BHARTIYA VIDYA MANDIR
SENIOR SECONDARY SCHOOL

SECTOR-39, CHANDIGARH ROAD, LUDHIANA

Vacation Learning Pack

Create, Think & explore

Class : XI

Create

Be Kind

Stay Curious

Keep Learning

Read

Imagine

Discover

Grow

पवित्र मन रखो पवित्र तन रखो

पवित्र मन रखो पवित्र तन रखो
पवित्रता मनुष्यता की शान है

जो मन ,वचन, कर्म से पवित्र है वह चरित्रवान ही यहां महान है

1 बड़ा ही मूल्यवान है तुम्हारा यह जन्म, तुम्हारा यह जन्म।
जगत की कर्मभूमि में करो भले कर्म, करो भले कर्म।

अच्छे रखो विचार ,उत्तम करो व्यवहार,
आदर्श व्यक्ति की यह पहचान है।
जो मन, वचन ,कर्म से पवित्र है
वह चरित्रवान ही यहां महान है।।

2 तुम अपनी आंख मैं अमूत रखो विमल विमल, सदा विमल विमल।
तुम्हारी वाणी में माधुर्य हो सरल सरल, सदा सरल सरल।।

तुम हो के निर्विकार, सबका करो सत्कार,
यह जन्म तुम्हारा इम्तहान है।
जो मन, वचन ,कर्म से पवित्र है
वह चरित्रवान ही यहां महान है।।

पवित्र मन रखो पवित्र तन रखो

अच्छे विचार
उत्तम व्यवहार
श्रेष्ठ चरित्र
सफल जीवन

शुद्ध मन

मधुर वचन

सत्कर्म

पवित्रता ही मानवता की सबसे बड़ी पहचान है।

पवित्र विचार अपनाओ, पवित्र वाणी बोलो, पवित्र कर्म करो – यही है जीवन का सच्चा धन।
यही है चरित्र की पहचान और महानता की राह।

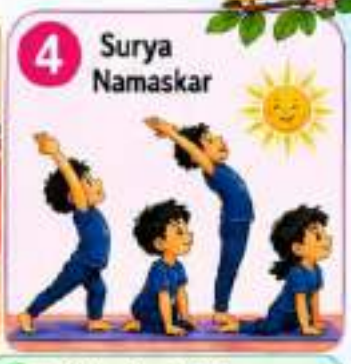
DAILY HABITS OF CHILD DURING SUMMER VACATION

1. Wake up early

2. Meditation and Affirmation

3. Pranam to Earth and Parents

4. Surya Namaskar



5. Brushing teeth

6. Bathing daily

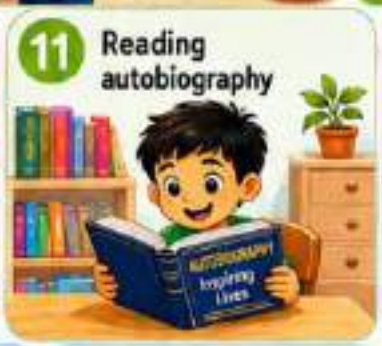
7. Offering water to Sun

8. Watering birds and plants

9. Healthy breakfast

10. Doing vacation learning pack

11. Reading autobiography



12. Fruit time

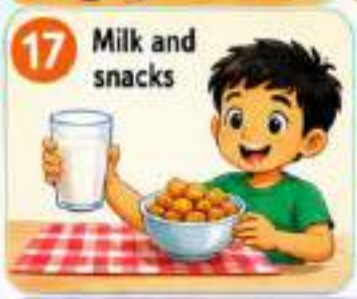
13. Creative new skills

14. Day time nap

15. Lunch – nutritious food

16. Tech time (app time)

17. Milk and snacks



18. Outdoor games

19. Dinner with family and siblings

20. Meditation and Affirmation

21. Going to bed

GOOD HABITS TODAY, BRIGHT FUTURE TOMORROW!

CLASS XI – INFORMATICS PRACTICES

Session: 2026–27

Theme: Technology for Smart Learning

Instructions
- Complete all activities neatly.

- Attach screenshots and coding outputs.

- Use Python wherever required.

- Maintain a practical file.

Section A – Research Activity

Research any TWO topics:

- Artificial Intelligence

- Cyber Security

- Cloud Computing

- Data Science

- ❖ Write introduction, uses, advantages, and future scope.

Section B – Python Practical

Create Python programs for:

1. Simple Calculator

2. Student Percentage & Grade Calculator

3. Number Guessing Game

4. Temperature Converter

Section C – Data Handling

Collect data of your daily screen time for 7 days.

Using Python and matplotlib:

- Create bar graph

- Create pie chart

- Write observations

Section D – Creative Activity

Create a poster or infographic on:

- Digital India

- Safe Internet Usage

- AI in Education

Section E – Mini Project

Develop any ONE project:

- Quiz Application

- ATM Simulation

- Password Generator

- Student Attendance System

Include:

- Aim

- Algorithm

- Python code

- Output screenshots

HOLIDAYS HOMEWORK SUBJECT- CHEMISTRY CLASS XI
Chapter 1: Some Basic Concepts of Chemistry

Q1. Medicine Preparation
A pharmacist prepares 500 mL glucose solution containing 18 g glucose ($C_6H_{12}O_6$).
a) Calculate the number of moles of glucose.
b) Find the molarity of the solution.
c) Why is accurate concentration important in medicines?
Q2. Environmental Chemistry
A factory releases 44 g of CO_2 gas into air.
a) Calculate number of moles of CO_2 released.
b) Find the number of molecules present.
c) Explain how excess CO_2 affects the environment.
Q3. Cooking Gas Problem
A family uses 220 g LPG containing mainly propane (C_3H_8).
a) Calculate moles of propane used.
b) Determine total number of hydrogen atoms present.
c) Why is LPG considered a cleaner fuel than coal?
Q4. Chemical Reaction Analysis
$2H_2 + O_2 \rightarrow 2H_2O$
If 8 g hydrogen reacts completely:
a) Calculate moles of hydrogen used.
b) Find mass of oxygen required.
c) Calculate mass of water formed.
d) State law used in this calculation.
Q5. Industrial Application
Calcium carbonate decomposes as:
$CaCO_3 \rightarrow CaO + CO_2$
If 100 g $CaCO_3$ is heated:
a) Calculate moles of $CaCO_3$.
b) Find mass of CO_2 produced.
c) Mention one industrial use of this reaction.
Q6. Water Purification
Alum is used in water treatment plants.
Chemical formula: $Al_2(SO_4)_3$
a) Calculate molar mass of alum.
b) How many oxygen atoms are present in one molecule?
c) Why is chemistry important in water purification?
Q7. . Space Science
Hydrogen fuel is used in rockets.
a) Why is hydrogen preferred as rocket fuel?
b) Calculate number of moles in 4 g hydrogen gas.
c) Name the scientist who proposed quantum theory used in atomic structure.
Q8.Calculate number of atoms in 5.6 g nitrogen gas.
Q9. Calculate empirical formula of a compound containing:* 40% carbon
* 6.7%hydrogen * 53.3% oxygen
Q10. A student observed fireworks during a festival.
a) Which branch of chemistry explains colors in fireworks?
b) Which atomic phenomenon is responsible for color production?

c) Why do different elements produce different colors?

Q11. .Why is modern chemistry important in solving global problems like:
* Climate change
* Water scarcity
* Energy crisis
Explain with examples.
Q12. Real-Life Stoichiometry
Calcium oxide is prepared by heating limestone:
$CaCO_3 \rightarrow CaO + CO_2$
A cement factory needs 560 kg CaO.
a) Calculate minimum mass of $CaCO_3$ required.
b) Calculate mass of CO_2 released.
c) Explain environmental concern related to this reaction.
Q13. . Concentration-Based
Two students prepare NaCl solution:
* Student A dissolves 5 g NaCl in 100 mL water.
* Student B dissolves 5 g NaCl in 500 mL water.
a) Which solution is more concentrated? Why?
b) Calculate molarity of both solutions.
c) Why is concentration control important in IV saline?
Q14.Calculate the number of electrons present in 2 g H_2 gas.
Q15. An oxide of nitrogen contains:* 30.4% nitrogen * 69.6% oxygen
Determine:
a) Empirical formula
b) Molecular formula if molar mass = 92 g/mol
Q16. Calculate total number of neutrons in 2 moles of oxygen atoms assuming mass number = 16.
Q17. Calculate the number of molecules present in 11 g of CO_2 .
Q18. How many atoms are present in 4.6 g sodium?
Q19. Calculate the mass of:
a) 0.5 mole H_2SO_4
b) 2.5 moles NaOH
Q20. Find the number of moles in:
a) 98 g H_2SO_4
b) 44 g CO_2
c) 18 g H_2O
Q21. Calculate the number of oxygen atoms present in 8 g O_2 gas.
Q22. What volume will 2 moles of oxygen occupy at STP?
Q23.How many molecules are present in 22.4 L methane gas at STP?
Q24..Calculate empirical formula of a compound containing:
* 52.17% carbon* 13.04% hydrogen* 34.79% oxygen
Q25. A compound contains:
* 40% carbon* 6.7% hydrogen* 53.3% oxygen
Its molecular mass is 180 g/mol.
Find:
a) Empirical formula
b) Molecular formula
Q26. $2Al + Fe_2O_3 \rightarrow Al_2O_3 + 2Fe$
If 54 g aluminum reacts completely:

a) Calculate moles of Al.
b) Find mass of Fe produced.
Q27. . $N_2 + 3H_2 \rightarrow 2NH_3$
If 28 g nitrogen reacts with excess hydrogen:
a) Calculate mass of ammonia formed.
b) Calculate number of NH_3 molecules formed.
Q28. How many grams of NaCl are required to prepare 500 mL of 0.2 M solution?
Q29. Find percentage composition of water.
Q 30. $2KClO_3 \rightarrow 2KCl + 3O_2$
Calculate:
a) Volume of oxygen produced at STP from 24.5 g $KClO_3$
b) Number of oxygen molecules formed
Q 31. 250 mL H_2 SO_4 solution contains 24.5 g acid.
Calculate:
a) Molarity
b) Normality
c) Number of molecules present
Q32. . Percentage Purity Problem
A sample of limestone contains 80% $CaCO_3$.
Calculate:
a) Mass of sample required to produce 44 g CO_2
b) Percentage impurity present
Q33. Atomic Mass Calculation
Chlorine has isotopes:
* Cl-35 (75%)
* Cl-37 (25%)
Calculate average atomic mass of chlorine.
Q34. Advanced Mole Concept
How many atoms are present in:
a) 11.2 L NH_3 gas at STP
b) 9 g water
Q35. Successive Reaction
$4Fe + 3O_2 \rightarrow 2Fe_2O_3$
If 112 g Fe reacts with excess oxygen:
Calculate:
a) Mass of Fe_2 O_3 formed
b) Number of oxygen atoms used

Chapter 2: Structure of Atom

Q1. Atomic Model Application
An atom has:
* Atomic number = 17
* Mass number = 35
a) Identify the element.
b) Calculate number of:
* Protons
* Electrons
* Neutrons
c) Write electronic configuration.

