

MDS PUBLIC SCHOOL, MADINA (ROHTAK)
SUMMER HOLIDAYS HOMEWORK
SESSION – (2024-25)
CLASS-11TH



**“SOME OF YOUR BEST IDEAS COME WHEN YOU'RE
ON VACATION.”**

Dear Students,

SummerVacation is round the corner, Hurray!! Have you started listing all exciting things you will do? Why not have fun with a little bit of learning along the way? So here's a list of some enjoyable learning activities you can do at the noon time.

- **Read a book to yourself.**
- **Prepare a meal with your family.**
- **Draw or paint a picture of something.**

Here are the ways by which you can make your holidays fun and learning at the same time:-

- **Go for walk, talk about things you see around.**
- **Speak in English as much as possible.**
- **Help your parents in small household chores like dusting, cleaning and watering the plants.**

NOTE:-Do all the assignments in neat and legible handwriting in separate notebook.
Parents are requested to just guide the children to complete the task on their own.
Holidays Homework marks will be added in final results.

Few guidelines for your parents to make your long summer break fruitful

'Knowledge is power'. Therefore encourage your child to cultivate the reading habit because it not only enhances the knowledge acquired but also develops the vocabulary and language skills.

"आपके कुछ बेहतरीन विचार तब आते हैं जब आप छुट्टियों पर होते हैं।

प्रिय विद्यार्थियो,

गर्मी की छुट्टियाँ नजदीक हैं, हुर्रे!! क्या आपने उन सभी रोमांचक चीज़ों की सूची बनाना शुरू कर दिया है ,जो आप करेंगे? रास्ते में थोड़ा-सा सीखने का आनंद क्यों न उठाया जाए? तो यहां कुछ मनोरंजक सीखने की गतिविधियों की सूची दी गई है, जिन्हें आप दोपहर के समय कर सकते हैं।

- अपने लिए एक किताब पढ़ें।
- अपने परिवार के साथ भोजन तैयार करें ।
- किसी चीज़ का चित्र बनाएं और रंग भरे ।

यहां वे तरीके दिए गए हैं, जिनसे आप अपनी छुट्टियों को मज़ेदार और सीखने लायक बना सकते हैं:-

- टहलने जाएं, आसपास दिखने वाली चीज़ों के बारे में बात करें।
- जितना हो सके अंग्रेजी में बोलें।
- अपने माता-पिता को घर के छोटे-छोटे कामों जैसे धूल झाड़ना, सफाई करना और पौधों को पानी देना आदि में मदद करें।

नोट:-सभी कार्य अलग-अलग कार्यपुस्तिका में साफ-सुथरी लिखावट में करें।

माता-पिता से अनुरोध है, कि वे बच्चों को केवल कार्य स्वयं पूरा करने के लिए मार्गदर्शन करें।

छुट्टियों के गृहकार्य के अंक अंतिम परिणाम में जोड़े जाएंगे।

आपके माता-पिता के लिए आपकी लंबी गर्मी की छुट्टियों को उपयोगी बनाने के लिए कुछ दिशानिर्देश:-

'ज्ञान शक्ति है'। इसलिए अपने बच्चे को पढ़ने की आदत विकसित करने के लिए प्रोत्साहित करें क्योंकि यह न केवल अर्जित ज्ञान को बढ़ाता है, बल्कि शब्दावली और भाषा कौशल भी विकसित करता है।

SUBJECT - ENGLISH

1. Select the poem from the syllabus and highlight the presence of listed literary. Explain the **literary devices** and cite suitable examples from selected poems. Given below is a list of **literary devices** that you can look for in your poem.

