



DALMIA VIDYA MANDIR

RAJGANPUR

www.dalmiavidyamandir.education



Dalmia Vidya Mandir, Chirawa



2024-25
**SUMMER
FUN WORK**



**CLASS
X**



DALMIA VIDYA MANDIR, RAJGANGPUR

(56 years of excellence)

(A CBSE English Medium Senior Secondary School, Affiliation No-1530001)

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Dear Parents,

Warm greetings from Dalmia Vidya Mandir!

We trust this letter finds you and your family in good health. As the summer break nears, we're delighted to share that our dedicated team, under the guidance of the Principal and Dr. Rosetta Williams (CEO, DVM group of schools), has curated summer assignments for your child.

These assignments, covering all subjects, aim to keep your child engaged in learning and prepare them for the upcoming academic year. They offer opportunities for exploration, skill development, and maintaining a learning routine during the break.

Your support in ensuring your child completes and submits these assignments to the respective class teacher on the first day of school reopening after the break is greatly appreciated. It will contribute to a positive start to the academic year and reinforce the knowledge acquired during the break.

For any queries or concerns, please reach out to the class teachers. Thank you for your ongoing support and involvement in your child's education. We eagerly anticipate a productive and successful academic year ahead.

Educationally yours,

Principal & Team

DVM, Rajgangpur

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ENGLISH

1. Read the passage given below:

Mountains have always been held in great awe by mankind. They have been a challenge to humans. Those brave among us have always wanted to conquer them. You see, the more incredible the mountains, the greater the thrill – a challenge to the bravery of the human race. Climbing mountains is an experience that is hard to put into words. You are in a beautiful environment and, when you reach the top, you feel incredible. But you also have to climb down, which is when most accidents happen – people are tired, it gets dark, and it's harder. So, mountain climbing is undoubtedly one of the most popular adventure sports along with being challenging and risky for the climber.

Without any perceived risk, there can't be a feeling that any significant challenge has been surmounted. Fair, but we have to bear in mind that mountaineering is not a sport that can be embraced without preparation. The enthusiasts must develop in themselves the spirit of adventure, willingness to undertake hardships and risks, extraordinary powers of perseverance, endurance, and keenness of purpose before climbing a mountain. They should also know how to handle mountaineering equipment. Then comes the penance of the rigorous training. This could very well be the lifeline up there. It helps inculcate and hone survival instincts that allow the climber to negotiate perilous situations. There are numerous institutes in India and abroad that offer such training.

Mountain climbers are unanimous in agreeing that the unpredictable weather is what they fear the most. There may be sunshine one moment and a snowstorm the other. At higher altitudes, snow is a regular feature, and being decisive about setting up camps or proceeding further is crucial. The icy sheets after ice storms make walking treacherous, while the powdery snow makes a mountaineer sink deep into the snow. Up there, where the intention is to embrace Nature's wonder, one realizes that it cannot be done without facing its formidable glory. A true mountaineer may challenge the mountain, yet is always respectful of the powerful forces of nature.

Summitting mountains carries its own health risks such as oxygen and altitude sickness problems, frost bites, swelling of hands and feet, fluid collection in the brain or lungs, and exhaustion. Yet, the gratification mountaineers feel from mastering something that is so frightening, urges them to undertake these endeavors. We may think that the mountaineers are fearless, but experts say, "Not at all. It's fear that keeps them so intrigued with such arduous journeys." Impulse and brazenness can be deadly foes. In the words of the Indian mountaineer, Bachendri Pal, "The biggest risk ... is to not to take the risk at all. Remember that." Based on your understanding of the passage, answer the questions given below.

I. Why does the writer say that mountains inspire 'awe' in humans? (Paragraph 1)

- A. They present us with opportunities for exciting sports.
- B. They evoke the wish in us, to master them.
- C. They inspire in us, deeds of valor.
- D. They represent peace and calm, to us.

Select the option that corresponds to the following relation below:

II. The more incredible the mountains—the greater the thrill (Paragraph 1)

- A. The higher the stamina—the lower the food intake
- B. The more you laugh—the lesser your illness
- C. The smaller the car—the bigger the advantage
- D. The heavier the luggage—the higher the penalty

III Select the option that displays what the writer projects, with reference to the following:

So, mountain climbing is undoubtedly one of the most popular adventure sports (Paragraph 1)

- A. doubt
- B. caution
- C. conviction
- D. denial

IV. Complete the following with a phrase from paragraph 1.

Opinion Reason

..... Best experienced rather than described

V. The writer compares training to penance in the line --Then comes the penance of the rigorous training (Paragraph 2). State 1 point of similarity between training and penance.

VI. Based on your reading of the text, list 2 reasons why the writer says that “mountaineering is not a sport that can be embraced without preparation”. (Paragraph 2)

1).....

2).....

VII. What connection does the writer draw out between unpredictable weather and the setting up of camps? (Paragraph 3)

VIII. The writer says, “A true mountaineer may challenge the mountain, yet is always respectful to the powerful forces of nature.” (Paragraph 3) Select the reason the mountaineer is respectful to the forces of nature, up in the mountains.

A. survival

B. experience

C. tradition

D. directive

IX. Supply 1 point to justify the following: While mountain-climbing, an impulsive mountaineer is either disaster-prone or as good as dead

X. Evaluate the INAPPROPRIATE reason for the feeling of exhilaration on reaching a summit, that the mountain climbers experience.

