

CLASS – X

Summer Holidays Homework-2024

ENGLISH

General Instructions:

- Language Games have been assigned Roll number-wise to students.
- Students can choose any one assignment in Literaria section.
- Section B is compulsory for all and to be done in writing skills register.
- Handwriting should be neat and legible.
- The work should be original, creative and not copied from the Internet.
- **Date of Submission: 20.06.2024**

Section-A

1. **Language Games**-Bring out your creative and playful side by inventing fun grammar and vocabulary-based games.

R.Nos.1 to13

- (i) **Question Formation Board Game**-Design a board game that helps players practice forming questions in English. Incorporate spaces or cards that challenge players to create questions using different question words (who, what, where, when, why, how) and sentence structures. The game should encourage players to think creatively and apply their knowledge of grammar rules while having fun. Also make a dice to play the game.



R.Nos.14 to25

- (ii) **Language Puzzle Station** – Create interactive language puzzles such as crosswords, word searches related to vocabulary or grammar. Provide clues to help solve the puzzle and learn new words or concepts.

Phase 4 Words

Across

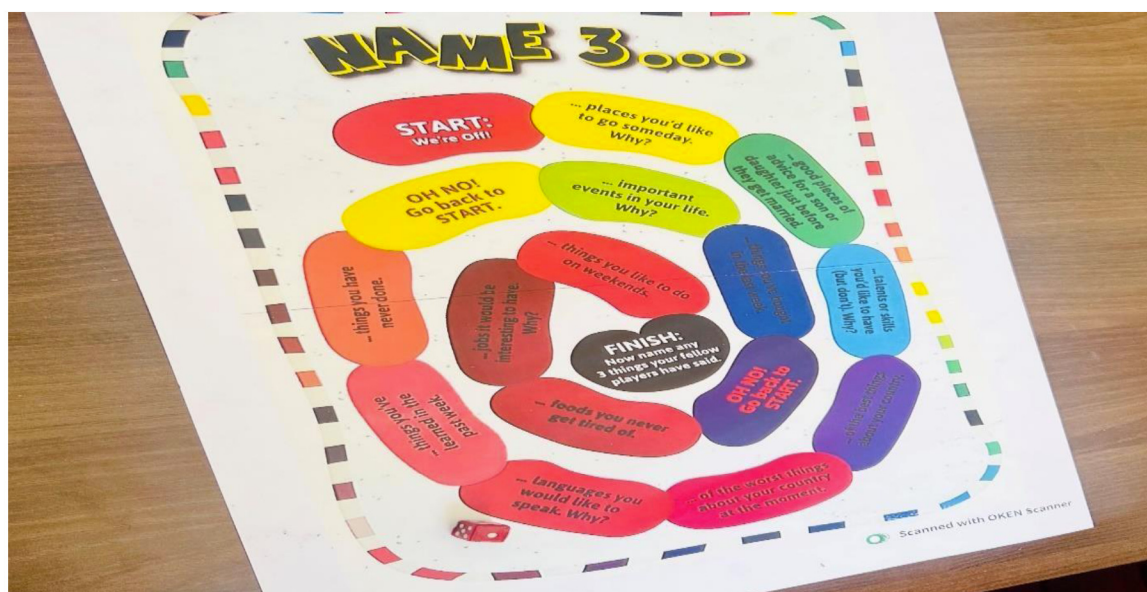
1. You wash your hair with this.
3. Another word for young people.
5. The tiger did a fierce _____.
7. Another word for turning.
9. A garment for your head.
11. Beauty and the _____.
13. An ape that is very similar to humans.
15. Standing on your hands.

Down

1. A lunch food that is made with bread.
2. I was _____ing a lot from being hurt.
4. The sound made when eating crisps.
6. What we do with our brains.
7. The lightning made _____ noises.
8. The King makes a Christmas _____ every year.

R.Nos.26 to40

- (iii) **Name THREE**-Write situations in which the player will have to tell three things on the situation with reason.eg. Three languages you would like to speak and why? You may incorporate grammar concepts by asking any examples of adverbs, adjectives, etc. Also make a dice to play the game.



2. **Literaria**-Let's explore the literature lessons by critically and creatively analyzing them and present it artistically. Do **any one** of the following activity -

Interactive Timeline- Use an A3 sheet to create an interactive timeline of events from the poem 'The Frog and the Nightingale' such as nightingale's arrival, her rise to fame, and her eventual demise.

- Storyboard Creation** – Create a storyboard depicting key scenes from the lesson. You can draw illustrations or use collage techniques to visually represent the events and characters.
- Class Magazine Cover**-Design an engaging and captivating magazine cover for your class publication that reflects on the interests and personalities of your classmates.
- Literary Character Social Media Profiles**-Create a social media profile for any of the characters from your favorite novel, short story or play.

Section-B

1. **Diary Entry**– Read about Lakshadweep islands and write a diary entry of the activities you would like do there. This diary entry is to be done in your writing skills register.

2. **Improve your Comprehension skills**- Unit-1 **Health and Medicine** of MCB Reader should be done by students in the book.

3. **Complete the following passage using suitable determiners.**

As years pass by, the weather changes ____ becoming more noticeable. During ____ summers, the temperatures in various places ____ rising. Heatwaves ____ become quite common ____ days. Many people have suffered heatstroke due to ____ tremendous heat. Doctors are suggesting that people ____ not leave their homes between 9:00 A.M to 3 P.M. and if at all people have to go out, they must ____ light colored clothes. Doctors ____ also suggesting that people should drink ____ of water. Scientists are saying that if people don't start to plant trees and take care of the environment, then with each passing year, the temperature ____ continue to rise. It is due to the rising temperatures that the huge glaciers are ____ at such a fast pace, thus increasing the water levels. Due to the increased water levels, many cities ____ get submerged in water in the coming years. So if we don't start taking some ____ now, the situation will deteriorate in ____ near future.