Simile	Metaphor	Personification	Alliteration
Repetition	Oxymoron	Refrain	Hyperbole
Allusion	Apostrophe	Irony	Paradox

2. Activity:-

- a) Plan a get together party to be held at your place.
 - b) Make a list of things you will require using **determiners**.
 - E.g.:- I called up all my friends for the party.
 - Some of them didn't come.
 - My mother bought few packets of chips for us.
 - c) Click photographs and paste them. Now, write a **diary entry** in not more than 120 words describing the fun you had at the party.
 - d) At the end of the party, when you were helping your mother clean up the house, you found a watch lying unclaimed in the living room. Draft a **notice** for the School Notice Board inviting the claimants for the same that you would put up in the school as soon as it reopens.
3. Smartphone is one of the most important means of communication today. But it has also become a nuisance for some. Write an **article** on the same in around 120 words and sign yourself as Tarun/Taruna, a student of **class XI**. You may take help from the following inputs:-

Important means of communication – connects a person socially – keeps people updated – has become a virtual companion – many disadvantages – disrupts peace of mind – a constant source of disturbance – excessive usage leads to many health disorders – cause of deadly accidents on road – the biggest distraction for students – should be used wisely – use to be minimized.

4. Find out internal questions from the given chapter:

- a) The Portrait of a Lady
- b) We're not afraid to die... If we can all be together
- c) Photograph
- d) The Laburnum top
- e) The Voice of the Rain
- f) The Summer of the Beautiful White Horse
- g) The Address

ACTIVITY:

Make a video on the given author and send video to your subject teacher.

1. Khushwant Singh [1 to 10]
2. Shirley Toulson [11 to 20]
3. Walt Whitman [21 to 30]

SUBJECT-POLITICAL SCIENCE

1. Write assignment –
 - a. Explain in detail the following fundamental rights –
 - Right to Equality
 - Right to Liberty
 - Right against Exploitation
 - Right to Religious Freedom
 - Cultural and Educational rights
 - Right to Constitutional remedies
 - b. Make notes of chapter – 4: Social Justice.
2. **Activity** – Make a chart on the following concepts:
 - Different forms of Government such as Democracy, Dictatorship and Monarchy.
 - Fundamental Rights in the Indian Constitution.
3. Analyze a recent political event and its implications on domestic and international politics, in notebook.

Assignment:

1. What is the meaning of Politics?
2. Give two reasons that why should we study political theory?
3. Describe the idea of freedom?
4. Describe the meaning of Swaraj.
5. Elaborate the Harm Principle given by JS Mill?
6. _____ is the book of JS Mill.
7. Name 4 thinkers of Positive Liberty.
8. 'I disapprove of what you say but I will defend to death your right to say it' - Whose Statement is this?
9. Describe a fact sheet of Global inequalities.
10. Describe the economic inequalities in India.
11. What is the meaning of equality of opportunities?
12. Explain the concept of Feminism.
13. Explain in detail about the idea of socialism?

SUBJECT-HINDI

1. लिखित कार्य - प्रेमचंद, कबीर, मीरा का जीवन परिचय।
2. पाठ्यक्रम संबंधी पाठों के प्रश्न-उत्तर याद करें।

गतिविधि:

3. समाचार पत्रिका से पाँच कविताएँ लिखें।
4. भारत में 'साहित्य अकादमी' पुरस्कार से सम्मानित दस व्यक्तियों के नाम लिखें।

कार्यभार तालिका:

(क) निम्नलिखित पंक्तियों में अलंकार बताए-

1. चारु चंद्र की चंचल किरणें
(क) अनुप्रास
(ख) यमक
(ग) श्लेष
2. तीन बेर खाती थी वह तीन बेर खाती है।
(क) यमक
(ख) श्लेष
(ग) उपमा
3. उस काल मारे क्रोध के तनु काँपने लगा।
(क) रूपक
(ख) उत्प्रेक्षा
(ग) उदाहरण
4. पायो जी मैंने राम रत्न धन पायो।
(क) रूपक
(ख) उदाहरण
(ग) अनुप्रास
5. काली घटा का घमंड घटा।
(क) यमक
(ख) श्लेष
(ग) अनुप्रास

(ख) समास विग्रह करे-

1. यथाशक्ति
2. रोगग्रस्त
3. हथकड़ी
4. भारतरत्न
5. कंचनवर्ण

6. त्रिफला
7. पंजाब
8. सुख प्राप्त
9. पाठशाला
10. देशभक्ति

(ग) **प्रायोगिक कार्य:** किसी एक महान व्यक्ति पर वीडियो बनाकर अपने विषय अध्यापक को भेजें।

SUBJECT-BIOLOGY

1. Solve at least 3-3 case study based question from the chapters which are covered in class.
2. Make 10- 10 internal questions with answer from the chapters which are covered in class.
3. Prepare the chapters which are done in class.

