Bal Bharati
PUBLIC SCHOOL
Sector 12, Dwarka

Dear Parent,

As we usher in the much awaited and cherished Summer Holidays, we are pleased to present the **Holiday Homework for the academic year 2024-25**. Our aim is to enrich and perpetuate critical reasoning, out-of-the-box thinking, and empathy among our students.

Aligned with the visionary tenets of the NEP 2020, our curated activities emphasise experiential, value-based, and project-based learning. This summer, we eagerly anticipate our students embarking on an immersive journey of self-discovery, where textbooks yield to hands-on experiences and real-world applications. Let us together embrace the ethos of NEP 2020, nurturing our students to recognize and harness their unique strengths and inherent potentials.

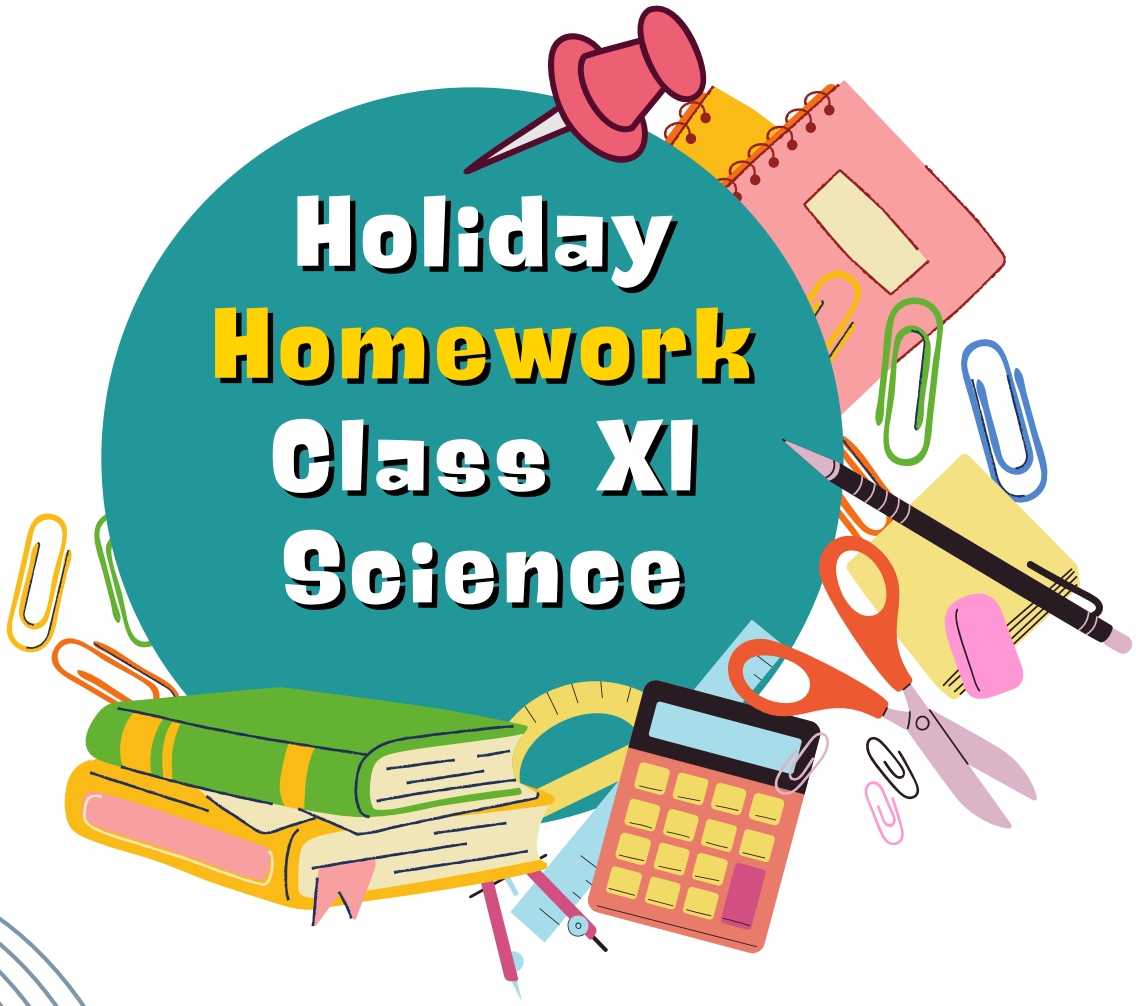
We extend our gratitude for your steadfast support in fostering holistic education.

Warm regards,

(Suruchi Gandhi)
Principal

Bal Bharati
PUBLIC SCHOOL
Sector 12, Dwarka

Holiday Homework
Class XI
Science



Index

SUBJECT	PSYCHOLOGY
TOPIC	What is Psychology?
PROJECT/ACTIVITY	Activity 1: Photo Essay: students to collect a series of photographs that depict moments, scenes, or objects that symbolize values and human qualities such as resilience, optimism, compassion, perseverance, gratitude, kindness, empathy, and strength. These photos can be taken by the students themselves or sourced from various online platforms, ensuring they are appropriate and properly credited. Caption and Reflection: For each photo, students are required to provide a caption that explains the significance of the image in relation to the chosen value or quality. Additionally, students should include a brief reflection on why they selected the photo and how it personally resonates with them. This reflection can include personal anecdotes, experiences, or insights related to the theme. Activity 2: PPT Prepare a PPT on how the evolving discipline of Psychology is related to other disciplines. You may explore implementation of psychological principles in aviation, defence, economics and political science. The PPT should showcase your interpretation and not have more than 15 slides.
LEARNING OUTCOME/SKILL ENHANCED	• Learning Outcome – Activity 1 • Students will be able to identify and recognize values and human qualities such as resilience, optimism, compassion, perseverance, gratitude, kindness, empathy, and strength. • Understand the significance of these values and qualities in promoting well-being and psychological resilience. • Develop skills in visual storytelling and communication through the creation of a picture essay. • Cultivate self-awareness and reflection by exploring personal connections to the chosen values and qualities. • Enhance empathy and perspective-taking through the consideration of diverse perspectives represented in the photos. • Learning Outcome – Activity 2 • Students will gain an understanding of how the evolving discipline of psychology is interconnected with other fields such as aviation, defense, economics, and political science. • Students will develop understanding of how psychological principles are applied in practical contexts within each discipline. • Students will analyze the impact of psychological interventions in various fields and considering the ethical implications of applying

	psychological principles in different contexts. • Students will become aware of potential career opportunities in interdisciplinary fields where knowledge of psychology can be applied, such as human factors engineering, defense psychology, behavioral economics, and political consulting
MODE OF SUBMISSION	Virtual Submission (through mail)
RUBRICS	Activity 1: • Photo selection and attribution • Reflection caption • Creativity and Presentation Activity 2: • Content- accuracy, depth and relevance • Clarity- organization, structure and language • Visual Design and presentation

ASSIGNMENT

- *Section A has 10 questions, from Question No. 1 to 10. Answer to these questions in one word or one sentence.*
- *Section B has 3 questions, from Question No. 11 to 13. Answer to these questions should not exceed 40-50words.*
- *Section C has 1 question. Answer to this question should not exceed 120 words.*
- *Section D has 1 question. Answer to this question should not exceed 200 words.*

SECTION A (1*10)

Q1.) _____ is the most effective way of acquiring a conditioned response.

Q2.) Partial reinforcement schedule is least resistant to extinction.