A. Achievement of a seemingly impossible feat

B. Spectacular panoramic view

C. Application of the inculcated survival instincts

D. Opportunity to use sophisticated mountaineering equipment

2. GRAMMAR

I. Fill in the blank by choosing the correct option to complete an online update.

The climate control comment by an activist on social media yesterday.

A. blow up

B. blew up

C. is blown

D. will be blown

II. Read the conversation between a doctor and his patient. Complete the sentence by reporting the patient’s reply correctly.

Doctor: Do you feel down from time-to-time Mr. Gopalan?

Patient: Yes, I do not stay in a good mood.

The doctor, while trying to figure out his patient’s ailment, asked about his well-being, to which, the patient affirmed.....

III. Select the correct option to fill in the blank for the given line, from a health magazine.

The advertisement read, 'If you smoke, statistically your story end 15% before it should.

A. must B. should C. will D. ought to

IV. Select the option that identifies the error and supplies the correction for the following line, from a news report:

Last week a child was not allowed to board the plane at Ranchi airport.

Option no. error correction

A. Child Children
B. Last Previous
C. the a
D. at in

V. Complete the given narrative, by filling in the blank with the correct option:

As I was standing on the dock, looking out at the lake for the last time, a feeling of emptiness was over me like darkness.

A. will wash B. had washed C. will have washed D. washed

VI Fill in the blank by using the correct form of the word in the bracket, for the given portion of a letter:

Subject: Request for Approval

Dear Sir

This is to respectfully submit that I.....(seek) approval for organizing a tree plantation drive to be undertaken by the club.

VII. Report the dialogue between a grandson and his grandfather, by completing the sentence:

Grandson: Grandpa, who are your superheroes?

Grandpa: Anyone who shows kindness and compassion to others.

In response to the question about his superheroes, grandfather says that.....

Identify the error in the given sentence, from a school magazine report and supply the correction.

VIII. In order to balancing the sentiments of the Eagles and the Hawks, the Student Council suggested a rematch between the teams.

Use the given format for your response.

Error Correction

IX. Sunil shared some information, with Tariq, about a holiday at sea. Report Tariq's question: Did you enjoy travelling by sea?

X. Fill in the blank by choosing the correct option, to complete the slogan by the ministry for Child Welfare.

.....WE AFFORD TO NEGLECT CHILDREN? THINK TWICE!!

A. WILL B. MAY C. NEED D. CAN

XI. Select the correct option to complete the narration of the dialogue between Latha and her father.

Father: Why ask so many questions, Latha?

Latha: I believe that if you don't know the answer, keep asking till you do!

Father asked Latha the reason for the many questions she was asking. Latha exclaimed

good-humouredly that in event of not knowing the answer one should.....

A. keep asking till one does.

B. kept asking till one does.

C. keep asking till one do.

D. kept on to ask till one do.

XII. Identify the error on a shop's hoarding and supply the correction, for the following sales offer:

Gumnaam & Daughters Pvt. Ltd.

Bindapur, Jharkhand

Massive discount for all senior citizen vaccinated with the precautionary dose.

Use the given format for your response.

Error Correction

3. a. You are Sunidhi Prakash, the Vice Captain of Brilliant Vidyalaya, Barra, Kanpur. You have recently noticed several posters around your school premises conveying the hazardous message: Lose weight in just a month! "A WONDER DIET comes to your rescue ... A privilege available for only a few!" Write a letter to the Editor of The DWA, in not more than 120 words, drawing attention to harm caused by such advertising. Propose the implementation of "Wholesome Lunch Month" in schools as an idea to address such practices, mention the advantages and share suggestions to foster healthy eating routines and develop positive body image among youngsters.

b. You are Zac Skaria, a resident of # 412, Magna Greens Apartments, Gandhi Marg, Jonpara, Mumbai. Three students of grade 10 from your residential complex have rescued and rehabilitated a few old beggars from the neighborhood. You think that their work deserves appreciation and recognition. Write a letter to the President of the RWA, seeking recommendations for these youth, to be nominated for the 'Serving Citizens' Award'. Suggest other ways such acts of kindness could be recognized and awarded in the future.

4. Read the following excerpt from an online post of a website on educational practices.

Kids who appreciate how much effort, time and care goes into growing food will understand how important farmers are, and why it's important to take care of our Earth. In the world of today, gardening needs to be given more importance than sports, music and dance in all schools because it creates environmental stewards and outdoor learning laboratories that help the child and community for years to come. Write a paragraph in 100-120 words to analyse the given argument. You could think about what alternative explanations might weaken the given conclusion and include rationale / evidence that would strengthen / counter the given argument.

5. Herriot knew his patients as well as their owners really well. Discuss. (The Triumph of Surgery)

6. Fiction writers prefer creating grey characters rather than black and white. Analyze this in detail, with reference to both the characters of The Thief's Story

Solution: Introductory – Both characters in the story—neither completely black (negative) nor white (ideal)—have redeeming qualities as well as those that need improvement—the story reveals both their personas as grey.

Use the given hints in writing down the answer.

PROJECT WORK:

Art integrated multidisciplinary project to be done with reference to your chapters in the book.

HINDI

MULTIPLE CHOICE QUESTIONS

Q1- मीठी वाणी बोलने से औरों को सुख और अपने तन को शीतलता कैसे प्राप्त होती है?

- क) अहंकार रहित मीठे बोल सबके हृदय को छूते हैं
- ख) मिश्री गलती है
- ग) मिश्री घुलती है
- घ) मीठे बोल

Q2- साखी शब्द किस से बना है ?

- क) साक्षी
- ख) साक्ष्य
- ग) सखि
- घ) सखी

Q3- साक्ष्य का क्या अर्थ है ?