ACTIVITY:

- Make any one chart from chapter 1 or 2.
- Make a model on any of the following topic:
 - Monera types
 - Whittakar classification
 - Virus structure
 - Types of fungi

ASSIGNMENT

1. Write the taxonomical categories in hierarchical order for the following organisms:
 - a) Man
 - b) Mango
2. Draw the labeled diagram of a blue green algae 'Nostoc'.
3. Differentiate between the followings:
 - a. Photosynthetic autotrophs and chemo synthetic autotrophs.
 - b. Spirilla & Cocci
 - c. Protista & Monera.
4. Why Two kingdom classification was replaced by the five kingdom classification?
5. How Archae bacteria are able to survive in extreme environmental conditions like Hot springs?
6. Mention about some of the earlier classification system.

Multiple choice questions

1. The order generally ends with
 - a. Ales
 - b. Aceae
 - c. Eae
 - d. None of these

2. Which of the following term is used to refer the number of varieties of plants and animals on earth?

- a. Taxonomy
- b. Identification
- c. Biodiversity
- d. Classification

3. Binomial nomenclature means

- a. One name given by two scientists.
- b. One scientific name consisting of a generic and specific epithet.
- c. Two names, one latinized, other of a person.
- d. Two names of same plant.

4. The practical purpose of classification of living organisms is to

- a. Explain the origin of living organisms.
- b. Trace the evolution of living organisms.
- c. Name the living organisms.
- d. Facilitate identification of unknown organisms.

5. Fungi which grow in dung are termed as

- (a) Caprophilous
- (b) Tericolous
- (c) Sacxicolous
- (d) Saxiphilous

6. Who is the father of Taxonomy among the following?

- (a) Linnaeus.
- (b) Birbalsahani
- (c) Aristole
- (d) Maheshwari

7. Protista include...

- (a) Paramecium, Euglena, Dinoflagellates
- (b) Hydra, Amoeba, Paramecium
- (c) Yeast, Euglena, Dinoflagellates
- (d) Mushroom, Paramecium, Euglena

8. Study of lichens is called

- (a) Algology
- (b) Cytology
- (c) Mycology
- (d) Lichenology

Research work

1. Try to find practical use of Kingdom Fungi.(8-10 uses)
2. Write scientific name of 10 animal and 10 plant species available in your locality.

SUBJECT-GEOGRAPHY

Q1) Put distinct colours to various international Organisations in World Map

- i) OPEC - Green
- ii) European Union - Red

- iii) BRICS - Blue
- iv) ASEAN - Yellow
- v) 5-Eyes - Violet
- vi) SAARC - Orange

Q2) How Geography is related to other natural Sciences? Also give proper examples.

(200 Words)

Q3). What do you understand by word 'Spatio temporal'? (200 words)

Q4). Explain Nebular hypothesis with diagram.

Q5). Explain binary star theories name the scholars associated with it.

Q6). Draw Geological time Scale on chart.

Q7). What is 'Singularity'? Give detailed explanation.

Q8). How P-waves are different from S & L-waves?

Q9). Define the following terms:

- i) Epicenter
- ii) Seismograph
- iii) Focus

Q10). Why different layers of earth have different densities?

Q11). Core of earth composed of -----?

Assignment:

1. Location of Southern most point of India is _____.
2. Length of India from North to South is _____.
3. Width of India from West to East is _____.
4. Length of India's land border is _____.
5. Coastal length of India excluding islands is _____.
6. Coastal length of India including islands is _____.
7. Define Geography.
8. How can we say that Geography is an integrating subject?
9. How Geography is related to History? Give examples.
10. What is Tropic of Cancer and name the states on Tropic of Cancer?
11. What do you mean by 'Nebula'?
12. Who coined the term 'Geography'?
13. Big bang theory was given by _____.
14. Big Bang theory is also called _____.
15. Explain the process of Star formation.

