Spring Dale Public School

Sherpur Road, Ludhiana

Holiday Home Assignment

"The road to success is not easy to navigate, but with hard work, drive and passion, it is possible to achieve your dreams."

Dear Parents
Greetings!
Summer vacation is a much awaited time for students as it brings a break from the routine school days and a chance to enjoy some leisure time, it reduces stress and enhances stamina. It offers an opportunity for recreation and refreshment that plays a vital role in students' overall development.

Guidelines for the parents:

1. Encourage your ward to read good books and enrich his/her reading skills effectively.
2. Minimise the use of mobile phone & screen time.
3. Please ensure to provide positive environment to reinforce his/her strengths productively.
4. Have a healthy discussion with your ward(s) and spend quality time with him/her.
5. Motivate your child to be regular and punctual at every step of life. It will definitely reward him/her with success.

Instructions for the students:

- Do complete your assignments in your own handwriting.
- Project files must be well maintained as they will be assessed and evaluated for the Final Assessment.
- Revise & practise all the topics already covered in the class.
- Focus on self-study and utilise this time period optimally.
- Students must use ***internet*** under the guidance of their parents.

Have a rejuvenating Summer Break!

CLASS XI

Dear Students,
Please complete the following tasks during the summer break:

1. Poster Making
   Create posters on the following topics:
   - Say 'No' to Drugs
   - Cyber Safety & Digital Hygiene
   - Literacy For All
   - Reduce, Reuse and Recycle
   - Fund Raising for Victims of Earthquake
   - Importance of Reading
2. Write articles (150–200 words) on any three of the topics below:
   - Women Empowerment
   - Climate Change & Human Responsibility
   - Mental Health Awareness
   - Ideal Ways to Spend Vacation
   - Give Respect and Gain Respect
   - Rise in Population is a Root Cause of Poverty in India
   - Artificial Intelligence: A Bane

Note:
- Make posters on A3-size thick sheets. (Ivory Sheet)
- Use coloured pens, bold markers and ensure captions are written in bold.
- Submit your work in handmade folders.
- The presentation must be neat and visually appealing.

कार्य विवरण

- पत्र: स्कूल जाने की उम्र में बच्चों को काम करते और भीख मांगते देखकर आपको कैसा लगता है? अपने विचारों को किसी प्रतिष्ठित दैनिक समाचार पत्र के संपादक के नाम पत्र लिखिए।
- अनुच्छेद: गर्मी की झुलसा देने वाली एक दोपहर
- परियोजना कार्य: "नमक के कानून" पर एक परियोजना कार्य लिखिए।
- हिंदी का एक पोर्टफोलियो तैयार कीजिए और उसमें यह कार्य कीजिए।
- नोट गृह कार्य A4 साइज शीट में लिखकर एक फाइल तैयार कीजिए और उसके प्रथम पृष्ठ पर अपना नाम विषय कक्षा ,शिक्षिका का नाम आदि जानकारी अवश्य लिखिए ।
- करवाए गए पाठ्यक्रम को कंठस्थ कीजिए।

1. ਪੰਜਾਬੀ ਲੋਕ ਗੀਤ ,ਲੋਕ ਬੋਲੀਆਂ ਵਿਸ਼ੇ ਤੇ ਤਸਵੀਰਾਂ ਸਹਿਤ ਸੁੰਦਰ ਪ੍ਰੋਜੈਕਟ ਤਿਆਰ ਕਰੋ।
2. ਸਮਾਜਿਕ ਬੁਰਾਈਆਂ ਦਾਜ, ਨਸ਼ੇ , ਭਰੂਣ ਹੱਤਿਆ(ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ 'ਤੇ) ਸੁੰਦਰ ਪ੍ਰੋਜੈਕਟ ਤਸਵੀਰਾਂ ਸਹਿਤ ਤਿਆਰ ਕਰੋ।
3. ਪੰਜਾਬੀ ਪਹਿਰਾਵਾ,ਪੰਜਾਬੀ ਰਹਿਣ ਸਹਿਣ ਅਤੇ ਪੰਜਾਬੀ ਹਾਰ- ਸ਼ਿੰਗਾਰ (ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ ਤੇ) ਸੁੰਦਰ ਪ੍ਰੋਜੈਕਟ ਤਸਵੀਰਾਂ ਸਹਿਤ ਤਿਆਰ ਕਰੋ

4. ਕਰਵਾਏ ਗਏ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ ।

MAKE PROJECT ON FOLLOWING TOPICS.EACH STUDENT WILL MAKE ONE PROJECT ON THAT TOPIC WHICH IS ASSIGNED BY TEACHER

1. Legislature
2. Judiciary
3. Executive
4. Local government
5. Election and Representation
6. Federalism
7. Rights
8. Constitution: How and why

FINAL PRESENTATION/LAYOUT OF THE PROJECT

Section 1: Political Science Project (Title of the Project) Name: School: Year: Roll no.:

Section 2: Certificate of authenticity (To be pasted) Teacher's Signature

Section 3: Index

Section 4: Acknowledgement (Acknowledging the institution, the place visited and the person who has helped.)

Section 5: Preface: Problem Statement/Objective of the project

Section 6: Introduction: (Objective/learning outcomes of the project. Introduce the selected topic by giving some historical background)

Section 7: Summary of the topic Activities done during the project

Section 8: Observations and Analysis

Section 9: Conclusion Summarized suggestions of findings/Future scope of study

Section 10: Appendix Person consulted, Bibliography, Books, Websites, Films/ Television referred.

Section 11: Values and Life skills learned through the project

Section 12 : Draft Thank you.

