

MDS PUBLIC SCHOOL, MADINA (ROHTAK)
SUMMER HOLIDAYS HOMEWORK
SESSION – (2024-25)
CLASS-12TH



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

Dear Students,

Summer Vacation 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.

Holiday homework marks will be added in final result.

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 बनाना या रंगना।

यहां वे तरीके दिए गए हैं जिनसे आप अपनी छुट्टियों को मज़ेदार और उपयोगी 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 और सुन्दर लिखावट में करें।

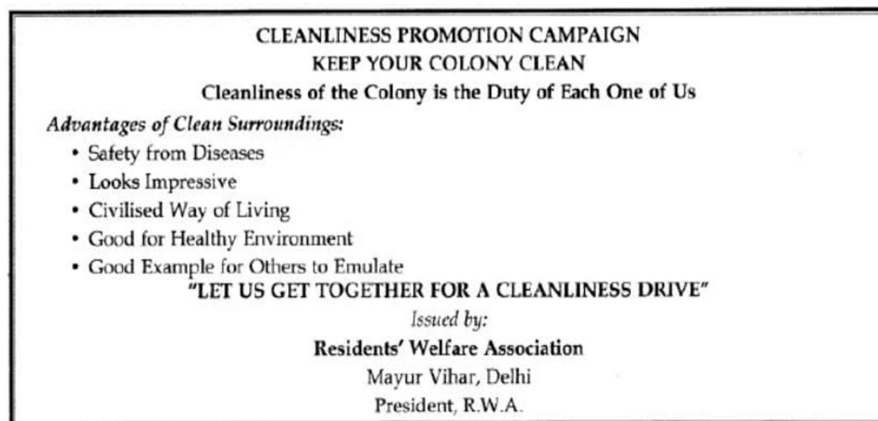
माता-पिता से अनुरोध है कि वे बच्चों को केवल कार्य स्वयं पूरा करने के लिए मार्गदर्शन करें।

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. Write a **report** on:
 - a) The book fair organised in your school recently.
 - b) Sports day celebration held in your school.
 - c) A road accident you witnessed while coming home.
2. Write a **job application** with biodata for:
 - a) The post of accountant in a reputed firm. Attach your biodata.
 - b) For the post of mathematics teacher in St. Stephens public school Noida.
 - c) For the post of computer operator in a reputed company.
3. Ayush Ministry, Government of India, has issued the following **poster**. Use ideas from the poster, together with your own ideas, write a letter to editor of a local newspaper about 'prevention is better than cure' in case of COVID 19.
4. Write a **formal invitation** for:
 - a) The annual sports meet to be organised in your school.
 - b) Inviting Chief Guest in the annual day celebration at your school.
 - c) Write a reply sending your acceptance for attending the annual function as Chief Guest.
5. You saw the following poster in your locality. Using these ideas together with your own ideas, write an **article** for a magazine. Give it a suitable title.



6. Write a **notice** for:
 - a) Blood donation camp
 - b) Inter school football match
 - c) Meeting of student council with the principal
7. Find out **internal** questions from the given chapters:

PROSE (VISTAS)

- a) The Third Level
- b) The Tiger King
- c) Journey to the end of the Earth
- d) The Enemy

PROSE (FLAMINGO)

- a) The Last Lesson
- b) Lost Spring
- c) Deep Water
- d) The Rattrap

POETRY (FLAMINGO)

- a) My Mother at Sixty-six
- b) Keeping Quiet
- c) A Thing of Beauty

ACTIVITY:-

Make a video on the given authors and send a video to your subject teacher :

- a) Kamala Das (Roll no 1 to 10)
- b) Pablo Neruda (Roll no 11 to 20)
- c) John Keats (Roll no 21 to 30)

SUBJECT-GEOGRAPHY

Do all assignments in FNB. Holidays homework marks will be added in final result.

ASSIGNMENT-1

1. Mention two branches of Political Geography.
2. Which are the six subfields of human geography?
3. Who proposed the concept of Neo-determinism?
4. Name the geographers who advocated 'Environmental Determinism'.
5. What is the meaning of environmental determinism? How did naturalisation of humans lead to the development of this concept?
6. Differentiate between Humanistic or Welfare School of Thought and Behavioural School of Thought.
7. How have people living in Trondheim and other similar places overcome nature?
8. How is human geography related to other social sciences?
9. How did man develop and expand proper technology?
10. Which examples have been described in the context of "Humanisation of Nature" and "Naturalisation of Humans"?

ASSIGNMENT-2

1. Define Population growth.
2. What are the components of population change?
3. Define place of origin and place of destination.
4. Define Density of population.
5. What do you mean by natural growth of population?
6. Define positive and negative growth of population.
7. Define pull and push factors.
8. What is demographic transition?
9. Define spatial pattern of population change.
10. What is CBR?

