. Project to be in 12-15 A4 size sheets.

ii. Use as much as diagrams, maps, pictures in making of your project.
iii. All the students to prepare chart / collage on thick chart paper for the above given topics.
C. Prepare 50 Multiple choice questions from Chapter 1 and 2 (25 from each chapter).
D. Complete the exercises of Chapter No 2- Forest and wildlife resources.
E. Revise and learn thoroughly Ch 1 Resources and development and Ch 2 Forest and wildlife resources for the Pre-Mid Term test scheduled after summer vacation.

## Holiday homework: Physics ( Class-10)

(1) To complete the NCERT exercises of chapter Reflection of light.
(2) To practice all the questions on reflection (spherical mirrors) from exemplar exercises.

(3) To solve at least 25 numericals based on mirror formula & magnification from any help book in class work note book.

## Class X HHW Science (Chemistry )

**Balance the following chemical equations and classify them with the type of reaction in a seperate note book or file of holiday homework**

**Problem #1:** $FeCl_3 + MgO \rightarrow Fe_2O_3 + MgCl_2$
**Problem #2:** $Li + H_3PO_4 \rightarrow H_2 + Li_3PO_4$
**Problem #3:** $ZnS + O_2 \rightarrow ZnO + SO_2$
**Problem #4:** $FeS_2 + Cl_2 \rightarrow FeCl_3 + S_2Cl_2$
**Problem #5:** $Fe + HC_2H_3O_2 \rightarrow Fe(C_2H_3O_2)_3 + H_2$
**Problem #6:** $H_2(g) + V_2O_5(s) \rightarrow V_2O_3(s) + H_2O(\ell)$
**Problem #7:** $HCl(aq) + MnO_2(s) \rightarrow MnCl_2(aq) + Cl_2(g) + H_2O(\ell)$
**Problem #8:** $Fe_2O_3(s) + C(s) \rightarrow Fe(s) + CO_2(g)$
**Problem #9:** $C_5H_{11}NH_2 + O_2 \rightarrow CO_2 + H_2O + NO_2$
**Problem #10:** $CO_2 + S_8 \rightarrow CS_2 + SO_2$
**Problem #11:** $NH_3(g) + N_2O(g) \rightarrow N_2(g) + H_2O(g)$
**Problem #12:** $NH_3 + O_2 \rightarrow NO + H_2O$
**Problem #13:** $NH_3 + Cl_2 \rightarrow N_2H_4 + NH_4Cl$
**Problem #14:** $NH_3 + F_2 \rightarrow N_2F_4 + HF$
**Problem #15:** $NH_3 + F_2 \rightarrow NH_4F + NF_3$
**Problem #16:** $NH_4NO_3(s) \rightarrow N_2(g) + O_2(g) + H_2O(g)$
**Problem #17:** $N_2O + CH_4 \rightarrow N_2 + CO_2 + H_2O$
**Problem #18:** $NO_2 + O_2 + H_2O \rightarrow HNO_3$
**Problem #19:** $NO_2 + H_2O \rightarrow HNO_3 + NO$
**Problem #20:** $N_2(g) + O_2(g) + H_2O \rightarrow HNO_3$
**Problem #21:** $N_2H_4 + N_2O_4 \rightarrow N_2 + H_2O$
**Problem #22:** $Mg(NO_3)_2 \rightarrow MgO + NO_2 + O_2$
**Problem #23:** $N_2O_4 + H_2O \rightarrow HNO_3 + NO$
**Problem #24:** $NaOH + Al \rightarrow Al_2O_3 + H_2 + Na_2O$
**Problem #25:** $KMnO_4 \rightarrow K_2O + MnO + O_2$
**Problem #26:** $Ca(AlO_2)_2(s) + HCl\ (aq) \rightarrow AlCl_3(aq) + CaCl_2(aq) + H_2O(\ell)$
**Problem #27:** $C_6H_6 + H_2O_2 \rightarrow CO_2 + H_2O$
**Problem #28:** $Fe + O_2 + H_2O \rightarrow Fe(OH)_2$
**Problem #29:** $MgNH_4PO_4 \rightarrow Mg_2P_2O_7 + NH_3 + H_2O$
**Problem #30:** $AlCl_3(s) + Ca_3N_2(s) \rightarrow AlN(s) + CaCl_2(s)$
**Problem #31:** $HNCO \rightarrow C_3N_3(NH_2)_3 + CO_2$
**Problem #32:** $CdS + O_2 \rightarrow Cd + SO_2$
**Problem #33:** $KAlSi_3O_8 + CO_2 + H_2O \rightarrow Al_2Si_2O_5(OH)_4 + H_4SiO_4 + KHCO_3$
**Problem #34:** $CH_3CCl_3 + O_2 \rightarrow CO_2 + H_2O + Cl_2$
**Problem #35:** $CO + Fe_3O_4 \rightarrow CO_2 + Fe$
**Problem #36:** $H_2S + CO \rightarrow CH_3COOH + S_8$
**Problem #37:** $H_2S(g) + SO_2(g) \rightarrow S_8(s) + H_2O(g)$
**Problem #38:** $FeSO_4 \rightarrow Fe_2O_3 + SO_2 + SO_3$
**Problem #39:** $Pb(NO_3)_2 + FeCl_3 \rightarrow Fe(NO_3)_3 + PbCl_2$
**Problem #40:** $C_3H_5(NO_3)_3 \rightarrow CO_2 + H_2O + N_2 + O_2$
**Problem #41:** $CO(NH_2)_2 + NO_2 \rightarrow CO_2 + H_2O + N_2$
**Problem #42:** $C_2H_2 + O_2 \rightarrow CO_2 + H_2O$
**Problem #43:** $Ag_2O + NH_4OH + NH_4NO_3 \rightarrow [Ag(NH_3)_2]NO_3 + H_2O$
**Problem #44:** $HClO_4 + P_4O_{10} \rightarrow H_3PO_4 + Cl_2O_7$
**Problem #45:** $C_4H_{10}S + O_2 \rightarrow CO_2 + H_2O + SO_2$
**Problem #46:** $NaBH_4 + BF_3 \rightarrow NaBF_4 + B_2H_6$