Q2. Electronic Configuration Logic
Two elements X and Y have atomic numbers 11 and 16.
a) Write electronic configuration of both.
b) Predict which element is more reactive and why.
c) State the type of bond formed between X and Y.
Q3. Isotopes in Daily Life
Carbon has isotopes C-12 and C-14.
a) Differentiate between isotopes and isobars.
b) Why do isotopes have same chemical properties?
c) Mention one application of C-14.
Q4 Bohr Model Reasoning
An electron in hydrogen atom jumps from higher energy level to lower energy level. a) What happens during this transition?
b) Why does line spectrum appear?
c) Which type of spectrum is produced:
* Emission
* Continuous Explain.
Q5. Quantum Mechanical Thinking
An electron cannot have all four quantum numbers same as another electron.
a) Name the principle involved.
b) Explain its importance in atomic structure.
c) How does this principle help in electronic configuration?
Q6. **Quantum Number Challenge**
For an electron with quantum numbers:
$n = 3, l = 1, m = 0$
a) Identify the orbital.
b) How many electrons can occupy this orbital?
c) Write all possible values of spin quantum number.
d) Why are quantum numbers important?
Q7. **Electronic Configuration Analysis**
An element has atomic number 24.
a) Write its electronic configuration.
b) Why does it show exceptional configuration?
c) Name the principle responsible for stability.
d) Predict its valency.
Q8. **De Broglie Equation Application**
An electron moves with velocity 2.2×10^6 m/s.
a) Calculate its wavelength using de Broglie equation.
b) Why are wave properties observable only in microscopic particles?
c) State one application of electron wave nature.
Q9. **Heisenberg Uncertainty Principle**
a) State Heisenberg uncertainty principle.
b) Why is it impossible to determine exact position and momentum simultaneously?
c) Explain one practical significance of this principle.
Q10. Calculate wavelength of electron moving with velocity:
2.18×10^6 m/s
Q11. Calculate frequency of radiation having wavelength 500 nm.
Q12. Find energy of photon having frequency:
6×10^{14} Hz
Q13. .Calculate wavelength of radiation with frequency:

3×10^{15} Hz
Q14. An electron jumps from n = 4 to n = 2 in hydrogen atom.
Calculate energy emitted .
Q15. Calculate number of neutrons in:
a) 1 atom of ^{35} Cl
b) 2 moles of ^{35} Cl atoms
Q16. . An element has atomic number 20 and mass number 40.
Find:
a) Number of protons
b) Electrons
c) Neutrons
d) Electronic configuration
Q17. Write all possible quantum numbers for:
a) 2p electron
b) 3d electron
Q18. De Broglie Wavelength
Calculate wavelength of electron moving with velocity:
2.5×10^{6} m/s(Given:h = 6.626×10^{-34} Jsmass of electron = 9.1×10^{-31} kg)
Q19. Energy of Electron
Calculate energy of electron in hydrogen atom for:
n = 3.Also calculate energy difference between:
n = 3 and n = 2
Q20. Frequency of Radiation
An electron jumps from n = 4 to n = 2.
Calculate:
a) Energy released
b) Frequency of radiation emitted
Q21. Photon Energy Problem
Calculate energy of photon having wavelength:
500 nm
Q22. Quantum Number Challenge
How many electrons in an atom can have:
a) n = 3
b) l = 2
c) m = 0
Q23. . Effective Nuclear Charge
An electron experiences nuclear charge reduced due to shielding.
If:
* Actual nuclear charge = +17
* Shielding constant = 10
Calculate effective nuclear charge.
Q24. Orbital Counting Problem
Calculate total number of:
a) Orbitals in 4th shell
b) Electrons maximum in 4th shell
Q24. Wave Number Problem
Calculate wave number of radiation having wavelength:
400 nm

Q25. Ionization Energy Logic

The ionization enthalpy of hydrogen atom is 1312 kJ/mol.

Calculate energy required to remove:
a) One electron from one H atom
b) One mole electrons from H atoms
Q20. A hydrogen atom absorbs energy and electron jumps from n = 1 to n = 4.
Calculate:
a) Energy absorbed
b) Wavelength required
c) Frequency of absorbed radiation

Assertion–Reason Questions (HOTS)
Choose:
a) Both true and reason correct explanation
b) Both true but reason not correct explanation
c) Assertion true, reason false
d) Assertion false, reason true
1. Assertion: Mole concept helps in calculating particles in chemical reactions.
Reason: Mass of atoms cannot be measured directly.
2. Assertion: Isotopes have same chemical properties.
Reason: They have same number of valence electrons.
3. Assertion: Bohr's model failed for multi-electron atoms.
Reason: It could not explain splitting of spectral lines.

Investigatory Project

Prepare a project file on any ONE topic:
* Green Chemistry
* Water Pollution and its Prevention
* Food Adulteration
* Chemistry in Medicines
* Air Pollution
* Importance of pH in Daily Life

Project should include:
* Introduction
* Aim/Objectives
* Theory
* Observation
* Conclusion
* Bibliography
* Pictures/Diagrams

HOLIDAYS HOMEWORK SESSION (2026-27)

PSYCHOLOGY- XI

COMMUNITY AND CASE BASED PROJECT:

The students will prepare a case project. The Project would involve the use of different methods of psychological enquiry like observation, interview and questionnaire.

Topics:

- Bullying /cyber bullying
- Mental health and wellbeing
- Peer pressure
- Anger management
- Sleep hygiene
- Changing gender roles and stereotypes

Students will write this project on A4 colourful sheets (10 to15) pages Students after observing write the project accordingly key notes.

Keynotes

- Acknowledgement
- Certificate
- Summary of the topic (introduction of case related psychological
- 0
- Types
- Symptoms.

Competency based questions:

Students bring A4 sheets for completing competency based all the questions

1.In the early 20thcentury a new perspective called gestalt psychology emerged in _____as a reaction to the structuralism of wundt?

a) England b) Germany

c) France d) USA

2.Popular theories of fun conflict against those based on scientific knowledge as they are based on

a) Common Sense b) Scientific theories

c) Social theories d) Psychological theories

3. Naturalistic observation can be conducted in_____.

a) Hospital b) Homes

c) School d) All of those

4. Heredity is determined by_____

a) Cells b) Nature

c) Genes d) Neurons

5 The genetic blueprint of an individual leading to change in an orderly fashion is known as?

a) Development c) Maturation
b) Growth d) Evolution

Case Study based:

1.Case Study

Rahul, a high school student, is experiencing anxiety and stress due to his upcoming board exams. He is worried about his performance and feels overwhelmed by the pressure to do well. His parents and teachers are encouraging him to focus on his studies, but Rahul is struggling to manage his emotions and stay motivated.

A. Analyse Rahul's situation from the perspective of psychology. How can psychology help Rahul understand and address his anxiety and stress?

2 Case Study

Dr. Sharma, a research psychologist, wants to investigate the relationship between sleep deprivation and cognitive performance in college students. She recruits 100 students and asks them to complete a survey about their sleep habits and cognitive functioning. She also conducts in-depth interviews with 20 students to gather more detailed information about their experiences.

A. Dr. Sharma's study in terms of the research methods used. What are the strengths and limitations of her approach?

3.Case Study

A researcher wants to investigate the effect of caffeine on memory recall. She recruits 60 participants and randomly assigns them to one of three groups:

1. *Control Group*: Participants receive a placebo drink with no caffeine.

2. *Experimental Group 1*: Participants receive a drink with a low dose of caffeine (100mg).

3. *Experimental Group 2*: Participants receive a drink with a high dose of caffeine (200mg).

After consuming their assigned drink, participants complete a memory recall task. The researcher measures the number of words correctly recalled by each participant.

A Explain in this study in terms of the experimental method. What are the advantages and limitations of this approach?

Assertion Reason based :-

Assertion (A): [Statement about psychology]

Reason (R): [Explanation or justification for the assertion]

Choose the correct option:

1. Both A and R are true, and R is the correct explanation of A.

2. Both A and R are true, but R is not the correct explanation of A.

3. A is true, but R is false.

4. A is false, but R is true.

1. *Assertion (A)*: Psychology is a scientific study of behaviour and mental processes.

Reason (R): Psychology uses empirical methods to study human behaviour.

2. *Assertion (A)*: Psychology is an interdisciplinary field that draws from biology, sociology, and philosophy.

Reason (R): Psychology seeks to understand human behaviour from multiple perspectives.

3. *Assertion (A)*: Psychology is only concerned with abnormal behaviour

Reason (R): Psychology focuses on understanding and treating mental disorders

4. *Assertion (A)*: Surveys are useful for collecting data from large samples.

Reason (R): Surveys allow researchers to collect self-report data from participants.

5.*Assertion (A)*: Experimental research allows researchers to establish cause-and-effect relationships.

Reason (R): Experimental research involves manipulating the independent variable and controlling extraneous variables.

6.. *Assertion (A)*: Case studies provide in-depth insights into individual experiences.

Reason (R): Case studies involve collecting detailed data from a single participants and small groups.

7 *Assertion (A)*: Human development is a lifelong process.

Reason (R): Development involves physical, cognitive, and socio-emotional changes that occur across the lifespan.

8.*Assertion (A)*: Genetics play a significant role in shaping human development.

Reason (R): Genetic factors influence traits such as intelligence, personality, and physical characteristics.