General Instructions:

1. Project should be individual only 2. It should be a handwritten project on a A4 size sheet. 3. Project should be summed up in 20 -25 pages. 4. It should be well researched based on facts and figures and pictorial. 5. The project must have a Table of contents, Title/ Cover page, Acknowledgement, Bibliography, Analysis with headings and sub-headings. 6. It must include relevant news clippings, facts and figures, pictures. 7. You can plan a survey or an inter

1. 1.Revise and Practice the syllabus covered in the class:
   (i) Micro Economics: Ch :- 1-3,
   (ii) Statistics for Economics: Ch:-1, 9&10.
2. Collect the data and write in your fair notebook
   (i) the Bank's interest rates of all types of Term Deposits
   For example Fixed Deposit for One year/ Two Years /Five Years etc
   (ii) the rates of Gold, Silver for ten days i.e. June 11,2025 to June 20,2025]
3. Do atleast two questions based on each method of Measures of Central Tendency from Mean, Median andMode from unsolved questions of your book.

4. Prepare a chart (on A3Size sheet) of the following:
   (i) Differentiate between Micro Economics and Macro Economics. (Even Roll.no)
   (ii) Formulas of Mean, Median and Mode. (Odd Roll. no)
   Solve the Following Questions:

Combined Mean

1. The mean height of 25 male workers in a factory is 61 inches and the mean height of 35 female workers in the same factory is 58 inches. Find the combined mean height of 60 workers in the factory.
2. The mean age of a combined group of men and women is 30.5 years. If the mean age of the group of men is 35 and that of the group of women is 25, find out the percentage of men and women in the group.
3. The mean weight of 150 students in a class is 60 kg. The mean weight of boys in the class is 70 kg and that of girls is 55 kg. Find the number of boys and girls in the class.

Corrected Mean

4. The average weight of a group of 20 boys was calculated to be 89.4. It was later discovered that one weight was misread as 78 kg instead of the correct one of 87 kg. Calculate the correct average weight.
5. The mean of 100 observations was found to be 40. Later on, it was discovered that two items were wrongly taken as 30 and 27 instead of 3 and 72. Find correct mean.
6. The average height of a group of 40 students was calculated as 155 cm. It was later discovered that the height of one student was read as 157 instead of 137 cm. Calculate the correct average height.

Missing Value

7. Arithmetic mean of the following series is 41:

Marks	20	30	40	50	60	70
No. of Students	8	12	x	10	6	4

Find the missing item.

8. Calculate the number of students against the class 30-40 of the following data, where X = 28.

Marks	0–10	10–20	20–30	30–40	40–50	50–60
Frequency	12	18	27	?	17	6

9. Find the missing frequency from the following data, if arithmetic mean is 25.4.

X	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89
No. of Persons	32	42	40	56	x	6	2	2

Miscellaneous Questions

10. Find the average marks from the following table

Marks	No. of Students
Below 10	25
Below 20	40
Below 30	60
Below 40	75
Below 50	95
Below 60	125
Below 70	190
Below 80	240

11. Calculate the mean from the following frequency distribution:

X	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89
No. of Persons	32	42	40	56	20	6	2	2

12. The Average age of 20 students in a class is 16 years. One student whose age is 18 years has left the class. Find out average age of rest of the students.

13. Locate the missing frequency, if arithmetic mean of the following series is 44.8.

X	20	30	40	50	60	70
f	5	?	15	10	8	5

14. The average marks of 30 students in a class were 52. The top six students had an average of 31. What were the average marks of the other students?

15. Calculate the mean of the given data:

Size of item	2	4	6	8	10	12	14	16
Frequency	5	7	10	13	17	9	6	3

- Revise syllabus done in class.
- Solve may test in assignment notebook.
- Prepare a chart on A3 sheet

  TOPICS:- Chart showing Classification of Business (Roll No. 1 to 11)

  Chart showing difference between private company and public company (Roll No. 12 to 22)
- Take a printout & Solve following assignment in your business studies notebook. It will be evaluated for mid term examination.

1. “Earning profit cannot be the only objective of business, more than the eating is the objective of living." Do you agree with this statement? Give reasons to support your answer.
2. In which form of organisation is a trade agreement made by one of the owners binding on the others. Explain its merits.
3. "It is said to be an artificial person created by law, having a separate entity with perpetual succession and common seal”. What is it? Elaborate up points of lighted features.
4. Mathura Private Limited the known group of promoter submitted an application to the registrar of the company for the approval of the name for cosmetic manufacturing company. They selected ‘Avon Limited’ as a name of the company so as to increase the sale of the newly open mark, as it will be benefitted by the name of already existing company.

a) Which function of the promoter is being referred here?
b) Who select the name of the company?
c) Would the purposed name be accepted by the registrar of companies? Give reason.

5. Salman is an IAS officer while his sister Reema runs an event management company. Their friend Amaira is a doctor and has her own clinic.
   a. Identify the economic activities in which Salman, Reema and Amaira are involved.
   b. Distinguish between these economic activities on different basis.
6. Compare the status of a minor in a Joint Hindu Family business with that in a partnership firm.
7. Name the following:-
   a. The most important or fundamental document of a company.
   b. The document containing the rules and regulation for the internal management of the affairs of a company.
   c. The amount of money which must be raised before allotment of shares.
   d. The clause specifies the maximum capital which the company will be authorized to raise through the issue of shares.
   e. The document called doctrine of Indoor management.