4. **One word has been omitted in each line. Write the omitted word and the word before or after, in the below given format:**

	Before	Word omitted	After
There was a fire our street yesterday morning.	fire	in	our
a) When I woke up, I looked of the window and saw	_____	_____	_____
b) smoke pouring out of house opposite. Then I	_____	_____	_____
c) saw fire engines arriving their sirens	_____	_____	_____
d) blaring. First one turned the corner and stopped outside	_____	_____	_____
e) the house. All the firemen dashed the house and	_____	_____	_____

- | | | | |
|--|-----|-----|-----|
| f) ran upstairs to the bedrooms. A woman screaming | ___ | ___ | ___ |
| g) from an upstairs window. She shouted that she locked | ___ | ___ | ___ |
| h) in the room and not get out. By this time a second | ___ | ___ | ___ |
| i) fire engine arrived and the firemen held a blanket | ___ | ___ | ___ |
| j) for her to jump into. The chief shouted that she to jump. | ___ | ___ | ___ |
| k) You could see that was terrified but suddenly she | ___ | ___ | ___ |
| l) made the decision and with great scream, she jumped. | ___ | ___ | ___ |
| m) She landed safely. Afterwards she said that it had the | ___ | ___ | ___ |
| n) most frightening experience of life. | ___ | ___ | ___ |

हिंदी

General Instructions

खंड - अ

विद्यार्थियों को अनुक्रमांक के अनुसार परियोजना प्रदान की गई है। अपने अनुक्रमांक के अनुसार ही परियोजना तैयार करें।

खंड - ब

इस खंड का कार्य हिंदी रजिस्टर में ही करें।

जमा कराने की तिथि - 21.06 .2024

खंड - अ

अनुपम - अतुलित अंडमान-निकोबार द्वीप समूह

अंडमान शब्द मलय भाषा के शब्द 'हांदुमन' से आया है जो हिन्दू देवता 'हनुमान' के नाम का परिवर्तित रूप है। निकोबार शब्द भी इसी भाषा से लिया गया है। हिन्द महासागर में बसा निर्मल और शांत अंडमान-निकोबार द्वीप समूह पर्यटकों के मन को असीम आनंद की अनुभूति कराता है।



जो सभ्यता जितनी अधिक पुरानी होगी, उतने ही अधिक किस्से -कहानियाँ उससे जुड़े होते हैं जो हमें देखने-सुनने को मिलते हैं। प्रेम सभी को जोड़ता है और घृणा दूरियाँ बढ़ाती है, इस बात से भला कौन इनकार कर सकता है। पाठ 'ततारा-वामीरो कथा' में भी इसी भाव को दर्शाया गया है।

अनुक्रमांक 01 - 10

अपने मन की कल्पना और विचारों को उड़ान देते हुए 'तताँरा वामीरो कथा' को कविता में रूपांतरित कीजिए।
आकर्षक प्रस्तुति एवं विभिन्न चित्रों से सुसज्जित करते हुए परियोजना तैयार कीजिए।

निर्देश -

- कविता लगभग दो पृष्ठ में लिखें। (A -4 Size)
- सजावट, चित्र एवं रंगों का प्रयोग अनिवार्य है।
- वर्तनी की अशुद्धियों पर विशेष ध्यान दें।

अनुक्रमांक 11 - 20

पाठ 'तताँरा वामीरो कथा' अथवा अंडमान-निकोबार की किसी भी एक लोक कथा को सुंदर एवं आकर्षक 'कॉमिक स्ट्रिप' के रूप में प्रस्तुत कीजिए।

निर्देश -

- लगभग 4 पृष्ठ तैयार करें।
- पृष्ठ के आकार का चुनाव अपनी पसंद के अनुसार करें।
- सजावट, चित्र एवं रंगों का प्रयोग अनिवार्य है।
- वर्तनी की अशुद्धियों पर विशेष ध्यान दें।

अनुक्रमांक 21 से अंत तक

पाठ 'तताँरा वामीरो कथा' में नवीन एवं रोचक बदलाव लाते हुए और एक नया मोड़ देते हुए कहानी का नया अंत सोचकर लिखिए। कहानी में आवश्यकतानुसार नए पात्रों का प्रवेश, पात्रों का परिवर्तन आदि कर सकते हैं।

निर्देश -

- लगभग 4 पृष्ठ तैयार करें।
- सजावट, चित्र एवं रंगों का प्रयोग अनिवार्य है।
- वर्तनी की अशुद्धियों पर विशेष ध्यान दें।

खंड - ब

कार्य पत्रिका

प्रश्न 1 निर्देशानुसार 'पदबंध' पर आधारित बहुविकल्पीय प्रश्न का उत्तर दीजिए-

(i) 'विदेश से आए कुछ हिंदी जानते थे।' पदबंध का भेद लिखिए।

(क) संज्ञा पदबंध

(ख) सर्वनाम पदबंध

(ग) क्रिया पदबंध

(घ) विशेषण पदबंध

(ii) 'बरगद के पेड़ की घनी छाँव से हमें गर्मी में भी ठंडक का एहसास हुआ।' पदबंध का भेद लिखिए।