SUBJECT-PHYSICS

1. Make chart on topic "Dimensional formula".
2. Make working model on topic "Electric Circuit".
3. Make a project on topic "Motion".
4. Solve given assignment.
5. Solve derivation of Unit-2.
6. NDA – Solve assignment of unit 1 and 2 from NDA booklet.

Assignment

Dimensional analysis

1. If the units of energy, force and velocity are 50 J, 5 N and 2m/ s, what will be unit of mass, length and time?
2. The units of power, force and time are 1 kW, 1kN and 1 milli second. Find the unit of mass and length.
3. What will be the value of G in CGS units if in SI units it is $6.67 \times 10^{-11} \text{ m}^3\text{kg}^{-1}\text{s}^{-2}$
4. What will be the dimensions of a/b in the relation $E= b\cdot x^2/ at$, where E is energy, x is distance and t is time.
5. In the relation $h= 2T\cos \alpha/ r^2 \rho g$, where h is the height, T is surface tension ρ is density and r is the radius of a capillary tube, α is angle of contact and g is acceleration due to gravity. Verify the correctness of the equation.
6. Give one example each of physical quantities which have SI unit but no dimensions, which neither have unit nor dimension.
7. Acceleration due to gravity is 10m/s^2 . Determine its value in cm/minutes^2 .
8. If the units of force and length, each are doubled then how many times the unit of energy, Surface tension and stress be affected?
9. If velocity, density and frequency are taken as fundamental quantities, what will be the dimensions of linear momentum and surface tension?
10. If velocity, acceleration and force are chosen as fundamental units, what will be the dimensions of linear momentum, angular momentum and Young's modulus of elasticity?
11. A piece of lead has a mass of 23.94g and a volume of 2.10 cm^3 . Calculate the density in SI units.
12. If force, length and time are fundamental quantities, determine the dimensions of mass.
13. Check the dimensional correctness of the following equation $-\rho= 3g /4 \pi R G$
14. If the mass (m) of a stone depends on velocity (v), ρ (density of water) and g, find the expression for mass.
15. Determine the expression for centripetal force if it depends on mass m, radius r and speed v of the object.

16. As H(heat) depends on I, R and t, determine its formula with the help of dimensional analysis.
17. Find the dimensional formulae for the following physical quantities:
- Torque
 - Coefficient of Viscosity
 - Voltage
18. A large fluid star oscillates in shape under the influence of its own gravitational field. Using dimensional analysis, find the expression for period of oscillation (T) in terms of radius of star (R), mean density of fluid (ρ) and universal gravitational constant (G).
19. If energy E is proportional to mass m and c, the speed of light, determine the relation in these quantities using the concept of dimensions.
20. If force (F) acceleration (A) and time (T) are taken as fundamental units, then find the dimension of energy.
21. Derive equation of motion by using calculus method.

SUBJECT-CHEMISTRY

Learn and write all intext and NCERT exercise questions / answers of:-

- Unit -1 (Some basic concepts of chemistry)
- Unit - 2 (Structure of atom)

Do assignment of 'Some basic concepts of chemistry' from NDA booklet.

Activity:

- Make model on Bohr's model of atom (Roll no - 1,3,5,7,9)
- Working model on Rutherford model of atom (Roll. No. 11, 13, 15, 2, 4)
- Model on shapes of orbitals (Roll. No. 6, 8, 10, 12, 14)

Assignment:

Unit - 1 (Some basic concepts of chemistry)

Multiple choice Questions

1. Approximate atomic weight of an element is 26.89. If its equivalent weight is 8.9, the exact atomic weight of element would be
(a) 26.89 (b) 8.9 (c) 17.8 (d) 26.7
2. The number of moles present in 6 gms of carbon is:
(a) 2 (b) 0.5 (c) 5 (d) 1
3. The -ve charged particles is called:
(a) Anion (b) Cation (c) Radical (d) Atom
4. Which is not a unit of pressure:
(a) Bar (b) N/m² (c) Kg/m² (d) Torr