8. If registration of partnership is optional, why do partnership firms willingly go through this legal formality and get themselves registered? explain.
9. Hemant is a friend of Rahul, who is the partner of a firm, "Badshah Builders". Hemant accompany Rahul for a business meeting with other firm "Veera Construction". During this business meeting, Hemant actively participated and veera construction enter into contract with Badshah builders, thinking that Hemant is a partner of a firm. Which type of partner is Hemant here? Explain it also.
10. On the basis of nature of activities performed, the cooperative organisations can be classified into various categories. Describe them.
11. It is a business owned and carried on by members of Hindu undivided family, which is governed by the Hindu law. But this form of organisation too suffers from certain limitations. Discuss those limitations.
12. Distinguish between Memorandum of Association and Articles of Association.
13. A company got its certificate of incorporation on 24 August 2010 and on the certificate the date is written as 22 August 2010. Company allotted some shares on 23rd August. Is the allotment valid or not? Give reason.
14. Who is called parent of a company?
15. Every business has an important objective of developing new ideas or methods in the way something is done or made. It may be related to introducing something new in products or services and activities needed to supply products and services. No business enterprise can flourish in a competitive world without it.
    Identify and explain the objective of business highlighted here

1. Revise and practice the syllabus covered in the class
2. Revise HOTS,VERY SHORT QUES.ANS,SHORT QUES.ANS and PRACTICAL PROBLEMS given in book of chapter 1 to 8.
3. Prepare charts on A3 size sheet:

(A) Accounting Process -Roll no. (1 to 7)
(B) Accounting procedures – Rules of Debit and Credit (Traditional classification) Roll no (8 -14)
(C) Accounting procedures- Rules of Debit and Credit (Modern classification)Roll no (15-21)

4. Solve the given assignment on your fair notebooks.

ASSIGNMENT

1. Write the difference between expense and expenditure with 2 examples of each.
2. Define Assets and Liabilities in detail. Give examples of each.
3. What is the difference between Capital and Revenue expenditure?
4. Define Revenue and Capital receipts. Give examples of each.
5. Identify the accounting terms involved in the following situations:
   a) A company purchases machinery worth ₹5, 00,000 using a bank loan. Explain how this transaction affects the company's assets and liabilities.
   b) Mr. Sharma starts a business with ₹2, 00,000 as capital. During the year, he withdraws ₹20,000 for personal use. How will this impact the financial statements?
   c) A restaurant earns ₹1, 50,000 in revenue but incurs ₹80,000 in expenses. Calculate the profit or loss and explain the difference between revenue and expense.
   d) A trader sells goods worth ₹50,000 on credit to a customer and purchases raw materials worth ₹30,000 on credit from a supplier. Identify the debtor and creditor in this scenario.
   e) A business receives ₹10,000 in cash from a customer and issues a receipt. What type of accounting voucher is used, and why is it important in book keeping?
6. Tej Partap started business with cash Rs.14,000, bank balance Rs.36,000 and furniture Rs. 30,000. Paid Rent Rs. 12,000 and salaries Rs.24,000. Cash deposited into bank Rs. 8000. Borrowed Rs. 40,000 from bank for 3 years and purchased machinery for Rs. 25,000. Purchased goods for Rs. 38,000 from Nitish Kumar to whom returned the goods worth Rs 12,000. Goods were sold to Lalu Prasad for Rs. 50,000 who returned goods worth Rs. 10,000. Cash paid toNitish Kumar after deducting 3% discount. Provided Rs. 13,000 as depreciation. Furniture of the book value of Rs. 20,000 was sold for Rs. 25,000.
   (a) What is the amount of current and non-current liability?
   (b) What is the amount of cash discount availed and how much payment has been made to Nitish?
   (c) State the value of gain and closing balance of furniture.
7. Classify the following accounts under Personal, Real or Nominal accounts along with its effect on debit or credit:
   (a) Commission Accrued
   (b) Rent received in Advance
   (c) Bank overdraft
   (d) Rent paid in advance
   (e) Outstanding salary
   (f) Bank (deposit)
8. Pass journal entries for the following transactions of Mitesh:

April 2 2022 - Purchased goods of Rs 2, 00,000 less trade discount 10% from Prabhat Electric Company on the terms that on payment received within 10 days, Cash discount will be allowed @ 5% and on payment received within next 20 days, 2% cash discount will be allowed.

April 3 2022 - Purchased goods of Rs 2, 00,000 less 25% Trade discount and paid immediately availing Cash discount of 2%. Payment was made by bank draft paying Rs 200 as bank charges.

April 5 2022 - Paid amount to Prabhat Electric company on account Rs 1, 00,000

April 13 2022 - Paid Balance amount to Prabhat Electric company.

9. Identify the accounting concept involved in the below mentioned situations:
   (a) Under which concept if advance is received against sale of goods, the advance received is recorded as 'Advance against sale' and not sales?
   (b)Rent for the month of March 2022 Is not paid. Under which accounting concept it should be recorded as expense for the year ended 31st March 2022?
   (c)Under which principle, resignation by a marketing manager is not recorded in the books of account?
   (d)Gurpreet purchased 1000 sq. yards land to build a factory and paid rupees 15 lakhs towards its cost including registration charges. At the end of the financial year, the value of the land came down to rupees 13 lakhs. Gurpreet recorded the land at rupees 13 lakhs which principle has been violated here?
   (e) An investment company has been valuing its inventory of land at lower of market price or cost. It now wants to value its inventory at the current market price which is higher than the cost. Which accounting concept will be violated?

(f) Which concept assumes that a business enterprise will not be liquidated in the near future?

10. Pass journal entries of Raman for the following transactions:
    (i) Purchased goods from Sanjeev of Rs 40,000 less 10% Trade discount plus CGST and SGST @ 9% each.
    (ii) Purchased goods from Vijay of Rs 60,000 less 10% Trade discount plus CGST and SGST @ 9% each. Paid by cheque.
    (iii) Purchased goods from hari of Rs 1,00,000 less 10% Trade discount plus CGST and SGST @ 9% each. Paid by cheque immediately and availed 2% Cash discount.
    (iv) Purchased goods from Tarun of Rs 1,00,000 less 10% Trade discount plus CGST and SGST @ 9% each. Paid half the amount by cheque immediately and availed 2% cash discount.
    (v) Sold goods to bhuwan for Rs 40,000 less 10% Trade discount plus CGST and SGST @ 9% each.
    (vi) Sold good to Varun for Rs 50,000 less 10% Trade discount plus CGST and SGST @ 9% each. Received cheque for the amount.