Q3.) _____ is one of the chief proponents of operant conditioning.

a.) B.F Skinner
b.) Ivan Pavlov
c.) Tolomon
d.) Albert Bandura

Q4.) Which of the following helps in better memory retention?

a.) Use of mnemonics
b.) Deep level processing
c.) Minimizing interference
d.) All of the above

Q5.) Which of the following does not apply to stage model theory of memory?

a.) It was proposed by Atkinson and Shiffrin

b.) Information in sensory register fades very quickly
c.) Chunking helps in enhancing the capacity of STM.
d.) Many stimuli simultaneously enter our receptors creating a kind of "bottleneck" situation.

Q6.) Method of Loci uses imagery and visual encoding for better memory retention. (True/False)

Q7.) Neema was once mobbed by a person with a beard. Now every time she comes across a bearded person she starts feeling anxious. She is exhibiting:
a.) Generalization
b.) Discrimination
c.) Resistance
d.) Extinction

Q8.) Which of the following is not a secondary reinforcer?
a.) Money
b.) Fame
c.) Certificates
d.) Food

Q9.) Sudden solution to a problem is a principle of _____ learning.

Q10.) Classical conditioning was first investigated by _____.

Section B (2*3)

Q11.) Differentiate between maintenance and elaborative rehearsal.

Q12.) What are the different types of long-term memory?

Q13.) What are the different phases of skill acquisition?

Section C (3*1)

Q14.) Explain observational learning with the help of examples.

Section D (6*1)

Q15.) Explain the various stages of stage model of memory.

Or

Differentiate between classical and operant conditioning.

PROJECT GUIDELINES

SUBJECT	**ECONOMICS**
CLASS	XI
MARKS FOR PROJECT (MARKING SCHEME)	1. Relevance of the topic 3 marks 2. Knowledge Content/Research Work 6 marks 3. Presentation Technique 3 marks 4. Viva-voce 8 marks Total 20 Marks
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	HANDWRITTEN
GROUP/INDIVIDUAL	INDIVIDUAL
LIST OF EXPERIMENTS/TOPICS	1.Effect on PPC due to various government policies 2.Goods and service Tax Act 3.Demonetisation in India: An Analysis 4.Effect of Price change on a substitute and complementary good (taking prices from real life visiting local markets) 5. Environmental awareness among people in the society. 6.Demand and its determinants 7.Price Determination 8.Market Structure 9.Utility concept: Cardinal and Ordinal approach 10.Newspaper Article and its Evaluation on the basis of Economic Principles 11.Any other topic

GUIDELINES

The objectives of the project work are to enable learners to:

• probe deeper into theoretical concepts learnt in class XI

• analyse and evaluate real-world economic scenarios using theoretical constructs and arguments

• demonstrate the learning of economic theory

• follow up aspects of economics in which learners have interest

• develop the communication skills to argue logically

The expectations of the project work are that:

• project should be of 3,500-4,000 words (excluding diagrams & graphs), preferably hand-written

• it will be an independent, self-directed piece of study

Scope of the project:

Learners may work upon the following lines as a suggested flow chart:

- Choose a title/topic
- Collection of the research material/data
- Organization of material/data
- Present material/data
- Analysing the material/data for conclusion
- Draw the relevant conclusion
- Presentation of the Project Work

Expected Checklist:

• Introduction of topic/title

• Identifying the causes, consequences and/or remedies

• Various stakeholders and effect on each of them

• Advantages and disadvantages of situations or issues identified

• Short-term and long-term implications of economic strategies suggested in the course of research

• Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file

• Presentation and writing that is succinct and coherent in project file

• Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

Mode of presentation/submission of the Project:

At the end of the stipulated term, each learner will present the research work in the Project File to the Internal examiner as his/her own original work.

Assignment

Question 1. "Scarcity and choice go all together". Defend or refute.

Question 2 "Only 'Scarce Goods' attract price." Comment.

Question 3. A lot of people died and many factories were destroyed in an earthquake. How will it affect the PPC of the economy?

Question 4.Massive unemployment will shift PPC to the left. Defend or refute.

Question 5. A country's resources are fully and efficiently employed. The problem of scarcity exists. What advice would be given to raise the efficiency level of the human resource to fight scarcity?

Question 6.In an underdeveloped economy why there is the need of efficient utilization of resources?

Question7. India is a labour abundance and capital scarce economy. Which technique of production should be used to produce the commodity?

Question 8.Scarcity of resources is a universal phenomenon and is not confined to poor and backward countries only. Comment.

Question 9. Although water is useful, yet it is cheap. On the contrary, diamond is not much of use, still it is very expensive. Give an economic reason for this paradox.

Question 10. Large number of technical training institutions have been started by the government. State its economic value in the context of production possibility frontier.

Question 11.Unemployment is reduced due to the measures taken by the government. State its economic value in the context of production possibilities frontier.

Question 12. Production in an economy is below to its potentiality due to unemployment. Government starts employment generation schemes. Explain its effects by using production possibility curve.

Question 13. A doctor has a private clinic in New Delhi and his annual earnings are Rs 10 lakh. If he works in a government hospital in New Delhi, his annual earning will be Rs 8 lakh. What is the opportunity cost of having a clinic in New Delhi?

Question 14. What will be the impact of recently launched 'Clean India Mission' (Swachh Bharat Mission) on the Production Possibilities curve of the economy and why?

Question 15.What will likely be the impact of large scale outflow of foreign capital on Production Possibility Curve of the economy and why?

Question 16. How many units of a commodity a consumer will consume ,if it is available at free of Cost.

Question 17. "law of diminishing marginal utility will operate even if consumption takes place in intervals."Defend or refute.

Question 18."TU remains same, whether MU is positive or nagative. " Defend or refute.

Question 19. Explain the following conditions graphically:

Movement along the same indifference curve.

Shift from a lower to a higher indifference curve.

Question 20. After reaching the point of equilibrium, consumer would not like to change his allocation on Good X and Y even if price of Good X changes. Do you agree ? Comment.

PROJECT GUIDELINES

SUBJECT	**ENGLISH**
CLASS	XI
MARKS FOR PROJECT (MARKING SCHEME)	20 MARKS ALS- 5+5 = 10 MARKS PROJECT WORK + VIVA- 10 MARKS
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	(HANDWRITTEN)
GROUP/INDIVIDUAL	INDIVIDUAL
LIST OF EXPERIMENTS/TOPICS	a) Students will listen to podcasts/ interviews/radio or TV documentary on a burning social issue and prepare a report of 800 - 1000 words and submit the same in a file. A Viva will be taken on the report. b) Students should create their own video/audio after preparing the report based on the same topic of social relevance.

GUIDELINES

- **The Objectives of the Project Work are to enable Learners:**
  - To check Planning, Preparation and Presentation along with various language skills through Research and Writing.
  - To activate their Listening Skills and create more horizon for the Creative Skillset**.**
- **The Expectations of the Project Work are:**
  - To develop Pronunciation and Intonation.
  - To check the students' grammatical structures and assess their communication skills so as to make the teacher understand their point of view effectively**.**
  - To assess Interactive Competence and Fluency while delivering the speech.
- **Scope of the Project:**
  - Quality of Content of Project.
  - Accuracy of Information
  - Adherence to the Specified Timeline
  - Content with respect of topic given
  - Clarity of thoughts and ideas
  - Creativity
  - Knowledge and experience gained

- **Expected Checklist:**
  - Cover Page, with Title of Project, School details/details of students.
  - Statement of Purpose/Objectives/Goals

- Certificate of Completion.
- Students Action Plan for the completion of assigned tasks.
- Materials such as scripts for the Questionnaires for Interview, Written Assignments, Essays, Survey-Reports and other material evidence of Learning Progress and Academic accomplishment.
- The 800-1000 words Essay/Script/Report.
- Student Reflections.
- If possible, Photographs and Videos that capture the positive learning experiences of the students.
- List of Resources/Bibliography.