(क) संज्ञा पदबंध

(ख) क्रिया विशेषण पदबंध

(ग) क्रिया पदबंध

(घ) विशेषण पदबंध

(iii) 'वह विद्यालय से निकल कर बाजार की ओर आया होगा।' पदबंध का भेद लिखिए।

(क) संज्ञा पदबंध

(ख) क्रिया विशेषण पदबंध

(ग) क्रिया पदबंध

(घ) विशेषण पदबंध

(iv) 'इतनी लगन से काम करने वाला मैं असफल नहीं हो सकता।' पदबंध का भेद लिखिए।

(क) संज्ञा पदबंध

(ख) सर्वनाम पदबंध

(ग) क्रिया पदबंध

(घ) विशेषण पदबंध

(v) 'मज़दूर सुबह से शाम तक लगातार काम करते हैं तब जा कर उनके घर में खाना पकता है।' पदबंध का भेद लिखिए।

(क) संज्ञा पदबंध

(ख) क्रिया विशेषण पदबंध

(ग) क्रिया पदबंध

(घ) विशेषण पदबंध

प्रश्न 2 निम्नलिखित मुहावरों का वाक्य में प्रयोग कीजिए -

(क) राह न सुझना

(ख) आटे दाल का भाव मालूम होना

(ग) घी के दीये जलाना

(घ) घाट - घाट का पानी पीना

प्रश्न 3 रूढ़ियाँ जब बंधन लगने लगे तब उनका टूट जाना ही अच्छा है। क्यों ? स्पष्ट कीजिए।

प्रश्न 4 मीरा कृष्ण की चाकरी क्यों करना चाहती हैं उनका लक्ष्य सांसारिक सुखों की प्राप्ति क्यों नहीं है? 'मीरा के पद' के आधार पर स्पष्ट कीजिए।

प्रश्न 5 मीरा ने अपने पदों में प्रभु के प्रति भावनाएँ किस प्रकार व्यक्त की हैं ?

प्रश्न 6 दिए गए विषय पर आधारित विज्ञापन का निर्माण करें -

आपने दिल्ली हाट में अंडमान - निकोबार एवं लक्षद्वीप के पारंपरिक वस्त्र, भोजन, सजावटी वस्तुएँ, बाँस एवं सीप आदि से बनी वस्तुओं की प्रदर्शनी लगाई है। प्रदर्शनी से संबंधित समय, स्थान, तिथि, प्रवेश निःशुल्क / टिकट के द्वारा आदि की जानकारी देते हुए आकर्षक विज्ञापन तैयार कीजिए।

प्रश्न 7 'जीवन संघर्ष है, स्वप्न नहीं' विषय पर 120 शब्दों में दिए गए संकेत बिंदुओं की सहायता से एक अनुच्छेद लिखिए।

- संघर्ष जीवन का दूसरा नाम

- जीवन गतिशील एवं बाधाओं से भरा हुआ है

- स्वप्न असत्य है तथा जीवन सत्य है

FRENCH

General Instructions:

- Students to make the Story Book as given in Q1 on A4 size sheets (as per the instructions given below)
- Students to make the project on A3 size sheets on the topic given in Q2 (as per the instruction given below)
- Assignment questions to be done in French subject register by all students.
- **Date of Submission: 25.06.2024**

Q1: Illustrate a Children's Book: Write and illustrate a short storybook for children, featuring colourful characters with a heartwarming message. Think of themes that resonate with children, such as friendship, bravery, honesty etc. Develop characters that are relatable and endearing, each with their own unique traits and personalities. Use your artistic talents to create engaging illustrations that complement the text.

Q2: Travel Blog: Write a travel blog documenting your imaginary journey to the Andaman and Nicobar Islands. Share personal experiences, photos, and reflections on exploring the islands, including visits to famous landmarks, encounters with wildlife, and interactions with local communities. Make it beautiful and creative on A3 size sheet.

Assignment

Q1. Conjuguez les verbes entre parenthèses.

- a) Quand la dame est arrivée tout le monde _____ là. (être)
- b) Quand Nathalie _____ le vocabulaire pertinent, elle pourra mieux comprendre ces textes. (apprendre)
- c) J'écoutais de la musique quand je _____ dans le jardin ce matin. (se promener)
- d) _____ (s'amuser) bien le jour de votre anniversaire", dit le professeur à l'étudiant.
- e) Demain, quand elle _____ (acheter) tout ce dont elle a besoin, elle peindra la maison.
- f) Quand nous sommes arrivés chez notre ami, il _____ (lire) un roman.

Q2. Répondez aux questions suivantes au négatif :

- a) Êtes-vous toujours à l'heure?
- b) Y a-t-il quelque chose au premier étage?
- c) Mets-tu encore du sucre dans le thé ?
- d) Les parents de Fabien voyagent-ils partout ?
- e) Est-ce que quelqu'un est venu lui dire «Bonjour»?
- f) Est-ce qu'elle a acheté des fruits et des légumes ?
- g) Y a-t-il beaucoup de personnes au concert ?
- h) Vois-tu quelque chose de bizarre dans la salle ?
- i) Jeanne, a-t-elle déjà sorti son premier roman ?
- j) Ont-ils élu quelqu'un comme président de l'entreprise ?

Q3. Reliez les phrases avec les pronoms relatifs simples ou composés :

- Je vous prête la voiture. Mon père me l'avait donnée.
- Voilà le bâtiment. On a garé la voiture devant le bâtiment.
- La maison est très pratique. Tu habites dans la maison.
- Ce sont les sacs. Max y a mis toutes ses affaires.
- La photo est très belle. Ils parlent de cette photo.
- Marianne a une robe bleue. Je l'aime beaucoup.
- La table est cassée. Il a placé son portable sur la table.
- Pauline a finalement acheté le livre. Elle en avait besoin.
- Voilà les sacs. Ils ont mis toutes leurs affaires dans ces sacs.
- Je suis allé à Paris. J'y ai vu plusieurs monuments historiques.

