BIRLA PUBLIC SCHOOL GANGANAGAR

SUMMER HOLIDAY HOMEWORK

Session: 2026-27

Class – XI

Subject- English

Q.1: *Summer Journey into Timeless Wisdom*

Have you ever wondered how ancient words spoken thousands of years ago still whisper truths into our modern lives?

This summer, step into the world of timeless wisdom through the Bhagwad Gita and the Guru Granth Sahib Ji.

Reflect, imagine, and create as you listen to the voice of ages – and discover the warrior and sage within you!

Objective:

- To cultivate wisdom, reflection, and creativity by engaging with the teachings of the Bhagwad Gita and the Guru Granth Sahib Ji through reading or listening.

Compulsory Tasks:

1. Wisdom Diary (Daily Entry)

2. Podcast Homework: (Weekly Task)

General Requirements:

- Use your English notebook for your writing work according to your requirement.
- Language: Simple, clear, correct, and reflective English.
- Presentation: Neatly handwritten or typed, using headings, margins, and proper structure.
- Creativity: Add small decorative elements like simple borders, motifs, or scripture-related symbols.
- Authenticity: Personal thoughts and reflections are highly valued.

Submission Guidelines:

- Submit all your work neatly arranged.
- Mention your Name, Class, Section, and Roll Number clearly on the cover page.

Date of Submission: 6th July 2026

Evaluation Criteria:

Depth of understanding and reflection
Creativity and original expression
Language and articulation
Neatness and presentation

Important Note:

- You may refer to simple English translations available on YouTube.
- Choose teachings that truly inspire you.
- Let your entries reflect your own voice, thoughts, and feelings.

- Plagiarism will not be entertained — originality will be appreciated.

COMPULSORY TASKS:

<u>You have to attempt both the tasks given in this section.</u>

Section 1- (a) Wisdom Diary (Writing Assignment - Daily Reflection Task)

Daily Task:

- Read one Shloka (Bhagwad Gita) OR one Hymn (Guru Granth Sahib Ji). **(You are free to choose any other scripture.)**
- Listen to simple explanation if needed from digital audio & video platforms.
- Write your reflections by answering:

Weekly Wisdom Diary Questions:

1. Quote the Shloka/Hymn.
2. What does this Shloka/Hymn teach me? (2-3 lines)
3. How can I apply this teaching in my life today? (One real situation)
4. Draw a small symbol or doodle related to the idea.
5. Reflecting on the teachings from either the Bhagwad Gita or the Guru Granth Sahib Ji.

Section 1- (b) Podcast Homework (Speaking Assignment - Every Week)

Podcast Recording Task:

- Select one Shloka or Hymn every week.
- Students are encouraged to use digital platforms such as YouTube for understanding concepts and may use basic audio/video editing tools for podcast creation. Proper file naming and digital submission practices should be followed.
- Record yourself and your family members in answering these points:

Podcast Guiding Questions:

1. Recite the Shloka or Hymn (try with correct pronunciation).
2. What is the central idea? (Explain simply in English.)
3. Why did you choose this today? (One personal reason)

(Record in English)

4. Send your podcast videos to your subject teacher's mail id: ankur090176@bpsg.edu.in

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Q2. *(Art Integration Project – Explore Through Brochures)*
Digital Travel Brochure Design (ICT Integrated Task)

Explore the Wonders of Rajasthan and Nagaland!

Ever wondered what it's like to explore the royal palaces of Rajasthan or the serene landscapes of Nagaland?

Now's your chance to showcase these incredible destinations in your very own travel brochure!

Objective:

Each student will create one unique digital travel brochure integrating the culture, heritage, art, cuisine, festivals, eco-tourism, sports, or traditions of both Rajasthan and Nagaland.
The brochure should creatively compare, connect, and showcase the richness of the two states through attractive design, visuals, and persuasive writing.

Each brochure should be creative, colourful, and written using engaging and persuasive language.