A. Activities (Do these activities in Maths Lab Manual)

1. To find the number of subsets of a given set and verify that if a set has numbers of elements, then the total number of subsets is 2^n.
2. To verify the distributive law for three given non-empty sets A, B and C that is $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$.
3. To verify that for two sets A and B, $n(A \times B) = pq$ and the total number of relations from A to B is 2^{pq},where $n(A) = p$ and $n(B) = q$.
4. To find the values of sine and cosine in function in second, third and fourth quadrant using their given values in first quadrant.
5. To plot the graph of $\sin x$, $2\sin x$ and $\sin 2x$ using same coordinate axis.
6. To interpret geometrically the meaning of $i = \sqrt{-1}$and its integral power.
7. To find the number of ways in which three cards can be selected from given five cards.
8. To construct a parabola.
9. To construct an ellipse using a rectangle.
10. To explain the concept of octants by three mutually perpendiculars planes in space.

B. Project Work: (Do these Questions on A4 Sheet)

Case Study Based Questions:

1. In a school at Bhubaneswar, students of class XI were forming some sets. Two Students Ankita and Babita form two sets A = {1, 2, 3, 4, 5} and B = {2, 4, 6}.
   Based on the above information answer the following:
   (i) Find $A \cap B$.
   (ii) Find $A \cup B$.
   (iii) Find $A - B$ and $B - A$. Are they equal?
2. Maths teacher started the lesson Relations and Functions in Class XI. He explained the following topics:
   Ordered Pairs: The ordered pair of two elements a and b is denoted by (a, b) : a is first element (or first component) and b is second element (or second component). Two ordered pairs are equal if their corresponding elements are equal. i.e., $(a, b) = (c, d) \Rightarrow a = c \text{ and } b = d$.
   Cartesian Product of Two Sets: For two non-empty sets A and B, the cartesian product $A \times B$ is

the set of all ordered pairs of elements from sets A and B. In symbolic form, it can be written as $A \times B = \{(a,b) : a \in A, b \in B\}$.

Based on the above topics, answer the following questions.

(i) If $(a-3, b+7) = (3,7)$, then find the value of a and b

(ii) If $(x+6, y-2) = (0,6)$, then find the value of x and y

(iii) If $(x+2, 4) = (5, 2x+y)$, then find the value of x and y

(iv) Find x and y, if $(x+3, 5) = (6, 2x+y)$.

3. Hanuman and Pawan are two students of class XI in a school. The ages of students are represented by f and g be real functions defined by $f(x) = x + 4$ and $(x) = 16 - x^2$. Then answer some question based on their ages.

(i) Find the domain of $f(x)$ and $g(x)$.

(ii) Find the domain of sum of both ages.

(iii) Find the domain of $\left(\frac{f}{g}\right)$.

4. Let a relation R_1 on the set R of all real numbers be defined by $(a,b) \in R_1 \Leftrightarrow 1 + ab > 0$ for all $a, b \in R$. Check whether

(i) $(a,a) \in R_1$ for all $a \in R$.

(ii) $(a,b) \in R_1 \Rightarrow (b,a) \in R_1$ for all $a, b \in R$

(iii) $(a,b) \in R_1$ and $(b,c) \in R_1 \Rightarrow (a,c) \in R_1$ for all $a, b \in R$.

5. The domain of a function is the set of values that we are allowed to plug into our function. This set is the x values in a function such as $f(x)$. The range of a function is the set of values that the function assumes. This set is the values that the function shoots out after we plug an x value in.

(i) Find the domain of the function $f(x) = \frac{1}{2-\sin 3x}$

(ii) Find the range of the function $f(x) = \frac{1}{2-\sin 3x}$

6. A railway train is travelling on a circular curve of 1500 metres radius at the rate of 66 km/h.

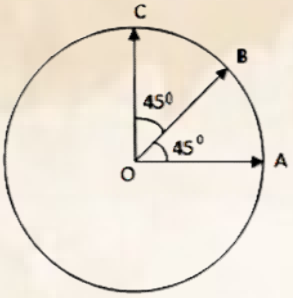
(i) Find the angle in radians by which it turned in 10 seconds.

(ii) Find the degree measure of the angle turned by railway train in 10 seconds.

(iii) How much degree will train turn in 20 seconds?

Dear students: Solve the following assignment (Short answer based)

1. Find the resultant of the following vectors as shown in the diagram if radius of circle is 20 m.



2. Given vectors A = 2i – j + 2k and B = -I -2j +2k. Find the unit vector of A – B and also find its magnitude.
3. The velocity of an object at any time is given by: $v = 2t^2 + 3t - 2$. Find displacement at t=2 sec.
4. Find the angle of resultant of (2i+j+k) and (i-3j+2k) with x- direction.

5. Two vectors (i+3j+k) and (4i-2j+nk) are perpendicular to each other. Find the value of n.
6. Find the component of vector A (i-2j+3k) in the direction of (i-2j)
7. Explain with the help of diagram that flying of a bird is an example of resolution of vectors.
8. A bullet x is fired from a gun when the angle of elevation of the gun is 30°. Another bullet y is fired from the gun at an angle of elevation 60°. Tell which of the two bullets would have a greater horizontal range?

Case study based

9. The trajectory of a projectile launched from ground is given by the equation $y = -0.025\ x^2 + 0.5x$, where x and y are the coordinate of the projectile on a rectangular system of axes. Answer the following questions:
   I. The angle of projection is given by --------
   II. Maximum height acquired by the projectile is given by ------
   III. Range acquired by projectile is given by ----------

Two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.