- क) प्रत्यक्ष ज्ञान
- ख) साक्ष्य ज्ञान
- ग) सांसारिक ज्ञान
- घ) मायावी ज्ञान की

Q4- संत समाज में किस ज्ञान की महत्ता है?

- क) अनुभव ज्ञान की
- ख) बाहरी ज्ञान की
- ग) मायावी ज्ञान की
- घ) सांसारिक ज्ञान

Q5- अपने स्वभाव को निर्मल रखने के लिए कबीर ने क्या सुझाव दिया है?

- क) निंदक को नमस्ते करने को कहा है
- ख) निंदक से दूर रहने को कहा है
- ग) निंदक पास रखने को कहा है
- घ) निंदा पास रखने को कहा है

Q6- कबीर के अनुसार सुखी कौन है ?

- क) सांसारिक लोग जो सोते और खाते हैं
- ख) आध्यात्मिक लोग
- ग) लालची लोग
- घ) सांसारिक लोग जो खाते हैं

Q7- ईश्वर कण कण में व्याप्त है , पर हम उसे देख क्यों नहीं पाते ?

- क) मन में छुपे अहंकार के कारण
- ख) आँखें बंद होने के कारण
- ग) आँखों पर चश्मा होने के कारण
- घ) मन के कारण

Q8- कबीर की साखियों का मुख्य उद्देश्य क्या है ?

- क) जीवन जीने के सही ढंग का ज्ञान देना
- ख) क्षत्रिय ज्ञान
- ग) शास्त्रीय ज्ञान
- घ) सही ढंग का ज्ञान

Q 9- 'जलती हुई मशाल' किसका प्रतीक है?

- क) तपस्या का
- ख) ज्ञान का
- ग) मोह का
- घ) त्याग का

Q10- बड़े भाई वर्तमान शिक्षा प्रणाली के विरुद्ध क्यों हैं ?

- क) खेल कूद पर पर जोर देती है
- ख) किताबी कीड़ा बनाती है और वास्तविकता से दूर है
- ग) बहुत लाभदायक नहीं है
- घ) सभी

Q11- बड़े भाई छोटे भाई से हर समय सबसे पहले क्या सवाल पूछते थे ?

- क) अब तुम कहाँ थे
- ख) क्या कर रहे थे
- ग) कहाँ जा रहे हो हो
- घ) पढाई कर ली

Q12- बड़े भाई साहब के अनुसार कैसी बुद्धि व्यर्थ है ?

- क) जो आत्म गौरव को मार डाले
- ख) पढाई न करने दे
- ग) जो खेल कूद में लगी रहे
- घ) सभी

Q13- लेखक को भाई साहब की बातें अच्छी क्यों नहीं लगती थी ?

क) क्योंकि लेखक अक्वल दर्जे में पास हुआ था

ख) भाई साहब फेल हो गए थे

ग) भाई साहब उपदेश देते थे

घ) सभी

Q14- "लेखक के दिल के टुकड़े" किस बात पर हो जाते थे ?

क) पतंग कटने से

ख) खेल में हार जाने से

ग) फेल होने से

घ) भाई साहब के उपदेश सुनने से

Q15- अवसर मिलते ही लेखक कौन से काम करता था ?

क) चार दीवारी पर चढ़ता उतरता था

ख) कागज की तितलिय| उडात| था

ग) कङ्कर् उछालता था

घ) सभी

Q16- भाई साहब किस मामले में जल्दबाजी नहीं करते थे ?

क) खेल कूद में

ख) लड़ने में

ग) शिक्षा के मामले में

घ) निर्णय लेने के बारे में

Q17- लेखक के भाई साहब उस से कितने साल बड़े थे ?

क) 3 साल

ख) 5 साल

ग) 6 साल

घ) 7 साल

Q18- लेखक को कौन-सा काम बहुत कठिन और असंभव जान पड़ता था?

क) दिन-रात खेलना-कूदना

ख) दिन-रात पढ़ाई करना

ग) खाना बनाना

घ) उपर्युक्त सभी

Q19- लेखक और उसके बड़े भाई कहाँ रहते थे?

क) घर पर

ख) छात्रावास में

ग) गाँव में

घ) इनमें से कोई नहीं

Q 20- बड़े भाई साहब ने छोटे भाई पर रौब जमाने के लिए किस बात की दुहाई दी?

क) अपने पढ़ाई की

ख) अपने अनुभवों व आयु की

ग) चित्र बनाने के कला की

घ) इनमें से कोई नहीं

LONG ANSWER TYPE QUESTIONS

1-पदबंध के पांच भेद होते हैं -

संज्ञा पदबंध, सर्वनाम पदबंध, विशेषण पदबंध , क्रिया पदबंध तथा क्रिया विशेषण पदबंध ।

इसके लिए एक फ्लोचार्ट तैयार कीजिए।

2-"कबीर एक समाज सुधारक थे।" इस तथ्य को स्पष्ट कीजिए।

3-"बड़े भाई साहब" नामक पाठ में कहानीकार बड़े भाई के चरित्र के माध्यम से शिक्षा संबंधी अपने विचारों को किस प्रकार सामने रखा है ?आप उनके विचार से कहां तक सहमत हैं? लिखिए।

4-समय-सारिणी (Time -Table) के अनुसार न पढ़ पाने की समस्या सामान्यतः विद्यार्थियों में होती है।

लेखक ने इस संदर्भ में जो बातें बताई हैं, उसके आधार पर अपना मत प्रस्तुत कीजिए।

PROJECT WORK

- 1- परियोजना कार्य -विष्णु के अवतार राम और कृष्ण माने जाते हैं। अन्य अवतारों के बारे में जानकारी प्राप्त कर विस्तार से लिखिए।