Q4. Écrivez un message à votre ami Pierre. Vous lui demandez s'il peut vous accompagner demain voir le film « Avatar » à PVR Shalimar Bagh. (30-35 mots)

Q5. Votre ami / amie vous a invité(e) pour son anniversaire. Vous ne pouvez pas y aller. Laissez-lui un message d'environ 30 mots.

Q6 : Mettez le dialogue en ordre.

- B: Oui, j'ai passé du temps avec ma famille. Et toi ?
 A: J'ai visité un nouveau musée avec des amis. C'était très intéressant.
 A: Salut, comment ça va ?
 B: Bonjour, ça va bien merci. Et toi ?
 A: Je vais bien aussi, merci. Tu as passé un bon week-end ?
 B: Ça semble être une excellente idée. Je suis partant !
 B: Oui, j'ai vu une critique élogieuse à ce sujet dans le journal.
 A: Tu as entendu parler du nouveau restaurant qui vient d'ouvrir en ville ?
 B: Ça semble être une excellente idée. Je suis partant !
 A: J'aimerais bien l'essayer ce week-end. Tu veux venir avec moi ?

MATHEMATICS

General Instruction

- Mathematics holidays homework has two sections:
 -Section A is Model making; students to check their class roll numbers when making models.
 -Section B is an assignment; Assignment to be done in mathematics register by all the students.
- Date of Submission – 27.06.2024**

Section A

Roll Nos. 1-6

Working model of a **Cartesian Plane**

Link: https://youtu.be/T_v7e1pylB0?si=SYczfUpTM67wZJE3

Roll Nos. 7-12

Working model on **Basic Proportionality Theorem**

Link : <https://youtu.be/uLapPjh-m64?si=D39MnyPO7B6rpqSO>

Roll Nos. 13-18

Working model on **Trigonometric Ratios**

Link: https://youtu.be/iXwqjHNwqBY?si=Jq3JouMdYm_fEmew

Roll Nos. 19-24

Working model of **Trigonometric Formulae/Identities**

Link: <https://youtu.be/JicX-Fq4IG0?si=hHaMB3cm-IJkYBAes>

Roll Nos. 25-30

Working model on **Probability**

Link : <https://youtu.be/rrDUHoU4ULU>

Roll No. 31 onwards

Working model on **Application of Trigonometry**

Link: <https://youtu.be/bBnzgRvD2IA?si=a9j9QNBR5pS3pe3A>

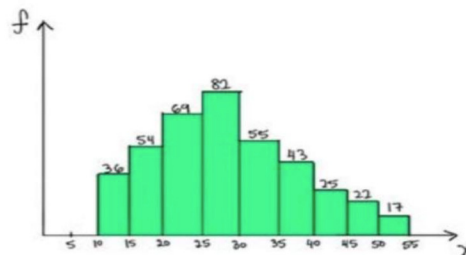
Section B

Q1. If the lines $3x+2ky-2=0$ and $2x+5y+1=0$ are parallel, then what is the value of k?

- (a) $4/15$
- (b) $15/4$
- (c) $4/5$
- (d) $5/4$

Q2. Which of the following is a possible value for the median of the below distribution?

- (a) 32
- (b) 26
- (c) 40
- (d) 17



Q3. Mode and mean of a data are 12k and 15k. Median of the data is-

- (a) 12k
- (b) 14k
- (c) 15k
- (d) 16k

Q4. Mean of 100 items is 49. It was discovered that three items which should have been 60, 70, 80 were wrongly read as 40, 20, 50 respectively. The correct mean is-

- (a) 48
- (b) 49
- (c) 50
- (d) 60

- Q5 What is the quadratic polynomial whose sum and the product of zeroes is $\sqrt{2}$ and $\frac{1}{3}$ respectively?
- (a) $3x^2 - 3\sqrt{2}x + 1$
 (b) $3x^2 + 3\sqrt{2}x + 1$
 (c) $3x^2 + 3\sqrt{2}x - 1$
 (d) $-3x^2 - 3\sqrt{2}x + 1$
- Q6 If $(n-k)$ is a factor of the polynomials x^2+px+q & x^2+mx+n . Prove that: $k = n + \frac{n-q}{m-p}$.
- Q7 Solve $2^x + 3^y = 17$, $2^{x+2} - 3^{y+1} = 5$.
- Q8 Find the value of k for which the following system of equations will have infinite number of solutions. $(k-2)x + (k-1)y = k$ and $(k+2)x + (2k+1)y = 2(k+2)$
- Q9 Ram takes 3 hours more than Shyam to walk 30 km. But if Ram doubles his speed, he is ahead of Shyam by $1\frac{1}{2}$ hours. Find their speeds of walking.
- Q10 A chemist has one solution which is 50% acid and a second solution which is 25% acid. How much of each should be mixed to make 10 liters of a 40% acid solution?
- Q11 If the squared difference of the zeros of the quadratic polynomial $x^2 + px + 45$ is equal to 144, find the value of p .
- Q12 Find the missing frequency in the following distribution if N is 60 and the median is 40.
- | | | | | | |
|-----------|------|-------|-------|-------|-------|
| Marks | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
| Frequency | 5 | x | y | 8 | 2 |
- Q13 Find p , if the mean of the given data is 15.45
- | | | | | | |
|-----------|-----|------|-------|-------|-------|
| Class | 0-6 | 6-12 | 12-18 | 18-24 | 24-30 |
| Frequency | 6 | 8 | P | 9 | 7 |
- Q14 Akhila went to a fair in her village. She wanted to enjoy rides on the Giant Wheel and play Hoopla (a game in which you throw a ring on the items in the stall, and if the ring covers any object completely, you get it). The number of times she played Hoopla is half the number of rides she had on the giant wheel. Each ride costs ₹3, and a game of hoopla costs ₹4. If she spent ₹20 in the fair, represent this situation algebraically and graphically.
- Q15 Draw the graphs of the pair of equations $x + 2y = 5$ and $2x - 3y = -4$. Find the area of the triangle formed with the lines and x -axis.

