



SUMMER HOLIDAY

HOME WORK

CLASS XII

SESSION: 2024-2025

STUDENT NAME: _____

ROLL NO: _____

Summer Vacation is probably the best time of the year for you all; it's time for loads of fun, though we can't go out but getting pampered to no end and of course bonding with distant cousins can be done virtually.

School is fun too, with learning happening at all times, summer vacation can also be a time for learning with lots of activities around.

Here are a few tasks for you to complete during the vacation. Do remember to complete the given tasks after reading them carefully.

Some Tips to make this holiday special:

- Have a family dinner every day of the holidays.
- Play board games with your parent and sibling and show them who is the smartest.



Spend some quality time with an elderly person in the family



Some useful tips for summer vacation

Do's

- ❖ Eat a nutritious diet with plenty of water. Include citrus fruits (orange, lemon, grapefruit) and vegetables which are rich in vitamin C, vitamin D containing foods (cheese, egg yolks) and zinc-containing foods (legumes, lentils, beans, and nuts).
- ❖ Wash your hands frequently, always with soap and water for at least 20 seconds or frequently use alcohol-based hand rub.
- ❖ Wear light cotton clothes.
- ❖ Protect yourself and others.
- ❖ Be a leader in keeping yourself, your school, family and community healthy.
- ❖ Cough and sneeze into a tissue or your elbow and avoid touching your face, eyes, mouth and nose.
- ❖ Share what you learn about preventing disease with your
- ❖ Family and friends, especially with younger children.



Don'ts:

- ❖ Do not share cups, eating, utensils, food or drinks with others.
- ❖ Do not have close contacts with a sick person.
- ❖ Do not participate in large gatherings.
- ❖ Do not touch your face, nose and eyes without washing hands.
- ❖ Don't dirty your place of living.
- ❖ Don't have junk food.
- ❖ Don't watch too much TV and other electronic gadget (Mobile, Laptop etc)
- ❖ Don't waste time being lazy.

CHEMISTRY:

Learning Based Questions:

Q.1. Learn activation energy

Q.2. Learn all Basic radicals containing groups.

Q.3. Learn preparation reactions of Haloalkanes

Project Based Questions:

Complete the given projects Roll No. wise (hand written) in spiral binding file with printed cover page.

Roll No. 1 to 5:

Objective: To study the occurrence of oxalate ions in guava fruit at various stages of ripening.

Roll No. 6 to 10:

Objective: To determine the amount of Casein present in various milk samples.

Roll No. 11 to 15:

Objective: To extract essential oil present in Ajwain (Carum), Illaichi (Cardamom), and Saunf (Fennel Seeds)

Roll No. 16 to 20:

Objective: To understand the components of ink in the pens and markers through the method of paper chromatography

Roll No. 21 to 25:

Objective: To identify vitamin C in fruit juices and to determine which of the following juices contain the most vitamin C, orange, apple, cranberry or grape

Roll No. 26 to 30:

Objective: Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chili powder and pepper.

Roll No. 31 to 35:

Objective: To determine caffeine in different tea samples.

Roll No. 36 to 38:

Objective: To study the occurrence of oxalate ions in guava fruit at various stages of ripening.

Explanation Based Questions:

Q.1 Explain preparation of Haloalkanes by alcohols.

Q.2. What do you mean by order of reaction. Explain with types.

Q.3. Write the difference between O.O.R. and molecularity.

Q.4. Define Arrhenius equation

Q.5. Give at least 04 examples of each i.e. Zero order reaction, First order reaction and Second order reaction.

Q.6. The conversion of molecules X to Y follows second order kinetics. If concentration of X is increased to three times how will it affect the rate of formation of Y ?

Q.7. A first order reaction has a rate constant $1.15 \times 10^{-3} \text{ s}^{-1}$. How long will 5 g of this reactant take to reduce to 3 g.