HOLIDAY ASSIGNMENT

CLASS XI **SUBJECT PUNJABI**

1..ਦਿੱਤੇ ਗਏ ਵਿਸ਼ਿਆਂ ਵਿੱਚੋਂ ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ ਉੱਤੇ ਸੁੰਦਰ ਪ੍ਰੋਜੈਕਟ 10ਤੋਂ 15 ਪੰਨਿਆਂ ਦਾ (ਚਿੱਤਰ ਸਹਿਤ) ਤਿਆਰ ਕਰੋ।

1 ਸੱਭਿਆਚਾਰਕ ਗਤੀਵਿਧੀਆਂ (ਲੋਕ - ਨਾਚ, ਲੋਕ - ਗੀਤ, ਲੋਕ – ਬੋਲੀਆਂ)

2 ਪੁਸਤਕ ਸਮੀਖਿਆ

3 ਸਲੋਗਨ ਲੇਖਣ

4 ਪੇਂਡੂ ਅਤੇ ਸ਼ਹਿਰੀ ਜੀਵਨ

5 ਸਮਾਜਿਕ ਕੁਰੀਤੀਆਂ (ਦਾਜ, ਭਰੂਣ ਹੱਤਿਆ, ਨਸ਼ੇ)

6 ਮਾਂ- ਬੋਲੀ (ਮਹੱਤਤਾ ਤੇ ਪ੍ਰਚਾਰ – ਪ੍ਰਸਾਰ)

7 ਪੰਜਾਬੀ ਪਹਿਰਾਵਾ

8 ਪੰਜਾਬੀ ਰਹਿਣ - ਸਹਿਣ

9 ਪੰਜਾਬੀ ਹਾਰ - ਸ਼ਿੰਗਾਰ

10 ਵਿਰਾਸਤੀ ਖੇਡਾਂ

11 ਕਰੋਨਾ ਕਾਲ ਸਮੇਂ ਮੇਲੇ ਤੇ ਤਿਉਹਾਰ

12 ਕਰੋਨਾ ਕਾਲ ਸਮੇਂ ਵਿਆਹ ਤੇ ਹੋਰ ਸਮਾਗਮ

2. ਇੱਕ ਦਿਨ ਬਿਨਾਂ ਮੋਬਾਇਲ ਤੋਂ ਆਪਣਾ ਅਨੁਭਵ ਲਿਖੋ।

3. ਪੰਜਾਬੀ ਦੇ ਕੋਈ ਵੀ ਅਜਿਹੇ ਸ਼ਬਦ ਜੋ ਤੁਸੀਂ ਪਹਿਲੀ ਵਾਰ ਸੁਣੇ ਹੋਣ . ਉਹਨਾਂ ਦਾ ਅਰਥ ਲਿਖ ਕੇ ਇੱਕ ਪੰਜ ਪੇਜ ਦੀ ਡਿਕਸ਼ਨਰੀ ਬਣਾਓ।

4. ਦਸ ਬੁਝਾਰਤਾਂ ਚਿੱਤਰ ਸਮੇਤ ਅਤੇ ਉਨ੍ਹਾਂ ਦੇ ਉੱਤਰ ਵੀ ਲਿਖ ਕੇ . . ਸੁੰਦਰ ਸਕਰੈਪ ਬੁੱਕ ਤਿਆਰ ਕਰੋ।

5. ਕਰਵਾਏ ਗਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ ।

HOLIDAY ASSIGNMENT (2026-27)

Class: XI

Subject: Physical Education (048)

General Instructions:

1) Do all assignments in A4 size 25-30 pages with proper heading.

2) Paste/Draw relevant pictures. Handwritten only.

3) Paper to be used for the project should be superior Quality and Neatly Written.

4) Assignments will be evaluated for Term -1 Exam.

5) Cover Page: Name, Class, Roll No, Session 2026-27, Stream

6) Acknowledgement & Certificate , Index , Content

7) Introduction: Meaning of Yoga, History from Vedic period to Modern day

8) Elements of Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, Samadhi — explain with examples

9) Asanas for Lifestyle Diseases: From below Asanas For each, write TWO asanas with Procedure, Benefits, Contraindications & Draw/paste diagram.

(A) Obesity → 1) Trikonasana, 2) Katichakrasana

B) Diabetes → 1) Paschimottanasana, 2) Ardha Matsyendrasana

C)Hypertension → 1)Tadasana, 2) Shavasana

D) Back Pain → 1) Bhujangasana, 2) Makarasana)

10. Role of Pranayama: Explain Anulom-Vilom & Kapalbhati with steps and 3 benefits each.

11. Conclusion: Importance of Yoga in student life for stress & exam pressure

12. Bibliography

HOLIDAYS HOMEWORK

SUBJECT : BIOLOGY

CLASS: XI

LIVING ORGANISMS

1. Why do common characteristics decrease from species to kingdom?
2. Give examples of species belonging to the same genus.
3. Why are potato and brinjal placed in the same genus?
4. Write the taxonomic classification of mango.
5. What criteria can classify people you meet often?

BIOLOGICAL CLASSIFICATION

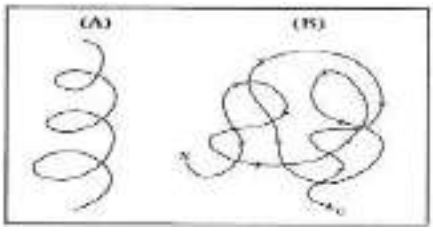
1. What Criteria Did Whittaker Use for Classification?
2. How Are Viroid Different from Viruses
3. Why Are Lichens Called Pollution Indicators?
4. Discuss How Classification Systems Changed Over Time.
5. What Do Algal Bloom and Red Tide Signify?
6. What Did Schwann Conclude About Plant and Animal Cells?
7. Why Are Eukaryotic Cells More Complex Than Prokaryotic Cells?
8. Can polar molecules move across the membrane in the same way? Explain

CELL CYCLE AND CELL DIVISION

1. If DNA content is 2C in G_1, what is DNA content after S phase?
2. Distinguish cytokinesis from karyokinesis.
3. Explain with diagram different phases of prophase 1.
4. Differentiate mitosis and meiosis.
5. Briefly explain cell cycle with the help of diagram.
6. Write significance of mitosis and meiosis.

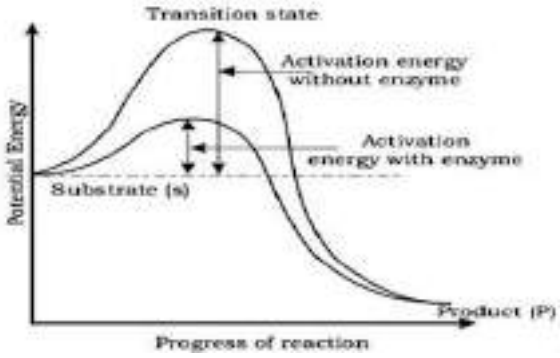
BIOMOLECULES

1. Identify A and B



2. Prepare amino acid serine with the following formula

3. Identify the graph and write the role of enzyme in this process.



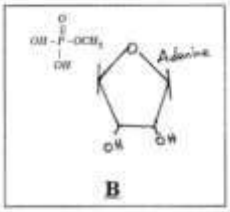
4. Complete the following reaction:

$$E+S \rightleftharpoons ES \rightleftharpoons \text{.....?.....} \rightleftharpoons E+ \text{.....?.....}$$

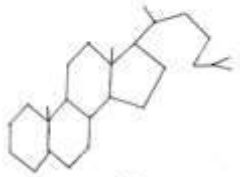
(a) **(b)**

5. Identify the following diagrams.

A



B



C

6. Explain different structural levels of proteins.
7. Briefly explain the structure of DNA.
8. What are cofactors and coenzymes? Give examples.

PROJECT

MAKE A POWER POINT PRESENTATION ON ORGANELLES (ANY FOUR) PRESENT IN CELL ALONG WITH 3D DIAGRAMS, VIDEOS OF THEIR FUNCTIONING.

HOLIDAYS HOME WORK (2026-27)

BUSINESS STUDIES (054)

CLASS XI

❖ GENERAL INSTRUCTIONS:-

1) Complete the whole work neatly in your booklet /file /note book.

2) Use real life examples, creative examples where needed.

3) SUBMISSION DATE: - REOPENING DATE OF SCHOOL.

❖ PROJECT WORK:-

Make a chart on the topic sole proprietorship/partnership/cooperative societies (anyone topic).

❖ COMMUNITY ENGAGEMENT:-

Research any one online business and note various advantages and disadvantages of this business to the society.

❖ NATURE BASED PROJECT:-

Prepare a PPT showing social responsibility of business towards society as an important objective of business.

- **MULTIPLE CHOICE QUESTIONS & ASSERTION / REASON BASED QUESTIONS**

1) Assertion (A): A nominal partner is one who allows to use his or her name by a firm but does not contribute capital.
Reason (R): He or she takes active part in managing the firm and shares its profits / losses
Choose the correct option from the following:

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

2) Assertion (A): Registration is not compulsory in sole proprietorship

Reason (R): Sole Proprietor has unlimited liability.

Choose the correct option from the following

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

3) Assertion (A): Business activity is considered an economic activity.

Reason (R): It aims at earning profit through the production/sale of goods/services.

Choose the correct option from the following:

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

4) Business activity involves dealing in goods and-services on what basis?

(a) Irregular basis

(b) One-time basis

(c) Regular basis

(d) None of these

5) Which is NOT an auxiliary to trade?

(a) Mining **(b) Insurance**

(c) Warehousing **(d) Transport**

6) Which represents a business objective?

(a) Innovation **(b) Profit earning**

(c) Productivity **(d) All of the above**

7) Which of the following is the principal of Cooperative Society:-

(a) One liability, one vote **(b) One man, one vote**

(c) Multiple votes **(d) No vote**

8) Which of the following is/are treated as Auxiliaries to Trade?

(a) Banking Industry **(b) Insurance Industry**

(c) Transportation Industry **(d) All of the above**

9) The reward of risk is:

(a) Success **(b) Failure**

(c) Profit **(d) Loss**

10) Registration is optional in

a) Partnership **b) Cooperative Societies**

c) Joint Stock Company **d) None of above**

11) Which of the following statement is NOT true about a minor partner?

a) He has to bear losses also
b) He can inspect books of accounts
c) He has an option to continue with a firm even after attaining majority
d) He shares only profits

12) **_____ company needs to have only two directors.**

a) Public Company
b) Sole Proprietorship
c) Private Company
d) None of the above

13) Which of the following contract is signed by the promoters with the third party on behalf of the proposed company?

a) Preliminary contracts
b) Provisional contract
c) Prospectus
d) Memorandum of association

14) **Which of the following business enterprises does not have a separate legal entity?**

a) Sole Proprietorship
b) Partnership
c) Company
d) Cooperative Society

❖ CASE STUDY BASE QUESTIONS

1) Manish is a student pursuing a final year B.Tech. from IIT Kharagpur. His father, Mr. Sambal Singh, who owned a small general store in Jaipur, had a heart attack and became completely paralyzed. There was no other source of income for the family, so Manish left his studies and decided to take charge of his father's general store. While checking the books of accounts, he found that his father had taken a loan of ₹2 lakhs from the Bank of Baroda to be repaid this year, but the business is running into losses due to his father's illness. Hence, his mother advised him to close the business and look for a job outside.

i) The form of business organisation formed by Sambal Singh is:

(a) Joint Stock Company

(b) Partnership

(c) Sole Proprietorship

(d) Co-operative Society

ii) **Which of the following shows a merit and a demerit of the type of business organisation mentioned in the above case?**

a) **Secrecy, Limited liability**
b) Sole recipient of profits and no diffusion of risk
c) Secrecy and direct incentive
d)Limited resources and unlimited liability

2) Madhu, Himanshu and Mayank, after completing B.E. in civil engineering, have jointly taken a project of constructing three government school buildings in a village near Agra within the time period of 6 months. As per the written agreement between them, only Madhu and Mayank will contribute the capital, and take all managerial decisions, whereas Himanshu will contribute capital only but will not be actively involved in management.