- **Mode of Presentation/Submission of the Project:**
  - Each learner will present Research Work in the Project File.
  - The questions for the Viva Voce shall be asked from the Project File of the learner.
  - The practice of Listening and Speaking skills will be done throughout the Academic Session.
  - Viva Voce of the project file will check the following parameters:
    1. Fluency – Cohesion, Coherence and Speed of Delivery.
    2. Pronunciation – Grammar and Vocabulary.
    3. Interactive Competence – Initiation and relevance to the topic.

PROJECT WORK

1. **ASL PROJECT**: Students shall be required to prepare a Project (an Interview Based Research/Survey) and write a report, in accordance with the guidelines provided by CBSE.

2. **ASSIGNMENT**

a. Draft a **Notice** for your society, that has organised a Fitness Camp for two days for the residents as well as workers, along with their families, providing all the necessary details.

b. You are Garv/ Garvita of 302, Shanti Niketan, Whitefield, Bangalore. Highlight the importance of proper garbage disposal through a **Letter to the Editor** encouraging the people to adopt cleanliness as a way of life.

c. With reference to the Play "Mother's Day" from the book Snapshots, prepare a **character analysis** of Mrs. Fitzgerald and Mrs. Pearson.

In addition to this, prepare a **Speech** for the School Assembly throwing light on the role of Mothers in the life of children.

SUBJECT	**Mathematics**
CLASS	XI
MARKS FOR PROJECT (MARKING SCHEME)	10 Activity File. (Presentation of content – 2 marks) Notebook. (Assignment Work : Accuracy -2 marks) Ppt/movie. (Creativity – 2, Originality - 2 , Oral Presentation-2)
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	Handwritten Digital
GROUP/INDIVIDUAL	Individual
LIST OF EXPERIMENTS/TOPICS	Activity File Work Sets: 1. If a set has n number of elements, then the total number of subsets is 2n and also find the number of subsets of a given set 2. For two sets A and B, n (A×B) = pq and the total number of relations from A to B is 2pq, where n(A) = p and n(B) = q. Relations and Functions: 1. Difference between a Relation and a Function. Trigonometric functions 1. The relation between the degree measure and the radian measure of an angle. 2. Graphs of sin x, sin 2x, 2sinx and sin 2 x , using same coordinate axes. 3. Values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant. Power Point / Movie Explore Geogebra app. Please find attached link to learn the basics of geogebra. https://www.youtube.com/live/wmTtfgTvvDo?feature=share. Create your id in the web browser (Geogebra) and prepare a project on any of the above three units. Present your project in the form of Power point / movie or Geogebra link.

GUIDELINES

The objectives of the project work are to enable learners to:

1. Understanding Relations: Understanding Sets and the relationship between different elements or objects.
2. Logical Reasoning: To provide a foundation for logical reasoning and problem-solving skills.
3. Classification and Categorization: To allow for the classification and categorization of objects based on their properties.
4. Learning trigonometric functions serves several objectives, including:
5. Geometry and Measurement: Trigonometric functions are essential for solving problems related to angles, distances, and shapes in geometry and trigonometry.
6. Navigation and Surveying: Trigonometric functions are used in navigation, surveying, and geodesy to calculate distances, angles, and positions on the Earth's surface.
7. Engineering and Physics: Trigonometric functions are widely used in engineering and physics to analyze and design mechanical systems, electrical circuits, and waves.

The expectations of the project work are:

1. Understanding of concepts
2. Problem solving ability
3. Accuracy.
4. Creativity
5. Critical Thinking

Scope of the project:

1. It helps students explore real world applications or connection of the topics with other disciplines.
2. The project addresses the varied interest if Students and allows creativity, independent thinking and collaborative learning.

Expected Checklist:

1. Originality.
2. Creativity
3. Problem solving.
4. Computational Skills

Mode of presentation/submission of the Project:

1. Activity File
2. Notebook
3. PowerPoint Presentation or movie.

Assignment

UNIT: 1. SETS

Questions for Practice:

1. Write down the power set of $\{\varphi, (1, \varphi)\}$.
2. If X and Y are two sets such that n(X) = 15, n(Y) = 20 and $n(X \cup Y) = 30$,
3. find $n(X \cap Y)$.
4. Write the set $\left\{\frac{1}{2}, \frac{2}{5}, \frac{3}{10}, \frac{4}{17}, \frac{5}{26}, \frac{6}{37}, \frac{7}{50}\right\}$ in set builder form.

5. Draw the appropriate Venn diagrams for the following: i. $A' \cup B'$ (ii) $A' \cap B'$
6. Prove for sets A and B: i. $A' \cap B' = (A \cup B)$ ii. $(A - B) - C = A - (B \cup C)$.
7. Check for the validity of the following statement and justify your answer
   If A $\subset$ B and x $\notin$ B, then x $\notin$ A.
8. Draw a venn diagram showing (A - B) $\cup$ (B - A).
9. Let U be the universal set and A$\cup B \cup C = U$, then find $[(A - B) \cup (B - C) \cup (C - A)]'$.
10. Prove that for any three sets A, B and C, A$\cup (B \cap C) = (A \cup B) \cap (A \cup C)$.
11. Prove the following for sets A and B,

i. A – B = A, iff A $\cap B = \varphi$.

ii. $(A \cup B)' = A' \cap B'$

UNIT: RELATIONS AND FUNCTIONS

Questions for Practice:

1. If $(\frac{x}{3}, y - \frac{2}{3}) = \left(\frac{5}{3}, \frac{1}{3}\right)$, find 'x' and 'y'.
2. Let A = {1,2,3,4,5,6,7,8,9,10}. Define a relation R from A to A by R = {(x, y): 2x − y = 0, where x, y ∈ A}
3. If the ordered pairs (x, -1) and (5, y) belong to the set {(a, b) : b = 2a – 3}, find the values of x and y.
4. Determine the domain and range of the following relation:-
   R = {(x, x^3): x is a prime number less than a 10}
5. A relation R is defined on the set of integer as R = { (x, y) | $y = x + \frac{6}{x}$ $where\ x, y \in N$ & $x < 6$}. Find R. Also find its domain and range.
6. For a non zero 'x', p f(x) + q f(1/x) = $\frac{1}{x} - 5$, where p≠ q. Find f(x).
7. Draw the graph of the function Y = $\frac{1}{x-5}$. Also write its domain and range.
8. A relation R is defined on the set of integer as R = { (x, y) | $y = x + \frac{6}{x}$ $where\ x, y \in N$ & $x < 6$}. Find R. Also find its domain and range.
9. Let R be a relation defined on the set Z of integers as follows.R={$(x, y): x \in Z, y \in Z, x^2 + y^2 = 16$}. Find R as a set of ordered pairs.