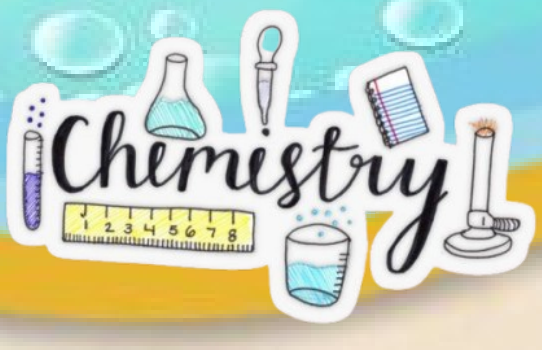
a) **Both A and R are true and R is the correct explanation of A**
b) **Both A and R are true and R is NOT the correct explanation of A**
c) **A is true but R is false**
d) **A is false but R is true**
e) **A is false and R is also false**

10. Assertion: Dot product of two vectors cannot have negative value. Reason: Maximum value of Cosθ of an angle is 1.
11. Assertion: At the highest point of journey, a projectile has maximum velocity. Reason: Horizontal component of velocity remains constant throughout motion.

2. Write down the following practicals in your practical file:-

1. To measure diameter of a small rectangular body using Vernier Callipers.
2. To measure diameter of a small spherical/cylindrical body and to measure the depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.
3. To measure diameter of a given wire using screw gauge.

3.Revise motion in a plane till done in the class



Q.1 ASSIGNMENT:

1. Calculate the number of atoms in each of the following: (i) 52 moles of Ar (ii) 52 u of He (iii) 52 g of He.
2. Calculate the mass percent of different elements present in sodium sulphate (Na_2SO_4).
3. Determine the empirical formula of an oxide of iron, which has 69.9% iron and 30.1% dioxygen by mass.
4. Calculate the amount of carbon dioxide that could be produced when
   (i) 1 mole of carbon is burnt in air
   (ii) 1 mole of carbon is burnt in 16 g of dioxygen.
   (iii) 2 moles of carbon are burnt in 16 g of dioxygen.
5. Calculate the concentration of nitric acid in moles per litre in a sample which has a density, 1.41 g/mL and the mass percent of nitric acid in it being 69%.
6. How much copper can be obtained from 100 g of copper sulphate ($CuSO_4$)?
7. What will be the mass of one 12C atom in g?
8. How many significant figures should be present in the answer of the following calculations?

(i) 5 × 5.3641 (ii) 0.0125 + 0.7864 + 0.02151

9. Use the data given in the following table to calculate the molar mass of naturally occurring argon isotopes:

isotope	isotopic molar mass	abundance
36Ar	35.96755 g mol–1	0.337%
38Ar	37.96272 g mol–1	0.063%
40Ar	39.9624 g mol–1	99.600%

10. Calcium carbonate reacts with aqueous HCl to give $CaCl_2$ and CO_2 according to the reaction, $CaCO_3$ (s) + 2 HCl (aq) → $CaCl_2$ (aq) + CO_2(g) + H_2O(l).What mass of $CaCO_3$ is required to react completely with 25 mL of 0.75 M HCl?
11. Which one of the following will have the largest number of atoms?
    i. 1 g Au (s) (ii) 1 g Na (s) (iii) 1 g Li (s) (iv) 1 g of Cl_2(g)
12. The Balmer series in the hydrogen spectrum corresponds to the transition from n_1= 2 and n_2=3,4.....This series lies in the visible region.Calculate the wave number of lines associated with the transition in the Balmer series when the electron moves to n=4 orbit.
13. Chlorophyll present in Green leaves of plants absorbs light at $4.620*10^{14}$Hz. Calculate the wavelength of radiation in nm.Which part of the electromagnetic spectrum does it belong to?
14. Electronic configuration of valence shell copper is $3d^{10}4s^1$ and not $3d^9 4s^2$. How can this configuration be explained?
15. The effect of the uncertainty principle is significant only for motion of microscopic particles and is negligible for macroscopic particles .Justify the statement with the help of a suitable example.
16. What is the experimental evidence in support of the idea that electronic energy in an atom is quantized?
17. Calculate the total number of angular nodes and radial nodes present in 3p.
18. Calculate the energy associated with the first orbit of helium ion. What is the radius of this orbit?
19. If an electron is moving with the velocity of 600 m/ s, which is accurate up to 0.005% then calculate the uncertainty in its position.
20. a) How many subshells are associated with n=4?
    b) How many electrons will be present in the subshells having m_s value of -1/2 for n=4?
21. Neon gases used in sign boards, if it emits strongly at 616 nm. Calculate a) frequency of the emission b) distance travelled by this radiation in 30 seconds c) energy of quantum d) number of quantum present if it produces two joules of energy.
22. Which of the following will have the most negative electron gain enthalpy and which the least negative? P,S,Cl,F . Explain your answer.
23. Explain why cations are smaller and anions are larger in radii than their parent atoms?
24. How would you explain the fact that the first ionization enthalpy of sodium is lower than that of magnesium but its second ionization enthalpy is higher than that of magnesium?
25. Arrange the following in decreasing order of their van der waal radii: Cl, H,O,N.
26. Use the periodic table to answer the following questions.
    (a) Identify an element with five electrons in the outer subshell.
    (b) Identify an element that would tend to lose two electrons.
    (c) Identify an element that would tend to gain two electrons.
    (d) Identify the group having metal, non-metal, liquid as well as gaseous elements at room temperature.
27. Nitrogen has positive electron gain enthalpy whereas Oxygen has negative .However ,oxygen has lower ionization enthalpy than nitrogen. Explain.
28. Show by a chemical reaction with water that Na_2O is the basic oxide and Cl_2O_7 is an acidic oxide .
29. Predict the formula of the stable binary compounds that would be formed by silicon and oxygen.
30. Give the name and atomic number of an inert gas atom in which the total number of d- electrons is equal to the difference in the numbers of total p-and s- electrons.