S.No. Student Name Alloted Topic

1. ALISHA: Climate and Weather Patterns of Rajasthan and Nagaland: A Comparative Scientific Study
2. DHANYA: Biodiversity and Unique Flora & Fauna of Rajasthan and Nagaland
3. GUNTAS SINGH JAKHAR: Renewable Energy Resources in Rajasthan and Sustainable Living Practices in Nagaland
4. GURLEEN: Water Conservation Techniques of Rajasthan and Natural Water Systems of Nagaland
5. HEMANT KUMAR SINGAL: Geological Features: Deserts of Rajasthan and Hills of Nagaland
6. MANNAT MAAN: Eco-Tourism and Environmental Conservation in Rajasthan and Nagaland
7. NAVDEEP KAUR: Medicinal Plants and Traditional Healing Practices of Rajasthan and Nagaland
8. RAKSHA: Scientific Study of Traditional Architecture and Climate-Responsive Housing
9. REET: Agricultural Practices and Crop Diversity in Rajasthan and Nagaland
10. SHIVRANJANI: Wildlife Adaptations in the Desert Ecosystem of Rajasthan and Forest Ecosystem of Nagaland
11. TRIPTI SINGAL: Food Science Behind the Traditional Cuisines of Rajasthan and Nagaland
12. YASHKIRAT KAUR: Impact of Geography and Climate on Lifestyle, Language, and Culture in Rajasthan and Nagaland
13. AADITYA AGGARWAL: Tourism Industry and Economic Growth in Rajasthan and Nagaland
14. BHAVYA PERIWAL: Handicraft and Handloom Industries of Rajasthan and Nagaland: From Local Markets to Global Trade
15. DIYANA: Entrepreneurship Opportunities in Cultural and Eco-Tourism of Rajasthan and Nagaland
16. KRIT KALRA: Role of Festivals in Boosting Tourism and Local Businesses in Rajasthan and Nagaland
17. KRITI JAIN: Traditional Jewellery Business and Export Potential of Rajasthan and Nagaland
18. KUNAL DUDI: Sustainable Tourism and Its Impact on Employment Generation in Rajasthan and Nagaland
19. SABHYA MADAAN: Branding and Marketing Strategies Used to Promote Rajasthan and Nagaland Tourism
20. VISHESH CHAWLA: Changing Consumer Preferences in Traditional Crafts, Cuisine, and Cultural Tourism
21. AARIKA: Cultural Identity and Social Traditions of Rajasthan and Nagaland
22. ANSHI: Role of Folk Literature and Oral Traditions in Rajasthan and Nagaland
23. AYAN MADAR PATEL: Impact of Geography on Lifestyle and Human Settlements in Rajasthan and Nagaland
24. KARTIK: Tribal Communities and Social Structure of Rajasthan and Nagaland

25. KHUSHI CHOUDHARY: Women and Their Contribution to Cultural Heritage in Rajasthan and Nagaland
26. KUSHAGAR KARWASRA: Comparative Study of Festivals and Community Life in Rajasthan and Nagaland
27. PARTAPKARAN BRAR: Traditional Art Forms as a Reflection of Society and History
28. RANDEEP SINGH KHICHAR: Historical Evolution of Rajasthan and Nagaland: Heritage and Identity
29. RIDHI: Tourism as a Medium of Cultural Exchange in Rajasthan and Nagaland
30. UDIT: Influence of Religion and Beliefs on Art and Architecture in Rajasthan and Nagaland
31. YASHNOOR GILL: Preservation of Indigenous Languages and Cultural Expressions
32. GURRATAN SINGH: Unity in Diversity: Comparative Cultural Study of Rajasthan and Nagaland

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.**Brochure Design Requirements:**

- Create the brochure using digital tools such as Canva, Microsoft PowerPoint, or Google Slides
- Set page size to A4 (Landscape preferred)
- Divide the page into 3 columns to represent a tri-fold brochure (4 panels)
- Use the given links for help:
  https://youtube.com/shorts/oGgC5eGIwZY?si=Rh-EV6hWDzfJAN0P
  https://youtu.be/uCcPDSE6vLw?si=6VO6CzqL3Z5WzErc