Q.8. Write Swart's reaction

Q.9. Write Finkelstein reaction

Q.10. Write structures of the following compounds:

(i) 2-Chloro-3-methylpentane

(ii) 1-Chloro-4-ethylcyclohexane

(iii) 4-tert. Butyl-3-iodoheptane

(iv) 1,4-Dibromobut-2-ene

(v) 1-Bromo-4-sec. butyl-2-methylbenzene.

PHYSICS

I. Learning Homework

Q. State and Prove Gauss law. Also prepare the derivation for finding the electric field due to

(i) Uniformly charged long straight wire

(ii) Uniformly charged sheet

(iii) Uniformly charged sphere

II. Project Work

* Complete 5 experiments in your lab manual

* Complete activity file (6 activities)

III. Assignment (Do this work in notebook)

- (i) A hollow metal sphere of radius 5 cm is charged such that the potential on its surface is 10 V. What is the potential at the centre of the sphere?
- (ii) Two charges $5 \times 10^{-8}\text{C}$ and $-3 \times 10^{-8}\text{C}$ are located 16 cm apart from each other. At what point (s) on the line joining the two charges is the electric potential zero? Take the potential at infinity to be zero.
- (iii) Distinguish between an intrinsic semiconductor and p-type semiconductor. Give reason, why, a p-type semiconductor crystal is electrically neutral although number of holes are much greater than number of electrons.
- (iv) Why do the electric field lines not form closed loops?
- (v) State 'Gauss law' in electrostatics. Use this law to derive an expression for the electric field due to an infinitely long straight wire of linear charge density λ per cm.
- (vi) Given a uniform electric field Vector $E = 2 \times 10^3\hat{i}$ N/C, find the flux of this field through a square of side 20 cm, whose plane is parallel to the y-z plane. What would be the flux through the same square, if the plane makes an angle of 30° with the x-axis?
- (vii) Two point charges $+q$ and $-2q$ are placed at the vertices 'B' and 'C' of an equilateral triangle ABC of side as given in the figure. Obtain the expression for (i) the magnitude and (ii) the direction of the resultant electric field at the vertex A due to these two charges.
- (viii) Why must the electrostatic potential inside a hollow charged conductor be the same at every point?
- (ix) Calculate the work done to dissociate the system of three charges q , $+2q$ and $-4q$ placed on the vertices of an equilateral triangle of side 10 cm.
- (x) "For any charge configuration, equipotential surface through a point is normal to the electric field." Justify.

MATHEMATICS

I. Assignment

1. Find the value of $\sin^{-1}(\cos(\sin^{-1}(\sqrt{3}/2)))$.
- 2 Evaluate $\tan^{-1}(\sin((\pi/2)))$.
3. Let $A = \{0, 1, 2, 3\}$ and define a relation R on A as follows:
 $R = \{(0, 0), (0, 1), (0, 3), (1, 0), (1, 1), (2, 2), (3, 0), (3, 3)\}$. Is R reflexive? symmetric? transitive?
4. Show that the function $f : \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = x/(x^2 + 1)$, $\forall x \in \mathbb{R}$ is neither one-one nor onto.
5. Let R be relation defined on the set of natural numbers N as follows: $R = \{(x, y) : x \in \mathbb{N}, y \in \mathbb{N}, 2x + y = 41\}$. Find the domain and range of the relation R. Also verify whether R is reflexive, symmetric and transitive.
6. Show that the relation R in the set Z of integers given by $R = \{(a, b) : 2 \text{ divides } (a - b)\}$ is an equivalence relation.
7. Which is greater, $\tan 1$ or $\tan^{-1}(1)$?
8. Express the matrix
$$A = \begin{bmatrix} 2 & 4 & -6 \\ 7 & 3 & 5 \\ 1 & -2 & 4 \end{bmatrix}$$
 as the sum of a symmetric and a skew-symmetric matrix.
9. By using determinants, solve the following system of equations
$$\begin{aligned} x + y + z &= 1, \\ x + 2y + 3z &= 4, \\ x + 3y + 5z &= 7 \end{aligned}$$

Case study:

10. Two schools P and Q decided to award their selected students for the values of discipline and honesty in the form of prizes at the rate of Rs x and Rs y respectively. School P decided to award

respectively 2,3 students a total prize money of Rs. 2300 and school Q decided to award respectively 3, 5 students a total prize money of Rs. 3700.