Q.2 Complete the following practicals in your lab manuals:

1. To prepare standard solution of oxalic acid.
2. To prepare standard solution of sodium carbonate.
3. Determination of strength of given solution of sodium hydroxide by titrating against standard solution of oxalic acid
4. Determination of strength of given solution of HCl by titrating against standard solution of sodium carbonate .

Project Topics:	***Rollno.***
1. Phytohormones.	1,11,21,31
2. Digestion of food.	2,12,22,32
3. Respiratory disorders	3,13,23,33
4. Absorption of digested products	4,14,24,34
5. ECG	5,16,25,35
6. Disorders of the Digestive system	6,16,26,36
7. Cardiac cycle.	7,17,27,37
8. Disorders of Circulatory system	8,18,28,38
9. Disorders of the excretory system	9,19,29,39
10. Virus , viroids, prions	10,20,30

Project Report Must Include:
Title Page (with your name, roll number, school, and session)
Acknowledgment
Index
Introduction
Detailed explanation of the topic
Real-life examples and case studies
Diagrams, pictures, or flowcharts (hand-drawn or printed)
Conclusion
Bibliography (sources of information)1.
Presentation:
Handwritten
10–15 pages (including pictures and diagrams)
Use of coloured pens and creativity is encouraged

1. NAAD ,SHARUTI,
SWAR, SAPTAK,MARGI, DESHI SANGEET
2. LIFE SKETCH OF TANSEN JI
3. TEEN TAAL DESCRIPTION AND NOTATION
4. RAAG BHIHAG DESCRIPTION AND NOTATION
5. EKTAAL DESCRIPTION AND NOTATION.
6. MAKE A CHART RELATED WITH ANY INSTRUMENT.

Instructions:

- All work should be completed neatly in Assignment Notebook.
- Poster or article should be made on an A4 size sheet.
- Submission Date: First day after summer break.
- Marks will be awarded for creativity, content, and timely submission.

1. Poster/Article Writing (Choice-Based)

Choose any one of the following tasks and complete it on an A4 size sheet:
Option 1: Poster Making on the topic: "Mental Health Matters"

- Use slogans, facts, and illustrations
- Focus on creating awareness and promoting positive mental health

Option 2: Article Writing on any one topic related to psychology (Choose creatively)

- Suggested topics: Power of Positive Thinking, Managing Exam Stress, Role of Psychology in Sports, Impact of Social Media on Mental Health, Self-Concept and Teen Identity, etc.
- Word limit: 200–250 words
- Should include facts, personal views, and suggestions

2. Project Work

Prepare a detailed project report (minimum 10-15 pages) on any one topic from the NCERT Psychology syllabus.

Project Guidelines:

- Cover page (Name, Class, Roll No., Topic)
- Index
- Introduction to the topic
- Main content with relevant subheadings
- Case studies or examples
- Conclusion
- References (if any)

ASSIGNMENT

Chapter 1 – What is Psychology? (Case-Based Questions)

1. Riya believes psychology is about reading minds. After attending her first class, she realizes it's a scientific study of behavior and mental processes.
   a. What is the correct definition of psychology?
   b. What are the key components studied in psychology?
2. Aman says men are more intelligent than women. His friend questions this belief.
   a. What is this belief an example of?
   b. How does scientific psychology differ from popular belief?
3. A child sees a burning matchstick and blinks instinctively.
   a. Identify the type of behavior.
   b. What stimulus-response model can be used to explain this?
4. Two students discuss whether psychology is a science or an art.
   a. Is psychology a natural or social science?
   b. Give one example supporting each aspect.
5. While watching a movie, Samira gets emotional and cries.
   a. Which psychological concepts are involved here?
   b. Differentiate between overt and covert behavior.
6. A student claims he studies better while listening to music.
   a. What psychological process could be involved?
   b. Is this a subjective experience?

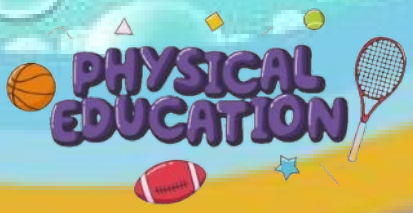
7. Shruti imagines herself passing an exam and feels positive.
   a. Which psychological concept is at play?
   b. How can this help in real-life problem-solving?
8. A scientist studies memory using fMRI techniques.
   a. Which field of psychology does this fall under?
   b. Mention one tool used for studying brain activity.
9. An artist draws abstract art after facing trauma.
   a. What psychological phenomenon could explain this?
   b. How do psychologists study subjective experiences?
10. A teacher says "Out of sight, out of mind" about a student's fading interest in studies. Another teacher says "Distance makes the heart grow fonder."
   a. What do these sayings reflect?
   b. How does psychology approach such contradictory beliefs?
11. A war veteran learns to control pain through mental visualization.
   a. Which psychological technique is being used?
   b. What is psychoneuroimmunology?
12. After a flood, villagers work together to help others.
   a. Which field of psychology can study this community behavior?
   b. How can socio-cultural context influence behavior?
13. A person loses their arm but still feels it moving.
   a. What is this condition called?
   b. What does it reveal about the mind-body relationship?
14. In a classroom, students learn about the growth of psychology as a discipline.
   a. Name two schools of thought in psychology.
   b. Mention their founders.
15. A boy solves a problem differently after understanding multiple perspectives.
   a. Which approach emphasizes active construction of knowledge?
   b. Name two psychologists associated with this view.