**Problem #47:** $C_5H_7O + O_2 \rightarrow CO_2 + H_2O$
**Problem #48:** $NaOH + P_4 + H_2O \rightarrow NaH_2PO_2 + PH_3$
**Problem #49:** $NBr_3 + NaOH \rightarrow N_2 + NaBr + HOBr$
**Problem #50:** $VO + Fe_2O_3 \rightarrow FeO + V_2O_5$
**Problem #51:** $Fe_2O_3(s) + CO(g) \rightarrow Fe(s) + CO_2(g)$
**Problem #52:** $S_2H_5 + O_2 \rightarrow SO_2 + H_2O$
**Problem #53:** $KOH + F_2 \rightarrow KF + F_2O + H_2O$
**Problem #54:** $Al + KOH + H_2SO_4 + H_2O \rightarrow KAl(SO_4)_2 \cdot 12H_2O + H_2$
**Problem #55:** $KAl(SO_4)_2 \cdot 12H_2O + BaCl_2 \rightarrow KCl + AlCl_3 + BaSO_4 + H_2O$
**Problem #56:** $C_{10}H_{22} \rightarrow C_4H_{10} + C_2H_4$
**Problem #57:** $NH_2CH_2COOH(s) + {}^{9}\!/_{4}O_2(g) \rightarrow 2CO_2(g) + {}^{5}\!/_{2}H_2O(\ell) + {}^{1}\!/_{2}N_2(g)$
**Problem #58:** $C_3H_5O_9N_3 \rightarrow CO_2 + N_2 + O_2 + H_2O$
**Problem #59:** $C_{20}H_{45} + O_2 \rightarrow CO_2 + H_2O$
**Problem #60:** $C_3H_5 + O_2 \rightarrow CO_2 + H_2O$
**Problem #61:** $C_5H_{11}SO_2N + O_2 \rightarrow CO_2 + H_2O + SO_2 + NO_2$
**Problem #62:** $Ca(OH)_2 + C_4H_6O_5 \rightarrow H_2O + CaC_4H_4O_5$
**Problem #63:** $FeTiO_3 + Cl_2 + C \rightarrow TiCl_4 + FeCl_3 + CO$
**Problem #64:** $Ca_3P_2(s) + H_2O(\ell) \rightarrow Ca(OH)_2(aq) + PH_3(g)$
**Problem #65:** $TiCl_4(\ell) + H_2O(\ell) \rightarrow TiO_2(s) + HCl(aq)1$
**Problem #66:** $Cu_2O + O_2 \rightarrow CuO$
**Problem #67:** $FeSO_4(NH_4)_2SO_4 \cdot 6H_2O + H_2C_2O_4 \cdot 2H_2O \rightarrow FeC_2O_4 \cdot 2H_2O + NH_4HSO_4 + H_2O$
**Problem #68:** $BCl_3 + P_4 + H_2 \rightarrow BP + HCl$
**Problem #69:** $NH_3 + KAl(SO_4)_2 \cdot 12H_2O \rightarrow Al(OH)_3 + (NH_4)_2SO_4 + KOH + H_2O$
**Problem #70:** $FeS_2 + O_2 \rightarrow Fe_2O_3 + SO_2$

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**SUBJECT: BIOLOGY** **NOTE: TO BE DONE IN BIOLOGY FAIR NOTEBOOK**

1. **Read chapter 6 (Life Processes) and chapter 7 (Control and Coordination) and makes notes for the chapter.**
2. **Solve the exercise of both chapters. 3. Write the solution of Internal question. 4. Complete the worksheet**

## Worksheet : 1

## Chapter: Life Processes

**Long Answer Questions**

**Q1. Explain the process of autotrophic nutrition in green plants.**
Include: Definition, conditions necessary for photosynthesis, role of chlorophyll, chemical equation and importance of photosynthesis.