Based on the above information, answer the following questions:

- (a) Give the matrix equation representing the above situation.
- (b) Find the value of the determinant of coefficients of x and y
- (c) If A is the matrix representing the coefficients of x and y, then find adj A
- (d) Evaluate the inverse of matrix A.

Mathematics Activities (To be done in practical file)

Activity-1 To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \text{ is parallel to } m\}$ is symmetric but neither reflexive nor transitive

Activity-2 To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \text{ is perpendicular to } m\}$ is an equivalence relation.

Activity-3 To demonstrate a function which is not one-one but is onto

Activity-4 To demonstrate a function which is one-one but not onto.

BIOLOGY

I. Learning

Learn about Sexual Reproduction in Flowering Plants.

II. Project Work

Make a file on DNA Fingerprinting.

III. Assignment (Do it in your Notebook)

1. Draw the labelled diagram of Ovule.
2. Explain Oogenesis.
3. Explain the term:- DNA and RNA
4. Explain Spermatogenesis.
5. Draw well labelled structure of DNA.
6. Explain Polymerase Chain Reaction.
7. Define double fertilisation.
8. Explain Megagametogenesis.
9. What is biotechnology?
10. Define:- a) Polyembryony b) Apomixis

ACCOUNTANCY

*** LEARNING HOMEWORK**

1. Read & Learn Ch.1, 2 and 3 Completely.

*** PROJECT WORK**

Make a project file on any topic as given by CBSE which must include, the following :-
Front Page, Certificate, Acknowledgement, index introduction of the topic, Conclusion and finding bibliography.

*** ASSIGNMENT QUESTIONS**

1. Reading of Partnership Transactions
2. Methods of Calculating Interest on Drawings
3. Methods of Valuation of Goodwill.

BUSINESS STUDIES

I. Learning homework

1. Read and learn ch- 1 and 2 completely.

II. Project work

Make a project file on any topic as given by CBSE which must include the following:-
Front page, certificate, acknowledgement, index, Introduction of the topic, conclusion and finding, bibliography..

III. Assignment Questions

1. Henry's fayol 14 principles of Management
2. Taylor scientific principles
3. Taylor scientific technique
4. Concept of coordination
5. Difference between Efficiency and Effectiveness
6. Dimensions of Business environment
7. Steps in Planning
8. Steps in organising
9. Importance of planning
10. Functions of management

ECONOMICS

I. Learning Homework

1. Read and learn ch- 1, 2, 5 and 6 completely.

II. Project work

Make a project file on any topic as given by CBSE which must include the following:-

Front page, certificate, acknowledgement, index, Introduction of the topic, conclusion and finding, bibliography.

III. Assignment Questions

Read the following information carefully and answer the questions 1-6 on the basis of the same:

In macroeconomics we usually simplify the analysis of how the country's total production and the level of employment are related to attributes (called 'variables') like prices, rate of interest, wage rates, profits and so on, by focusing on a single imaginary commodity and what happens to it. We are able to afford this simplification and thus usefully abstain from studying what happens to the many real commodities that actually are bought and sold in the market because we generally see that what happens to the prices, interests, wages and profits, etc., for one commodity more or less also happens for the others. Particularly, when these attributes start changing fast, like when prices are going up (in what is called an inflation), or employment and production levels are going down (heading for a depression), the general directions of the movements of these variables for all the individual commodities are usually of the same kind as are seen for the aggregates for the economy as a whole.

- 1- Which of the following is the variable of macroeconomics?

(a) Aggregate demand	(b) Aggregate supply
(c) Consumption expenditure	(d) All of these
- 2- _____ is concerned with the economy as a whole:

(a) Microeconomics	(b) Macroeconomics
(c) Industrial economics	(d) None of these
- 3- Which of the following does not come under the scope of macroeconomics?