Chapter 2 – Methods of Enquiry in Psychology (Case-Based Questions)

1. A psychologist wants to study the effect of noise on problem-solving ability.
   a. Which research method is most suitable?
   b. Identify the independent and dependent variables.
   c. Mention one ethical concern related to this study.
2. During a classroom, a student behaves differently in the presence of a camera.
   a. Which method of observation is this?
   b. What kind of bias can influence such observation?
   c. Suggest a way to reduce this bias.
3. A survey is conducted to assess attitudes of students toward online education.
   a. Which method is used?
   b. What type of questions may be asked?
   c. Mention one strength and one limitation of this method.
4. A researcher gives two different teaching methods to two groups and compares their exam results.
   a. What type of experiment is this?
   b. Define the control and experimental group.
   c. What are the dependent and independent variables?
5. A psychologist observes the behavior of children in a park without interacting.
   a. Identify the method and type of observation.
   b. State one limitation of this method.
   c. What makes it useful in real settings?
6. In a study, researchers distribute a 20-question form to 500 students to measure anxiety.
   a. Which method is being used?
   b. What type of data will be collected?
   c. State one precaution to be taken during data collection.
7. A teacher notices that as homework increases, student motivation decreases.
   a. What type of correlation is this?

b. Define correlation coefficient.
c. Why can't we infer causality?

8. An employer uses aptitude tests to recruit new employees.
   a. Which psychological method is used?
   b. List two qualities of a good psychological test.
   c. What information can this test provide?
9. A study involves video interviews to understand how patients cope with chronic illness.
   a. Identify the data analysis method.
   b. Why is qualitative method suitable here?
   c. Mention one ethical concern.
10. A psychologist studies the effects of meditation on anxiety using structured tests.
    a. Which method is applied?
    b. Name the independent and dependent variables.
    c. Mention one control technique used in such experiments.
11. A psychologist investigates the childhood experiences of a well-known writer.
    a. Which method is used here?
    b. What are two strengths of this method?
    c. Why is generalization difficult?
12. A test is administered twice with a gap of two weeks and the scores are similar.
    a. What is being tested here?
    b. Define reliability.
    c. What does test-retest reliability measure?
13. An unstructured interview is conducted with people affected by natural disaster.
    a. What type of method is this?
    b. Why is this approach more empathetic?
    c. Mention one limitation of this method.
14. A psychologist prepares two sets of similar items to avoid practice effect in a test.
    a. What technique is being applied?
    b. Why is it important in experimental research?
    c. Define counterbalancing.
15. A survey through social media is conducted to understand teen habits.
    a. Identify one potential bias in this method.
    b. How can the sampling affect the findings?
    c. Suggest one way to ensure data accuracy.

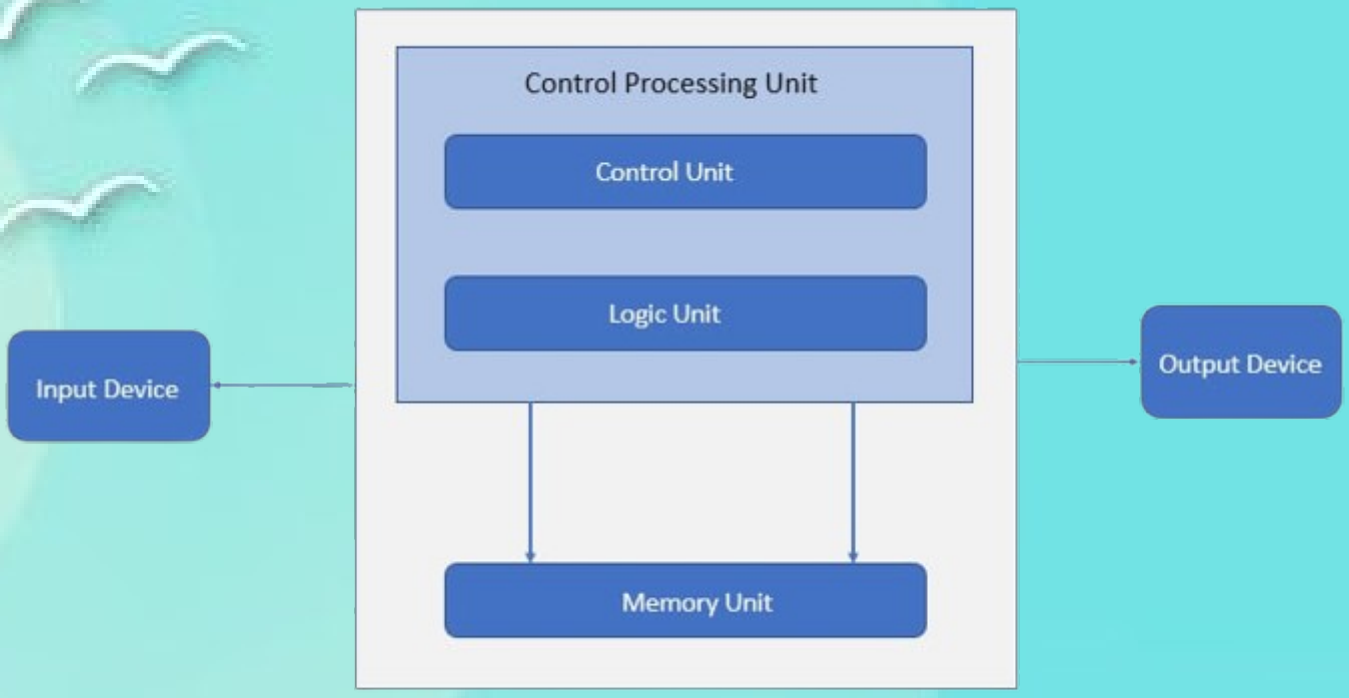


1. Measure BMI of ten members from your family or neighbourhood and show graphic representation of the data.
2. Pictorial Presentation of any five Asanas for improving Concentration.
3. Make a list of olympic host cities
4. Make a list of Indian olympic winners

All the questions mentioned above to be solved in class notebook

1. Write a Python program that asks the user to enter their year of birth and calculate when the person will turn 100 years.
2. Write a program in Python to input temperatures of 7 days (Monday, Tuesday, …. Sunday) and print the average temperature of the week.