- Title and Slogan: Every brochure must have a catchy title and a short slogan.
- Sections: Proper sections like Introduction, Highlights, Interesting Facts, and Conclusion.
- Pictures: Include hand-drawn pictures, printed images, borders, or traditional patterns.
- Language: Use persuasive, engaging, and grammatically correct English.
- Neatness: Keep the layout clean and colourful. Avoid overcrowding text.
- Creativity: Design the brochure to look attractive and professional.

What to Include in Your Brochure:

- Introduction to Rajasthan and Nagaland (as per the theme you select)
- Highlight 3–4 major places, events, or products for each state
- Fun/interesting facts to grab attention
- Short captions, slogans, and attractive lines
- Maps, traditional motifs, or cultural symbols (optional but appreciated)

Presentation:

- Use colours, designs, headings, and bullet points to make the brochure look beautiful.
- **You may make it digitally (using Canva/PowerPoint) or by hand (recommended for Art Integration).**
- Decorate without overcrowding the information. Balance visuals and text.

Submission Instructions:

- Submit your project neatly compiled.
- Last Date of Submission: 6th July 2026

Evaluation Criteria:
Content accuracy and coverage
Creativity and presentation
Language and expression
Neatness and effort

Important Note:
Original work will be appreciated.
Avoid copying large content from the internet.
Let your brochure reflect your creativity and understanding!

Q.3 *Summer Life Skills Digital Journal: Learn, Practice, and Shine!*

Instructions:
Every week, learn or practice one home-related skill (examples: financial awareness, cooking a simple dish, cleaning, helping out siblings, fixing small things, managing house budget, etc.).
Maintain your record in the given table.
Take a picture of yourself while practicing each skill as proof of your journey toward becoming self-dependent.

Daily Learning Table:

Date	Skill/ Task Learned	How I did it?	What I learnt?	Feeling (Happy/ Proud/Challenged)	Picture attached (Yes/No)

(Extend the table if required. You can go with Microsoft Excel or Google Sheet Table.)

Weekly Reflection Table:

Week Number	Most Interesting Task This Week	Lesson Learnt (in 3-4 lines)
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		
Week 6		
Week 7		

Birla Public School Ganganagar

REPORT

Summer Life Skills Journal - Final Reflection

Name: _____
Class & Section: _____
Roll Number: _____

My Journey of Growth

1. The most useful skill I learned:

_____
_____
_____

2. The most challenging task for me was:

_____
_____
_____

3. My proudest achievement during this project:

_____
_____
_____

4. A memorable moment I captured:

_____
_____
_____

5. One lesson I will always remember:

_____
_____

Final Declaration

"I hereby declare that I have completed my Summer Life Skills Journal honestly and learned valuable lessons for becoming more independent."

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Signature of Student: _____

Signature of Parent/Guardian: _____

"The focus of this project is regular effort and honest expression, not perfection. Students are encouraged to keep their work simple, meaningful, and stress-free."

Subject -Mathematics

1. If A and B are two sets, then $A \cap (A \cup B)$ equals :

a. A b. B c.∅ d. $A \cap B$

2. Two finite sets have m and n elements. The number of subsets of the first set is 112 more than that of the second set. The values of m and n are, respectively,

a. 4,7 b. 7,4 c. 4,4 d. 7,7

3. The set $(A \cap BI)^I \cup (B \cap C)$ is equal to

a. $A^I \cup B \cup C$ b. $A^I \cup B$ c. $A^I \cup CI$ d. $A^I \cap B$

4. In a class of 60 students play cricket and 20 students play tannins, and 10 students play both the games. Then, the number of students who play neither is

a. 0 b. 25 c. 35 d. 45

5. A survey shows that 63% of the people watch a News Channel whereas 76% watch another channel. If x% of the people watch both channel, then