ASSIGNMENT -3

1. What do you mean by sex composition?
2. Define age structure.
3. What do you mean by Occupational Structure?
4. What do you mean by age sex pyramid?
5. What do you mean by expanding population?
6. What are the four pillars of Human development?
7. What are the different approaches related to human developments?
8. What is UNDP?
9. Explain GNH.
10. What is HDI?

ASSIGNMENT-4

1. What do you mean by population doubling time?
2. Describe different phases of growth of population.

3. Define linguistic composition.
4. Classified modern Indian languages.
5. What is marginal worker?
6. Define main worker.
7. Define primary, secondary and Tertiary activities.
8. What is human development?
9. Make a table related to HDI.pg.no.28.
10. What are the different types of rural settlements?
11. Classify the different towns on the basis of their functions.
12. Make a table from pg.no.38 on Indian population.

ASSIGNMENT-5

1. Define the following-
 - a) Barren and waste land.
 - b) Culturable waste land.
 - c) Current fallow land
 - d) Net area sown
2. What are common property resources?
3. How cropping intensity is calculated?
4. Prepare table on cropping seasons of India.
5. What is dry land farming?
6. What do you mean by wet land farming?
7. What are the different problems of Indian agriculture? Explain.
8. Define underemployment.

ASSIGNMENT -6

1. Which river basin has the highest total replenishable ground water resource?
2. In which river basin is the level of ground water utilization the highest?
3. Write about the following programs started by Indian government.
 - a) Haryali
 - b) Neeru Meeru
 - c) Arvary Pani Sansad
4. What do you mean by watershed management?

ASSIGNMENT- 7

Mark the following items on map.

- 1) Major rivers of India
- 2) Distribution of population, 2001
- 3) Growth of population (1991-2001)
- 4) Rice, Wheat, Sugarcane, cotton and jute, Tea and coffee producing areas.
- 5) Different river basins.

SUBJECT- POLITICAL SCIENCE

ASSIGNMENT-1

1. What is meant by two nation theory?
2. Who insisted on the partition of British India?
3. Which four main challenges were faced by India at the time of its independence? Explain briefly.
4. Write a note on the consequences of partition.
5. What is meant by Non-Congressism?
6. Which political party of India has leaders like A.K. Gopalan, E.M.S. Namboodiripad and S.A. Dange?
7. Describe any four factors which were responsible for the dominance of the Congress Party in India till 1967.
8. When and why did a long phase of coalition politics begin in India?
9. Trace the significance of India's first general held in 1952.
10. What is Green Revolution?
11. List any two merits and two demerits of the Green Revolution.

12. Differentiate between main objectives of the first and the second five year plans.
13. What is meant by Planned Development?
14. List any two major objectives of Nehru's foreign policy.
15. What was 'Kargil Confrontation'?
16. Explain briefly India's nuclear policy?
17. What was The Tibet issue? How did it cause tension between India and China? Explain.
18. What is meant by the term "Congress Syndicate"?
19. What is the meaning of 'dangerous decade' in the context of Indian Politics?
20. What does 'Aaya Ram-Gaya Ram' stands for in Indian politics?
21. Examine the major issues which led to the split of Congress Party in 1969.
22. Analyse the issue 'Indira vs the Syndicate'. What type of challenges did the issue pose before Indira Gandhi?
23. What is meant by Emergency? List any three lessons learnt from the National Emergency of 1975.
24. Who was Charu Majumdar?
25. Highlight the acts of dissent and resistance to the Emergency imposed in 1975. In your opinion, how did these acts affect the public opinion ?

Assignment-2

Question1. The foreign policy of a country is the outcome of her economic policy" these remarks were made by:

- (a) Indira Gandhi
- (b) Jawaharlal Nehru
- (c) Morarji Desai
- (d) Charan Singh

Question2. Bandung Conference was held in the year:

- (a) 1954
- (b) 1955
- (c) 1956
- (d) 1957

Question3. Bangladesh emerged as an independent nation in:

- (a) January 1972
- (b) December 1971
- (c) March 1971
- (d) November 1971

Question4. China made a sudden attack on India in:

- (a) August 1962
- (b) September 1962
- (c) October 1962
- (d) September 1965

Question5. The Architect of Non-alignment is:

- (a) Pt. Nehru
- (b) Indira Gandhi
- (c) Y. B. Chavan
- (d) Atal Behari Vajpayee

Question6.

Match the following:

(a) The goal of India's foreign policy in the period 1950-1964	(I) Tibetan spiritual leader who crossed over to India.
(b) Panchsheel	(II) Preservation of territorial integrity, sovereignty, and economic development.
(c) Bandung Conference	(III) Five principles of peaceful coexistence.
(d) Dalai Lama	(IV) Led to the establishment of NAM.