SCIENCE

General Instructions:

- Homework has two sections:
 - Section A is Model making; Students to check their class roll numbers when making models.
 - Sections B is an assignment; Assignment to be done in their respective subject notebooks.
- **Date of Submission:**
 - Assignment (Section B): 24.06.2024
 - Models (Section A): 27.06.2024

Section A

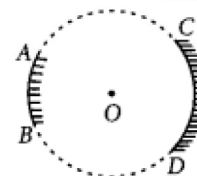
S. NO.	TOPIC	ROLL NO.
1	3D Working Model on Double circulation	1-5
2	A working model to demonstrate chemical reactions and equations.	6-10
3	Working model on “EVAPORATIVE EMISSION CONTROL”	11-15
4	3D Working Model on Reflex arc.	16-20
5	Working model of Electromagnetic Crane.	21-25
6.	Working model of Buzz Wire game.	26-30
7.	Working model of Domestic Electric Circuit.	31 onwards

Section B

PHYSICS

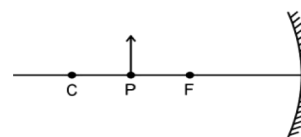
- Q1.(a) Water has refractive index 1.33 and alcohol has refractive index 1.36. Which of the two media is optically denser? Give reason for your answer.
 (b) Draw a ray diagram to show the path of a ray of light passing obliquely from water to alcohol.
 (c) State the relationship between angle of incidence and angle of refraction in the above case.
- Q2.For the same angle of incidence 45° , the angle of refraction in two transparent media: I and II is 20° and 30° respectively. Out of I and II, which medium is optically denser and why?
- Q3.The image formed by a spherical mirror is real, inverted and is of magnification -2. If the image is at distance of 30 cm from the mirror, where is the object placed? Find the focal length of the mirror.
- Q4. “The magnification produced by a spherical mirror is -3”. List four points of information you obtain from this statement about the mirror/ image.
- Q5. Under what condition will a glass lens placed in a transparent liquid become invisible.
- Q6. Why does a ray of light passing through the center of curvature of a concave mirror after reflection, is reflected back along the same path?

- Q7. AB and CD, two spherical mirrors, from parts of a hollow spherical ball with its center at O as shown in the diagram. If arc AB = $\frac{1}{2}$ arc CD, what is the ratio of their focal lengths? State which of the two mirrors will always form virtual image of an object placed in front of it and why?



- Q8. A security mirror used in a big showroom has radius of curvature 5 m. If a customer is standing at a distance of 20 m from the cash counter, find the position, nature and size of the image formed in the security mirror.
- Q9. The refractive index of a medium V with respect to a medium 'y' is $\frac{2}{3}$ and the refractive index of medium 'y' with respect to medium 'z' is $\frac{4}{3}$. Find the refractive index of medium 'z' with respect to medium V. If the speed of light in medium 'x' is $3 \times 10^8 \text{ ms}^{-1}$, calculate the speed of light in medium 'y'.

- Q10. An object of height h is kept at point P in front of a mirror as shown below. The height of the image produced is h. In the diagram, F is the focus and C is the center of curvature.



- (a) If the object is now moved to point C, will the height of the image now produced be less than, equal to, or greater than h? Give a reason for your answer.
- (b) If the focal length of the mirror is 20 cm and the distance between points P and C is 10 cm, determine the distance between the images produced when the object is kept at P and C.

CHEMISTRY

- Q1. A student burnt a metal A found in the form of ribbon. The ribbon burnt with a dazzling flame and a white powder B was formed which is basic in nature. Identify A and B. Write a balanced chemical equation for the above mention reaction.
- Q2. A zinc rod is left for nearly 20 minutes in a copper sulphate solution. What change would you observe in the zinc rod?
- Q3. A, B and C are three elements which undergo chemical reactions in the following way.
- $$\text{A}_2\text{O}_3 + 2\text{B} \rightarrow \text{B}_2\text{O}_3 + 2\text{A}$$
- $$3\text{CSO}_4 + 2\text{B} \rightarrow \text{B}_2(\text{SO}_4)_3 + 3\text{C}$$
- $$3\text{CO} + 2\text{A} \rightarrow \text{A}_2\text{O}_3 + 3\text{C}$$
- Answer the following:
- (a) Which element is most reactive? Justify.
- (b) Which element is least reactive? Justify.
- Q4. Which of the following reaction is possible? Explain giving a suitable reason.
- (a) $\text{Cu (s)} + \text{ZnSO}_4 \text{ (aq)} \rightarrow \text{CuSO}_4 \text{ (aq)} + \text{Zn (s)}$
- (b) $\text{Fe (s)} + \text{ZnSO}_4 \text{ (aq)} \rightarrow \text{FeSO}_4 \text{ (aq)} + \text{Zn (s)}$
- (c) $\text{Zn (s)} + \text{MgSO}_4 \text{ (aq)} \rightarrow \text{ZnSO}_4 \text{ (aq)} + \text{Mg (s)}$

Q5. Write the balanced chemical equations for the following reactions:

- (a) Ammonium chloride and Potassium hydroxide on reaction gives potassium chloride, ammonia and water.
- (b) Calcium hydrogen carbonate on reaction with Sulphuric acid gives Calcium Sulphate, water and liberates carbon dioxide.
- (c) Copper (II) sulphate on treatment with potassium iodide precipitates cuprous iodide, liberates iodine gas and also forms potassium sulphate

Q6. Re-write the given chemical equations after balancing them.