Unit 3: Trigonometric Functions

Questions for Practice:

1. A wheel of diameter 1 metre is rotating at 25 revolutions per minute. Find the angle turned in one second and the distance travelled in one second.
2. Find the value of sin$\frac{28\pi}{3}$.
3. Find the length of an arc of a circle of radius 5 cm subtending a central angle measuring15^o. (Ans: 5 ^{o}12")
4. Find in degrees the angle subtended at the centre of a circle of diameter 50cm by an arc of length 11 cm. (Ans: 25^{o}12')

5. The moon's distance from the earth is 360000kms and its diameter subtends an angle of 31' at the eye of the observer. Find the diameter of the moon. (Ans:3247.62km)
6. If the angular diameter of the moon be 30' , how far from the eye a coin of diameter 2.2cm be kept to hide the moon?(Ans: 252cm)
7. Assuming that a person of normal sight can read at such a distance that the letters subtended an angle of 5/ at his eye, find what is the height of the letters that he can read at a distance of 12 meters.(Ans: 1.7cm)
8. Find the angle between the minute hand of a clock and the hour hand when the time is 7:20 AM (Ans: 100^o)
9. Prove that $\sqrt{3}Co\sec 20^\circ - Sec20^\circ = 4$.
10. If tan x = b/a , then find the value of $\sqrt{\frac{a+b}{a-b}} + \sqrt{\frac{a-b}{a+b}}$.

SUBJECT	BIOLOGY
CLASS	XI
MARKS FOR PROJECT (MARKING SCHEME)	1.Clearly defined Aim 2. Knowledge Content/Research Work 3. Presentation Technique 4. Viva-voce Total 5 Marks
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	HANDWRITTEN
GROUP/INDIVIDUAL	INDIVIDUAL
LIST OF EXPERIMENTS/TOPICS	Examples of investigatory projects in biology for class 11 students: 1. Investigating the effect of different plant hormones on plant growth 2. Investigating the effect of different wavelength of light on rate of photosynthesis in plants 3. Investigating the effects of various organic and inorganic fertilizers on plant growth and development. 4 Studying the impact of different types of pollutants (such as heavy metals, pesticides, etc.) on the germination and growth of seeds. 5. Investigating the role of various factors on the rate of enzyme action (salivary amylase), such as temperature, pH, and substrate concentration. 6. Exploring the effects of electromagnetic radiation (e.g., from mobile phones, Wi-Fi routers) on the growth and development of plants. 7. Investigating the potential antimicrobial properties of various plant extracts against common human pathogens. 8. Investigating the effect of various energy drinks on blood pressure of humans 9. Prepare a spirometer and obtain the spirogram of individuals belonging to different age groups. 10. Study and compare the effect of different iron supplementation methods on hemoglobin levels in individuals with iron deficiency anemia. 11.Prepare human blood smear and identify the different types of WBC's in it. 12. Examining the association between blood lipid profiles (e.g., cholesterol levels) and the risk of developing hematological disorders,

	such as thrombosis or Coronary Heart Disease 13. Prepare a functional model to show the functioning of either of the two a) human heart b) dialysis 14. Studying the correlation between blood glucose levels and hematological parameters in diabetic patients. 15. Analyzing the hematological changes associated with chronic diseases, such as kidney disease, liver disease, or autoimmune disorders. 16. Studying the relationship between blood type (ABO and Rh) and susceptibility to certain hematological disorders or diseases. 17. Analyzing the hematological effects of environmental factors, such as air pollution or exposure to heavy metals, in urban populations. 18. studying the impact of various radiation on the development of human fetus. 19. Rear commonly found vegetable pests to study the different stages of their life cycle. Any other topic

GUIDELINES

The objectives of the project work are to enable learners to:

• probe deeper into theoretical concepts learnt in classes XI.

• analyses and evaluate real-world biological issues using theoretical constructs and arguments

• demonstrate the application of theoretical concepts in real world problems

• promote scientific method of problem solving.

• develop the communication skills to argue logically

The expectations of the project work are that:

• learners will complete only ONE project in each academic session

• project should be of 2,500-3,000 words (excluding diagrams & graphs), preferably hand-written

• it will be an independent, self-directed piece of study

Scope of the project:

Project covers various topics in biology such as biotechnology, human physiology, plant physiology, animal and plant tissues in integration with other subjects like chemistry and mathematics.

It also involves formulation of hypothesis and designing experiments to check its validation.

Key guidelines to follow while documenting the investigatory project

1.Index: Maintain index, and neatly organized content with page numbers

2. Title Selection Choose a concise and descriptive title that reflects the purpose of your investigation.

3.Introduction: Provide a clear introduction to the topic, including the background information, significance of the study, and objectives of the project.

4. Review of Literature: Include a brief review of relevant literature and studies related to your topic to show understanding of existing knowledge.

5.Hypothesis- State a clear hypothesis or research question that you aim to investigate through your project.

6. Materials and Methods: Describe the materials (equipment, chemicals, biological specimens) and methods used in your experiment. Include detailed procedures in a step wise manner supported by pictures at each critical step

7. Data Collection and Analysis- Record all data obtained during the experiment systematically. Use appropriate tables, graphs, and charts to present your findings.

8. Results Present the results of your experiment objectively, including any statistical analyses performed.

9 Discussion - Interpret your results and discuss their implications. Compare your findings with existing literature and address any limitations or challenges encountered during the project.

10.Conclusion- Summarize the key findings of your investigation and how they relate to your hypothesis or research question. Give suggestions for further studies that can investigate other aspects not covered by this project

11.Bibliography : Cite all sources of information used in your project, including books, journals, and websites links

12. Acknowledge any individuals or institutions that provided assistance or resources for your project.

It's important to conduct your investigation ethically and ensure that your project is well-documented and scientifically sound.

Expected Checklist:

• Introduction of topic/title

• Identifying the causes, consequences and/or remedies

• Various stakeholders and effect on each of them

• Advantages and disadvantages of situations or issues identified

• Short-term and long-term implications of strategies suggested in the course of research

• Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file

• Presentation and writing that is succinct and coherent in project file

• Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

Mode of presentation/submission of the Project:

At the end of the stipulated term, each learner will present the research work in the Project File to the examiner who will judge the project work on parameters given above.

COMPLETE THE FOLLOWING ASSIGNMENT

Chapter 3: PLANT KINGDOM

Very Short Answer Type Questions **1 mark**

1. Food is stored as Floridean starch in Rhodophyceae. Mannitol is the reserve food material of which group of algae?
2. Give an example of plants with

a. Haplontic life cycle

b. Diplontic life cycle

c. Haplo- diplontic life cycle

3. The plant body in higher plants is well differentiated and well developed. Roots are the organs used for the purpose of absorption. What is the equivalent of roots in the less developed lower plants?
4. Most algal genera show haplontic life style. Name an alga which is

   a. Haplo-diplontic

   b. Diplontic
5. In Bryophytes male and female sex organs are called _____and _____.

Short Answer Type Questions

1. Why are bryophytes called the 'amphibians of the plant kingdom'?
2. The male and female reproductive organs of several pteridophytes and gymnosperms are comparable to floral structures of angiosperms. Make an attempt to compare the various reproductive parts of pteridophytes and gymnosperms with reproductive structures of angiosperms.
3. Heterospory i.e., formation of two types of spores - microspores and megaspores is a characteristic feature in the life cycle of a few members of pteridophytes and all spermatophytes. Do you think heterospory has some evolutionary significance in plant kingdom?
4. How far does *Selaginella* one of the few living members of lycopodiales (pteridophytes) fall short of seed habit.
5. Each plant or group of plants has some phylogenetic significance in relation to evolution : Cycas, one of the few living members of gymnosperms is called as the 'relic of past'. Can you establish a phylogenetic relationship of Cycas with any other group of plants that justifies the above statement?
6. The heterosporous pteridophytes show certain characteristics, which are precursor to the seed habit in gymnosperms. Explain.
7. Comment on the lifecycle and nature of a fern prothallus.