Question7. In the formulation of foreign policy, what was Pt. Jawaharlal Nehru's first priority?

Question8. In which year McMahon Line boundary line was determined between India and China?

- Question9.** Who proposed the partition of Kashmir?
- Question10.** In which year, who declared the five principles of Panchsheel?
- Question11.** In which year China invaded India?
- Question12.** After the Chinese revolution in 1949, which country was the first to recognize the Communist Government?
- Question13.** What do you mean by Panchsheel?
- Question14.** Write one basic principle of India's foreign policy.
- Question15.** Where the first Non-aligned Summit was held?
- Question16.** Which is a major issue of dispute between India and Pakistan?
- Question17.** Write 'True' or 'False' against each of these statements.
- Question18.** Non-alignment allowed India to gain assistance both from U.S.A. and U.S.S.R.
- Question19.** India's relationship with her neighbors has been strained from the beginning.
- Question20.** The Cold War has affected the relationship between India and Pakistan.
- Question21.** The treaty of Peace and Friendship in 1971 was the result of India's closeness to the U.S.A.

Assignment -3

- Question1.** Which of these statements about the Bombay Plan is incorrect?
- (a) It was a blueprint for India's economic future.
- (b) It supported state ownership of industry.
- (c) It was made by some leading industrialists.
- (d) It supported strongly the idea of planning.
- Question2.** Which of the following ideas did not form part of the early phase of India's development policy?
- (a) Planning
- (b) Liberalisation
- (c) Cooperative Farming
- (d) Self-sufficiency
- Question3.** The Idea of Planning in India was drawn from:
- (a) The Bombay Plan
- (b) Experiences of the Soviet bloc countries
- (c) Gandhian Vision of Society
- (d) Demand by Peasant Organisation
- (I) b and d only
- (II) d and e only
- (III) a and b only
- (IV) all the above
- Question4.** Match the following:

(a) Charan Singh	(i) Industrialisation
(b) P.C. Mahalanobis	(ii) Zoning
(c) Bihar Famine	(iii) Farmers
(d) Verghese Kurien	(iv) Milk Cooperatives

- Question5.** Who said, "Planning is a way of organizing and utilizing resources to maximum advantage in terms of defined social ends"?
- (a) K.T. Shah
- (b) Planning commission of India
- (c) Dr. Rajinder Prashad
- (d) None of these
- Question6.** In India, planning was conceived as the main instrument of:
- (a) Political development
- (b) Cultural development
- (c) Social development
- (d) Socio-economic development
- Question7.** How many plans have been completed so far in India?
- (a) Twelve

- (b) Six
- (c) Eight
- (d) Four

Question8. The Planning Commission in India was set up in:

- (a) 1953
- (b) 1957
- (c) 1960
- (d) 1950

Question9. The Chairman of the National Development Council is:

- (a) President of India
- (b) Finance Minister of India
- (c) Prime Minister of India
- (d) Chief Minister of U.P.

Question10. What is meant by planned development?

Question11. Which Indian thinker emphasized planning in India and when?

Question12. From where the idea of planning in India was drawn.

Question13. What is Planning?

Question14. When was the Planning Commission set up?

Question15. In which year First Five Year Plan was started?

Question16. When Second Five Year Plan was started?

Question17. Mention the main objective of the Second Five Year Plan.

Question18. When was NITI Aayog established?

Assignment-4

Question1. In which year first general election was held in India?

- (a) 1947
- (b) 1952
- (c) 1955
- (d) 1960

Question2. Who became the Prime Minister of India after the first general election?

- (a) Pt. J.L. Nehru
- (b) Sardar Patel
- (c) Smt. Indira Gandhi
- (d) Mahatma Gandhi

Question3. In 1957, which party formed the government in Kerala?

- (a) Jan Sangh
- (b) C.P.I
- (c) Congress
- (d) Socialist Party

Question4. When was the Socialist Party formed in India?

- (a) 1948
- (b) 1952
- (c) 1955
- (d) 1960

Question5. Match the following leaders listed in list A with the parties in list B.

List A	List B
(a) S.A. Dange	(i) Bharatiya Jan Sangh
(b) Shyama Prasad Mukherjee	(ii) Swatantra Party
(c) Minoo Masani	(iii) Praj Social Party
(d) Ashoka Mehta	(iv) Communist Party of India

Question6. The first general election in 1952 involved simultaneous elections to the Lok Sabha and _____ (The President of India/State Assemblies/Rajya Sabha/The Prime Minister)

Question7. The party that won the second-longest number of Lok Sabha seats in the first elections was the _____ (Praja Socialist Party/Bharatiya Jans Sangh/ Communist Party of India/Bharatiya Janata Party)

Question8. One of the guiding principles of the ideology of the Swatantra Party was _____
(Working class interests/Protection of Primary states/economy free from state control/Autonomy of state within the Union.)