SANSKRIT

1. संस्कृतेन संख्या लेखनम्-(1-100)

2.शब्दरूपलेखनम्-(प्रकृति, भवती, रवि, गुरु)

प्रकृति

भवती

रवि

गुरु

3.धातुरूपलेखनम्-(धाव्, पा) ।

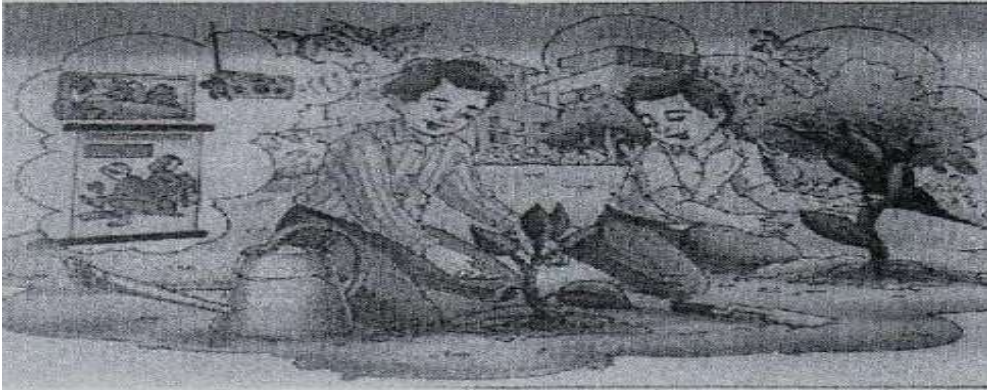
धाव्

पा

4. अधोलिखितानि वाक्यानि संस्कृतभाषया अनूद्य लिखत :

- (i) लिपिक अपना कार्य करता है ।
Clerk does his work.
- (ii) दो किसानों ने खेत जोता था ।
Two farmers ploughed the field.
- (iii) मैं आलस्य का त्याग करूँगा ।
I will leave laziness.
- (iv) तुम सब मिलकर गीत बोलो ।
You recite song together.
- (v) हमें रोज व्यायाम करना चाहिए ।
We should exercise daily.
- (vi) सफलता परिश्रम का परिणाम है ।
Success is the result of hard work.
- (vii) कल मोहन कहाँ था ?
Where was Mohan yesterday ?

5.चित्रं दृष्ट्वा पञ्चवाक्यानि संस्कृतेन लिखत ।



मञ्जूषा

नगरस्य, स्तः, भवनानि, बालो, उड्डयन्ति, पादपान्, पर्यावरणम्, प्रसन्नः, पक्षिणः, जलपात्रम्, शुद्धम्, भवेयुः, जागरुकाः, सर्वत्र ।

- i) |
- ii) |
- iii) |
- iv) |
- v) |

6.

अधोलिखितं गद्यांशं पठित्वा प्रदत्तप्रश्नानाम् उत्तराणि संस्कृतेन लिखत :

“चलभाषियन्त्रम्” वर्तमानयुगस्य जीवनम् एव वर्तते । अस्य मुख्यं प्रयोजनं दूरस्थेन जनेन सह वार्तालापः इति, परम् अद्य अस्माकं जीवनशैली एव अनेन पूर्णतया प्रभाविता वर्तते । अधुना अनेन केवलं वार्ता एव न भवति अपितु वार्तया सहैव वयं प्रियजनं द्रष्टुम् अपि सक्षमाः । अपि च ईमेल-फेसबुक-व्हाटसएप-माध्यमैः वार्ता सुकरा भवति । अस्य माध्यमेन गमनागमनार्थं शीघ्रमेव जनाः सरलतया वाहनं प्राप्नुवन्ति । यदि कदापि वयं मार्गं विस्मरामः तदा उचितं मार्गं प्रदर्शयितुम् अपि इदम् श्रेयस्करम् । न केवलमेतदेव अपितु एतत् यन्त्रं विभिन्नाभिः क्रीडाभिः मनोरञ्जनं चापि करोति, अतः बालाः, वृद्धाः, युवकाः सर्वे एव एतस्य यन्त्रस्य दासाः अभवन् । अधुना तु इदं यन्त्रं मित्रं, विद्यालयः, मार्गदर्शकः च सर्वमपि अभवत् ।

- (अ) एकपदेन उत्तरत । (केवलं प्रश्नद्वयम्) X 2:
- (i) वर्तमानयुगस्य जीवनम् किं वर्तते ?
- (ii) के सरलतया वाहनं प्राप्नुवन्ति ?
- (iii) एतत् यन्त्रं काभिः मनोरञ्जनं चापि करोति ?
- (ब) पूर्णवाक्येन लिखत । (केवलं प्रश्नद्वयम्) A 2:
- (i) अद्य चलभाषियन्त्रेण का प्रभाविता वर्तते ?
- (ii) अधुना वार्ता कैः सुकरा भवति ?
- (iii) के एतस्य यन्त्रस्य दासाः अभवन् ?
- (स) अस्य अनुच्छेदस्य कृते उपयुक्तं शीर्षकं संस्कृतेन लिखत ।
- (द) यथानिर्देशम् उत्तरत । (केवलं प्रश्नत्रयम्) - 3:
- (i) ‘करोति’ इत्यस्याः क्रियायाः कर्तृपदं किम् ?
- (ii) ‘सुकरा’ इति पदस्य विशेष्यं गद्यांशात् चित्वा लिखत ।
- (iii) ‘हितकरम्’ इत्यस्य पदस्य कः पर्यायः अत्र आगतः ?
- (iv) अनुच्छेदे ‘कठिनतया’ पदस्य कः विपर्ययः आगतः ?