8. How are the male and female gametophytes of pteridophytes and gymnosperms different from each other?

9. In which plant will you look for mycorrhiza and corolloid roots? Also explain what these terms mean.

Long Answer Type Questions **5 mark**

1. Gametophyte is a dominant phase in the life cycle of a bryophyte. Explain.
2. With the help of a schematic diagram describe the haplo-diptontic life cycle pattern of a plant group.
3. Lichen is usually cited as an example of **'symbiosis'** in plants where an algal and a fungal species live together for their mutual benefit. Which of the following will happen if algal and fungal partners are separated from each other?

a. Both will survive and grow normally and independent from each other,

b. Both will die

c. Algal component will survive while the fungal component will die.

d. Fungal component will survive while algal partner will die.

Based on your answer how do you justify this association as symbosis.

4. Explain why sexual reproduction in angiosperms is said to take place through double fertilization and triple fusion. Also draw a labelled diagram of embryo sac to explain the phenomena.
5. Draw labelled diagrams of

a. Female and male thallus of a liverwort,

b. Gametophyte and sporophyte of *Funaria.*

c. Alternation of generation in Angiosperm.

Chapter 3: ANIMAL KINGDOM

Very Short Answer Type Questions **1 mark**

1. Identify the phylum in which adults exhibit radial symmetry and larva exhibit bilateral symmetry.
2. What is the importance of pneumatic bones and air sacs in Aves?
3. What is metagenesis? Mention an example which exhibits this phenomenon.
4. What is the role of feathers?
5. Which group of chordates possess sucking and circular mouth without jaws?
6. Give one example each for an animal possessing placoid scales and that with cycloid scales.
7. Mention two modifications in reptiles required for terrestrial mode of life.

8. Mention one example each for animals with chitinous exoskeleton and those covered by a calcareous shell.
9. What is the role of radula in molluscs?
10. Name the animal, which exhibits the phenomenon of bioluminescence. Mention phylum to which it belongs.
11. Differentiate between a diplobastic and a triploblastic animal.
12. Give an example of the following
    a. Round worm
    b. Fish possessing poison sting
    c. A limbless reptile/ amphibian

Short Answer Type Questions

1. Differentiate between:

a. Open circulatory system and closed circulatory system

b. Oviparous and viviparous characteristic

c. Direct development and Indirect development

2. Sort out the animals on the basis of their symmetry (radial or bilateral) coelenterates, ctenophores, annelids, arthropods, and echinoderms.

3. There has been an increase in the number of chambers in heart during evolution of vertebrates. Give the names of the class of vertebrates having two, three or fourchambered heart.

4. Fill up the blank spaces appropriately

Phylum class	Excretory Organ	Circulatory Organ	Respiratory System
Arthropoda		Lungs/ Gills/ Tracheal System	
	Nephridia	Closed	
	Metanephedia	Open	Skin/ parapodia
Amphibia	Closed	Lung	

5. Match the followings:

a.	Amphibia	i. Air Bladder
b.	Mammals	ii. Cartilagious notochord
c.	Chondrichythyes	iii. Mammary glands
d.	Ostichthyes	iv. Pneumatic bones
e.	Cyclostomata	v. Dual habitat
f.	Aves	vi. Sucking and circular mouth without jaws

6. Endoparasites are found inside the host body. Mention the special structure, possessed by these and which enables them to survive in those conditions.

7. Match the following and write correct choice in space provided:

Animal	Characteristics
a. Pila	i. Jointed appendages
b. Cockroach	ii. Perching
c. Asterias	ii. Water Vascular
d. Torpedo	v. electric organ
e. Parrot	v. Presence of shell
f. Dog fish	vi. Placoid scales

8. Differentiate between:

a. Open and closed circulatory system

b. Oviparity and viviparity

c. Direct and indirect development

d. Aceolomate and pseudo coelomate

e. Notochord and nerve cord

f. Polyp and medusa

9. Give the characteristic features of the following citing one example of each

a. Chondrichthyes and ostichthyes

b. Urochordata and cephalochordate

10. Mention two similarities between

a. Aves and mammals

b. A frog and crocodile

c. A turtle and pila

11. Name

a. A limbless animal

b. A cold blooded animal

c. A warm blooded animal

d. An animal possessing dry and cornified skin

e. An animal having canal system and spicules

f. An animal with cnidoblasts

12. Give an example for each of the following:

a. A viviparous animal

b. A fish possessing a poison sting

c. A fish possessing an electric organ

d. An organ, which regulates buoyancy

e. Animal, which exhibits alternation of generation

f. Oviparous animal with mammary gland

Long Answer Type Questions **5 mark**

1. Give three major differences between chordates and non-chordates and draw a schematic sketch of a chordate showing those features.
2. What is the relationship between germinal layers and the formation of body cavity in case of coelomate, acoelomates and pseudocoetomates?
3. Comment upon the habitats and external features of animals belonging to class, amphibia and reptilia.
4. Mammals are most adapted among the vertebrates. Elaborate.

SUBJECT	PHYSICS
MARKS FOR PROJECT (MARKING SCHEME)	1. Clarity and relevance of the problem statement (2) 2. Appropriate presentation of content (3) 3. Research Skill (3) 4. Oral presentation (2) Total: 10 marks
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	Handwritten
GROUP/INDIVIDUAL	Individual
LIST OF EXPERIMENTS/TOPICS	List of Investigatory Projects 1. To demonstrate that a centripetal force is necessary for moving a bo with a uniform speed along a circle, and that the magnitude of this force increases with increase in angular speed. 2. To demonstrate inter-conversion of potential and kinetic energy. 3. To demonstrate conservation of linear momentum. 4. To demonstrate the law of moments. 5. To demonstrate the effect of angle of launch on range of a projectile 6. To demonstrate that the moment of inertia of a rod changes with the change of position of a pair of equal weights attached to the rod. 7. To study variation of volume of a gas with its pressure at constant temperature using a doctors' syringe. 8. To demonstrate Bernoulli's theorem with simple illustrations 9. To demonstrate free oscillations of different vibrating systems. 10. To demonstrate longitudinal and transverse waves.

GUIDELINES

The objectives of the project work are to enable learners to:

- demonstrate the application of theoretical concepts in real world problems
- apply scientific method of problem solving.

The expectations of the project work are that:

- A well-structured experimental plan that outlines the methodology, variables, and data collection techniques.
- Accurate data collection and analysis using appropriate tools and methods.
- Clear presentation of results, including data visualizations such as graphs, charts, or tables.
- Proper documentation of sources and references.

Scope of the project:

- The project may involve designing experiments, simulations, or theoretical models to explore a specific concept.
- The project may be a solution of existing problems or an innovative application of any scientific principle.