Question9. One-party dominance is related to which political party of India?

Question10. Who addressed Congress as Umbrella Organisation?

Question11. Which Indian party is the oldest party in Asia?

Question12. Mention the name of four states where Congress failed to get absolute majority in 1962.

Question13. Mention the period when Congress dominated Indian politics.

Question14. The era of one-party dominance began with the year.

Question15. Who said, "One party dominance expressed India's party system more accurately than the

term 'One-party system?'

Question16. How many national and state parties were there at the time of the first general election?

Question17. Which of the faction of the Communist Party was pro-Soviet?

Question18. How many seats were secured by the Jan Sangh in the first election of Lok Sabha?

SUBJECT -HISTORY

Instructions: Do homework in FNB and writing must be clean and clear.

- 1) Write about different tribal societies which are present in India.
- 2) Write about any five India's archaeological sites in detail.
- 3) Make a chart on timeline from each chapter.
- 4) Find out at least 25 questions from each chapter.
- 5) Write the differences between earliest and modern societies.
- 6) Read all chapters carefully from Theme 1 and try to solve exercises.
- 7) Write about Haryana's archaeological site Rakhi Gardhi in about 200 words.

ACTIVITY:- Mark maps from each chapter which are related to archaeological sites.

SUBJECT- I.T

1. Create a visual representation of Communication data using Excel, such as charts or graphs illustrating communication pattern. Analyze how visual data can aid in understanding communication trends and making informed decisions. How can data-drive insights improve communication strategies?
2. Write a paragraph on 'Importance of positive attitude'.
3. Revise all RDBMS concepts.
4. Solve sample paper given in your book.

ACTIVITY:- Create a vision board slide in PowerPoint to visually represent your academic and personal goals. Explain the significance of using visual aid in goal setting. How might regularly revisiting this slide impact your motivation and focus?

SUBJECT-A.I

1. Write paragraph on the following:
 - a) Should social media comments be protected by free speech?
 - b) Is it ever appropriate for the government to restrict freedom of speech?
 - c) Even a clock that doesn't work is right twice a day. Write about positive thing.

ACTIVITY:-

- Make a chart on Do's and Don'ts of interview.
- Name an entrepreneur you admire and what do you admire about that person?

- Engineers have found ways and means to build roads with plastic wastes. The waste plastic generated in tons over the globe can be utilised to make roads. This will not only provide better roads for vehicles to move but also solves the problem of waste generation. Find out more about it and prepare a presentation on the topic.
- Solve sample paper given in your book.

SUBJECT-PHYSICS

NDA

- Solve assignment of unit 1 to 3.

ACTIVITY: - Make working model on topic "Electric circuit".

- Make a project file on "Magnetic effect of current" or "Current electricity".
- Solve derivation of Unit-1, 2 and 3.

ASSERTIONS AND REASONS

DIRECTIONS

In the following questions (1-8), a statement of Assertion (A) is followed by a statement of Reason [R].

Mark the correct choice as:

- (a) If both assertion and reason are true and reason is the correct explanation of the assertion.
- (b) If both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) If assertion is true but reason is false.
- (d) If both assertion and reason are false/assertion is false and reason is true.

1. Assertion. The dimensional formula for product of resistance and conductance is same as for dielectric constant.

Reason. Both have dimensions of time constant.

[AIIMS 2009]

2. Assertion. Electrons move from a region of higher potential to a region of lower potential.

Reason. An electron has less potential energy at a point where potential is higher and vice-versa. [AIIMS 13]

3. Assertion. A wire carrying an electric current has no electric field around it.

Reason. Rate of flow of electrons in one direction is equal to the rate of flow of protons in opposite direction.

4. Assertion. Though large number of free electrons are present in the metal. Yet there is no current in the absence of electric field.

Reason. In the absence of electric field electrons move randomly in all directions. [AIIMS 11]

5. Assertion. The internal resistance of a cell is constant.

Reason. Ionic concentration of the electrolyte remains same during use of a cell. [CBSE OD 23]

6. Assertion. The temperature coefficient of resistance is positive for metals and negative for semiconductors.

Reason. The charge carriers in metals are negatively charged whereas in semiconductors they are positively charged. [CBSE 23C]

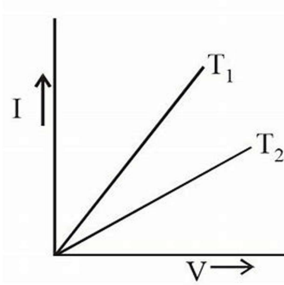
7. Assertion. An electrical bulb starts glowing instantly as it is switched on.