ODIA

୧. ନିମ୍ନଲିଖିତ ବିଷୟବସ୍ତୁ ଉପରରେ ଯେ କୌଣସି ପାଞ୍ଚଟି ରଚନା ବା ପ୍ରବନ୍ଧ ଲେଖ।

1. ନଳ ପ୍ରବୃତ୍ତ ଓ ତାହାର ନିରାକରଣ।
2. ସ୍ବଚ୍ଛ ଭାରତ ଗଠନ ରେ ଛାତ୍ରଛାତ୍ରୀ ମାନଙ୍କ ଭୂମିକା।
3. ସଡ଼କ ସୁରକ୍ଷା ନୀତି ରକ୍ଷା।
4. ଓଡ଼ିଶାର ପ୍ରାକୃତିକ ସମ୍ପଦ ଓ ତାହାର ସଂରକ୍ଷଣ।
5. ପରିବେଶ ସୁରକ୍ଷା ଆମ ସମସ୍ତଙ୍କ କର୍ତ୍ତବ୍ୟ।
6. ଜାତୀୟ ସଂହିତା।
7. ଭାରତରେ ଆତତ୍ସକବାଦ।
8. ବିଦ୍ଵାପନ ଓ ଏହାର ପ୍ରଭାବ।
9. ସମାଜ ଗଠନରେ ସମ୍ବାଦ ପତ୍ରର ଭୂମିକା।
10. ସ୍ବାସ୍ଥ୍ୟ ହିଁ ସମ୍ପଦ।

୨. ଦିଆ ଯାଇଥିବା ଶୀର୍ଷକ ଗୁଡ଼ିକ ମଧ୍ୟରୁ ଯେ କେବଳ ଯେ ତିନୋଟି ଶୀର୍ଷକ ର ଲକ୍ଷଣ ସମ୍ଭାବ୍ୟତଃ ରେ ପ୍ରକାଶ କରିବା ପାଇଁ ସମ୍ପାଦକ ଡକ୍ ନିକଟକୁ ପତ୍ର ଲେଖ ।

1. ସବୁଜ ପୃଥିବୀ ଗଠନ ରେ ଛାତ୍ରଛାତ୍ରୀ ମାନଙ୍କ ଭୂମିକା ।
2. ଯେ-ଗ ଦିବସ ପାଳନ ର ଆବଶ୍ୟକତା ।
3. ପ୍ରାକୃତିକ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଓ ଛାତ୍ରଛାତ୍ରୀ ମାନଙ୍କ ସଚେତନତା ।
4. ନୂତନ ଶିକ୍ଷା ନୀତି ଏକ ନୂଆ ଯୁଗର ସମ୍ଭାବନା ।
5. ବିଦ୍ୟାଳୟ ରେ ନୈତିକ ମୂଲ୍ୟଯୁକ୍ତ ଶିକ୍ଷା ର ଆବଶ୍ୟକତା ।

୩. ସପ୍ତରସ୍ତ୍ରୀୟ ସରଳାରୂପ ଲେଖ ।

କ). ଯେଉଁ ମାନେ ଗୁରୀସୀମ୍ଭ ଦବେତା ଏଟଲାସ ପରି ସମସ୍ତ ବିଶ୍ୱର ଭାର ବହନ କରିଛନ୍ତି ବେଳି କୁବ୍ଦ ହେଲା ଚାଲନ୍ତି ସମୋନେ ଖାଲି ପୁରବଞ୍ଚନା କରିଥାନ୍ତି ।

ଖ). ସଂକଟ କାଳେ ତୁମ୍ଭନ୍ତେ ଉଦ୍ଧାରନ୍ତି ପୁଣି

ଦିଅସି ସିଂଘନାଦ ପୁରସନ୍ନ ବଦନେ ।

ଗ). ନଳିନୀ ପର ରେ ଯେହ୍ନେ ପଡ଼ନ୍ତେଣେ ପାଣି

ପୃଥିବୀ ଦଳଦଳିତ କମ୍ପିଇ ମଦେନୀ ।

MATHEMATICS

1. The degree of a zero polynomial is

- (a) Not defined (b) 1 © 2 (d) 3

2. The zero of $p(x) = ax + b$ is

- (a) a (b) b © $-\frac{b}{a}$ (d) $-\frac{a}{b}$.

3. The number of zeroes, a cubic polynomial can have at most is

- (a) 0 (b) 1 © 2 (d) 3

4. The zeroes of a polynomial $x^2 - 3x - 4$ are

- (a) 4, -1 (b) 4, 1 © -4, 1 (d) -4, -1.

5. If α and β are the roots of the quadratic polynomial $ax^2 + bx + c$, then $\alpha + \beta$ is equal to

- (a) $\frac{c}{a}$ (b) $-\frac{b}{a}$ © c (d) $-b$.

6. The zeroes of the polynomial $t^2 - 15$ are

- (a) $\pm\sqrt{15}$ (b) $\pm\sqrt{5}$ © $\pm\sqrt{3}$ (d) ± 3 .