- (a) $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$
- (b) $\text{SiCl}_4 + \text{H}_2\text{O} \rightarrow \text{H}_4\text{SiO}_4 + \text{HCl}$
- (c) $\text{Al} + \text{HCl} \rightarrow \text{AlCl}_3 + \text{H}_2$
- (d) $\text{C}_7\text{H}_6\text{O}_2 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- (e) $\text{Fe}_2(\text{SO}_4)_3 + \text{KOH} \rightarrow \text{K}_2\text{SO}_4 + \text{Fe}(\text{OH})_3$
- (f) $\text{Ca}_3(\text{PO}_4)_2 + \text{SiO}_2 \rightarrow \text{P}_4\text{O}_{10} + \text{CaSiO}_3$
- (g) $\text{KClO}_3 \rightarrow \text{KClO}_4 + \text{KCl}$
- (h) $\text{Al}_2(\text{SO}_4)_3 + \text{Ca}(\text{OH})_2 \rightarrow \text{Al}(\text{OH})_3 + \text{CaSO}_4$
- (i) $\text{H}_2\text{SO}_4 + \text{HI} \rightarrow \text{H}_2\text{S} + \text{I}_2 + \text{H}_2\text{O}$

Q7. Identify the type of chemical reaction that takes place when _____

- (a) Limestone is heated.
- (b) A magnesium wire is burnt in air.
- (c) Electricity is passed through water.
- (d) Ammonia and hydrogen chloride are mixed.
- (e) Silver bromide is exposed to sunlight.

Q8. A sample of water weed was placed in water and exposed to sunlight. Bubbles of a gas are seen on the surface of the leaves.

- (a) Name the gas evolved.
- (b) Write a balanced equation of reaction taking place.

Q9. Give balanced equations for the following:

- (a) A reaction which gives out heat.
- (b) A reversible reaction.
- (c) A reaction with a solid and gas which produces heat.

Q10. 2g of ferrous sulphate crystals are heated in a dry boiling tube.

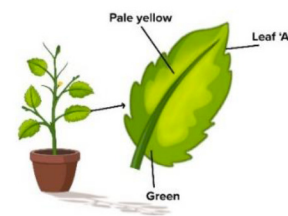
- (a) List any two observations.
- (b) Name the type of chemical reaction taking place.
- (c) Write the chemical equation for the reaction.

PORTFOLIO ACTIVITY

The Andaman Sea is a marginal sea of the north eastern Indian Ocean. It is a complex solution containing a variety of dissolved substances. Investigate the chemistry of the surrounding marine environment and find the composition of seawater and factors influencing its chemistry (salinity, pH, dissolved gases, etc.). Prepare a project report on A4 size. You can support your project work with pictures. (Max. Pages- 4-5).

BIOLOGY

- Q1. Which part of the visible spectrum of light is absorbed by the chlorophyll pigment?
- Q2. In which animal the heart does not pump the oxygenated blood to different parts of the body? Explain the type of circulation in that organism.
- Q3. Explain how the translocation of materials in phloem tissue in plants is achieved by utilizing energy.
- Q4. Explain the process of breathing in man.
- Q5. Name the correct substrates for the following enzymes:
(a) Trypsin (b) Amylase (c) Pepsin (d) Lipase
- Q6. What do the following transport?
(a) Pulmonary vein (b) Vena cava (c) Pulmonary artery (d) Aorta
- Q7. Give reasons:
(a) Blood groups of donor and recipient is matched before blood transfusion.
(b) Transport system in plants is slow.
(c) Circulation of blood in aquatic vertebrates differs from that in terrestrial vertebrates.
(d) During the daytime, water and minerals travel faster through xylem as compared to the night.
(e) Veins have valves whereas arteries do not.
- Q8. What is the significance of emulsification of fats?
- Q9. What causes movement of food inside the alimentary canal?
- Q10. A potted plant with variegated leaves was taken in order to prove a factor necessary for photosynthesis. The potted plant was kept in the dark for 24 hours and then placed in bright sunlight for a few hours. Observe the diagram and answer the questions.



- (a) What aspect of photosynthesis is being tested in the above diagram.
(b) Represent the process of photosynthesis in the form of a balanced equation.
(c) Why was the plant kept in the dark before beginning the experiment?
(d) What will be the result of the starch test performed on leaf 'A' shown in the diagram?

Give an example of a plant with variegated leaves.

SOCIAL SCIENCE

General Instructions

- Roll number-wise topics have been assigned for students.
- Students need to prepare a project on ANY ONE topic assigned to their roll-number group.
- The project report to be prepared as per the instructions detailed below. Assignment
- Questions to be done in the Economics notes register by all students.
- **Date of Submission: 21.06.2024**

Section A

Roll Nos: 1-11

TOPIC: Upkeep and expansion of environment friendly green places.

OR

TOPIC: Role of advertisements and social media in promoting consumer awareness.

Roll Nos: 12-22

TOPIC: Development of Andaman and Nicobar and Lakshadweep Islands: strategic imperative and ecological concerns.

OR

TOPIC: A case study about economic inequalities at workplace.

Roll Nos: 23 onwards

TOPIC: Sustainable building techniques and green architecture.

OR

TOPIC: An investigation of awareness of illiterate population on consumer rights in India.