Reason. Drift speed of electrons in a metallic wire is very large. [AIIMS 17]

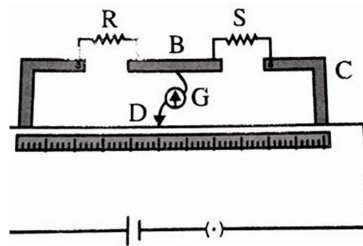
8. Assertion. A current flows in a conductor only when there is an electric field within the conductor.

Reason. The drift velocity of electrons in presence of electric field decreases.

9. I-V graph for a metallic wire at two different temperatures, T_1 and T_2 is as shown in Fig. Which of the two temperatures is lower and why?



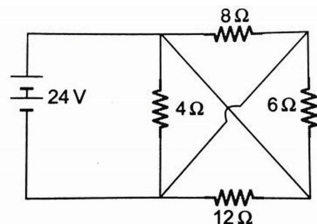
10. In metre bridge, the null point is found at a distance of 60.0 cm from A. If now a resistance of 5 ohm is connected in series with S, the null point occurs at 50 cm. Determine the values of R and S.



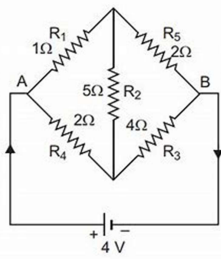
11. In a metre bridge, the null point is found at a distance of 40 cm from A. If a resistance of 12 ohm is connected in parallel with S, the null point occurs at 50.0 cm from A. Determine the values of R and S.

12. Calculate the current drawn from the battery by the network of resistors in the following diagram.

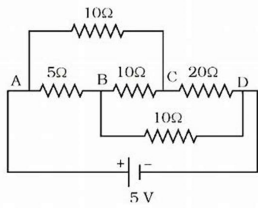
(a)



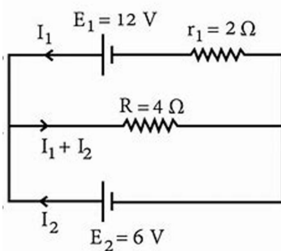
(b)



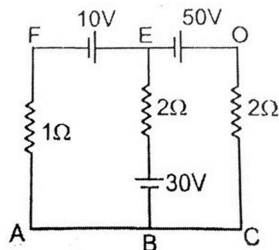
(c)



(d)



(e)



13. Define internal resistance of a cell. Prove that $r = (E/V - 1)R$ where R is the external resistance used.

14. Derive the formula for the equivalent EMF and internal resistance for the parallel combination of two cells with EMFs E_1 and E_2 and internal resistances r_1 and r_2 respectively. What is the corresponding formula for the series combination?

15. Explain how electron mobility changes for good conductor when the temperature of the conductor is decreased at constant potential difference. [CBSE OD 06C; D 17]

16. A potential difference (V) is applied across a conductor of length 'L' and cross-sectional area 'A'. How will the drift velocity of electrons and the current density be affected if another identical conductor of the same material were connected in series with the first conductor? Justify your answers. [CBSE D 23]

17. The potential difference applied across a given conductor is doubled. How will this affect (i) the mobility of electrons and (ii) the current density in the conductor? Justify your answers.

18. The current through a wire depends on time as $I = I_0 + at$, where $I_0 = 10A$ and $a = 4A/sec$. Find the charge that flows across a section of the wire in 10 seconds.
19. A battery is connected first across the series combination and then across the parallel combination, of three resistances $R, 2R$ and $3R$. In which of the three resistances will power dissipated be maximum in the two cases? Justify your answer.
20. Draw graph for variation of resistivity of copper and nichrome with temperature.

SUBJECT- MATHEMATICS

1. Solve assignment of chapter 1 to 5 from NDA booklet.
2. **Project:** Make a model on any topic.
3. Make a project file on any topic.
4. Revise chapter 1 to 5 complete in Holidays Homework Notebook.

ACTIVITY 1 {FOR ODD ROLL NO.}

- Make a working model on Inverse Trigonometric Function.
- Make a working model on probability.

ACTIVITY 2 {FOR EVEN ROLL NO.}

- Make a working model on Relation and Functions.
- Make a working model on Conic Section.