3. Make a chart on Types of software on A4 sheet
4. Explain Architecture of computer system.



5. Create a python program to calculate simple interest. Take required values from user.

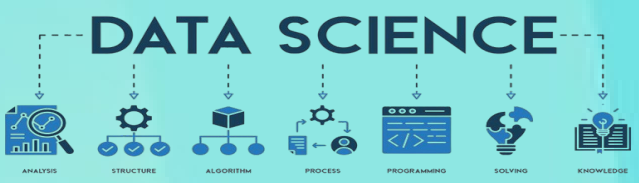
1. Solve May test.
2. Collect and write the information of different schemes and their interest rates offered by different banks and by Post office on Scrap Book .
3. Make a PPT on RBI. Take out printouts and paste it on a scrapbook.
4. Make a chart on A3 sheet related to various types of accounts.

1. Prepare a project on A4 Sheets.

Topic : Initial Public Offering (IPO)

a) Project must include the meaning of IPO, Types Of IPOs, Advantages and Disadvantages of Investing in IPOs, IPO process.
b) Prepare a case study of : Ather Energy IPO (Provide all the required details)

2. Prepare PPT on Securities and Exchange Board of India.
3. Watch a movie ‘ One Idiot’ and ‘Return of One Idiot’ and prepare a report for classroom presentation



- Revise the syllabus that was done in the classroom.
- Solve May Unit Test in your notebook .
- Make a PPT on the topic “ Data Science and how it is evolved with Time..”
- Solve the following MCQ

1. Which of the following characteristics of data is more concerned to dat science?
a. Velocity b. Volume c. Variety d. None
2. What is most important thing in data science is ?
a. Data b. Question c. Answer d. None
3. When you are oreparing for presentation, you should
a. focus on method b. practice hand gestures
c. Try different speaking techniques d. All of above
4. Id data ethics not followed what happened to company?
a. Scams b. Effect to reputation c. Both a & b d. None
5. What is the primary goal of data science?
a. To develop programming language b. To create database
c. Tbuild hardware system d. to extract meaningful insights from data
6. Choose the correct option of oral communication.
a. Reports b. Face to face interaction c. Newspaper d. Notes
7. What is first step in data science?
a. Data Collection b. Data Analysis c. Data visualization d. Model Building.
8. What are close ended questions?
a. That can have any answers b. That do not have answers
c. That have many answers d. With yes or no answers
9. Which of the following is Not a type of data?
a. Numerical Data b. Categorical data c. Date data d. Unnecessary data

Unit 1: Introduction to Early Childhood Care and Education

- Instructions:
- All work to be done neatly in the ECCE class notebook.
- Submission Date: First day after the vacation.
- Marks will be awarded for creativity, understanding, and presentation.

Part A: Theory Tasks

1. 1. Define ECCE and write its significance in today’s context. (150–200 words)
2. 2. Create a table explaining how ECCE addresses the needs of children based on:

- Gender
- Caste

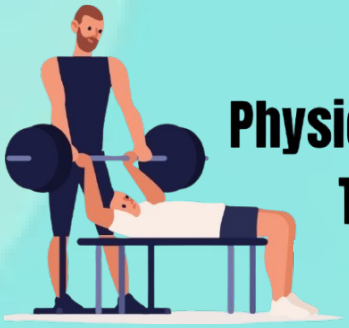
- Class
- Religion
- Family type
- Rural/Urban background

3. 3. Write a short note (100 words each) on the following:
- Rights of Children
- Role of ECCE educators
- ECCE in Indian policy context (mention NEP 2020 briefly)

4. 4. Case Study (Choose any one): Write a 200-word case on a real or hypothetical child, identifying their background and explaining how ECCE can support their holistic growth.

Part B: Creative/Practical Tasks

5. 1. Make a colorful poster (on A4 sheet) with the theme: "Why Early Childhood Care Matters". Include at least 3 visual elements and 5 key points.
6. 2. Optional (Bonus Activity): Interview any parent/guardian and write down 5 points about their understanding or experience of ECCE.



Physical Activity Trainer

1. Pictorial Presentation of Surya Namaskar
2. Design a 30-minute physical activity session of any game of your choice for children aged 6-8. Include a warm-up, main activity, and cool-down.

The questions mentioned above to be written in practical file.

APPLIED ARTS

1. Illustrations 3 (22cm/30cm) Cartridge sheet
   - i. Landscape with 1 human figures
   - ii. Folk Art 1
   - iii. Family and friends scene 1
   - iv. Portrait 1

2. Posters (Half Chart) on Ivory Sheet
   - i. Posters with slogans on Save Environment 1
   - ii. Quotation on Education with background.

2. Advertisement (Half Chart)
Topic
Any 1 Advertisements on cosmetic and food
Colours medium:- Acrylic colour, Poster colours, Water colour (Domestic or Camlin Artist), Pencil colours, Oil pastels, Brush pens
Brushes no. 2,4,6,8,10,12 Round and Flat

(Theory)
Unit-2
Learn Sculpture, Bronze and artistic aspects of Indo-Islamic Architecture

2. Descriptions:-

i. Descent of Ganga
ii. Trimurti
iii. Lakshmi Narayana
iv. Cymbal Player, Sun Temple