(a) Theory of money	(b) Theory of employment
(c) Role of the government	(d) None of these
- 4- _____ is the central issue in macroeconomics:

(a) Determination of resources
(b) Allocation of resources
(c) Price level of an industry
(d) Consumer's equilibrium
- 5- Read the following statements carefully and choose the correct alternative among those given below:

Statement 1: Study of cotton textile industry is related to microeconomics.

Statement 2: Cotton textile industry involves aggregation of cotton textile firms.

(a) Bothe of the statements are true
(b) Both the statements are false
(c) Statement 1 is true and Statement 2 is false
(d) Statement 2 is true and Statement 1 is false.

Assertion and Reason

In the following questions (1-5), a statement of Assertion (A) is followed by a statement of Reason (R) Choose the correct alternative among those given below:

Alternatives:

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)
- (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A)
- (c) Assertion (A) is true but Reason (R) is false

(d) Assertion (A) is false but Reason (R) is true

1. Assertion (A): Export is a flow variable.

Reason (R) : Exports depend on the size of population at a point of time.

2. Assertion (A): A car purchased by a household is a final good.

Reason (R) : Household is the final user of the car.

3. Assertion (A): Money flows are opposite to real flows. 3

Reason (R) Money flows are in response to real flows.

4. Assertion (A): Car is a durable consumer good.

Reason (R) : Car can be repeatedly used for several years and is of relatively high value.

5. Assertion (A) Intermediate goods are not included in the estimation of GDP.

Reason (R) : Value of intermediate goods is only a part of the value of final goods.

Choose the Correct Alternative

In the following users the end (1-5), two statements asre given. Read the statements carefully and choose the correct alternative among those given below:

Alternatives:

(4) Both the statements are true

(b) Both the statements are false

(c) Statement 1 is true and Statement 2 is false

(d) Statement 2 is true and Statement 1 is false

1. Statement 1: All producer goods are capital goods

Statement 2: Only consumers are the final users of final goods

2. Statement 1: Statement 2: Electric goods are an example of semi-durable consumer good. Statement 2:

Intermediate goods are included in the estimation of national income

3. Statement 1: Final goods are included in the estimation of national product

Statement 2: Wood purchased by firm X from firm Y for resale will be treated as intermediate good

4. Statement 1: Capital formation is a stock variable

Statement 2: A stock variable has time dimension.

5. Statement 1: Households are the owners of the factors of production

Statement 2: Household sector supplies goods and services to the producer sector.+++++

Question Nos. 9-14 ure to be answered on the basis of the following text and data

Money plays a crucial role in the smooth functioning of the economy. Money supply is considered as important tool to control other macro economic variables

Central Bank and commercial banks are the two main sources of money supply, Measurement of mo supply is an important task performed by the central bank.

RBI in its press release on 22 September, 2021 has released data on money supply for the fortnight ended September, 2021 as follows:

1. The value of money supply in the economy ist

(a) 1,30,78,148

(b) 1,93,99,596

(c) 47,78.148

(d) 47, 31, 426

10. Money supply is a variable, measured at a point of time.

(a) Stock

(b) Flow

(c) Both Stock and Flow

(d) Neither Stock, nor Flow

11. Demand deposits are

- (a) Chequeable deposits
- (c) Fixed deposits
- (b) Non-chequeable deposits
- (d) Recurring deposits

12. Suppose primary deposits are 2,000 crore and reserve deposit ratio is 10%. The money create commercial banks would be crore in the economy.

- (a) 10,000
- (b) 2,000
- (c) 20,000
- (d) 1,000

13. Read the following statements carefully-Assertion (A) and Reason (R) and choose the correct alternative.

Assertion (A): Money supply includes money held by all the financial institutions. Reason (R) Money held by the government does not come into circulation.

Alternatives:

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)
- (b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A)
- (c) Assertion (A) is true but Reason (R) is false
- (d) Assertion (A) is false but Reason (R) is true

14. _____ releases data on money supply in India.