- Q1. If A is a square matrix of order 3, such that $A(\text{adj } A) = 10I$, then $|\text{adj } A|$ is equal to ?
- Q2. If A is 3×3 matrix such that $|A| = 8$, then find $|3A|$.
- Q3. A relation in a set A is calledrelation, if such element of A is related to itself.
- Q4. If $A+B = \begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix}$ and, $A - 2B = \begin{bmatrix} -1 & 1 \\ 0 & -1 \end{bmatrix}$ then, Find A and B .
- Q5. If the function $F(x) = \begin{cases} \frac{x^2-9}{x-3} & \text{if } x \neq 3 \\ k & \text{if } x = 3 \end{cases}$
- Q6. If $[x1] \begin{bmatrix} 1 & 0 \\ -2 & 0 \end{bmatrix} = 0$, then find x .
- Q7. Show that the function $f: R \rightarrow R$ defined by $f(x) = \frac{x}{x^2+1}$ is neither one – one nor onto.
- Q8. If $A = \begin{bmatrix} 0 & 2 \\ 3 & -4 \end{bmatrix}$ and $KA = \begin{bmatrix} 0 & 39 \\ 2b & 24 \end{bmatrix}$, then find the value of K, a and b .
- Q9. If A and B are symmetric matrices such that AB and BA are both defined, then prove that $AB - BA$ is skew symmetric matrix .
- Q10. Use elementary Row operation $\begin{bmatrix} 2 & 1 \\ 2 & 0 \end{bmatrix}$, Find A^{-1} .
- Q11. Using property show that determinant is $\begin{vmatrix} 1 & 3 & 5 \\ 2 & 6 & 10 \\ 31 & 11 & 38 \end{vmatrix} = 0$
- Q12. Show that $\begin{vmatrix} -31 & 160 & 161 \\ 0 & 0 & 0 \\ -15 & 79 & 12 \end{vmatrix}$ matrix is singular.

Q13. Find K if matrix is singular $\begin{bmatrix} 5-K & K+1 \\ 2 & 4 \end{bmatrix}$.

Q14. Find the value of $\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix}$.

Q15. If $A = \frac{1}{3} \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & -2 \\ -2 & 2 & -1 \end{bmatrix}$, Show that $AA' = I = A'A$

Q16. $A = \begin{bmatrix} -1 \\ 2 \\ 3 \end{bmatrix}$, $B = [-2 \quad -1 \quad 4]$ verify $(AB)' = B'A'$.

Q17. $A = \begin{bmatrix} 2 & 1 \\ -3 & 1 \end{bmatrix}$, show that $A + A'$ is symmetric matrix.

Q18. If $A = \begin{bmatrix} 6 & 2 \\ 1 & 5 \end{bmatrix}$, Verify $(A')^{-1} = (A^{-1})'$.

Q19. Find the Inverse of $\begin{bmatrix} 2 & 5 \\ -3 & 1 \end{bmatrix}$.

Q20. If $A = \begin{bmatrix} 2 & 7 \\ 1 & 4 \end{bmatrix}$, Show that $A^2 - 6A + I = 0$.

Q21. Check whether the system of equations have unique solution or not.

$$x + 2y = 4$$

$$2x + 4y = 8$$

Q22. Find the Inverse of A matrix, $A = \begin{bmatrix} 1 & 5 \\ 3 & 8 \end{bmatrix}$ by using elementary row operation.

Q23. If $f(x) = \begin{cases} \frac{1-\cos 4x}{8x^2}, & x \neq 0 \\ k, & x = 0 \end{cases}$ is continuous, find k.

Q24. Examine the continuity of $f(x) = 2x^2 - 1$, at $x = 3$.

Q25. Find the derivative of $f(x) = x^2$ at $x = 2$.

Q26. Show that the function $f(x) = \begin{cases} 2+x, & x \geq 0 \\ 2-x, & x < 0 \end{cases}$ is not derivable.

Q27. Show that the function $f(x) = \begin{cases} x+1, & x \geq 1 \\ x^2+1, & \text{if } x < 1 \end{cases}$.

Q28. Examine the continuity of $f(x) = \begin{cases} x^3-3, & \text{if } x \leq 2 \\ x^2+1, & \text{if } x > 2 \end{cases}$ at $x=2$.

Q29. solve the equations by matrix method $5x+2y=3$, $3x+4y=5$.

Q30. If $A = \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$ then verify $(\text{adj}A)^{-1} = \text{adj}A^{-1}$

SUBJECT-HINDI

1. निम्नलिखित विषय पर नोट लिखे।

a) बढ़ती बेरोजगारी

b) समाचार पत्र की उपयोगिता

2. सभी पाठों के प्रश्न-उत्तर याद करे।

3. समाचार पत्र में प्रकाशित स्तंभ लेख, संपादकीय लेख और विशेष लेख लिखे।

गतिविधि ; वोट की महत्ता बताते हुए एक विडिओ बनाकर अपने विषय संबंधित अध्यापक को भेजे ।

SUBJECT-BIOLOGY

ASSIGNMENT

1. Read the paragraph given below and answer the questions that follow:

IUCN maintains a Red Data Book or Red List which is a catalogue of taxa facing risk of Extinction. The IUCN Red List (2004) documents the extinction of 784 species in the last 500 Years. Some examples of recent extinction include Dodo, Quagga, Thylacin and Steller's Sea Cow. The last twenty years alone have witnessed the disappearance of 27 species. Red List has eight categories of species.