**Q2. Describe the human digestive system with the help of a labelled diagram.**
Include alimentary canal, digestive glands, functions of organs and digestive enzymes.

**Q3. Explain the process of nutrition in Amoeba with diagram.**
Include ingestion, digestion, absorption, assimilation and egestion.

**Q4. Differentiate between autotrophic and heterotrophic nutrition in detail.**
Write differences based on definition, food source, chlorophyll requirement, energy source and examples.

**Q5. Explain the process of respiration in human beings.**
Include breathing mechanism, lungs, alveoli, aerobic and anaerobic respiration with equation.

**Q6. Differentiate between aerobic and anaerobic respiration.**
Compare oxygen requirement, energy release, end products, site and examples.

**Q7. Describe the mechanism of breathing in humans.**
Include inhalation, exhalation, diaphragm, rib movement and gaseous exchange.

**Q8. Explain gaseous exchange in plants and animals.**
Include stomata, lenticels, alveoli and diffusion.

**Q9. Explain transportation of materials in human beings.**
Include blood, blood vessels, heart and double circulation.

**Q10. Draw a labelled diagram of human heart and explain double circulation in humans.**
Include pulmonary and systemic circulation.
**Q11. Explain transportation in plants in detail.**
Include xylem, phloem and transpiration pull.
**Q12. Describe the process of transpiration and explain its importance.**
Include mechanism, factors affecting transpiration, advantages and disadvantages.
**Q13. Explain the human excretory system with labelled diagram.**
Include kidneys, ureters, urinary bladder, urethra and urine formation.
**Q14. Describe the structure and function of nephron.**
Include Bowman's capsule, glomerulus, ultrafiltration and selective reabsorption.
**Q15. Explain excretion in plants.**
Include gaseous waste removal, storage in vacuoles and excretion through gums and resins.
**Q16. Why is diffusion insufficient in multicellular organisms? Explain in detail.**
**Q17. Why is the separation of oxygenated and deoxygenated blood necessary in humans? Q18. Explain why the small intestine is highly adapted for absorption of digested food.**
**Q19. Why are lungs designed with millions of alveoli? Explain with reasons.**
**Q20. Explain how transpiration helps in the upward movement of water in plants.**

## Diagram Practice

- Human Digestive System  Human Respiratory System  Human Heart  Double Circulation
- Human Excretory System  Nephron  Stomata  Nutrition in Amoeba

## Worksheet : 2

**Chapter: Control and Coordination**
**Long Answer Questions**
**Q1. Explain the meaning of control and coordination in living organisms.**
Include the importance of coordination and different systems involved in coordination.
**Q2. Describe the structure and functions of the human nervous system.**
Include central nervous system, peripheral nervous system and autonomic nervous system.
**Q3. Explain the structure of a neuron with a labelled diagram.**
Include dendrites, cell body, axon, nerve impulse and synapse.
**Q4. Explain the mechanism of reflex action with the help of reflex arc.**
Include pathway of nerve impulse and importance of reflex actions.
**Q5. Describe how nervous tissue coordinates activities in human beings.**
Include receptors, sensory neurons, motor neurons and effectors.
**Q6. Differentiate between voluntary and involuntary actions in detail.**
Compare on the basis of control, organs involved and examples.
**Q7. Explain the role of brain in control and coordination.**
Include forebrain, midbrain and hindbrain with their functions.
**Q8. Describe the structure and functions of spinal cord.**
Include reflex actions and transmission of nerve impulses.
**Q9. Explain chemical coordination in human beings.**
Include endocrine glands, hormones and their functions.
**Q10. Describe the functions of different endocrine glands in humans.**
Include pituitary, thyroid, pancreas, adrenal and reproductive glands.
**Q11. Explain the role of hormones in regulating body functions.**
Include growth, metabolism, reproduction and emergency responses.
**Q12. Differentiate between nervous coordination and hormonal coordination.**
Compare on the basis of speed, duration, mode of transmission and effects.
**Q13. Explain phototropism, geotropism and hydrotropism in plants.**
Include definition, examples and role of plant hormones.
**Q14. Describe the role of auxins in plants.**
Include functions in growth, tropic movements and apical dominance.
**Q15. Explain how plants coordinate movements without nerves.**
Include plant hormones and growth responses.
**Q16. Why is coordination necessary in multicellular organisms? Explain in detail.**

**Q17. Explain how the human brain protects itself from injury.**
**Q18. Why are hormones called chemical messengers? Explain with examples.**
**Q19. Explain the importance of reflex actions in daily life.**
**Q20. Describe the interrelationship between nervous system and endocrine system.**

**Diagram Practice**

| | | | | |
|---|---|---|---|---|
| Neuron | Human Brain | Reflex Arc | Human Nervous System | Endocrine Glands in Human Body |
| Phototropism in Plants | | | Geotropism in Plants | Structure of Spinal Cord |

**Instructions**

Answer all questions in detail.
Use proper headings and subheadings.
Use coloured pencils only for diagrams.
Draw neat labelled diagrams wherever required.
Maintain neat handwriting and presentation.