(i) **What type of a partner Himanshu is?**

a) Active
b) Dormant
c) Nominal
d) Secret

(ii) **If the partners are not able to complete the project effectively and efficiently, then who will be held liable for the losses incurred on account of noncompletion of project?**

a) **Madhu**
b) Himanshu
c) Madhu and Mayank
d) All of these

(iii) **Specify the kind of partnership mentioned in the above case**.

a) Limited partnership
b) Particular partnership
c) Partnership at will
d) General partnership

(iv) **Name the written agreement which defines the terms and conditions of such partnership.**

a) MOU
b) MOA

c) Partnership deed
d) Partnership registration

Holidays Home work
Class XI (2026-27)
Subject :-Music

*learning of Entire unit test syllabus.

*Make a chart of Tanpura with its part on a colourful chart.

*find out 10 multiple choice questions from Sangeet smart Tansain, biography.

*Make a PPT/documentary on ragas and your all definitions from your unit test one syllabus.

Make a video of yourself performing Teen taal laykari with hand movements.

*write self reflection:-
“How did I feel while singing Rag Bihag.

*prepare an illustrated glossary of terms like:-
Naad, shruti, swar, saptak, taal, lay
(Use Calligraphy)

*Write Rag Bihag introduction in created manner,

BHARTIYA VIDYA MANDIR SENIOR SECONDARY SCHOOL,LUDHIANA
HOLIDAYS HOMEWORK (2026-27)

CLASS-XI
SUBJECT- ENGLISH CORE

General Instructions-

1. Attempt questions in your English fair notebook.
2. Mention date and day when you do your work.
3. Use your creativity and imagination wherever required.
4. Submit your holidays homework when the school re-opens.

Task 1:- Reading Skills

Q1.Read the given **passage** and answer all the questions that follow.

1. No student of a foreign language needs to be told that grammar is complex. By changing word sequences and by adding a range of auxiliary verbs and suffixes, we are able to communicate tiny variations in meaning. We can turn a statement into a question, state whether an action has taken place or is soon to take place, and perform many other word tricks to convey subtle differences in meaning. Nor is this complexity inherent to the English language. All languages, even those of so-called 'primitive' tribes have clever grammatical components. The Cherokee pronoun system, for example, can distinguish between 'you and I, 'several other people and I' and 'you, another person and I. In English, all these meanings are summed up in the one, crude pronoun 'we. Grammar is universal and plays a part in every language, no matter how widespread it is. So the question which has baffled many linguists is - who created grammar?

2. At first, it would appear that this question is impossible to answer. To find out how grammar is created, someone needs to be present at the time of a language's creation, documenting its emergence. Many historical linguists are able to trace modern complex languages back to earlier languages, but in order to answer the question of how complex languages are actually formed, the researcher needs to observe how languages are started from scratch. Amazingly, however, this is possible.

3. Some of the most recent languages evolved due to the Atlantic slave trade. At that time, slaves from a number of different ethnicities were forced to work together under colonisers rule. Since they had no opportunity to learn each others' languages, they developed a make-shift language called a pidgin. Pidgins are strings of words copied from the language of the landowner. They have little in the way of grammar, and in many cases it is difficult for a listener to deduce when an event happened, and who did what to whom. Speakers need to use circumlocution in order to make their meaning understood. Interestingly, however, all it takes for a pidgin to become a complex language is for a group of children to be exposed to it at the time when they learn their mother tongue. Slave children did not simply copy the strings of words uttered by their elders, they adapted their words to create a new, expressive language. Complex grammar systems which emerge from pidgins are termed creoles, and they are invented by children.

4. Further evidence of this can be seen in studying sign languages for the deaf. Sign languages are not simply a series of gestures; they utilise the same grammatical machinery that is found in spoken languages. Moreover, there are many different languages used worldwide. The creation of one such language was documented quite recently in Nicaragua. Previously, all deaf people were isolated from each other, but in 1979 a new government introduced schools for the deaf. Although children were taught speech and lip reading in the classroom, playgrounds,

they began to invent their own sign system, using the gestures that they used at home. It was basically a pidgin. Each child used the signs differently, and there was no consistent grammar. However, children who joined the school later, when this inventive sign system was already around, developed a quite different sign language. Although it was based on the signs of the older children, the younger children's language was more fluid and compact, and it utilised a large range of grammatical devices to clarify meaning. What is more, all the children used the signs in the same way. A new creole was born.

5. Some linguists believe that many of the world's most established languages were creoles at first. The English past tense-ed ending may have evolved from the verb 'do' It ended' may once have been 'It end- did. Therefore it would appear that even the most widespread languages were partly created by children. Children appear to have innate grammatical machinery in their brains, which springs to life when they are first trying to make sense of the world around them. Their minds can serve to create logical, complex structures, even when there is no grammar present for them to copy.

Answer the following questions, based on the passage above.

i.Why did the narrator say that it is impossible to say who created grammar? Answer in about 40 words.

ii. Complete the following sentence appropriately.

The language created by children of slaves with complex grammar system is called _____.

iii. All the following sentences about Nicaragua sign language are true EXCEPT

(a) The language incorporates signs which children used at home.
(b) The language is based on speech and lip reading.
c) The language has been created since 1979.
(d) The language was perfected by younger children.

iv. Sign language is not simply a series of gestures because

a) they were basically pidgin
b) they incorporated the same grammatical system found in spoken languages
c) they were developed from the English language
d) children developed it with lip reading system

v. What was the main disadvantage of the sign language used in the schools for deaf in 1979?

vi. Which word in para 3 have the same meaning as "extrapolate"?

a) Complex
b) Opportunity
c) Evolved
d) Deduce

vii."Some of the most recent languages evolved due to the Atlantic slave trade:' Justify this statement in about 40 words.

viii.How do children play a role in the creation of language? Answer in about 40 words.

<u>Task 2 :- Writing Skills</u>

Q2.A) You are Ankit/Ankita. Write a **speech** in 120-150 words on the topic "Education Gives One Power".

B) You are Raman/ Ridhi. Write a **speech** in about 120-150 words on the topic "Value of time in a student's life."

Q3. A) 'Is brain drain a benefit or a loss for India?' Write a **debate** in 120-150 words for or against the motion.

B) "Are digital payments safer than cash?" Write a **debate** in 120-150 words for or against the motion.

Q4.Make **two** different **Posters** on any topics of social or environmental relevance. **For eg.** Save Water, Gender Equality, the Importance of Afforestation, Any type of Pollution, Climate Change, etc.

Task 3:- Integrated Grammar Exercise:-

Q5.**Reorder** the following sentences:

1. to/ be/ her/ Sudha/ the/ hard/ class/ is/ working/ in/ order/ best
2. things/ is/ this/ why/ are/ constantly/ shifting
3. during/ forests/ forces/ provide cover for/ battles/ our
4. last/ was/ the railway/ Sunday/ particularly/ platform/ busy
5. on the platform/ vendors with/ were/ wares/ their/ selling/ flowers/ sweet-smelling/the

Q6.Transform the following into assertive sentences:-

1. Will you join us today?
2. Do you understand the lesson?

Transform the following into Exclamatory sentences:-

3. The night is very peaceful.
4. It is a very lovely painting.

Transform the following into Simple into Complex sentences:-

5.Being tired, she slept early.

6. Without working hard, you cannot succeed.

Change the following direct into Indirect speech:-

7.She said, "I will call you tomorrow."

8. The teacher said, "Keep quiet."

Change the following active into passive voice:-

9. The chef prepared a delicious meal.
10. They are building a new bridge.

Q7..Fill in the blanks with the **correct form of the verb / suitable clause.**

1. She _____ (prepare) for the exam since morning.
2. If he _____ (work) hard, he would have succeeded.
3. The train _____ (leave) before we reached the station.
4. I will call you when I _____ (reach) home.
5. He said that he _____ (finish) the work.
6. Unless you _____ (listen) carefully, you will not understand.
7. The teacher appreciated the boy who _____ (answer) all the questions correctly.
8. While the children _____ (play), it started to rain.
9. She behaves as if she _____ (know) everything.
10. This is the place where I _____ (meet) him last year.

Task 4: Poetry Analysis

Q7.Choose a **poem** from a renowned **poet** and **analyse** it. Consider the following aspects in your analysis: an•Poet's background and writing style • Theme and message conveyed in the poem •Use of **poetic devices**

Task 5:- Literature Based Answers

A)SHORT QUESTIONS

Q1. What change came over the grandmother in the last phase of her life?
Q2. Explain the phrase 'Its silence silences'.
Q3. How did Mourad justify keeping the stolen horse?
Q4. Everybody including the sparrows mourned the grandmother's death. Elaborate.
Q5. The sea appears to have changed less in comparison to the three girls who enjoyed the sea holiday. Comment.

B)LONG QUESTIONS

Q6. The poet has paid a tribute to her mother. Similar instances can be seen in "The Portrait of a Lady". This made you think that writing about a loved one is much better than building their statues or drawing their portraits. Comment.
Q7. "We had been famous for our honesty for something like eleven centuries," the narrator describes his family in these words. Do you think it is possible to remain honest in modern times?
Q8.Write a comprehensive account of your relationship with your grandparents as presented in the story "**The Portrait of a Lady"**
Q9.Human life is short-lived in contrast to nature. Comment on the statement in the light of the poem "**A Photograph"**
Q10.Can the act of stealing be ever justified? Give your views in the context of reading of "**The Summer of the Beautiful White Horse"**

Task 6: Vocabulary through Literature

Q11.Pick **15 new words** from your English textbooks (Hornbill,Snapshot) Choose only the words that start with the first letter of your name. **Example**: If your name begins with **A** choose words like Abandon, Accurate,etc. **For each word, write: •Meaning •One sentence**

Task7:-Newspaper Classified Ads Collection

Q12. Read any one **English newspaper daily** and cut out the **classified ads (2 each)** from it and paste it in your English notebook.

- **For sale**
- **Situation wanted**
- **Lost and found**
- **Situation vacant**
- **Tour and travels**
- **Matrimonial**

Instructions:-
1.Write the **heading** of each category on the top of the page.
2.**Paste two ads** under each heading.
3.Draw a **simple box** around each ad.
4.Paste the ads neatly in your English notebook under proper headings.

BHARTIYA VIDYA MANDIR SEN SEC SCHOOL

SEC 39,CHD ROAD,LUDHIANA

CLASS XI

SUBJECT : POLITICAL SCIENCE

Academic Session: 2026-27

This project is designed to encourage research, critical thinking, and a deeper understanding of the Indian political landscape. Please find your assigned topic based on your Roll Number below.

Project Assignments by Roll Number

Roll No.	Topic	Core Focus
1 – 4	**The Making of the Constitution**	Evolution, the Constituent Assembly, and key influences.
5 – 8	**Elections in India**	The electoral process, role of the ECI, and recent reforms.
9 – 12	**Working of the Indian Judiciary**	Structure of courts, Judicial Review, and Judicial Activism.
13 – 16	**Social Justice & Ethics**	Analysis of ethical standards and justice in Indian politics.
17 – 20	**Human Rights Act**	The 1993 Act, NHRC's role, and ground-level impact.
21 – 23	**Political Impact on Legislation**	How party politics and ideologies shape the laws of the land.