7. If sum of the zeroes of the quadratic polynomial $ax^2 + bx + c$ is 0, the

- (a) $a=0$ (b) $b=0$ © $c=0$ (d) $b \neq 0$

8. If the zeroes of the quadratic polynomial $ax^2 + bx + c$ are reciprocal to each other, then the value of c is

- (a) 0 (b) a © $-a$ (d) 1

9. If α and β are the zeroes of the quadratic polynomial $ax^2 - 2x + 1$, then $\alpha^2 + \beta^2$ is

- (a) 1 (b) 3 © 2 (d) -2

10. If α, β are the zeroes of the polynomial $x^2 - 9$, find $\alpha\beta(\alpha + \beta)$

- (a) 0 (b) 3 © -3 (d) 9

11. The solution of the pair of equations $x + y = 14$, $x - y = 4$ is

- (a) $X=9, y=5$ (b) $x=5, y=9$ © $x=9, y=9$ (d) $x=5, y=5$.

12. Which of the following is not a solution of the equation $2x + 3y = 5$?

- (a) $X=1, y=1$ (b) $x=-2, y=3$ © $x=4, y=-1$ (d) $x=5, y=5$

13. The difference between two numbers is 26 and one number is three times the other number. find them.

- (a) 39, 13 (b) 30, 10 © 40, 11 (d) 30, 40.

14. If $y = 2x - 3$ and $y = 5$, then the value of x is

(a) 1 (b) 2 © 3 (d) 4

15. The pair satisfying $2x+y=6$ is

(a) (1, 2) (b)(2, 1) ©(2,2) (d)(1, 1)

16. The age of a son is one third the age of his mother, if the present age of mother is x years, then the age of the son after 12 years is

(a) $\frac{x}{3} + 12$ (b) $\frac{x+12}{3}$ © $x+4$ (d) $\frac{x}{3} - 12$.

17. If the unit's and ten's digit of a two digit number are y and x respectively, then the number will be

(a) $10x+y$ (b) $10y+x$ © $x+y$ (d) xy

18. Solve for x and y : $x-y=0$, $2x-y= 2$

(a) (2, 2) (b)(1, 1) © (2, 0) (d)(0, 2)

19. What is the coefficient of the first term of the quotient when $2x^2 + 3x + 1$ is divided by $x+2$?

(a) 1 (b) 2 © 3 (d) -2

20. The degree of a polynomial 2 is

l. 0 (b) 1 © 2 (d) 3

21. If two positive integer a and b are written as $a=x^3y^2$ and $b=xy^3$ where x,y are prime numbers find HCF(a,b)

22. What is the HCF of smallest prime number and smallest composite number ?

23 . Write quadratic polynomial, whose zeroes are -3 and 4.

24. If one of the zeroes of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is -3 , find the value of k .

25. If the line given by $3x + 2ky = 2$ and $2x + 5y = 1$ are parallel then find the value of k .

26. If $\frac{1}{2}$ is a root of the equation $x^2 + kx - \frac{5}{4} = 0$, then find the value of k .

27. Is -8 a solution of the equation $3x^2 + 8x + 2 = 0$?

28. Check whether 15^n can end with digit zero for any natural number n .

29. Prove that $2 + \sqrt{5}$ is an irrational number.

30. PROJECT: Early history of Mathematics

31. ACTIVITY: (I) To obtain the zeros of linear polynomial geometrically.

32. Workbook home work

Ex-(all) Real numbers

SCIENCE

MULTIPLE CHOICE QUESTIONS

1. If the teeth are not cleaned regularly, they become covered with a sticky yellowish layer W of food particles and bacteria. Since layer W covers the teeth, the alkaline liquid X secreted by glands Y inside the mouth cannot reach the teeth surface to neutralize the acid formed by the action of organisms Z on sugary food, and hence tooth decay sets in.

- (i) What is W known as?
- (ii) What is X?
- (iii) What are organisms Z?
- (iv) State one way of removing layer W from the teeth.

2. When a person puts food in his mouth, then teeth cut it into small pieces, chew and grind it. The glands A in the mouth secrete a substance B which is mixed with the food by the tongue. The substance B contains an enzyme C which starts the digestion of food in the mouth. The slightly digested food from the mouth goes down a tube D. The special type of movements E in the walls of tube D pushes the food into the stomach for further digestion. The stomach wall secretes gastric juice containing three substance F, G and H. One of the functions of F is to kill bacteria which may enter the stomach with food. The substance G protects the inside layer of the stomach from the damaging effect of substance F whereas substance H is an enzyme for digestion. The partially digested food then enters into the small intestine for further digestion.

- (a) What is (i) gland A (ii) substance B, and (iii) enzyme C?
- (b) Name the tube D.
- (c) What is the movement E known as?
- (d) What are (i) F (ii) G?

3. The partially digested food coming from the stomach of a person enters a long and narrow organ A in his body. The organ A receives the secretions of two glands : liver and secretes a greenish yellow liquid B which is normally stored in the organ C. Pancreas secretes pancreatic juice which contains three digestive enzymes D, E and F. The intestinal juice completes the process of digestion of food. The inner wall of organ A has million of tiny finger-like projections G which help in the rapid absorption of digested food into blood stream. The undigested part of food then passes into wider tube H which absorbs most of the water from undigested food. The last part of tube H called I stores this undigested food (or waste) for some time. The undigested food is then passed out through opening J as faeces in the process known as K.

- (a) Name the organ A.
- (b) Name (i) liquid B, and (ii) organ C
- (c) What are the digestive enzymes D, E and F ?
- (d) Name (i) tube H (ii) part I (iii) opening J

4. A unicellular animal P having no fixed shape ingests a food particle by forming temporary finger-like projections Q. The food particle is engulfed with a little surrounding water to form a temporary stomach R inside it. The chemicals S from surrounding cytoplasm enter into R and break down food into small and soluble molecules by chemical reactions. The digested food is absorbed directly into the cytoplasm by the process T. The undigested food is thrown out of the body by the rupture of a cell organelle U in a process called V.