a. $x = 35$ b. $x = 63$ c. $39 \leq x \leq 63$ d. $x = 39$

6. if X and Y are two sets and XI denotes the complement of X, then $X \cap (X \cup Y)I$ is equal to

a. X b. Y c. ∅ d. $X \cap Y$

7. In a town of 840 persons, 450 persons read Hindi, 300 read English and 200 read both. Then the number of person read neither is

a. 210 b. 290 c. 180 d. 260

8.Let n(A) = m, and n(B) = n. Then the total number of non- empty relations that can be defined from A to B is

a. mn b. nm-1 c. mn-1 d. $2^{mn}-1$

9. Range of $f(x) = \frac{1}{1-2\cos x}$ is

a. $[\frac{1}{3}, 1]$ b. $[-1, \frac{1}{3}]$ c. $(-\infty, -1) \cup [\frac{1}{3}, \infty)$ d. $[-\frac{1}{3}, 1]$

10. If $[x]2-5[x]+6 = 0$, where [] denote the greatest integer function, then

a. $x \in [3,4]$ b. $x \in (2,3]$ c. $x \in [2,3]$ d. $x \in [2,4)$

11.Let $f(x) = \sqrt{1+x^2}$, then

a. $f(xy) = f(x).f(y)$ b. $f(xy) \geq f(x).f(y)$ c. $f(xy) \leq f(x).f(y)$ d. None of these

12. Domain of $\sqrt{a^2 - x^2}$ (a>0) is

a. (-a,a) b. [-a,a] c. [0,a] (-a, 0]

13. if $f(x) = ax + b$, where a and b are integers, $f(-1) = -5$ and $f(3) = 3$, then a and b are equal to

a. a = -3, b = -1 b. a = 2, b = -3 c. a = 0, b = 2 d. a = 2, b = 3

14. the domain of the function f defined by $f(x) = \sqrt{4-x} + \frac{1}{\sqrt{x^2-1}}$ is equal to

a. $(-\infty, -1)U(1,4]$ b. $(-\infty, -1]U(1,4]$ c. $(-\infty, -1)U[1,4]$ d. $(-\infty, -1)U[1,4)$

15. The domain and range of the real function f defined by $f(x) = \frac{4-x}{x-4}$ is given by

a. Domain = R, Range = {-1,1} b. Domain = R-{1}, Range = R

c. Domain = R-{4}, Range = {-1} d. Domain = R-{-4}, Range = {-1,1}

16. The domain and range of real function f defined by $f(x) = \sqrt{x-1}$ is given by

a. Domain = (1,∞), Range = (0,∞) b. Domain = [1,∞), Range = (0,∞)

c. Domain = [1,∞), Range = [0,∞) d. None of these

17. the domain of the function f given by f(x) = $\frac{x^2+2x+1}{x^2-x-6}$

a. R-{3,-2} b. R-{-3,2} c. R-[3,-2] d. R-(3,-2)

18. If $\sin\theta + \operatorname{cosec}\theta = 2$, then $\sin^2\theta + \operatorname{cosec}^2\theta$ is equal to

a. 1 b. 4 c. 4 d. None of these

19. If $f(x) = \cos^2 x + \sec^2 x$, the

a. f(x) <1 b. f(x) = 1 c. 2<f(x)<1 d. f(x)≥ 2

20. If tanx = $\frac{1}{2}$ and tany = $\frac{1}{3}$, then the value of x+y is

a. $\frac{\pi}{6}$ b. π c. 0 d. $\frac{\pi}{4}$

21. Which of the following is not correct?

a. Sinx = $-\frac{1}{5}$ b. cosx = 1 c. secx = $\frac{1}{2}$ d. tanx = 20

22. The value of tan10 tan20 tan30 …… Tan890 is

a. 0 b. 1 c. $\frac{1}{2}$ d. not defined

23. The value of $\frac{1-\tan^2 15^0}{1+\tan^2 15^0}$ is

a. 1 b. $\sqrt{3}$ c. $\frac{\sqrt{3}}{2}$ d. 2

24. The value of cos10 cos20 cos30 …….. cos1790 is

a. $\frac{1}{\sqrt{2}}$ b. 0 c. 1 d. -1

25. If tanx = 3 and x lies in third quadrant, then the value of sinx is

a. $\frac{1}{\sqrt{10}}$ b. $-\frac{1}{\sqrt{10}}$ c. $\frac{-3}{\sqrt{10}}$ d. $\frac{3}{\sqrt{10}}$