Guidelines for Each Topic

1. Making of the Constitution (Roll No. 1-4)

- Trace the timeline from the **Cabinet Mission Plan** to Jan 26, 1950.
- Highlight the contribution of key figures (Dr. B.R. Ambedkar, B.N. Rau, etc.).
- Include a section on the "Borrowed Features" from other global constitutions.

2. Elections in India (Roll No. 5-8)

- Explain the **First Past the Post (FPTP)** system vs. Proportional Representation.
- Discuss the importance of the **Model Code of Conduct**.
- Evaluate the impact of technology (EVMs and VVPATs) on transparency.

3. Working of the Indian Judiciary System (Roll No. 9-12)

- Create a flowchart of the **Integrated Judiciary**
- Case Study: Research one landmark judgment (e.g., *Kesavananda Bharati* case) regarding the Basic Structure Doctrine.
- Briefly explain Public Interest Litigation (PIL).

4. Social Justice: Ethics in Politics (Roll No. 13-16)

- Define "Social Justice" in the context of the Indian Preamble.
- **Critical Debate:** Discuss the impact of "Criminalization of Politics" on ethical governance.
- Suggest three reforms that could improve the ethical standard of candidates.

5. Human Rights Act & Gratification (Roll No. 17-20)

- Analyze the **Protection of Human Rights Act, 1993**.
- Examine the powers and limitations of the **National Human Rights Commission (NHRC)**.
- Discuss a real-world scenario where the Act provided "gratification" (justice/relief) to a marginalized group.

6. Political Impact on Indian Legislation (Roll No. 21-23)

- Explain how a Bill becomes an Act.
- Analyze how a "Coalition Government" vs. a "Majority Government" affects the speed and nature of law-making.
- Discuss the role of the Opposition in the legislative process.

General Instructions & Submission Criteria

1. **Format:** The project must be handwritten on A4 size sheets (Interleaf preferred for diagrams/pictures).
2. **Length:** 15–20 pages, including the cover page, index, and bibliography.
3. **Visuals:** Use flowcharts, newspaper clippings, and relevant photographs to support your research.
4. **Originality:** Avoid "copy-pasting" from the internet. Use your textbook (*Indian Constitution at Work* and *Political Theory*) as primary sources, supplemented by news articles.
5. **Assessment:** You will be graded on:
    - Content Accuracy (4 Marks)
    - Presentation & Creativity (3 Marks)
    - Viva-voce/Understanding (3 Marks)

Submission Date: First Monday after the school reopens.

HOLIDAYS WORK CLASS - XI DANCE
Instructions: Complete all work in a separate notebook/file. Write neatly with proper headings. Add drawings/pictures wherever possible. Learn and practice all practical portions regularly.
Part A – Theory Work 1. Brief History of Indian Dance Write about: Origin of Indian dance Development during ancient period Contribution of temples Development in medieval and modern periods
. Origin from Vedic Period Write short notes on: Dance in Vedas Importance of dance in rituals and worship Relation of music and dance in ancient India
Themes from Indian Epics Write short notes on: Ramayana Mahabharata Bhagavata Purana Gita Govinda Mention their importance in classical dance. Gat Bhav Stories Write story summary and explain dance presentation of: Kaliya Daman Govardhan Leela Panghat

Draupadi Cheer Haran

Makhan Chori

Marich Vadh

Bhasmasur Vadh

Madan Dahan

Creative Activity

Project Work

Make any one:

Poster on Indian Classical Dances

Chart of Teentaal

Scrapbook on Kathak

Drawing of Krishna Leela scenes

Practical Practice

Daily Practice (Minimum 20 Minutes)

Practice:

Tatkaar

Hastak

Chakkars

Teentaal counting

One Gat Bhav story

HOLIDAYS HOMEWORK (2026-27)
XI ECONOMICS (030)

1. Calculate Arithmetic mean using Short cut method.

Wages	10	20	30	40	50
No. of Workers	4	5	3	2	1

2. Calculate Average using Step deviation method.

Class interval	5-15	15-25	25-35	35-45
Frequency	8	12	15	9

3. Calculate weighted mean of the following distribution

Items	12	29	14	41
Weights	6	4	5	2

4. Average marks of three Sections of Class XI is given below. Calculate combined mean from the data.

Section	Mean Marks	No. of Students
A	75	50
B	60	60
C	55	50

5. Calculate Median & Mode of the following distribution.

Variable(X)	10	11	12	13	14	15	16
Frequency (F)	8	15	25	20	12	10	5

6. Calculate Median & Mode from the following table

Mid value	5	15	25	35	45
Frequency	4	8	16	7	5

7. Calculate Mode for the following table

Values	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50
Frequency	11	18	34	48	60

8. Locate the median graphically(Less than ogive & More than ogive) from the following data

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	10	20	30	20	10

9. Find Arithmetic mean from the following data using Step deviation method

Temperature	-40 to -30	-30 to -20	-20 to -10	-10 to 0	10 to 20	20 to 30	30 to 40
No. of days	10	28	30	42	65	180	10

10. Find Average bu using (a) Direct method (b)Assumed mean method(c)Step deviation method

Workers	A	B	C	D	E	F	G	H	I	J
Daily income	120	150	180	200	250	300	220	350	370	260

11. Elaborate how" Scarcity is the root of all Economic problems".
12. What is Marginal rate of transformation? Explain with the help of numerical example.
13. Lot of people died and many factories are destroyed because of severe earthquake in a country. How will it affect the country's PPC?
14. Giving reasons, identify which of the following are the subject matter of microeconomics or macroeconomics
(a) National income
(b) Price determination of a commodity
(c) General price level
15. Assuming that no resources is equally efficient in production of all goods, name the curve which shows production potential of the economy .explain giving reason its properties.
16. Explain the problem for whom to produce with the help of suitable example.
17. Difference between positive economics and normative Economics.
18. Which of the following statements are true or false? Give reasons.
(a) An economy always produces on but not inside the PP Curve.
(b) Massive unemployment shift the PP curve to the left.
(c) Anyone economy cannot operate on any point outside the curve.
(d) Microeconomics is be study of the behavior of the economy as a whole.
19. Explain the meaning of opportunity cost with the help of example.

20. Give merits and demerits of mean.
21. What are the objectives of calculating the measures of Central tendency?

1. Case study

Positive economics and normative economics are two standard branches of modern economics. Positive economics describes and explains various economic phenomena, while normative economics focuses on the value of economic fairness or what the economy should be.

To put it simply, positive economics is called the 'what is' branch of economics. Normative economics, on the other hand, is considered the branch of economics that tries to determine people's desirability to different economic programs and conditions by asking what 'should be' or what 'ought to be'

Positive economics relies on objective data analysis, relevant facts, and associated figures. It attempts to establish cause-and-effect relationship or behavioral associations which can help ascertain and test the development of economic theories.

(a) "The price of Petrol was 230 per liter on 1st January 2023". Is it Positive Economics or Normative Economics? Explain.
(b) "The price of Petrol should be below₹100 per liter". Is it Positive Economics or Normative Economics? Explain.

2. Case study

An economy may be rich or poor, may be developed or underdeveloped but every economy faces three central problems: What to produce? How to produce? For whom to produce? First problem is related to choose goods or services for production so that maximum wants can be satisfied. This problem arise because resources are scarce in comparison of wants. Second problem is concerned with the choice of technique of production. That technique is preferred which can provide more production at less cost. Third problem is related to choosing the segment for which production of goods and services to be done.

(a) Which economy faces three central problems?
(b) Which problem focuses on the method of production for more output at less input?
(c) Explain central problem 'For whom to produce'?

PROJECT WORK 20 Marks

The project work should be hand written on hard colored Plain sheet of 30 pages.
1. Page 1 cover page including topic of the Project , submitted to-name of teacher, submitted by-name of student
2. Page 2 Acknowledgement
3. Page3 Certificate
4. Page4 index(sub topic along with page no)
5. Page5-28 subject matter along with pictures, maps & graphs

Holidays Homework Session (2026-27)

XI - SOCIOLOGY (039)

A) Project undertaken during the academic year at school level-

Project Topics - (Choose any ONE topic of your own choice)

1) Caste System in India. **2) Rural versus Urban Society**

3) Social Groups and Their Types **4) Culture and Socialization**

Points to be noted for Sociology Project-

1) The Project will be hand written and presented in a creative manner.

2) Kindly adhere to the given TIME limit. Project work should be completed during summer vacations.

3) Headings should be underlined .

4) Originality & creativity should be there.

5) Presentation of content should be appropriate and arranged in a systematic manner .

6)Handmade creativity ,Colourful photos(can be taken from newspaper & magazines also),flow charts , diagrams, pictures according to the content should be used.

7) Project should be covered within 20 to 30 pages.

Steps to be followed for the Project under the given guidelines of CBSE are as follow-

1. Introduction

2. Statement of Purpose
3. Research Question

4. Methodology
5. Data Analysis.

6. Conclusion

Guidelines for Sociology Project Work: 20 Marks

One Project to be done throughout the session, as per the existing scheme.

1. **Steps involved in the conduct of the project:** Students may work upon the following lines as a suggested flow chart:

B) COMPETENCY BASED:- PASSAGE BASED QUESTIONS :

GENERAL INSTRUCTIONS -

1) Kindly prefer Sociology Fair Notebooks for attempting PASSAGE- BASED QUESTIONS and Assertion- Reason Based Questions .

2) Kindly submit your SOCIOLOGY holidays homework immediately after the completion of Summer Vacations.

Chapter 1: Sociology and Society (Part-A)

Passage 1: The Sociological Imagination

"The sociological imagination enables us to grasp history and biography and the relations between the two within society... Perhaps the most fruitful distinction with which the sociological imagination works is between 'the personal troubles of the milieu' and 'the public issues of social structure'... Troubles occur within the character of the individual and within the range of his immediate relations with others... Issues have to do with matters that transcend these local environments of the individual and the range of his inner life.

Questions:

1) Define 'Sociological Imagination' as described in the passage.

2) What is the difference between 'troubles' and 'issues'?

3) Give an example of how a change in the history of a society affects an individual's life according to the text.

Passage 2: Sociology vs. Common Sense

"Common sense explanations are generally based on what may be called ‘naturalistic’ and/or individualistic explanation... A naturalistic explanation for behaviour rests on the assumption that one can really identify ‘natural’ reasons for behaviour... Sociology thus breaks away from both common sense observations and ideas as well as from philosophical thought... Common sense is unreflective since it does not question its own origins."

Questions:

1) What is a 'naturalistic' explanation for behavior?

2) Why is common sense described as 'unreflective' in the passage?

3) How does sociology differ from common sense in its approach?

Passage 3: The Material Making of Sociology

"The Industrial Revolution was based upon a new, dynamic form of economic activity — capitalism... Entrepreneurs engaged in the sustained, systematic pursuit of profit. The markets acted as the key instrument of productive life. And goods, services and labour became commodities whose use was determined by rational calculation."