Expected Checklist:

- Research Question: Clearly define the research question or hypothesis.
- Literature Review: Conduct background research and compile relevant information.
- Experimental Plan: Design the experiment, including materials, procedures, and data collection methods.
- Data Collection: Gather data accurately and systematically.
- Data Analysis: Analyze the data using appropriate statistical or graphical methods.
- Results: Present the results clearly, using graphs, charts, or tables as needed.
- Interpretation: Interpret the results in relation to the research question or hypothesis.
- Conclusion: Summarize the findings and suggest areas for further research.
- Documentation: Cite sources and references accurately.

Mode of presentation/submission of the Project:

- A detailed report that includes the research question, literature review, experimental plan, data analysis, results, interpretation, and conclusion. Include proper citations and references.

Assignment:

CHAPTER 1- UNITS AND MEASUREMENT

1. A planet moves around the sun in nearly circular orbit. Its period of revolution T depends upon radius r of the orbit, mass m of the sun and the gravitational constant G. Show dimensionally that $T^2 \alpha r^3$.

2. The velocity of a body which has fallen freely under gravity varies as $g^p h^q$, where g is acceleration due to gravity and h is the height through which the body falls. Determine the value of p and q.

3. The escape velocity of a body depends upon the acceleration due to gravity of the planet and the radius of the planet R. Establish dimensionally the relationship between v, g and R.

4. Mention three advantages and three limitations of using dimensional analysis.

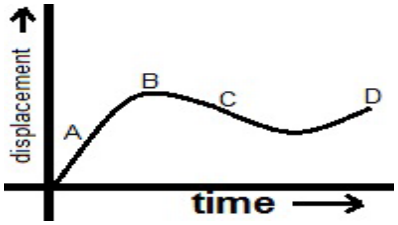
5. The frequency of vibration f of a mass m suspended from a spring of spring constant k is given by a relation $f = am^x k^y$, where a is dimensionless constant. Find the values of x and y.

6. A jet of water of cross sectional area A and velocity υ impinges normally on a stationary flat plate. The mass per unit volume of water is ρ. By dimensional analysis, determine an expression for the force F exerted by the jet against the plate.

7. Give examples of pair of physical quantities with the same dimensional formula. Also, mention their dimensional formula.
8. Check the dimensional consistency of the equation: $s = ut + \frac{1}{2} at^2$

CHAPTER 2- MOTION IN STRAIGHT LINE

1. The displacement of a particle along x axis is given by $x= 3+8t+7t^2$. Obtain the velocity and acceleration at t=3s. Also specify the nature of motion the particle is undergoing.
2. Brakes are applied to a train travellling at 72km/h. After passing over 200m, its velocity is reduced to 36km/h. At the same rate of retardation, how further will it go before stopping?
3. A ball is dropped from the tower of height h. it covers a distance of h/2 in the last second of its motion. How long does the ball remain in air?
4. The displacement x(in m) of a body varies with time t(in s) as $x=-2/3t^3+16t+2$. How long does the body take to come to rest?
5. From the top of a tower 100m in height a ball is dropped and at the same time another ball is projected upwards from the ground with a velocity 25m/s. Find when and where the two ball will meet (g=10m/s).
6. A ball hits a wall with a velocity of 30 m/s and rebounces with the same velocity. What is the change in its velocity?
7. A player throws a ball upwards with an initial speed of 29.4 m s^{-1}.
   a) Choose the x = 0 m and t = 0 s to be the location and time of the ball at its highest point, vertically downward direction to be the positive direction of x-axis, and give the signs of position, velocity and acceleration of the ball during its upward, and downward motion.
   b) To what height does the ball rise and after how long does the ball return to the player's hands ? (Take g = 9.8 m s^{-2} and neglect air resistance).
8. A body covers half of a distance with 40 km/h, half of the left with 20km/h and rest of it with 30km/h. Find the average speed of the body for the journey.
9. A particle is released from rest from a tower of height 3h. Find the ratio of intervals of time to cover three equal heights h.
10. The displacement time graph of a moving particle is given below , The instantaneous velocity of the particle is negative at the point:



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

CHAPTER 3 - MOTION IN A PLANE

1. Two bodies are projected at angle θ and $(90^o-\theta)$ to the horizontal with the same speed. Find the ratio of their (i) time of flight. (ii) Maximum heights attained by them and (iii) of horizontal ranges?
2. A fighter plane flying horizontally at an altitude of 1.5 km with speed 720 km/h passes directly overhead an anti-aircraft gun. At what angle from the vertical should the gun be fired for the

shell with muzzle speed 600 m s-1 to hit the plane ? At what minimum altitude should the pilot fly the plane to avoid being hit ? (Take g = 10 m s^{-2}).

3. State the Parallelogram law of vector addition. Also analytically find the resultant of two vectors acting at angle θ to each other.
4. Why does a projectile fired along the horizontal not follows a straight line path ?
5. The sum of the magnitudes of two forces acting at a point is 18 N and the magnitude of their resultant is 12N. If the resultant makes an angle of 90˚ with the force of smaller magnitude, what are the magnitudes of the two forces?
6. At what point in its trajectory does a projectile have its (i) minimum speed (ii) maximum speed.
7. If two vectors are given as A = 3i+4j and B = 7i+24j, find a vector having the same magnitude as B and parallel to A.
8. A body of mass 1kg initially at rest explodes and breaks into three fragments of masses in the ratio 1:1:3. The two pieces of equal mass fly off perpendicular to each other with a speed of 30m/s each. What is the velocity of the heavier fragment?
9. A body of mass 5kg is acted upon by 2 perpendicular forces 8N and 6N. Give the magnitude and direction of acceleration of body.
10. A ball is kicked at an angle of 30˚ with the vertical. If the horizontal component of its velocity is 19.6 m/s, find the maximum height and horizontal range.

SUBJECT	CHEMISTRY
MARKS FOR PROJECT (MARKING SCHEME)	1. Brief & Clear Statement of the Aim – 2 marks 2. Appropriateness of Methodology – 3 marks 3. Innovative design / New idea – 2 marks 4. Oral Presentation Skills – 3 marks Total marks - 10
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	HANDWRITTEN
GROUP/INDIVIDUAL	INDIVIDUAL
LIST OF EXPERIMENTS/TOPICS	1. Study of the presence of oxalate ions in guava fruit at different stages of ripening. 2. Study of the effect of Potassium Bisulphate as food preservative under various conditions (temperature, concentration, time, etc.) 3. Study of digestion of starch by salivary amylase and effect of pH and temperature on it. 4. Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc. 5. Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom). 6. Study of common food adulterants in fat, oil, butter, sugar, turmeric power, chilli powder and pepper. 7. Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any). 8. Investigation of the foaming capacity of different washing soaps and the effect of addition of Sodium Carbonate on it. 9. Study the acidity of different samples of tea leaves. 10. To check the contamination in drinking water by testing sulphide ion. 11. Any other relevant topic.

GUIDELINES

The objectives of the project work are to enable learners to:

- demonstrate proficiency in experimental skills such as observing, recording data and drawing conclusions.

- use creativity in approaching scientific problems and generating innovative ideas for investigation.
- to acquire skills to gather information from various sources and critically evaluate their relevance and reliability
- develop the communication skills to argue logically.

The expectations of the project work are :

- Originality - Demonstrating creativity and innovation in selecting a research topic and developing hypotheses or solutions.
- Quality - Producing reliable and accurate data through careful experimentation, observation, or analysis.
- Clarity - Communicating findings, methodologies, and conclusions effectively through written reports, oral presentations, or visual displays.
- Critical Thinking - Demonstrating the ability to analyze data critically, interpret results, and draw logical conclusions.