26. The of tan750-cot750 is equal to

a. $2\sqrt{3}$ b. $2+\sqrt{3}$ c. $2-\sqrt{3}$ d. 1

27. Which of the following is correct?

a. Sin10>sin1 b. Sin10<sin1 c. Sin10 = sin1 d. Sin10 = $\frac{\pi}{18^0}$ sin1

28. If tanx = $\frac{m}{m+1}$, tany = $\frac{1}{2m+1}$, then x+y is equal to

a. $\frac{\pi}{6}$ b. π c. 0 d. $\frac{\pi}{4}$

29. The minimum value of 3cosx+4sinx+8 is

a. 5 b. 9 c. 7 d. 3

30.The value of tan3A – tan2A –tanA is equal to

a. tan3A tan2AtanA b. –tan3A tan2A tanA c. tanAtan2A-tan2Atan3A-tan3AtanA d. None of these

31. The value of sin(450+x) – cos(450-x) is

a. 2cosx b. 2 sinx c. 1 d. 0

32. The value of $\cot(\frac{\pi}{4}+\theta)\cot(\frac{\pi}{4}-\theta)$ is

a. -1 b. 0 c. 1 d. Not defined

33. The value of cos120 +cos840+cos1560+cos1320 is

a. $\frac{1}{2}$ b. 1 c.$-\frac{1}{2}$ d. $\frac{1}{8}$

34. if tanA = $\frac{1}{2}$, tanB = $\frac{1}{3}$, then tan(2A+B) is equal to

a. 1 b. 2 c. 3 d. 4

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35. the value of $\sin\frac{\pi}{10}\sin\frac{13\pi}{10}$ is

a. $\frac{1}{2}$ b. $-\frac{1}{2}$ c. $-\frac{1}{4}$ d. 1

36. the value of sin500-sin700+sin100 is equal to

a. 1 b. 0 c. $\frac{1}{2}$ d. 2

37. if sinx + cosx = 1, then the value of sin2x is equal to

a. 1 b. $\frac{1}{2}$ c. 0 d. -1

38. if for real values of x, $\cos x = x+\frac{1}{x}$, then

a. x is an acute angle b. x is right angle c. x is an obtuse angle d. No value of x

In the following questions, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

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

(b) Both A and R are true but R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true.

39. Assertion (A): If (x, 1), (y, 2) and (z , 1) are in A × B and n(A) = 3, n(B) = 2, then A = {x, y, z} and B = {1, 2}.

Reason (R): If n(A) = 3 and n(B) = 2, then n(A × B) = 6 .

40. Assertion (A): The value of $\theta = \pi/3$ or $2\pi/3$, when θ lies between $(0, 2\pi)$ and $\sin 2\theta = 3/4$.

Reason (R): $\sin\theta$ is positive in the first and second quadrant.

41. If A = {3, 5, 7, 9, 11}, B = {7, 9, 11, 13}, C = {11, 13, 15} and D = {15, 17}

Find the following:

(i). $(A \cup D) \cap (B \cup C)$ (ii). $B \cap C$

42. Find the domain and range of the real functions: $\sqrt{16 - x^2}$

43. Let f = {(1,1), (2,3), (0,–1), (–1, –3)} be a function from Z to Z defined by f(x) = ax + b, for some integers a, b. Determine a, b.