5. What is the normality of a 1 M solution of H_3PO_4
 (a) 0.5 N (b) 1.0 N (c) 2.0 N (d) 3.0 N
6. The total number of ions present in 111 g of CaCl_2 is
 (a) One Mole (b) Two Mole
 (c) Three Mole (d) Four Mole
7. An organic compound contains carbon, hydrogen and oxygen. Its elemental analysis gave C, 38.71% and H, 9.67%. The empirical formula of the compound would be
 (a) CHO (b) CH_4O (c) CH_3O (d) CH_2O
8. Which of the following cannot give iodometric titrations
 (a) Fe^{3+} (b) Cu^{2+} . (c) Pb^{2+} . (d) Ag^+
9. The significant figures in 3400 are
 (a) 2 (b) 5 (c) 6 (d) 4
10. The S.I unit of temperature is:
 (a) Kelvin (b) Celsius (c) Fahrenheit (d) Centigrade
11. The total number of atoms represented by the compound $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ is
 (i) 27 (ii) 21 (iii) 5 (iv) 8
12. Difference in density is the basis of
 (i) gravity separation (ii) molecular sieving
 (iii) ultrafiltration (iv) molecular attraction
13. An atom is 10 times heavier than $1/12$ th of mass of a carbon atom (C – 12). The mass of the atom in a.m.u. is
 (i) 10 (ii) 120 (iii) 1.2 (iv) 12
14. The percentage of nitrogen in urea is about
 (i) 46 (ii) 85 (iii) 18 (iv) 28
15. Which of the following halogen can be purified by sublimation
 (i) F_2 (ii) Cl_2 (iii) Br_2 (iv) I_2
16. The prefix 10¹⁸ is
 (i) giga (ii) exa (iii) kilo (iv) nano (e) mega
17. What is the concentration of nitrate ions if equal volumes of 0.1 M AgNO_3 and 0.1 M NaCl are mixed together
 (i) 0.1 M (ii) 0.2 M (iii) 0.05 M (iv) 0.25 M
18. Which of the following is not a SI unit?
 (i) litre (ii) candela (iii) metre (iv) mole
19. Any charged particle is called:
 (i) Atom. (ii) Molecule (iii) Ion (iv) Mixture
20. The number of significant figures for the three numbers 161 cm, 0.161 cm, 0.0161 cm are
 (i) 3,3 and 3 respectively
 (ii) 3,4 and 4 respectively
 (iii) 3,4 and 5 respectively
 (iv) 3,3 and 4 respectively

SUBJECT-MATHEMATICS

NDA

Do assignment of chapter 1, 2 and 5 from NDA booklet.

NCERT

Revise chapter 1, 2 and 5 in separate notebook.

ACTIVITY 1 {FOR ODD ROLL NO.}

- Make a working model on trigonometry.
- Make a working model on probability.

ACTIVITY 2 {FOR EVEN ROLL NO.}

- Make a working model on Sets.
- Make a working model on types of functions.

ASSIGNMENT

1. Describe each of the following sets in Roster form
 - (i) $\{x : x \text{ is a positive integer and a divisor of } 9\}$
 - (ii) $\{x : x \in Z \text{ and } |x| \leq 2\}$
 - (iii) $\{x : x \text{ is a letter of the word 'PROPORTION'}\}$
 - (iv) $\left\{x : x = \frac{n}{n^2 + 1} \text{ and } 1 \leq n \leq 3, \text{ where } n \in N\right\}$
2. Write the set $\left\{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \frac{7}{8}, \frac{8}{9}, \frac{9}{10}\right\}$ in the set-builder form.
3. Describe the following sets in Roster form:
 - (i) $\{x : x \text{ is a letter before } e \text{ in the English alphabet}\}$.
 - (ii) $\{x \in N : x^2 < 25\}$
 - (iii) $\{x \in N : x \text{ is a prime number, } 10 < x < 20\}$
 - (iv) $\{x \in N : x = 2n, n \in N\}$
 - (v) $\{x \in N : x > x\}$
4. Describe the following sets in set-builder form:
 - (i) $a = \{1, 2, 3, 4, 5, 6\}$
 - (ii) $B = \{1, 1/2, 1/3, 1/4, 1/4, \dots\}$
 - (iii) $C = \{0, 3, 6, 9, 12, \dots\}$
 - (iv) $D = \{10, 11, 12, 13, 14, 15\}$
 - (v) $E = \{0\}$
 - (vi) $\{1, 4, 9, 16, \dots, 100\}$