- (a) Name the unicellular animal P.
- (b) What is R?
- (c) Name (i) chemical S, and (ii) process T.
- (d) Name (i) organelle U, and (ii) process V.

5. There are four organisms A, B, C and D. The organism A eats only the flesh of other animals as food. The organism B can eat grains, fruits and vegetables as well as meat and fish. The organism C can make the food itself from simple inorganic substances present in the environment by utilising sunlight energy. On the other hand, organism D eats only plants and their products as food.

- (a) Which organism is (i) omnivore (ii) herbivore, and (iii) carnivore?
- (b) Which organism is an autotroph?
- (c) Which organism is/are heterotroph(s)?
- (d) Which organism can be a producer?

(e) Which organism is/are a consumer (s)?

(f) Give one example each of organisms which could be like (i) A (ii) B (iii) C

6. The organisms A, B and C can obtain their food in three different ways. Organism A derives its food from the body of another living organism which is called its D, without killing it. The organism B takes in the solid food by the process of ingestion, digests a part of this food and throws out undigested food in the process called E. The organism C obtains its food from dead and decaying plants.

(a) What is the mode of nutrition of (i) organism A (ii) organism B, and (iii) organism C?

(b) What is the organism like D called?

(c) Name the process E.

(d) Give one example each of organisms like (i) A (ii) B, and (ii) C.

7. An organism A which cannot move from one place to another, makes a simple food B from the substances C and D available in the environment. This food is made in the presence of a green coloured substance E present in organs F in the presence of light energy in a process called G. Some of the simple food B also gets converted into a complex food H for storage purposes. The food H gives a blue-black colour with dilute iodine solution.

(a) What is (i) organism A (ii) food B, and (iii) food H?

(b) What are C and D?

(c) Name (i) green coloured substance E, and (ii) organ F.

(d) What is the process G?

8. X is a wild animal which eats only the flesh of other animals whereas Y is a domestic animal which feeds mainly on green grass.

(a) What are animals like X known as ?

(b) What are animals like Y known as ?

(c) Which animal, X or Y, has a longer small intestine ? Why ?

(d) Name one animal which is like X.

(e) Name one animal which is like Y.

9. During the respiration of an organism A, 1 molecule of glucose produces 2 ATP molecules whereas in the respiration of another organism B, 1 molecule of glucose produces 38 ATP molecules. Which organism is undergoing aerobic respiration?

(a) A

(b) B

10. A, B and C are three living organisms. The organism A is a unicellular fungus which can live without air. It is used in the commercial production of an organic compound P from molasses. The organism B is a unicellular animal which lives in water and feeds and moves by using pseudopodia. It breathes through an organelle Q. The organism C is a tiny animal which acts as a carrier of malarial parasite. It breathes and respire through a kind of tiny holes R and air-tubes S in its body. Which organism/organisms undergo anaerobic respiration?

(a) A

(b) C

11. There are five animals P, Q, R, S and T. The animal P always lives in water and has gills for breathing. The animal Q can stay in water as well as on land and can breathe both, through moist skin and lungs. The animal R lives in soil and breathes only through its skin. The animal S lives on land and breathes through spiracles and tracheae. And animal T lives in water and breathes through its cell membrane. Which animal could be earthworm?

(a) R

(b) Q

12.

(i) Glucose $\xrightarrow{\text{Respiration}}$ Ethanol + Carbon dioxide + Energy

(ii) Glucose $\xrightarrow{\text{Respiration}}$ Carbon dioxide + Water + Energy

(iii) Glucose $\xrightarrow{\text{Respiration}}$ Lactic acid + Energy

In the above image, consider the following chemical reactions which take place in different organisms/tissues under various conditions. Which of the above reactions produces the maximum amount of energy?

- (a) (i)
- (ii) (ii)

13. During the respiration of an organism A, 1 molecule of glucose produces 2 ATP molecules whereas in the respiration of another organism B, 1 molecule of glucose produces 38 ATP molecules. Which type of organism, A or B, can convert glucose into alcohol?

- (a) A
- (b) B

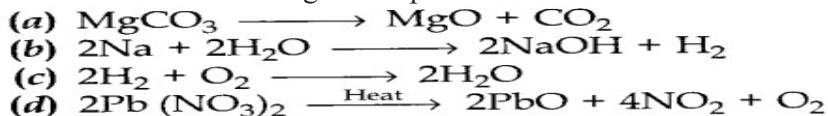
14. A, B and C are three living organisms. The organism A is a unicellular fungus which can live without air. It is used in the commercial production of an organic compound P from molasses. The organism B is a unicellular animal which lives in water and feeds and moves by using pseudopodia. It breathes through an organelle Q. The organism C is a tiny animal which acts as a carrier of malarial parasite. It breathes and respire through a kind of tiny holes R and air-tubes S in its body. Which organism/organisms undergo anaerobic respiration?

- (a) A
- (b) C

15. When a person eats sugary food, then organisms A present in his mouth act on sugar to produce a substance B. The substance B first dissolves the calcium salts from the top part C of the tooth and then from its middle part D forming holes E. These holes ultimately reach the part F in the lower part of tooth which contains nerves and blood vessels. The substance B irritates the nerve endings inside the tooth causing toothache. By what name are the holes E in the tooth known ?