44. Find the value of $\sin 15^0$

45. Prove that : cot x cot 2x – cot 2x cot 3x – cot 3x cot x = 1

Class -XI (Chemistry)

Q1. Choose any traditional Indian dish and write its ingredients in:

- Moles, grams, and number of particles.
- Present as a decorated *recipe card* or *mini poster* with illustrations.

Q2. Design a **flipbook** or **comic strip** showing evolution of atomic models:

- Dalton → Thomson → Rutherford → Bohr.

Q3. Calculate the number of moles in:

a) 10 g of H_2SO_4 b) 50 g of $CaCO_3$ c) 22 g of CO_2

Q4. A compound contains 40% carbon, 6.7% hydrogen, and 53.3% oxygen. Its molar mass is 60 g/mol. Calculate its empirical and molecular formula.

Q5. A. How many grams of oxygen are required to completely react with 32 g of methane (CH_4)? (Balanced Equation: $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$)

B. What volume of CO_2 will be formed at STP when 10 g of $CaCO_3$ is decomposed? ($CaCO_3 \rightarrow CaO + CO_2$)

C.If 20 g of hydrogen reacts with excess oxygen, what mass of water will be formed?

Q6. A. Write the four quantum numbers for the last electron in:

a) Na (Z=11) b) Cl (Z=17) c) Ca (Z=20)

B. How many orbitals are possible when:

a) n = 2 b) n = 3

C. Calculate the maximum number of electrons in:

a) n = 3 b) n = 4

Q7. Write the number of significant figures in the following:

a) 0.00250 b) 2500 c) 2500.0 d) 3.400×10^{-4} e) 100.0 f) 6.022×10^{23}

Q8. Calculate the mass of:

a) 0.5 mol of NaOH b) 2 mol of Cl_2 c) 0.2 mol of CH_4

Q9. Find the number of molecules in:

a) 5 moles of water b) 0.25 mole of O_2 c) 1 mole of glucose

Q10. Explain bohr's atomic model

NOTE: -Complete practical 1 to 5 in lab manual

Investigatory project(Art integrated projects)

Handwritten Format:

1. Write neatly and legibly. Use a **black and blue pen** for all the text (avoid coloured pens, unless specifically required).
2. Avoid **cutting**, **overwriting**, or using **correction fluid**.
3. **Margins**: Maintain equal margin on both sides of the page. This helps in keeping the work organized.
4. **Page Numbering**: Number your pages at the bottom-centre or bottom-right corner for easy reference.

Following things must be included in your project

1. Title Page
2. Certificate
3. Acknowledgment
4. Table of Contents (Index)
5. Main Content (Introduction, Objective, Materials, Methods, Results, Discussion, Conclusion)
6. Summary
7. Diagrams and Pi-Charts (if applicable)

8. Bibliography

S.No.	Project name	Student Name
1	Study of pH in Daily Life Substances	ALISHA
2	**Adulteration in Food Items** • Detect adulterants in milk, turmeric, sugar, salt, honey, and spices. • Explain health effect	DHANYA
3	**Water Quality Analysis** • Test hardness, pH, dissolved solids, and chlorine content of different water samples	GUNTAS SINGH
4	**Natural Indicators from Plants** • Prepare indicators from turmeric, hibiscus, beetroot, red cabbage, china rose.	GURLEEN
5	**Extraction of Essential Oils** • Extract oils from orange peel, mint leaves, or cloves.	HEMANT KUMAR
6	**Fermentation Process Study** • Observe fermentation using yeast, sugar, and warm water.	MANNAT MAAN
7	**Comparative Study of Foaming Capacity of Different Soaps** • Relation with hardness of water.	NAVDEEP KAUR
8	**Crystallization of Salts** • Copper sulphate, alum, potassium nitrate.	RAKSHA
9	**Paper Chromatography of Ink/Pigments** • Separation of colours in marker pens or leaves.	REET
10	**Testing Presence of Starch, Protein, and Fats in Food Samples**	SHIVRANJANI
11	**Water Quality Analysis of Different Sources** • Tap water, borewell, RO water, pond water.	TRIPTI SINGAL
12	**Mole Concept in Daily Life Calculations**	YASHKIRAT KAUR