(viii) $\{2, 4, 6, 8, \dots\}$

(viii) $\{5, 25, 125, 625\}$

5. List all the elements of the following sets:

(i) $A = \{x : x^2 \leq 10, x \in \mathbb{Z}\}$

(ii) $B = \left\{x : x = \frac{1}{2n-1}, 1 \leq n \leq 5\right\}$

(iii) $\left\{C = x : x \text{ is an integer}, \frac{1}{2} < x < \frac{9}{2}\right\}$

(iv) $D = \{x : x \text{ is a vowel in the word "EQUATION"}\}$

(v) $E = \{x : x \text{ is a month of a year not having 31 days}\}$

(vi) $F = \{x : x \text{ is a letter of the word "MISSISSIPPI"}\}$

6. 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 the set-builder form.

7. Which of the following sets are finite and which are infinite?

(i) Set of concentric circles in a plane.

(ii) Set of letters of the English Alphabets

(iii) $\{x \in \mathbb{N} : x > 5\}$

(iv) $\{x \in \mathbb{N} : x < 200\}$

(v) $\{x \in \mathbb{Z} : x < 5\}$

(vi) $\{x \in \mathbb{R} : 0 < x < 1\}$

8. Which of the following sets are equal?

(i) $A = \{1, 2, 3\}$

(ii) $B = \{x \in \mathbb{R} : x^2 - 2x + 1 = 0\}$

(iii) $C = \{1, 2, 2, 3\}$

(iv) $D = \{x \in \mathbb{R} : x^3 - 6x^2 + 11x - 6 = 0\}$

9. Two finite sets have m and n elements. The total number of subsets of the first set is 56 more than the total number of subsets of the second set. Find the values of m and n .

10. Write the following subsets of \mathbb{R} as intervals:

(i) $\{x : x \in \mathbb{R}, -4 < x \leq 6\}$

(ii) $\{x : x \in \mathbb{R}, -12 < x < -10\}$

11. Write the following intervals in the set-builder form:
- (i) $(-7, 0)$
 - (ii) $[6, 12]$
 - (iii) $(6, 12]$
 - (iv) $[-20, 3)$
12. Let $A = \{a, b, \{c, d\}, e\}$. Which of the following statements are false and why?
- (i) $\{c, d\} \subset A$
 - (ii) $\{c, d\} \in A$
 - (iii) $\{\{c, d\}\} \subset A$
 - (iv) $a \in A$
 - (v) $a \subset A$
 - (vi) $\{a, b, e\} \subset A$
 - (vii) $\{a, b, e\} \in A$
 - (viii) $\{a, b, c\} \subset A$
 - (ix) $\phi \in A$
 - (x) $\{\phi\} \subset A$
13. Let $A = \{\{1, 2, 3\}, \{4, 5\}, \{6, 7, 8\}\}$. Determine which of the following is true or false.
- (i) $1 \in A$
 - (ii) $\{1, 2, 3\} \subset A$
 - (iii) $\{6, 7, 8\} \in A$
 - (iv) $\{\{4, 5\}\} \subset A$
 - (v) $\phi \in A$
 - (vi) $\phi \subset A$
14. Let $A = \{\phi, \{\phi\}, 1, \{1, \phi, 2\}\}$. Which of the following are true?
- (i) $\phi \in A$
 - (ii) $\{\phi\} \in A$
 - (iii) $\{1\} \in A$
 - (iv) $\{2, \phi\} \subset A$
 - (v) $2 \subset A$