- (a) Government of India
- (c) Commercial Banks
- (d) State Bank of India

HISTORY:

I. Make a project on Indus valley civilization

II. Assignment Questions

1. **Administrative system of mauryan Empire.**
2. **Achievements of Ashoka the great.**
3. **Social political and economical conditions in mahajanapadas.**
4. **Discuss whether kings in early states were invariably Kshatriyas.**
5. **Discuss whether the Mahabharata could have been the work of a single author.**

POLITICAL SCIENCE

Q1 Project file

India's democratic consolidation and the creation of an independent national electoral commission

Q2- Learn about the configuration & characteristics of atleast 10 International organisations.

Q3. Assignment-Case Based Questions

Q1. Read the given passage carefully and answer the questions that follow:

The Soviet Union had become stagnant in an administrative and political sense as well. The Communist Party that had ruled the Soviet Union for over 70 years was not accountable to the people. Ordinary people were alienated by slow and stifling administration, rampant corruption, the inability of the system to correct mistakes it had made, the unwillingness to allow more openness in government, and the centralisation of authority in a vast land. Worse still, the party bureaucrats gained more privileges than ordinary citizens. People did not identify with the system and with the rulers, and the government increasingly lost popular backing. Gorbachev's reforms promised to deal with these problems. Gorbachev promised to reform the economy, catch up with the West, and loosen the administrative system. All this might not have led to the collapse of the

Soviet Union but for another development that surprised most observers and indeed many insiders. The rise of nationalism and the desire for sovereignty within various republics including Russia and the Baltic Republics (Estonia, Latvia and Lithuania), Ukraine, Georgia, and others proved to be the final and most immediate cause for the disintegration of the USSR.

i. How long the communist party have been ruling Soviet Union?

- a. For sixty eight years
- b. For seventy years
- c. For Eighty Two years
- d. For fifty years

ii. What led to the collapse of the Soviet System?

- a. Because of its failure in World War Two
- b. Because people did not identify with the system
- c. Because of its extreme bureaucratic nature
- d. All of the above

iii. Gorbachev promised to _____

- a. Back the people in war and international tensions.
- b. Provide employment and pensions to elder citizens.
- c. To defeat west and become the sole super power.
- d. To reform the economy, catch up with the West, and loosen the administrative system.

iv. What was the final and most immediate cause for the disintegration of Soviet Union?

- a. The rise of nationalism and the desire for sovereignty within various republics including Russia and the Baltic Republics, Ukraine, Georgia, and others.
- b. The rise of extremism and the desire for privatization within various republics including Russia and the Baltic Republics, Ukraine, Georgia, and others.
- c. The rise of capitalism and the desire for democratic government within various republics including Russia and the Baltic Republics, Ukraine, Georgia, and others.
- d. All of the above

Objective Type Questions

Q2. The Revolution of Russia in 1917 was inspired by the ideals of _____

- a. Socialism
- b. Capitalism
- c. Socialism as well as Capitalism
- d. None of the above

Q3. The Warsaw Pact was _____

- a. an economic alliance
- b. Capitalism
- c. a military alliance
- d. None of the above

Question No. 4 consists of two statements Assertion (A) and Reason (R). Answer these questions selecting the appropriate option 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.

Q4. Assertion (A): After the Second World War, the east European countries that the Soviet Army had liberated from the fascist forces came under the control of the USSR. Reason (R): The Soviet System, however, became very bureaucratic and authoritarian, making life very difficult for its citizens

Q5. Gorbachev became General Secretary of the Communist Party of the Soviet Union in 1985.

True/False

Q6. The revolution in Russia in 1991 was inspired by the ideal of socialism. True/False

Short Answer Type Questions:

Q7. What was the largest garage sale in history?

- Q8. How was Kuwait liberated from Iraq in 1990?
Q9. Throw Light on the beginning of Arab Spring in Tunisia.
Q10. Write about the 9/11 series of attacks on U.S.