Prepare a detailed project in Social Science Activity-File on the above-mentioned topic according to the following headings:

The Project File should have the following (in the order mentioned)

1. **COVER PAGE**- showing project title, schools name, students name, class and section and academic session (2024-25)
2. **CONTENTS**- Table of contents with page number (approx...15 pages)
3. **PROJECT OVERVIEW**: Purpose, aim, methodology and experience while doing the project
4. **MAIN BODY**- Chapters with relevant headings. Students must include relevant pictures and diagrams to support the project.
5. **CONCLUSION**- Summary and conclusions based on findings.
6. **BIBLIOGRAPHY**- should have the title, pages referred, author, publisher, year of publication and if a website, the name of the website with a specific link which have been used.

NOTE: Only eco-friendly material to be used for the PROJECT.

Section B

Q1. What is the main criterion used by the World Bank in classifying different countries? What are the limitations of this criterion, if any?

Q2. Kerala, with lower per capita income, has a better human development ranking than Punjab. Hence, per capita income is not a useful criterion at all and should not be used to compare states. Do you agree? Discuss.

- Q3. There has been a big change in the three sectors of economic activities, but a similar shift has not taken place in the share of employment. Explain the above statement on the basis of facts.
- Q4. "The Earth has enough resources to meet the need of all but not enough to satisfy the greed of even one person." How is this statement relevant to the discussion of development? Discuss.
- Q5. Explain the various limitations of Civil Disobedience Movement.
- Q6. Differentiate between Non-Cooperation Movement and Civil Disobedience Movement.
- Q7. "Print not only stimulated the publication of conflicting opinions amongst communities, but it also connected communities and people in different parts of India". Elaborate.
- Q8. Evaluate the impact of print technology on the poor people in India through examples.
- Q9. 'Printing technology gave women a chance to share their feelings with the world outside'. Support the statement with any five suitable examples.
- Q10. Read the source given below and answer the following questions.
- Print created the possibility of wide circulation of ideas, and introduced a new world of debate and discussion. Even those who disagreed with established authorities could now print and circulate their ideas. Through the printed message, they could persuade people to think differently, and move them to action. This had significance in different spheres of life.
- "The implication of this in one sphere of life in early modern Europe - namely, religion. In 1517, the religious reformer Martin Luther wrote Ninety-Five Theses criticising many of the practices and rituals of the Roman Catholic Church".
- (a) Why was print not welcomed by everyone?
 - (b) Who was Martin Luther? What did he say about 'printing'?
 - (c) What do you mean by 'protestant reformation'?

ARTIFICIAL INTELLIGENCE

General Instructions:

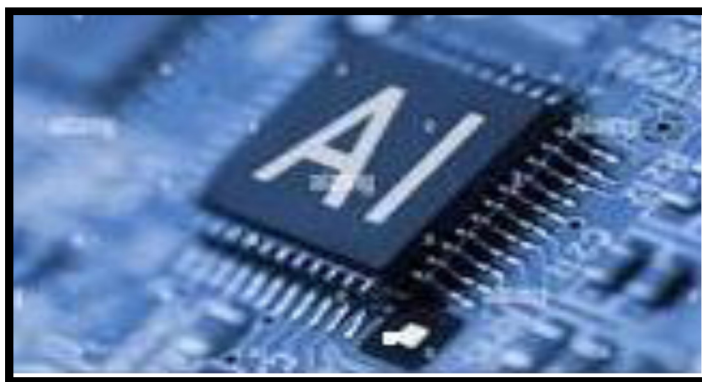
- Roll number-wise topics have been assigned for students.
- AI holidays homework has two sections: -
 - Section A is Chart / Movie making; Students to check their class roll numbers when making models.
 - Sections B is an assignment
- Assignment Questions to be done in the Artificial Intelligence notes register by all students.
- **Date of Submission: 3.07.2024**

Section A

Roll no. 1-10

Create a movie on 'How are AI Chips Making the World a Smarter Place'

Artificial Intelligence has become a showstopper. It is gaining attention from every domain. It is seldom now that you are visiting a website and there are no chatbots there, or you buy a phone which has no access to an assistant, these are all powered by AI. To take this up by a notch, the production of AI chips with a specific architecture having AI accelerators and the capability of deep learning is being pursued keenly by renowned chipmakers.



Students are required to collect information about:

- What are AI Chips?
- Advantages of Artificial Intelligence Chips Over General Hardware
- Latest AI Chips

Rules:

- The duration of the movie should not exceed 2 minutes.
- Movie to be submitted in .mp4 format only.
- Name of some latest AI Chips
- The movie should be uploaded on YouTube and unlisted link should be mailed.

Roll no. 11-20

Make a chart on 'How AI can improve disaster resilience and relief in Andaman and Nicobar Island?'

The Andaman & Nicobar Islands are scattered over 500 km in the Bay of Bengal are very vulnerable to natural disasters such as earthquakes because of its geological location.

Students are required to collect more information about:

- How can AI help combat the root cause of many natural disasters? How can Machine learning algorithms can analyze climate data?
- How can the processing of data from various sources, including weather sensors, satellites, and social media, detect early signs of impending disasters?



Roll no. 21-30

In present time, technology with AI must be implemented in an economically feasible way to strengthen various fields like Agriculture, Textile, Manufacturing, Construction, Medical, Tourism, Offline Education etc. Keeping this in mind, the students must pick ONE such field and present their idea in an investor-pitch-style presentation/ video. The proposal should be economically viable.