ESTD. 2019

Subject - Physics

Chapters:
1. Units and Measurements
2. Motion in a Straight Line
3. Motion in a Plane

SECTION A: DEFINITIONS

Chapter 1:
Physical Quantity, SI Units, Significant Figures, Dimensional Formula all 35 formulas

Chapter 2:
Distance, Velocity, Average speed and velocity, Acceleration, Equations of Motion

Chapter 3:
Vectors, Combination of vectors, Product of vectors, Projectile Motion, Circular Motion

SECTION B: DERIVATIONS
- Equations of motion graphical and mathematical
- Parallelogram law of vectors
- Time of flight and maximum height

SECTION C: NUMERICALS
1. Convert 72 km/h into m/s
2. Find acceleration if velocity changes from 10 to 30 m/s in 5 s
3. Find distance covered in 10 s with acceleration 2 m/s^2
4. Projectile motion problems
5. Circular motion problems

SECTION D: ACTIVITIES
1. Measure length of table and calculate error
2. Observe motion of vehicle
3. Perform simple projectile experiment

SECTION E: ART INTEGRATED PROJECT WORK (VERY IMPORTANT)
1. To measure diameter of a small spherical/cylindrical body using vernier calipers.
2. To measure the internal diameter and depth of a given beaker/calorimeter using vernier calipers and hence find its volume.
3. To measure diameter of given wire using screw gauge.
4. To measure thickness of a given sheet using screw gauge.
5. To determine the mass of a given object using a beam balance.
6. To find the weight of given body using the parallelogram law of vectors.
7. Using a simple pendulum plot L-T and graphs. Hence find the effective length of second's pendulum using appropriate length values.
8. To find the force constant of given helical spring by plotting a graph between load and extension.

Make a chart on "Applications of Physics in Daily Life"
Prepare formula sheet for all 3 chapters

BIRLA PUBLIC SCHOOL GANGANAGAR
ESTD. 2019

Class XI (Biology)

Answer the following questions

1. How does metabolism prove that viruses are non-living?
2. If a living organism is not growing, how can we confirm it is alive?
3. Why is it essential to standardize scientific names in taxonomy?
4. Define taxonomy and systematics. Differentiate between the two.
5. What is binomial nomenclature? Write rules with examples.
6. Differentiate between species and genus with suitable examples.
7. What are the basic steps of taxonomic studies?
8. List the major characteristics that define life.
9. Why are cyanobacteria placed under Monera and not Protista?
10. Viruses are considered a link between living and non-living. Justify.
11. Why are slime moulds considered organisms of dual nature?
12. How would you differentiate between a true nucleus and a nucleoid?
13. Describe the five-kingdom classification given by R.H. Whittaker.
14. Differentiate between Archaebacteria and Eubacteria.
15. What are the major characteristics of Protista? Mention two examples.
16. List distinguishing features of Fungi. How are they different from Plantae?
17. Classify viruses based on their genetic material.
18. How are Bryophytes amphibians of the plant kingdom?
19. Why are Pteridophytes better adapted to terrestrial life than Bryophytes?
20. Explain how gymnosperms survive in extreme conditions with examples.
21. What are the evolutionary trends seen from algae to angiosperms?
22. Write the general characteristics of Algae. Give examples of each type (Chlorophyceae, Phaeophyceae, Rhodophyceae).
23. Compare and contrast Bryophytes and Pteridophytes.
24. Describe the characteristic features of Gymnosperms with two examples.
25. List the main differences between monocots and dicots.
26. Describe the life cycle pattern of Pteridophytes and explain alternation of generations.

Activity Work-

(1) Prepare herbarium sheets by collecting ten plants present in surrounding and Mention their common name ,botanical names and classifications.

(2)Tabulate the Scientific names and common names of plants and animals mentioned in Chapters plant and animal kingdom.