Scope of the project:

- Topic Definition - Clearly defining the research question or problem statement that the project aims to address.
- Research Plan - Designing a systematic approach to gather relevant information, conduct experiments, or carry out investigations.
- Resource Management - Identifying and allocating necessary resources such as time, materials, equipment, and personnel.
- Timeline - Establishing a realistic timeline with milestones to monitor progress and ensure timely completion of the project.
- Dissemination - Sharing findings and outcomes with relevant stakeholders through presentations.

Expected Checklist:

- Topic Definition - Clearly defining the research question or problem statement that the project aims to address.
- Research Plan - Designing a systematic approach to gather relevant information, conduct experiments, or carry out investigations.
- Data Collection and Analysis - Collecting data through experiments, surveys, observations, or literature review, and analyzing it to draw meaningful conclusions.
- Evaluation - Implementing criteria for evaluating the success of the project in achieving its objectives and addressing the research question.

Mode of presentation/submission of the Project:

- A detailed well presented written report that includes experimental plan, data analysis, conclusion and proper references.

Complete the following assignment :

CH 1 : SOME BASIC CONCEPTS OF CHEMISTRY

1. Write the similarities and differences between a 1 M solution of NaOH and 1m solution of NaOH .
2. Two bulbs B1 and B2 of equal capacity contain 10g oxygen (O_2) and ozone (O_3) respectively. Which bulb will have greater number of molecules?
3. In the combustion of methane , why is methane regarded as the limiting reactant?
4. If 700 ml of H_2 at STP contains x molecules of it, how many molecules of O_2 are present in 700 ml of it at same temperature and pressure.
5. Molality is preferred to molarity for expressing the concentration of a solution. Why?
6. Write the formulae of three compounds containing same percentage composition of C,H and O.
7. How is a precise measurement different from an accurate measurement? Explain by giving an example.
8. Consider the reaction $Al + 6\,HCl \rightarrow 2AlCl_3 + 3H_2$
   If 25 g of aluminium is added to 90 g of HCl, how many grams of hydrogen will be produced?
9. Copper oxide obtained by heating copper carbonate or copper nitrate contains copper and oxygen in the same ratio by mass. State the law illustrated by this observation.
10. The reactant which is entirely consumed in the reaction is known as a limiting reagent.In the reaction $2A + 4B \rightarrow 3C + 4D$, when 5 moles of A react with 6 moles of B, then
    (i) Which is the limiting reagent?
    (ii) Calculate the amount of C formed?
11. A solid mixture weighing 5.00g containing lead nitrate and sodium nitrate was heated below 600^o C until the mass of the residue was constant. If the loss of mass is 28%, find the mass of lead nitrate and sodium nitrate in the mixture. (Atomic mass of Pb=207
12. 0.8 M solution of sulphuric acid has a density of 1.06 g/cm^3. Calculate its molality and mole fraction.

CH 2 : STRUCTURE OF ATOM

1. Calculate the frequency & energy of a Photon of radiation having wavelength 6000 Angstrom.
2. Two particles A and B are in motion. The momentum of particle B is half that of A. If the wavelength associated with the particle A is 5×10^{-8} m, calculate the wavelength associated with the particle B.
3. How many nodes are present in 5f orbital ?
4. Radius of the fourth orbit in hydrogen atom is 0.85nm.Calculate the velocity of the electron in this orbit.

5. The two extra-nuclear electrons in the 1s orbital of helium have anti parallel spins. Why do they not have parallel spins? State the law which does not allow an electron to have parallel spins in an orbital.
6. Why is the absorption spectrum also called photographic negative of the emission spectrum?
7. Why can't we overcome the uncertainity principle by Heisenberg's principle by building more precise devices to reduce the error in the measurement below the $h/4\pi$ limit?
8. Energy of the electron in a hydrogen atom has a negative sign for all possible orbits. What is the significance of the negative sign?
9. Write the rule due to which the electronic configuration for phosphorus is $[Ne]3p_x^1 3p_y^1 3p_z^1$ and not $[Ne]3p_x^2 3p_y^1 3p_z^0$.
10. Account for the following:

    a. Heisenberg's Uncertainty Principle have no significance in everyday life.

    b. Electronic energy is negative.

    c. Matter has dual nature but the ball hit with a hockey by a player does not make a wave.

11. Write the values of the quantum numbers n, l, and m for electron filling the 21^{st} place in the atom of an element with atomic number 24.

12. Calculate the wavelength of the radiation when an electron in a hydrogen atom undergoes a transition from 4^{th} energy level to the 2^{nd} energy level . In which part of the electromagnetic spectrum does this line lie?

1. PROJECT WORK

SUBJECT	COMPUTER SCIENCE
Marks for project (marking scheme)	10 marks (Project file-7 marks (printout of error free and indented code with correct output & comments included), Viva- (3marks)
Mode of submission (typed/handwritten)	Typed
Group/individual	Individual
List of experiments/topics	TOPIC: FLOW OF CONTROL (Do Any one from PROJECT 1 and PROJECT2) PROJECT 1: WORLD CLOCK Sudha is CEO of a Multinational company which has offices in California USA, London UK, Sydney Australia, Tokyo Japan. She is facing problem in knowing the time in four offices at any point of time. Write a python program to accept time in India and find out the current time in country choice given by Sudha. OR PROJECT 2: NUMBER GUESSING GAME Write a simple number guessing game where the computer generates a random number between 1 and 100, and the user has to guess it. Provide feedback if the guess is too high or too low. Use a while loop to repeatedly prompt the user until they guess correctly. (Do Any one from PROJECT3 and PROJECT4) PROJECT 3: Bill Generator Application Write a program to input the price of items, number of items and calculate the discount and total amount to be paid by the user according to the following criteria Total price — Discount% <500 — 10% 500-1000 — 12% >1000 — 15% OR PROJECT 4: Student Reportcard Generator Application Write a program to input the marks scored by the students in 5 subjects. Calculate the total marks and grade according to the following criteria Total marks — Grade 75 - 100 — A 50 - 74 — B 33 - 49 — C 0-32 — E

GUIDELINES

The objectives of the project work are to enable learners to:

1. **To Familiarize with Python Basics:** Enable learners to understand fundamental concepts in Python programming such as data types, operators, control structures, and loops.
2. **Practical Application:** Provide learners with hands-on experience in solving real-world problems using Python programming language.
3. **Skill Development:** Foster critical thinking and problem-solving skills through programming exercises and challenges.
4. **Introduction to Project Management:** Introduce learners to the project development process, including requirements gathering, planning, implementation, and presentation.

The expectations of the project work are that:

1. **Completion of Assigned Tasks:** Students are expected to complete all assigned tasks within the given timeframe.
2. **Understanding of Concepts:** Demonstrate understanding of Python programming concepts covered in class, including input/output, control flow, loops, and basic arithmetic operations.
3. **Quality of Code:** Write clean, well-structured code with appropriate comments and documentation where necessary.
4. **Problem-Solving Skills:** Apply logical thinking and problem-solving skills to tackle different programming challenges.
5. **Presentation:** Prepare to present their solutions and findings effectively, showcasing their understanding of the concepts and their ability to communicate technical information.