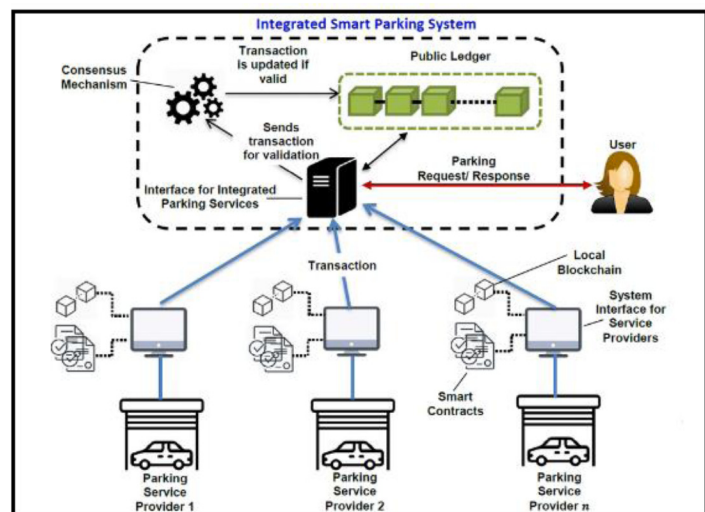
Students are required to make a presentation (maximum 10 slides) or video (maximum two minutes), showcasing their product/service. The presentation/video should include the following:

- One slide describing the issue and two or more slides for the solutions and various features of the product/service.
 - One slide should mention how AI would help in solving the problem.
 - A prototype/application preview showcasing the working of the product / service is a must
- mail the PPT/Movie.

Roll no. 31-42

Make a creative model on 'The AI-based Smart Parking'(Relate to SDG 3,SDG 8,SDG 9,SDG 11,SDG 13 ,SDG 16)

The AI-based Smart Parking consists of Video summarization, Digital Image processing, Cloud Computing, Mobile Application, Automated billing system with efficient and optimized use of parking space at its core. AI algorithms can analyze vast amounts of data collected from sensors, including historical parking data, weather conditions, traffic patterns, and special events. By leveraging machine learning techniques, the system can predict parking demand and dynamically adjust pricing, allocation, and availability predictions. can achieve higher levels of automation, efficiency, and intelligence, ultimately delivering greater value to both users and operators while contributing to sustainable urban development goals.



Section B



PROJECT: Create an AI chatbot using natural language processing (NLP).

OR

RESEARCH BASED ACTIVITY- Project document must comprise:

- Cover Page
- Index
- Basic Intro/ About the research topic
- How it Works/ What's happening around
- Research Core Area
- Data Visualizations
- Infographics
- Data Privacy Issues
- Inferences/Conclusions
- Citations/Reference

PROJECT TOPICS:

Choose any one topic out of the following:

1. Sentiment Analysis in Text/Voice
2. ChatGPT - A revolutionary bot
3. Autonomous Cars – Future of Transportation
4. AI shaking up the Job Market

Worksheet

Multiple Choice Questions:

- Q1. _____ Intelligence is the ability to communicate with others by understanding other people's feelings and influence on the person.
- (a) Naturalist
 - (b) Interpersonal
 - (c) Existential
 - (d) Intrapersonal
- Q2. Which is the first step for "Decision Making"?
- (a) Analysing the problem
 - (b) Thinking of alternative options available
 - (c) Problem Solving
 - (d) Identifying the problem

- Q3. The type of data being collected in data acquisition is known as _____.
(a) System Mapping
(b) 4Ws Canvas
(c) Data Features
(d) Web Scraping
- Q4. The data which can be in the form of any value within a range is considered as which of the following categories of data?
(a) Ungrouped
(b) Grouped
(c) Frequency
(d) None of These
- Q5. Decisions are _____ which involves choosing the best option out of the multiple.
(a) Mental Process
(b) Artificial Process
(c) Easy and Simple Process
(d) None of the above
- Q6. Which “Humanoid” got the citizenship of a country?
(a) Google Mini
(b) Alexa
(c) Siri
(d) Sophia
- Q7. AI is a _____.
(a) field of study
(b) type of technology
(c) form of intelligence
(d) all the above
- Q8. Which is not an important term of AI?
(a) Computer Vision
(b) Algorithm
(c) Autonomous
(d) Neural Networks
- Q9. Self Driving Car is an example of _____.
(a) Data Science
(b) Natural Language Understanding
(c) Natural Language Processing
(d) Computer Vision
- Q10. Which of the following model shows the relationship or patterns in data defined by the developer?
(a) Rule Base Approach
(b) Learning Based Approach
(c) Decision Tree
(d) K Map

Q11. The basis of decision making depends upon_____.

- i. Availability of Information
- ii. Past Experience
- iii. Positive Attitude
- iv. Self-Awareness

- (a) i) and ii)
- (b) ii) and iv)
- (c) i), ii) and iv)
- (d) i), ii) and iii)

Q12. Identify which of the following is incorrect about the unsupervised learning-based model.

- (a) We can provide a very large data set.
- (b) The algorithm itself analyzes the data set and determines relationships within that data.
- (c) The labelled data is fed with some rules by the developers.
- (d) It lets make predictions and improves the algorithms on its own.

Q13. A business problem wherein we categorize whether an observation is “Safe,” “At Risk,” or “Unsafe” is an example of

- (a) Classification
- (b) Clustering
- (c) Regression
- (d) Dimensionality Reduction

ART

General Instructions:

- Roll number-wise topics have been assigned for students.
- Folk art painting to be completed by all students in their respective sketch files.
- **Date of Submission: 10.07.2024**

I am an Artist - 10 (ART BOOK)

Page No - 46: Human figure composition (to be done In Sketch File).

Page No – 70: Poster on Water Conservation or Save Environment (any one) (to be done in sketch file.)

CRAFT WORK

In Andaman and Nicobar Islands handicrafts are a source of income for the habitants of Andaman. Their handicrafts is famous all around the world. Prepare a **jute bag painting** using required materials.



S