Questions :

1) What was the central economic driving force behind the Industrial Revolution?

2) How did the status of 'labour' change under the system of capitalism?

3) Which country was the center of the Industrial Revolution?

Passage 4:

"The problem of choosing subjects in the senior secondary school is a source of personal worry for the individual student. That this is a broader public issue, affecting students as a collective entity is self-evident. One of the tasks of sociology is to unravel the connection between a personal problem and a public issue."

Questions:

1) What is a common source of "personal worry" for senior secondary students mentioned in the text?

2) Why is the choice of subjects considered a "public issue"?

3) According to the passage, what is one of the main tasks of sociology?

Chapter 2: Terms, Concepts and Their Use in Sociology (Part- A)

Passage 1:

"Secondary groups are relatively large in size, maintain formal and impersonal relationships. The primary groups are person-oriented, whereas the secondary groups are goal oriented. Schools, government offices, hospitals, students' association etc. are examples of secondary groups."

Questions:

1) What is the primary characteristic of a 'secondary group'?

2) How do primary groups differ from secondary groups in terms of their orientation ?

3) Identify three examples of secondary groups provided in the text.

Passage 2 : Community vs. Society

"The term ‘community’ refers to human relationships that are highly personal, intimate and enduring... ‘Society’ or ‘association’ refers to everything opposite of ‘community’, in particular the apparently impersonal, superficial and transitory relationships of modern urban life. Commerce and industry require a more calculating, rational and self-interesting approach to one’s dealings with others."

Questions:

1) Define 'community' according to the passage.

2) What kind of relationships characterize modern urban 'society'?

3) What shift in human interaction occurs due to commerce and industry?

C) ASSERTION- REASON BASED QUESTIONS -

OPTIONS -

(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.

Chapter 1: Sociology and Society

1. Assertion (A): The sociological imagination enables us to grasp history and biography and the relations between the two within society.

Reason (R): Individual troubles and public issues are unrelated concepts in the study of sociology.

2 .Assertion (A): Sociology is a scientific discipline.

Reason (R): Sociology is bound by scientific canons of procedure and its statements must be arrived at through rules of evidence.

3. Assertion (A): Common sense is often described as "unreflective."

Reason (R): Common sense does not typically question its own origins or ask "Why do I hold this view?"

4. Assertion (A): The Industrial Revolution led to a massive increase in urbanization.

Reason (R): In the industrial era, factory production replaced cottage industries, drawing people from rural areas to new industrial centers.

Chapter 2: Terms, Concepts and Their Use in Sociology

5. Assertion (A): Secondary groups are characterized by impersonal and formal relationships.

Reason (R): Secondary groups, such as a government office or a hospital, are primarily goal-oriented rather than person-oriented.

6. Assertion (A): Every individual in a society occupies a "status."

Reason (R): Status is a position in a social system, while "role" is the dynamic or behavioral aspect of that status.

7. Assertion (A): An "Achieved Status" is one that is assigned to a person at birth.

Reason (R): Ascribed status is based on factors like caste, race, or age, which are beyond an individual's control.

8. Assertion (A): Social stratification refers to the structural inequalities between different groups of people.

Reason (R): In all societies, social resources like wealth, power, and prestige are distributed equally.

9. Assertion (A): Peer groups are considered primary groups.

Reason (R): Peer groups usually consist of individuals of similar age or professional standing who share intimate, face-to-face interactions.

10. Assertion (A): Social control is necessary to maintain order in society.

Reason (R): Social control refers to the various means used by a society to bring its unruly members back into line.

Xl- PHYSICS

A-Conversion of one system of unit into another.

1- Find the value of 100 J on a system which has 20 cm, 250g and half minute as fundamental units of length, mass and time.
2- Convert a power of one mega watt on a system whose fundamental units are 10kg, 1 cm and 1 minute.
3- When one meter, one kg and one minute are taken as fundamental units, the magnitude of a force is 36 units. What is the value of this force on cgs system.

B-Checking the correctness of formulae

4- on the basis of dimensional arguments, rule out the wrong relation for kinetic energy.

(i) $\frac{3}{16}\, mv^2$. (ii) $\frac{1}{2}\, mv^2 + ma$

5-Check the correctness of the equation

$$Fs = \frac{1}{2}\, mv^2 - \frac{1}{2}\, mu^2$$

6- The rate of flow (V) of a liquid flowing through a pipe of radius r and pressure gradient (p/l) is given by Poiseuille's equation $V = \pi/8\ p\ r^4/\eta l$. Check the dimensional correctness of the relation.

Check by the method of dimensions whether the following equations are correct:

(i) $E = mc^2$
(ii) $T = 2\pi\sqrt{(l/g)}$
(iii) $v = \sqrt{(P/\rho)}$ Where v = velocity of sound, P = pressure and ρ = density of medium.
(iv) $\nu = (1/2l)\ \sqrt{(T/m')}$ Where ν = frequency of vibration, l = length of the string and m′ = mass per unit length.

C-DERIVATION OF FORMULAE:

7- The critical angular velocity ω of a cylinder inside another cylinder containing a liquid at which turbulence occurs depends on viscosity η, density ρ and distance between walls of the cylinder d. Obtain and expression for ω using the method of dimensions.

8- Experiments show that frequency (n) of a tuning fork depends on length (l) of the prong, density (d) and young modulus (Y) of its material. On the basis of dimensional analysis, derive an expression for frequency of tuning fork.

9- Calculate the dimensions of linear momentum and surface tension in terms of velocity (v) density ρ and frequency ν as fundamental units.

The frequency 'ν' of vibration of a stretched string depends upon:

(i) Its length l
(ii) Its mass per unit length m′ and
(iii) The tension T in the string

Obtain dimensionally an expression for frequency ν.

10- The velocity of sound waves 'v' through a medium may be assumed to depend on:

(i) The density of medium 'd' and
(ii) The modulus of elasticity 'E'.

Deduce by the method of dimensions the formula for the velocity of sound. Take dimensional constant K = 1.

11- The critical angular velocity ωc of a cylinder inside another cylinder containing a liquid at which turbulence occurs depends on viscosity η, density ρ and the distance d between the walls of the cylinder. Find the expression for ωc.

12- The frequency ν of an oscillating drop may depend upon radius r of the drop, density ρ of the liquid and surface tension S of the liquid. Establish an expression for ν dimensionally.

D-SIGNIFICANT FIGURES AND ROUNDING OFF:

13- State the number of significant figures in the following :

(i) 0.0070300
(ii) 2.73×10^{-4} kg
(iii) 1.0850 m
(iv) 5.097×10^{3} s

14- Subtract 3.2×10^{-6} from 4.7×10^{-4} with due regard to significant.

15- Solve with due regard to significant figures:

i. $(2.91 \times 0.3842)/0.080$
ii. $(2.51 \times 1.81)/0.4463$
iii. $1.567 + 0.958 - 0.27$

E- MISCELLANEOUS NUMERICALS

16- If density p , acceleration due to gravity g and frequency f are the basic quantities, find the dimensions of force.

17- In the expression $P = E^2 l^2 m^{-5} G^{-2}$; E, m and G denote energy, mass angular momentum and gravitational constant respectively. Show that P is a dimensional quantity.

18- Show that angular momentum has the same physical unit as the Planck's constant h which is given by the relation $E = h\nu$

19- The Van der Waal's equation for a gas is $(P + a/V^2)(V - b) = RT$ Determine the dimensions of a and b. Hence write the SI units of a and b.

20- When white light travels through glass, the refractive index of glass (μ = velocity of light in air / velocity of light in glass) is found to vary with wavelength as $\mu = A + B/\lambda^2$.Using the principle of homogeneity of dimension, find the SI units in which the constants A and B must be expressed.

21- On a 60 km track, a train travels the first 30 km with a uniform speed of 30 km h^{-1}. How fast must the train travel next 30 km so as to average 40 km h^{-1} for the entire trip?

22- A body covers one third of its journey with speed 'u', next one third with speed 'v' and the last one-third with speed 'w'. Calculate the average speed of the body during the entire journey.

23- A body travelling along a straight line traversed one-half of the total distance with a velocity v_0. The remaining part of the distance was covered with a velocity v_1 for half of the time and with velocity v_2 for the other half of the time. Find the mean velocity averaged over the whole time of motion.

24-The position of an object moving along x-axis is given by $X = a + bt^2$ Where a = 8.5 m, b = 2.5 m s^{-2} and t is measured in seconds. What is its velocity at t = 0 s and t = 2.0 s? What is the average velocity between t = 2.0 s and t = 4.0 s?

25- The acceleration of a particle in m s^{-2} is given by $A = 3t^2 + 2t + 2$, Where time t is in second. If the particle starts with a velocity v = 2 m s^{-1} at t = 0,Then find the velocity at the end of 2 s.

26-A burglar's car had a start with an acceleration of 2 m s^{-2}. A police vigilant party comes after 5 seconds and continued to chase the burglar's car with a uniform velocity of 20 m s^{-1}. Find the time in which the police van overtakes the burglar's car.

27- A body starting from rest accelerates uniformly at the rate of 10 cm s^{-2} and retards uniformly at the rate of 20 cm s^{-2}. Find the least time in which it can complete the journey of 5 km if the maximum velocity attained by the body is 72 km h^{-1}.

28- A stone falls from a cliff and travels 24.5 m in the last second before it reaches the ground at the foot of the cliff. Find the height of the cliff.

29- A body is dropped from rest at a height of 150 m, and simultaneously, another body is dropped from rest from a point 100 m above the ground. What is their difference in height after they have fallen (i) 2 s (ii) 3 s. How does the difference vary with time?

30- A parachutist bails out from an aeroplane and after dropping a distance of 40 m, he opens the parachute and decelerates at 2 m s^{-2}. If he reaches the ground with a speed of 2 m s^{-1}, how long is he in the air? At what height did he bail out from the plane?

31- You drive a car at a speed of 70 km/h in a straight road for 8.4 km, and then the car runs out of petrol. You walk for 30 minute to reach a petrol pump at a distance of 2 km. The average velocity from the beginning of your drive till you reach the petrol pump is

(a) 16.8 km/h (b) 35 km/h (c) 64 km/h (d) 18.6 km/h

32- The acceleration experienced by a moving motorboat, after its engine is cut-off, is given by $dv/dt = -kv^3$ Where k is constant. If v_0 is the magnitude of velocity at cut-off, the magnitude of the velocity at a time t after the cut-off is

(a) $V_0/2$ (b) V_0 (c)$\sqrt{[v_0^2/(2v_0^2kt + 1)]}$. (d) V_0e^{-kt}

33-A train started from rest from a station and accelerated at 2 m/s^2 for 10s . Then, it ran at constant speed for 30s and thereafter it decelerated at 4m/s^2 until it stopped at the next station. The distance between two stations is

(a) 650m (b) 700 m (c) 750m (d) 800 m

34- A ball is dropped from a high rise platform at t=0 starting from rest. After 6s another ball is thrown downwards from the same platform with a speed v. The two balls meet at t=18 s. The value of v? (Take g=10m/s^2)

(a) 74 m/s. (b) 64 m/s. (c) 84 m/s (d) 94 m/s

35- The water drops fall at regular intervals from a tap 5 m above the ground. The third drop is leaving the tap at an instant the first drop touches the ground. How far above the ground is the second drop at that instant?