Long Answer Type Questions:

- Q11. Why did Soviet Union disintegrate? Discuss the causes of its disintegration.
Q12. Explain six factors which helped Soviet Union becoming super power after Second World War.
Q13. What was Shock Therapy? Was this the best way to make a transition from communism to Capitalism?
Q14. Among the post-communist countries after the disintegration of the Soviet Union, India's relation with Russia has been the strongest. Support the statement with examples.

ENGLISH :

Q1 Project -

Women Empowerment and Changing Gender Roles: Examine the role of women empowerment in reshaping gender roles in society and discuss its significance.

Q2. Learn & practice the formats of - Notice, Formal Letter to the Editor & Article.

Q3 - Assignment

1. The last lesson is set in the days of... _
a . First world war
b. Second World War
c. Civil War
d. Franco - Prussian war
2. "I had the strength to resist," What did Franz resist? L1
a. chirping birds
b. drilling Prussian soldiers
c. warm day outdoors
d . all of the above
3. "There was a crowd in front of the bulletin board". Where was that bulletin board?
a. town hall
b . School garden
c. sawmill
d. classroom
4. The expression 'thunderclap" in the lesson means
a. loud but not clear
b. loud and clear
c. startling and unexpected
d. unpleasant
5. Franz was feeling regretful and sad for _
a. reaching late
b. not learning participles
c. change of the Government
d. not learning his mother tongue
6. When they came to attend the last lesson, feeling of _ expressed by the villagers
a. regret for not learning French
b. thanking their master for his forty years of faithful service
c . respect for the country that was theirs no more.
d. alloftheabove
7. M. Hamel is pale as he
a. feels emotional and heart-broken.
b. is unwell.
c. is annoyed.
d .doesn't like the sound of the trumpets.
8. The grave and gentle tone in which M. Hamel spoke after getting the order from - Berlin was due to:
a. his patriotic feeling for his country •
b. his love for his mother tongue
c. the grief of not being able to teach French in futured. -
d. all of these
- 9 . M. Hamel wanted from the students on the last day of French lesson-to C
a. give him a farewell.
b. oppose the order from Berlin.
c. be very attentive.
d. guard their language.
- 1 0 .had been put up on the bulletin-board at the town-hall F
a. the news of the lost battles
b. the draft of the commanding officer
c. the order from Berlin to teach only German in the schools of Alsace and _ Lorraine.
d. all of these

PHYSICAL EDUCATION

Q1. Learn tournament types of tournament

Q2. Prepare a Project file-

- (a) Physical Fitness Test: SAI Khelo India Test, Brockport Physical Fitness Test (BPFT)
- (b).Proficiency in Games and Sports (Skill of any one IOA recognized Sport/Game of Choice)

Q3. Take a picture of yourself performing five asanas from the yoga Unit and describe the method and importance of doing those asanas in your notebook.

COMPUTER

I. Learning Homework

- (i) What is transmission media? Learn the type of transmission media.
- (ii) How many types of topologies available in a network

II. Project Work (Do this work in separate file)

WAP to store students' details like admission number, roll number, name and percentage in a dictionary and display information on the basis of admission number.

III. Assignment (Do this work in note book)

1. Python program to add two numbers
2. Python Program for factorial of a number
3. Python Program for simple interest
4. Python Program for compound interest
5. Python Program to check Armstrong Number
6. Python Program for Program to find area of a circle
7. Python program to print all Prime numbers in an Interval
8. Python program to check whether a number is Prime or not
9. Python Program for n-th Fibonacci number
10. Python Program for How to check if a given number is Fibonacci number?

HINDI

मौखिक - खण्ड

1. काव्य - Chap-3- (कविताकेबहाने) भावार्थ, एवंबहुविकल्पीयप्रश्न

लिखित - खण्ड

2. गद्य - Chap-10- 'कालेमेधापानीदेसारांशएवंकोई 4 प्रश्नोत्तर

परियोजनाकार्य

3. Chapter-2 (विभिन्नमाध्यमोंकेलिएलेखन) किसीदोपरलेखलिखिए-
4. इंटरनेटमाध्यम, टेलीवीजनमाध्यम, भारतमेंइंटरनेट, हिंदीनेटसंसार