Scope of the project:

1. **Python Basics:** The project covers fundamental Python programming concepts, including input/output operations, data types, operators, and control structures.
2. **Problem Solving:** Students will solve a variety of problems ranging from simple arithmetic calculations to more complex tasks involving loops, conditionals, and functions.
3. **Hands-on Practice:** The project provides ample opportunities for hands-on practice through coding exercises and challenges.
4. **Concept Reinforcement:** Reinforce concepts learned in class through practical application and problem-solving tasks.
5. **Introduction to Project Management:** Introduce students to the basics of project management, including planning, execution, and presentation of their solutions.

Expected Checklist:

Cover Page, Index, Program code and output, Bibliography

Mode of presentation/submission of the Project:

At the end of the stipulated term, each learner will present the Project File to the examiner who will judge the project work on parameters given above .

2. ASSIGNMENT

CHAPTER – FLOW OF CONTROL

1. What do you mean by statements? What are the three types of python statements. Give example of each.
2. How can we name the conditions in Python? What is the use of it? Explain with the help of suitable code.
3. Write the difference between
    a. for loop and while loop.
    b. break and continue
    c. in and not in operator
4. Write a short note on loop else statement.
5. What is the significance of pass statement?
6. **PYTHON Programs based on if statement**
    1. To input two numbers and check which number is greater
    2. To input a number and check whether the number is positive, negative or zero.
    3. To input age from the user and check whether user is eligible for voting or not.
    4. To input a number and check whether number is even or odd
    5. To input two numbers and an operator (+, -, *, /) from the user and calculate the result
    6. To input three numbers and display the largest number.
    7. To input three numbers and print them in ascending order. [Use the concept a,b=b,a]
    8. To print the roots of a quadratic equations
    9. To input a character and check whether it is uppercase, lowercase, digit or special character.
    10. Write a menu-driven program to input two numbers and display the result depending upon the choice entered by user.
        1. DISPLAY QUOTIENT WITHOUT DECIMAL
        2. DISPLAY REMAINDER
        3. DISPLAY QUOTIENT WITH DECIMAL
        4. EXIT
    11. Write a menu-driven program to calculate the area of different shapes i.e. rectangle, circle, square, triangle etc.
        1. AREA OF CIRCLE
        2. AREA OF RECTANGLE
        3. AREA OF TRIANGLE
        4. AREA OF SQUARE
        5. EXIT

12. WAP to input the sale of a salesman in 4 quarteres namely q1, q2, q3, q4 calculate the total sale and assign bonus as follows

    totalsale > 40000 bonus is 10% of sale

    total sale > 30000 bonus is 5%

    total sale > 20000 bonus is 2%

    total sale is < =20000 bonus is 0%

SUBJECT	PHYSICAL EDUCATION
MARKS FOR PROJECT (MARKING SCHEME)	1. Fitness Test (6 marks) 2. Skill of any one game/sport of choice (7 marks) 3. Yogic Practices (7 Marks) 4. Record File (5 marks) 5. Viva (Health/ Game& Sports/Yoga) (5 Marks) Total 30 Marks
MODE OF SUBMISSION (TYPED/HANDWRITTEN)	HANDWRITTEN
GROUP/INDIVIDUAL	INDIVIDUAL
LIST OF EXPERIMENTS/TOPICS	1. History of the game/sport. (choose anyone Game/Sport) Athletics, Badminton, Chess, Boxing, Tennis, Gymnastic, Rope Skipping, Yoga 2. Draw a neat diagram of court/field of your specialized game (3. Dimension of court/field and equipment's 4. Fundamental skills and Terminology of the game 5. Latest rules and regulation of the game 6. Famous personalities and tournaments related to your specialized game. 7. Write down the list of national award winners (Dronacharya award, Arjun award of your respective game. 8. Fitness Tests: Pushups and Modified pushups, Shuttle run, standing broad jump/ Long jump, 50-meter sprint, 600-meter walk and run test. 9. Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease- Diabetes, Asthma, Hypertension, Back pain, Obesity.

GUIDELINES

The objectives of the project work are to enable learners to:

- Physical Development
- Mental Development
- Social Development
- Neuro-Muscular Development

● Development of Health

● Learning and understanding different games and sports

● Learn and understand the Motor Abilities like Strength, Speed, Endurance, Coordination and Flexibility

● Control of emotions, Balance Behavior, Development of Leadership and Followership qualities and Team spirit.

●Develop the habbit of practicing yoga asanasand pranayam daily.

●Knowledge about human body and it's functioning and effects of physical activities.

● Learn about Nutrition and importance of balance diet.

● Understand and organize tournaments

● Learning the procedure and application of different physical and physiological test of different ages groups.

Scope of the project:

- It includes many topics which belong to other subjects like science, biology, psychology, and sociology.

SUBJECT	PHYSICAL EDUCATION
ASSESSMENT PARAMETER (MULTIPLE ASSESSMENT/SUBJECT ENRICHMENT)	SUBJECT ENRICHMENT
TOPIC	**1**. History of the game/sport. (choose anyone Game/Sport) Athletics, Badminton, Chess, Boxing, Tennis, Gymnastic, Rope Skipping, Yoga 2. Draw a neat diagram of court/field of your specialized game (3. Dimension of court/field and equipment's 4. Fundamental skills and Terminology of the game 5. Latest rules and regulation of the game 6. Famous personalities and tournaments related to your specialized game. 7. Write down the list of national award winners (Dronacharya award, Arjun award of your respective game. 8**.** Fitness Tests: Pushups and Modified pushups, Shuttle run, standing broad jump/ Long jump, 50-meter sprint, 600-meter walk and run test. 9. Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease- Diabetes, Asthma, Hypertension, Back pain, Obesity.

PROJECT/ACTIVITY	PROJECT PRACTIAL FILE
HOLIDAY HOMEWORK GUIDELINES LEARNING OUTCOME/SKILL ENHANCED	1. Students will develop competency in many movement activities. 2. Students will understand *how* and *why* they move in a variety of situations and use this information to enhance their own skills. 3. Students will achieve and maintain a health-enhancing level of physical fitness. 4. Students will exhibit a physically active lifestyle and will understand that physical activity provides opportunities for enjoyment, challenge and self-expression. 5. Students will demonstrate responsible personal behavior while participating in movement activities. 6. Students will demonstrate responsible social behavior while participating in movement activities. Students will understand the importance of respect for others. 7. Students will understand the relationship between history, culture and games.
RESOURCES (Online Links)	https://youtu.be/yRzHRKFhAz0?si=bIMbkyjiTU5R2tSq https://youtu.be/LB0f1LkenRQ?si=Ks6tGU6Rqvd7nZS3
MODE OF SUBMISSION	ONLINE /OFFLINE

SUBJECT	PHYSICAL EDUCATION
ASSESSMENT PARAMETER (MULTIPLE ASSESSMENT/SUBJECT ENRICHMENT)	MULTIPLE ASSESSMENT
TOPIC	INTERNATIONAL YOGA DAY
PROJECT/ACTIVITY	• You have to do any five asanas and click the pictures and make a collage and two videos of asanas and share YouTube link on given mail id: balwadasushil@gmail.com
HOLIDAY HOMEWORK GUIDELINES LEARNING OUTCOME / SKILL ENHANCED	Develop the habit of practicing yoga asanas and pranayama daily
RESOURCES (Online Links)	https://youtu.be/3KaAG_FME-A?si=uMIBZOJ36T6Vc4Nw https://youtu.be/OcKTF01z-JM?si=wIcXqbXFz13TlU7E
MODE OF SUBMISSION	ONLINE

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