(a) 3.75 m (b) 4.00 m (c) 1.25 m. (d) 2.50 m

36- A helicopter rises from rest on the ground vertically upwards with constant acceleration g. A food packet is dropped from the helicopter when it is at a height h. The time taken by the packet to reach the ground is close to (g is the acceleration due to gravity)

(a) $t = 3.4 \sqrt{(h/g)}$

(b) $t = 1.8 \sqrt{(h/g)}$

(c) $t = \sqrt{(2h/3g)}$

(d) $t = (2/3) \sqrt{(h/g)}$

NOTE:- All students are instructed to prepare:

One Project File on the topic allotted by the subject teacher.

One Practical File according to the instructions .

BHARTIYA VIDYA MANDIR SENIOR SECONDARY SCHOOL, LUDHIANA

HOLIDAYS HOMEWORK 2026-27 XI COMMERCE

PRACTICE ASSIGNMENT

ACCOUNTANCY

General Instructions:

- **Complete all holiday homework neatly and on time.**
- **Mention Name, Class, Section and Roll Number on all work.**
- **Do the work independently and avoid copying.**
- **Maintain proper handwriting and formats.**
- **Submit the homework on the reopening day without fail.**

Q1 – Mukesh, a businessman, had paid the house rent where he lives from the business. Is this a business transaction? Give reason.

Q2- What are compound journal entries. Give an examples.

Q3- What is the difference between cash discount and trade discount?

Q4- State whether the following accounts will indicate a debit or credit balance:
(i) Drawing
(ii) Advance Rent Received
(iii) Bad Debts
(iv) Sales Return
(v) Furniture
(vi) Bank Overdraft

Q5- Give journal entries for the following transanctions along with ledger of Ram.

Date 2026	**Transactions**
Jan 1	Started business with cash ₹1, 50,000.
Jan 2	Cash purchases ₹ 52,000
Jan 3	Sold goods to Ram ₹ 10,000
Jan 6	Returned Defective goods by Ram ₹ 2,000
Jan 8	Paid rent ₹ 1800
Jan 10	Withdraw from bank for house rent ₹ 6,000.

Q6- From the following Trial Balance as on 31st March 2010, prepare Trading and Profit &loss Account.

Head of Accounts	₹	Head of Accounts	₹
Cash at Bank	6,000	Capital	50,000
Cash in hand	900	Sales	1,77,000
Advertisement	2,000	Creditors	25,000
Rent, Rates and Taxes	10,000	Rent Received	525
Carriage on sales	1,200	Purchase	750

Carriage on purchase Manufacturing wages Salaries Sundry debtors Bank charges Discount Opening stock Returns Purchases Plant and machinery Loan to Ram	750 10,000 6,000 45,000 75 350 30,000 1,000 60,000 60,000 20,000	Returns	
	2,53,275		2,53,275

Stock in hand at the end Rs.35, 000.

Q7- Journalise the following transactions:

Date 2026	**Transactions**
April 1	Paid to X ₹10,000 in full settlement of the amount of ₹10,500.
April 2	Received ₹5,000 from Y and ₹7,000 from Z.
April 3	Received ₹7,000 from A after allowing him discount of ₹500.
April 5	Paid wages ₹2,500, rent ₹1,500 and office expenses ₹3,000.
April 9	A running business is purchased with following assets and liabilities: Cash ₹5,000, machinery ₹11,000, Furniture ₹3,000, Creditors ₹6,000.

CASE BASED QUESTIONS

Q8- Mr. Roop started business of buying and selling of Readymade Garments with ₹ 10,00,000 as an initial investment. Of which he paid ₹ 2,00,000 for furniture, ₹ 3,00,000 for buying ladies and kids garments for resale purpose. He employed two salesman and one clerk. At the end of the month be paid ₹ 25,000 as their salaries. Out of the garments purchased he sold some garments for ₹ 2,50,000 for cash and balance to Mr. Yogesh on credit for ₹1,00,000. In the next month a fire broke out in his office and furniture costing ₹ 45,000 was last due to fire that was uninsured. He also sold the delivery van of Book value ₹3,00,000 for ₹ 3,05,000. During next month he purchased some more garments from Mr. Mehta for ₹ 55,000 which are still unsold.

From the above, answer the following:

(i) What is the amount of Capital with which Mr. Roop started business?

(ii) Who is the creditor and state the amount payable to him

(iii) What is the value of goods purchased?

(iv) How much cash is left with Mr. Roop, at present?

MATHEMATICS

CLASS XI

SETS

1. Two finite sets have m and n elements. The total number of subsets of the first set is 56 more than the total number of subsets of the second set. The values of m and n are
(a) m = 7, n = 6 (b) m = 6, n = 3
(c) m = 5, n = 1 (d) m = 8, n=7

2. If X and Y are two sets, then X ∩ (Y ∪ X)' equals
(a) X (b) Y
(c) ϕ (d) none of these

3. Let A = {x : x is a multiple of 3} and B = {x : x is a multiple of 5}. Then, A ∩ B is given by
(a) {3, 6, 9 , ...} (b) {5, 10, 15, 20, …}
(c) {15, 30, 45, …} (d) none of these

4. Let A and B be two non-empty subsets of a set X such that A is not a subset of B. Then,
(a) A is a subset of complement of B
(b) B is a subset of A
(c) A and B are disjoint
(d) A and the complement of B are non-disjoint.

5. If a N = {a x : x ∈ N} and b N ∩ c N = d N, where b, c ∈ N then
(a) d = bc (b) c = bd (c) b = cd (d) None of these

6. If $A = \{1, 3, 5, 7, 9, 11, 13, 15, 17\}, B = \{2, 4, \ldots, 18\}$ and N is the universal set, then $A' \cup ((A \cup B) \cap B')$ is
(a) A (b) N (c) B (d) ϕ

7. If A and B are two given sets, then $A \cap (A \cap B)^C$ is equal to
(a) A (b) B (c) ϕ (d) $A \cap B^C$

8. If A = {x : x is a multiple of 3} and, B = {x : x is a multiple of 5}, then A – B is
(a) $\overline{A} \cap B$ (b) $A \cap \overline{B}$ (c) $\overline{A} \cap \overline{B}$ (D) $\overline{A \cap B}$

9. If A = {1, 2, 3, 4, 5}, B = {2, 4, 6} and C = {3, 4, 6}, then $(A \cup B) \cap C$ is
(a) {3, 4, 6} (b) {1, 2, 3} (c) {1, 4, 3} (d) none of these

10. If A is a finite set having n elements, then P (A) has
(a) 2n elements (b) 2^n elements
(c) n elements (d) none of these

11. Using properties of sets.
(i) $(A - B) \cup B = A \cup B$
(ii) $(A - B) \cup A = A$

(iii) $(A - B) \cap B = \emptyset$
(iv) $(A - B) \cap A = A \cap B'$
(v) $A \cup (B - A) = A \cup B$

12. If $A \subset B$. Then show that $C - B \subset C - A$.

13. Draw the venn diagram for
(a) $(A \cup B)'$ (b) $A' \cap B'$ (c) $(A - B)'$
(d) $(B - A)$ (e) $A' \cup B'$ (f) $(A \cap B')$

14. If $A \cup B = A \cap B$ then show that A = B

15. If $A \cup B = A \cup C$ & $A \cap B = A \cap C$ then show that B = C.

LINEAR INEQUALITIES

1. If $\frac{|x-2|}{x-2} > 0$, then :
(a) $x \in [2, \infty)$ (b) $x \in (2, \infty)$
(c) $x \in (-\infty, 2)$ (d) $x \in (-\infty, 2]$

2. The length of a rectangle is three times the breadth. If the minimum perimeter of the rectangle is 160 cm, then :
(a) breadth > 20 cm (b) length < 20 cm
(c) breadth $\geq$ 20 cm (d) length $\leq$ 20 cm

3. If $|x + 3| > 10$, then :
(a) $x \in (-13, 7)$ (b) $x \in (-13, 7]$
(c) $x \in (-\infty, -13] \cup [7, \infty)$ (d) $x \in (-\infty, -13] \cup [3, \infty)$

4. If $-3x + 17 < -13$, then :
(a) $x \in (10, \infty)$ (b) $x \in [10, \infty)$
(c) $x \in (-\infty, 10]$ (d) $x \in [-10, 10)$

5. If $|x + 2| \leq 9$, then :
(a) $x \in -7, 11)$ (b) $x \in [-11, 7]$
(c) $x \in (-\infty, -7) \cup (11, \infty)$ (d) $x \in (-\infty, -7) \cup [11, \infty)$.

6. If x is a real number such that $|x| < 3$, then :
(a) $-3 \leq x \leq 3$ (b) $-3 < x < 3$
(c) $x \leq 3$ (d) $x \geq 3$

7. If x and a are real numbers such that a > 0 and |x| > a, then :
(a) $x \in (-a, a)$ (b) $x \in (-a, a]$
(c) $x \in (-\infty, -a) \cup (a, \infty)$ (d) $x \in (-a, \infty)$

8. The solution set of $-5x + 25 \leq 0$ is :
(a) $(5, \infty)$ (b) $(-5, \infty)$
(c) $(-\infty, 5)$ (d) $(-\infty, -5)$

9. The solution set of $4x - 7 < 3 - x$ is :

(a) $(-2, \infty)$ (b) $(-\infty, 2)$

(c) $(-2,\ 2)$ (d) $(2, \infty)$

10. The solution set of $x + 3 > 0$, $2x < 14$ is :

(a) $[-3, 7]$ (b) $(-3, -7)$

(c) $(-3, 7)$ (d) $[3, -7]$

11. If $|x + 2| \leq 9$, then :

(a) $x \in [-11, 7]$ (b) $x \in [-7, 11]$

(c) $x \in [11, -7]$ (d) $x \in [-7, -11]$

12. If $\frac{|x-3|}{x-3} \geq 0$, then :

(a) $x \in [3, \infty)$ (b) $x \in (3, \infty)$

(c) $x \in (-\infty, 3)$ (d) $x \in (-\infty, 3]$

13. If $|x + 3| \geq 10$, then :

(a) $x \in (-13, 7)$ (b) $(-13, 7]$

(c) $x \in (-\infty, -13] \cup [7, \infty)$ (d) $x \in (-\infty, -13) \cup (7, \infty)$.