- i. Dodo, an extinct taxon, belongs to which country?
 - a. Mauritius b. Africa
 - c. Australia d. Russia
- ii. To which of the following categories of IUCN *Berberis nilghiriensis* belongs?
 - a. Extinct c. extinct in wild
 - b. Endangered. d. Critically endangered
- iii. Steller's Sea Cow and Passenger Pigeon became extinct due to _____.
 - a. Alien species invasion. c. over-exploitation
 - b. Co-extinctions d. Intensive agriculture
- iv. Bali, Javan and Caspian are _____.
 - a. Species of tiger c. species of cheetah
 - b. Subspecies of tiger d. subspecies of cheetah
- v. IUCN stands for _____.
 - a. International Union for Conservation of Nature
 - b. International Union for Conservation of Naturalist
 - c. International Union for Conservation of Nature and Wild Life
 - d. None of the Above

Q2. Give reason for the following:

- (a) The first half of the menstrual cycle is called follicular phase as well as Proliferative phase.
- (b) The second half of the menstrual cycle is called luteal phase as well as Secretary phase.

3. What is meant by L.H. Surge? Write the role of L.H.
4. Explain significance of the condition in which the testes remain suspended in Scrotum outside the abdomen.
5. How many sperms will be produced from 10 primary spermatocytes?
6. How Many eggs will be produced from 10 primary oocytes?
7. Menstruation or absent during pregnancy. Why?
8. Why any organism needs to be part of any kind of population interaction?
9. Continued self-pollination lead to inbreeding depression. List four devices, which flowering plant have developed to discourage self-pollination?
10. What are some of the limitations of ecological pyramids?

11. Energy flow is always unidirectional in an ecosystem". Justify this assertion.
12. In the past, which factor would have caused a mass extinction of species?
13. Which are biodiversity hotspot in India and what is their role in ecosystem?

Research based Work.

14. How can the loss of biodiversity be prevented?
15. Mention measure taken by Government of any 5 Indian states to conserve biodiversity.
16. How is pollen stored in a pollen bank? Mention about some Indian pollen bank.

Project work.

17. To prepare project of approx 15 pages on any of the topic given --- STD, AIDS, Application of Bio-technology, Drug addiction, DNA fingerprinting, effect of smoking and alcohol on human health, Effect of various diet on pregnancy , Biodiversity conservation , Infertility.

It should include:

- Cover page
- Index
- Acknowledgement
- Certificate
- Introduction
- Details about the project
- Annexure
- Bibliography

SUBJECT - ECONOMICS

- 1) Do all the practical question of every chapter done till now
- 2) Learn and write HOTS of every chapter done till now
- 3) Do ' Test your understanding' question in notebook
- 4) Do all the ' Assertion and Reasoning' questions in notebook
- 5) Answer the following questions:
 - a) Solo purpose of the British colonial rule in India.
 - b) Explain partition of the country and its impact.
 - c) What is Suez Canal and access to Indian market?
 - d) Name some key industries that come in India after Second World War.
 - e) Status significant drawback of the new industry setup in India.
 - f) What lower the significance of GDP as an index of welfare?
 - g) Define micro and macro paradox.
 - h) All capital goods are producer good but all producer and goods are not capital goods why?
 - i) What is qualitative and quantitative instrument of credit control?

ACTIVITY:-

- make a video on "Indian economy" on the eve of independence [Jatin]
- make a video on "Five year plan" [Priyanshu]
- make project on the topic 'National income and related aggregates'

SUBJECT-CHEMISTRY

Learn and write all Intext and NCERT question of:

Unit – 1 [Solutions]

Unit – 2 [Electrochemistry]

Unit – 3 [Chemical Kinetics]

Unit – 6 [Haloalkane and Haloarene]

NOTE: Do PYQ of these units also.

NDA

Do assignment of [Solutions] from NDA booklet.

Make assignment on allotted topics.

ASSIGNMENT:

1. The term $-dx/dt$ in a rate equation refers to:

- (a) the conc. of a reactant
- (b) the decrease in conc. of the reactant with time
- (c) the velocity constant of reaction
- (d) None of these

2. For a reaction $P + Q \rightarrow 2R + S$, the incorrect statement is

- (a) Rate of disappearance of P = Rate of appearance of S
- (b) Rate of disappearance of Q = 2 x Rate of appearance of R
- (c) Rate of disappearance of Q = Rate of disappearance of P
- (d) Rate of disappearance of Q = $1/2$ x Rate of appearance of R

3. In a reaction, $2X \rightarrow Y$, the concentration of X decreases from 0.50 M to 0.38 M in 10 min. What is the rate of reaction in Ms^{-1} during this interval?