15. Find x and y , if $(x + 3, 5) = (6, 2x + y)$
16. Let $A = \{1, 2, 3\}$ and $B = \{x : x \in N, x \text{ is prime less than } 5\}$. Find $A \times B$ and $B \times A$.
17. If $A \times B = \{(a, 1), (b, 3), (a, 3), (b, 1), (a, 2), (b, 2)\}$, find A and B .
18. Let A and B be two sets such that $A \times B$ consist of 6 elements. If three elements of $A \times B$ are : $(1, 4)$, $(2, 6)$, $(3, 6)$. Find $A \times B$ and $B \times A$.
19. The Cartesian produce $A \times A$ has 9 elements among which are found $(-1, 0)$ and $(0, 1)$. Find the set A and the remaining elements of $A \times A$.
20. Let A and B be two sets such that $n(A) = 5$ and $n(B) = 2$. If a, b, c, d, e are distinct and $(a, 2), (b, 3), (c, 2), (d, 3), (e, 2)$ are in $A \times B$, find A and B .
21. Let $A = \{-1, 3, 4\}$ and $B = \{2, 3\}$. Represent the following products graphically i.e. by lattices:
 - (i) $A \times B$
 - (ii) $B \times A$
 - (iii) $A \times A$
22. 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 .
23. If $a \in \{-1, 2, 3, 4, 5\}$ and $b \in \{0, 3, 6\}$, write the set of all ordered pairs (a, b) such that $a + b = 5$.
24. If $a \in \{2, 4, 6, 9\}$ and $b \in \{4, 6, 18, 27\}$, then form the set of all ordered pairs (a, b) such that a divides b and $a < b$.
25. If $A = \{1, 2, 3\}$ and $B = \{2, 4\}$, what are $A \times B, B \times A, A \times A, B \times B$, and $(A \times B) \cap (B \times A)$?

SUBJECT-AI

1. Make a chart on 7C's of communication.
2. Make a presentation on topic 'communication and its types'.
3. Make a chart on 'parts of speech'.
4. Make a chart on 'ICT skills'.
5. Write shortcut keys of MS Word on A4size Sheet.
6. Write a short note on internet and its applications.
7. Write a short note on ICT and its impacts.
8. Write various elements of communication.
9. Write difference between the following:-
 - (a) Save and Save AS
 - (b) Find and Replace
 - (c) Column and row
 - (d) Header and Footer
10. Write steps to print a document in MS Word.

SUBJECT - ECONOMICS

* **Project** - Make a project on "Central problem of an economy"

* Prepare the chapters which are done in class

Answer the following questions:

- 1) What is micro and macro economics?
- 2) What is simple and complex economy?
- 3) What is economic problem and why it is arise?

- 4) Differentiate between Control and central planned economy free and market economy and mixed economy.
- 5) Why do we need to make a choice?
- 6) What is scarcity?
- 7) What is positive economics and explain its four characteristics?
- 8) What is normative economics and explain its four characteristics?
- 9) Define three central problem of an economy?
- 10) Give two examples of micro and macro economy.
- 11) What is the marginal opportunity cost?
- 12) Define PPC with the help of table and diagram.
- 13) Define marginal rate of transformation.
- 14) What is the assumption of PPC?
- 15) What do you mean by economising of resources?
- 16) What does the problem for whom to produce refer to?
- 17) What does the opportunity cost mean ? explain with a numerical example
- 18) Explain the central problem of the choices of products to be produced.
- 19) What is the emergence of the choice?
- 20) Differentiate between opportunity cost and marginal opportunity cost.

SUBJECT – MUSIC

1. Taal and Raag learn question answer
2. Sangeet episode learn
3. Short note learn



Henry Edward Armstrong (born May 6, 1848, [Lewisham](#), Kent [now a part of London], Eng.—died July 13, 1937, Lewisham) was an English organic chemist whose research in [substitution](#) reactions of [naphthalene](#) was a major service to the synthetic-dye industry.

Armstrong studied at the Royal College of Chemistry, where he developed a method of determining organic impurities (sewage) in drinking water, which was used in the sanitary surveys of water supplies and helped to control [typhoid fever](#). In 1867, he went to study under [Hermann Kolbe](#) at the [University of Leipzig](#) in Germany and secured his Ph.D. there in 1870. In 1871 he became professor of [chemistry](#) at the [London](#) institution Finsbury Circus (later Finsbury Technical College) and in 1879 was appointed to help organize the teaching of chemistry and [physics](#) at the City and Guilds of London institute. From 1884 he taught at the Central Technical College, retiring in 1911. He had been elected a fellow of the [Royal Society](#) in 1876.