14. The linear inequality, which represents the solution set as given in the following figure is:

(a) $|x| > 3$ (b) $|x| \geq 3$

(c) $|x| < 3$ (d) $|x| \leq 3$

15. If $|z + 4| \leq 9$, then the maximum value of $|z + 1|$ is:

(a) 10 (b) 6

(c) 0 (d) 4

16. Solve the system of inequations :

$$\frac{x - 4}{x + 4} > 1$$

17. Solve the system of inequations :

$$x - 3 > 0, 2x + 9 > 5, 3x + 4 < -5.$$

18. Find all pairs of consecutive odd natural numbers both of which are smaller than 10 such that then sum is more than 11.

19. A man wants to cut three lengths from a single piece of board of length 91 cm. The second length is to be 3 cm longer than the shortest and third length is to be twice as long as the shortest. What are possible lengths for the shortest board if the third piece is to be at least 5 cm longer than the second?

20. How many litres of water will have to be added to 1125 litres of 45% solution of acid so that the resulting mixture will contain more than 25% but less than 30% acid content?

COMPLEX NUMBER

1. $i^{2n+1} + i^{2n+2} + i^{2n+3} + i^{2n+4}$ is
(a) 1 (b) i (c) 0 (d) None of these

2. Additive inverse of $-i$
(a) i (b) $-i$ (c) 1 (d) None of these

3. If Z is purely real
(a) Re (z) = 0 (b) Re (z) > 0 (b) Im (z) = 0 (d) Im (z) < 0

4. $|z_1 z_2|$ is equal to
(a) $z_1 \, . \, z_2$ (b) $\bar{z_1} \, . \, \bar{z_2}$ (c) $|z_1| \, |z_2|$ (d) $\sqrt{z_1 \, . \, z_2}$

5. If a complex number lies in the third quadrant, then its conjugate lies in the
(a) 1st quadrant (b) IInd quadrant (c) 3rd quadrant (d) 4th quadrant

6. If $(3 + i)(3 + 2i)(3 + 3i) \ldots . (3 + ni) + x + iy$ then $10.13.18\ldots (9 + n^2)$ is equal to
(a) $x^2 + y^2$ (b) $\sqrt{x^2 + y^2}$ (c) x (d) y

7. Where does z lies in plane, if $\left|\frac{z-5i}{z+5i}\right| = 1$?
(a) x-axis (b) y-axis (c) origin (d) None of these

8. Find real θ such that $\frac{3+2i\sin\theta}{1-2i\sin\theta}$ is purely real.

9. Find the real numbers x and y if $(x - iy)(3 + 5i)$ is the conjugate of $-6 - 24i$.

10. If $(x + iy)^3 = u + iv$, then show that $\frac{u}{x} + \frac{v}{y} = 4(x^2 - y^2)$.

11. Find the real values of x and y, if
$\frac{(1+i)x-2i}{3+i} + \frac{(2-3i)y+i}{3-i} = i$

12. For the conjugates of the following complex numbers :
$\frac{(3-2i)(2+3i)}{(1+2i)(2-i)}$

13. If $z_1 = 2 - i, z_2 = 1 + i$, find $\left|\frac{z_1+z_2+1}{z_1+z_2+i}\right|$.

14. Find the smallest positive integer value of n for which $\frac{(1+i)^n}{(1-i)^{n-2}}$ is a real number.

15. If z_1 is a complex number other than -1 such that $|z_1| = 1$ and $z_2 = \frac{z_1-1}{z_1+1}$, then show that the real part of z_2 is zero.

CLASS – XI Painting

Holidays Homework

Practical work:

1. Draw 1 Still life with drapery (at least three objects) with oil pastel colors.

2. Make 1 Landscape on:

- Village scene.

3. Make 1coloured Composition based on:

- Floral Theme
  Or
- Dance theme.

4. Create any 1 Painting inspired by Indian folk art styles:

- Madhubani
  or
- Warli Art

(Make all sheets on A2 Size Sheet)

❖ Write 4-5 lines about the selected folk art form.

Theory:

❖ Revise Chapter Pre-Historic rock painting and Indus valley civilization.

❖ Learn Bullets to be remember from your book and also make a table chart of the same

श्री शिव रुद्राष्टकम्

नमामीशमीशान निर्वाणरूपं विभुं व्यापकं ब्रह्म वेदस्वरूपम्। निजं निर्गुणं निर्विकल्पं निरीहं,चिदाकाशमाकाशवासं भजेऽहम्॥
निराकारमोङ्कारमूलं तुरीयं, गिरा ग्यान गोतीतमीशं गिरीशम्।करालं महाकाल कालं कृपालं, गुणागार संसारपारं नतोऽहम्॥2॥
तुषाराद्रि संकाश गौरं गभीरं, मनोभूत कोटि प्रभा श्री शरीरम्। स्फुरन्मौलि कल्लोलिनी चारु गंगा,लसद्भालबालेन्दु कंठे भुजंगा॥3॥
चलत्कुंडलं भ्रू सुनेत्रं विशालं, प्रसन्राननं नीलकंठं दयालम्। मृगाधीशचर्माम्बरं मुंडमालं, प्रियं शंकरं सर्वनाथं भजामि ॥4॥
प्रचंडं प्रकृष्टं प्रगल्भं परेशं, अखंडं अजं भानुकोटि प्रकाशम्। त्रयः शूल निर्मूलनं शूलपाणिं भजेऽहं भवानिपतिं भावगम्यम्॥5॥
कलातीत कल्याण कल्पान्तकारी, सदा सज्जनानन्ददाता पुरारी। चिदानंद संदोह मोहापहारी, प्रसीद प्रसीद प्रभो मन्मथारी॥6॥
न यावद् उमानाथ पादारविन्दं, भजंतीह लोके परे वा नराणाम्। न तावत्सुखं शान्ति सन्तापनाशं, प्रसीद प्रभो सर्वभूताधिवासम्॥7॥
न जानामि योगं जपं नैव पूजां,नतोऽहं सदा सर्वदा शंभु तुभ्यम्। जरा जन्म दुःखौघ तातप्यमानं, प्रभो पाहि आपन्नमामीश शंभो॥8॥

हिंदी अर्थ

हे ईशान ! मैं मुक्तिस्वरूप, समर्थ, सर्वव्यापक, ब्रह्म, वेदस्वरूप, निजस्वरूप में स्थित, निर्गुण, निर्विकल्प, निरीह, अनन्त ज्ञानमय और आकाश के समान सर्वत्र व्याप्त प्रभु को प्रणाम करता हूँ।जो निराकार हैं, ओंकाररूप आदि कारण हैं, तुरीय हैं, वाणी बुद्धि और इन्द्रियों के पथ से परे हैं, कैलासनाथ हैं, विकराल और महाकाल के भी काल, कृपाल, गुणों के आगार और संसार से तारने वाले हैं, उन भगवान को मैं नमस्कार करता हूँ।जो हिमालय के समान श्वेतवर्ण, गंभीर और करोड़ों कामदेव के समान कान्तिमान शरीर वाले हैं, जिनके मस्तक पर मनोहर गंगा जी लहरा रही हैं, भालदेश में बाल चन्द्रमा सुशोभित होते हैं और गले में सर्पों की माला शोभा देती है।जिनके कानों में कुण्डल हिल रहे हैं, जिनके नेत्र एवं भृकुटी सुन्दर और विशाल हैं, जिनका मुख प्रसन्न और कण्ठ नील है, जो बड़े ही दयालु हैं, जो बाघ की खाल का वस्त्र और मुण्डों की माला पहनते हैं, उन सर्वाधीश्वर प्रियतम शिव का मैं भजन करता हूँ।जो प्रचण्ड, सर्वश्रेष्ठ, प्रगल्भ, परमेश्वर, पूर्ण, अजन्मा, कोटि सूर्य के समान प्रकाशमान, त्रिभुवन के शूलनाशक और हाथ में त्रिशूल धारण करने वाले हैं, उन भावगम्य भवानी पति का मैं भजन करता हूँ। हे प्रभो !आप कालरहित, कल्याणकारी और कल्प का अंत करने वाले हैं। आप सर्वदा सत्पुरुषों को आनंद देते हैं, आपने त्रिपुरासुर का नाश किया था, आप मोहनाशक और ज्ञानानन्दघन परमेश्वर है, कामदेव के आप शत्रु हैं, आप मुझ पर प्रसन्न हों, प्रसन्न हों।मनुष्य जब तक उमाकांत महादेवजी के चरणारविन्दों का भजन नहीं करते, उन्हें इहलोक या परलोक में कभी सुख और शांति की प्राप्ति नहीं होती और न उनका संताप ही दूर होता है। हे समस्त भूतों के निवासस्थान भगवान शिव! आप मुझ पर प्रसन्न हों।हे प्रभो! हे शम्भो! हे ईश! मैं योग, जप और पूजा कुछ भी नहीं जानता। हे शम्भो ! मैं सदा सर्वदा आपको नमस्कार करता हूँ। जरा, जन्म और दुःख समूह से संतप्त होते हुए मुझ दुःखी की दुःख से आप रक्षा कीजिये।

ਮੂਲ ਮੰਤਰ

ੴ (Ek Onkar): There is One God.
ਸਤਿ ਨਾਮੁ (Sat Naam): God's name is Truth. God is True.
ਕਰਤਾ ਪੁਰਖੁ (Karta Purakh): He is the Creator.
ਨਿਰਭਉ (Nirbhav): He is without fear.
ਨਿਰਵੈਰੁ (Nirvair): He is without enmity.
ਅਕਾਲ ਮੂਰਤਿ (Akal Moorat): His form is timeless.
ਅਜੂਨੀ (Ajooni): He is beyond birth & death.
ਸੈਭੰ (Saibhang): He is self-existent.
ਗੁਰ ਪ੍ਰਸਾਦਿ (Gur Prasaad): (Known) by the grace of the Guru

BHARTIYA VIDYA MANDIR SEN. SEC. SCHOOL

SEC-39, CHANDIGARH ROAD, LUDHIANA

CONGRATULATIONS!!!

CLASS-X RESULT (2025-26)

FIRST POSITION

ASHISH SINGH
97.2%

RIDHI SHARMA
97.2%

ARSHPREET SINGH
97.2%

SECOND POSITION

SHUBHNEET ARORA
97%

ANJEL
97%

THIRD POSITION

GAURI
96.8%

WE ARE PROUD OF OUR ACHIEVERS ✦ KEEP SHINING AND REACHING NEW HEIGHTS!

BHARTIYA VIDYA MANDIR SEN. SEC. SCHOOL

SEC-39, CHANDIGARH ROAD, LUDHIANA

CONGRATULATIONS!!!

CLASS-XII RESULT (2025-26)

HUMANITIES

KANISHKA MISHRA
96.8%

CHARANPREET KAUR
88.8%

TARANJEET SINGH
88.6%

COMMERCE

ARMAAN SAINI
93.6%

VANSHIKA
89.6%

AASHIMA
86.4%

MANMEET KAUR
86.4%

NON-MEDICAL

HIMANSHU SHARMA
95%

RAMANAND
93%

NITIN TIWARI
90.6%

MEDICAL

TANMAY KUMAR
79.6%

ISHPREET KAUR
77.8%

SAHIL RAJ
70.6%

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