- (a) 2×10^{-4}
- (b) 4×10^{-2}
- (c) 2×10^{-2}
- (d) 1×10^{-2}

4. Instantaneous rate of a chemical reaction is

- (a) rate of reaction in the beginning
- (b) rate of reaction at the end
- (c) rate of reaction at a given instant
- (d) rate of reaction between two specific time intervals

5. A first order reaction has a rate constant $1.15 \times 10^{-3} \text{s}^{-1}$. Time taken for 5 g of this reactant to reduce to 3 g is

- (a) 444 s
- (b) 400 s

(c) 528 s

(d) 669 s

6. Order of reaction is decided by

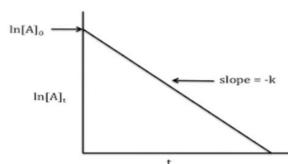
(a) temperature

(b) mechanism of reaction as well as relative concentration of reactants

(c) molecularity

(d) pressure

7. A plot is shown below between concentration and time t . Which of the given orders is indicated by the graph



(a) Zero Order

(b) Second Order

(c) First Order

(d) Fractional Order

8. A zero order reaction is one whose rate is independent of

(a) the concentration of the reactants

(b) the temperature of reaction

(c) the concentration of the product

(d) the material of the vessel in which reaction is carried out

9. A catalyst increases the reaction rate by:

(a) decreasing enthalpy

(b) increasing internal energy

(c) decreasing activation enthalpy

(d) increasing activation enthalpy

10. A first order reaction takes 40 min for 30% decomposition. $t_{1/2}$ will be

(a) 77.7 min

(b) 52.5 min

(c) 46.2 min

(d) 22.7 min

11. In a reaction, the threshold energy is equal to

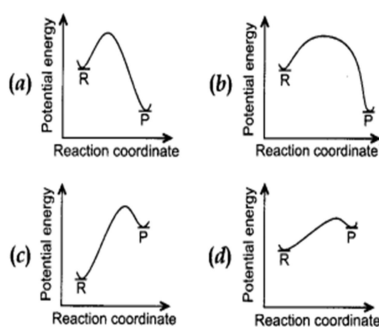
(a) activation energy + normal energy of reactants

- (b) activation energy - normal energy of reactants
- (c) normal energy of reactants - activation energy
- (d) average kinetic energy of molecules of reactants

12. Which of the following influences the reaction rate performed in a solution?

- (a) Temperature
- (b) Activation energy
- (c) Catalyst
- (d) All of the above

13. An endothermic reaction with high activation energy for the forward reaction is given by the diagram.



14. The half-life of the first order reaction having rate constant $K = 1.7 \times 10^{-5} \text{s}^{-1}$ is

- (a) 12.1 h
- (b) 9.7 h
- (c) 11.3 h
- (d) 1.8 h

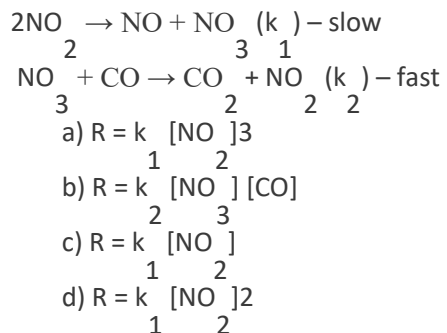
15. For a chemical reaction $A \rightarrow B$, it is found that the rate of reaction doubles when the concentration of A is increased four times. The order of reaction is

- (a) Two
- (b) One
- (c) Half
- (d) Zero

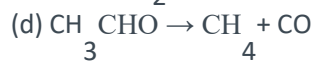
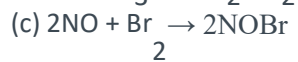
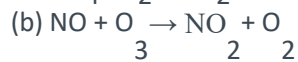
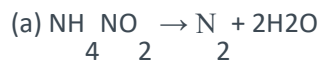
16. For a second-order reaction, what is the unit of the rate of the reaction?

- a) s^{-1}
- b) $\text{mol L}^{-1} \text{s}^{-1}$
- c) $\text{mol}^{-1} \text{L s}^{-1}$
- d) $\text{mol}^{-2} \text{L}^2 \text{s}^{-1}$

17. The reaction $\text{NO}_2 + \text{CO} \rightarrow \text{NO} + \text{CO}_2$ takes place in two steps. Find the rate law.



18. Which of the following reactions is an example of a fractional order reaction?



19. A reaction's rate constant is determined by

- (a) temperature of the reaction
- (b) extent of the reaction
- (c) initial concentration of the reactants
- (d) the time of completion of reaction

20. For a given rate, the unit of rate and the rate constant are the same.

- (a) zero order reaction
- (b) first order reaction
- (c) second order reaction
- (d) third order reaction

PHYSICAL EDUCATION

- Learn chapter-1, 2 and 3.

ACTIVITY: -

- Make a Yoga chart
- Prepare a video on different yoga postures and send to your subject teacher.



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.