(3)**Art Integration Project –** prepare art integrated project

(a) Dhanya- Biodiversity Collage

(b) Gurleen - Microscopic World Painting

(c) Mannat- Cell City Model

(d)Navdeep kaur- Taxonomy Tree Sculpture

(e) Raksha- Classification Flowchart Mural

(f)Reet- Animal Kingdom Wall Mural

(g) Shivranjani- Comic Strip on Animal Diversity

(h) Yashkirat- Animal Classification Rangoli

ESTD. 2019

Class XI – Computer Science (Python)

✅ TASK 1: PRACTICAL FILE (PYTHON PROGRAMMING)

A **separate practical file** is to be maintained for Python programming.

Python Program List

1. Program to print **"Welcome to School"**
2. Program to input name and display greeting
3. Program to find sum of two numbers
4. Program to check whether a number is even or odd
5. Program to find largest of three numbers
6. Program to swap two numbers
7. Program to check whether a number is positive, negative, or zero
8. Program to calculate grade based on marks
9. Program to create a simple calculator using `if-elif`
10. Program to print numbers from 1 to N
11. Program to find sum of first N natural numbers
12. Program to reverse a number
13. Program to find the largest element in a list
14. Program to find sum of elements in a list
15. Program to remove duplicates from a list
16. Program to calculate area of a circle
17. Program to calculate area of a triangle
18. Program to calculate area of a rectangle
19. Program to calculate area of a square
20. Program to calculate perimeter of a square

📌 **Note:** All **20 programs are mandatory** and will be **evaluated as part of the Practical Assessment**.

✅ TASK 2: ART INTEGRATED PROJECT

Topic Allotment (Roll No. Wise)

Roll No. 1-3
Topic: Number Systems through Indian Rangoli Art

Roll No. 4-6
Topic: Flowcharts & Algoriths using Warli Art

Roll No. 7-9
Topic: History of Computers through Traditional Indian Art

Roll No. 10-12
Topic: Python Variables and Data Types through Gond Art

Roll No. 13-15
Topic: Computer System Components as Craft Art

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Music

General Instructions:

- Make front page for your *Work* stating **BIRLA PUBLIC SCHOOL GANGANAGAR**, followed vertically by **SUMMER HOLIDAY HOMEWORK, SESSION-2026-27, SUBJECT -MUSIC INSTRUMENT NAME AND ROLL NO, CLASS, SUBJECT, TEACHER NAME.**
- Write in good handwriting.
- Complete the work neatly with proper numbering.
- Use your own creativity to make it look attractive.
- Do all the work on A4 Sheets

1. Art Integration Project (Music)

Objective:

To understand Naad Shruti Sawar Saptak Thaat Taal Jaati Teentaal Ektaal Chautaal Raag Bihag Bhimpilasi Bhairavi Tanpura ,Veena , Sitar, Harmonium, Tabla.

Name-wise Topic Distribution :(Each student must make an **individual Project**.)

NAME	Topic
Aaditya Agrawal	Write Definition Naad ,Shruti ,Sawar with type
Aayan patel	Write Definition Sapatak ,Thaat with type
Dhanya	Structure of Harmonium instrument with details
Kartik Bishnoi	Write Definition Taal and Laya
Kriti jain	Description of Taal Teentaal with Notation Single Dugun and Chaugun
Krit Kalra	Description of Raag Bihag with Notation
Kunal	Description of Raag Bhimpilasi with Notation
Khusagar	Description of Raag Bhairavi with Notation
Pratap karan	Description of Taal Chautaal with Notation Single Dugun and Chaugun
Randeep khichr	Structure of Tanpura Instrument with details
Sabhya	Structure of Sitar instrument with detail
Uddit saraswat	Structure of Tabla instrument with detail
Vishesh chawala	Structure of Veena instrument with detail
Yashnoor gill	Description of Taal Ektaal with Notation Single Dugun and Chaugun

ESTD. 2019