- (a) Dental caries
- (b) Gum caries

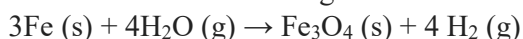
16. Which of the following is a displacement reaction?



17. Magnesium ribbon is rubbed before burning because it has a coating of

- (a) basic magnesium carbonate
- (b) basic magnesium oxide
- (c) basic magnesium sulphide
- (d) basic magnesium chloride

18. Which of the following statements about the given reaction are correct?



- (i) Iron metal is getting oxidised
- (ii) Water is getting reduced
- (iii) Water is acting as reducing agent
- (iv) Water is acting as oxidising agent

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

19. Which of the following are exothermic processes?

- (i) Reaction of water with quick lime
- (ii) Dilution of an acid
- (iii) Evaporation of water
- (iv) Sublimation of camphor (crystals)

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

20. Oxidation is a process which involves

- (a) addition of oxygen
- (b) addition of hydrogen
- (c) removal of oxygen
- (d) removal of hydrogen.

21. The process of reduction involves

- (a) addition of oxygen
- (b) addition of hydrogen
- (c) removal of oxygen
- (d) removal of hydrogen

22. Three beakers labelled as A, B and C each containing 25 ml of water were taken. A small amount of NaOH, anhydrous CuSO₄ and NaCl were added to the beakers A, B and C respectively. It was observed that there was an increase in the temperature of the solution contained in beakers A and B, whereas in case of beaker C, the temperature of the solution falls. Which one of the following statement(s) is (are) correct?

- (i) In beakers A and B, exothermic process has occurred.
- (ii) In beakers A and B, endothermic process has occurred.
- (iii) In beaker C exothermic process has occurred.
- (iv) In beaker C endothermic process has occurred.

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

23. Which among the following statement(s) is (are) true?

Exposure of silver chloride to sunlight for a long duration turns grey due to

- (i) the formation of silver by decomposition of silver chloride
- (ii) sublimation of silver chloride
- (iii) decomposition of chlorine gas from silver chloride
- (iv) oxidation of silver chloride

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

24. $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$

Identify the substance oxidized in the above equation.

- (a) MnCl₂
- (b) HCl
- (c) H₂O
- (d) MnO₂

25. A substance 'X' is used in white-washing and is obtained by heating limestone in the absence of air.

Identify 'X'.

- (a) CaOCl₂
- (b) Ca(OH)₂

(c) CaO

(d) CaCO₃

26. When Ag is exposed to air it gets a black coating of

(a) AgNO₃

(b) Ag₂S

(c) Ag₂O

(d) Ag₂CO₃

27. Which of the following is an endothermic process?

(a) Dilution of sulphuric acid

(b) Sublimation of dry ice

(c) Condensation of water vapours

(d) Respiration in human beings

28. In the double displacement reaction between aqueous potassium iodide and aqueous lead nitrate, a yellow precipitate of lead iodide is formed. While performing the activity if lead nitrate is not available, which of the following can be used in place of lead nitrate?

(a) Lead sulphate (insoluble)

(b) Lead acetate

(c) Ammonium nitrate

(d) Potassium sulphate

29. What type of chemical reactions take place when electricity is passed through water?

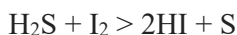
(a) Displacement

(b) Combination

(c) Decomposition

(d) Double displacement

30. Select the oxidising agent for the following reaction:



(a) I₂

(b) H₂S

(c) HI

(d) S

31. A substance added to food containing fats and oils is called:

(a) Oxidant

(b) Rancid

(c) Coolant

(d) Antioxidant

32. When SO₂ gas is passed through saturated solution of H₂S, which of the following reaction occurs?

(a) $\text{SO}_2 + 2\text{H}_2\text{S} \rightarrow 2\text{H}_2\text{O} + 3\text{S}$

(b) $\text{SO}_2 + 2\text{H}_2\text{S} \rightarrow \text{H}_2\text{O} + 3\text{S}$

(c) $\text{SO}_2 + \text{H}_2\text{S} \rightarrow \text{H}_2\text{O} + \text{S}$

(d) $\text{SO}_2 + \text{H}_2\text{O} \rightarrow \text{SO}_3 + \text{H}_2$

33. Which statement is true for the reflection of light?

(a) The angle of incidence and reflection are equal.

(b) The reflected light is less bright than the incident light.

(c) The sum of the angle of incidence and reflection is always greater than 90°.

(d) The beams of the incident light, after reflection, diverge at unequal angles.

34. The focal length of a plane mirror is

- (a) 0
- (b) infinite
- (c) 25 cm
- (d) -25 cm

35. An object is placed at a distance of 40cm in front of a concave mirror of a focal length of 20 cm.

The image produced is:

- (a) virtual and inverted
- (b) real and erect
- (c) real, inverted and of the opposite size as that of the object
- (d) real, inverted and of the same size as that of the object

SHORT ANSWER BASED QUESTIONS

1. A student wants to project the image of a candle flame on the walls of the school laboratory by using a mirror.
 - a) Which type of mirror should he use and why?
 - b) At what distance, in terms of focal length 'f' of the mirror, should he place the candle flame to get the magnified image on the wall?
 - c) Draw a ray diagram to show the formation of the image in this case.
 - d) Can he use this mirror to project a diminished image of the candle flame on the same wall? State 'how' if your answer is 'yes' and 'why not' if your answer is 'no'.
2. In this question, two statements are given- one labelled **Assertion (A)** and the other labelled **Reason (R)**. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:
 - a) Both A and R are true, and R is correct explanation of the assertion.
 - b) Both A and R are true, but R is not the correct explanation of the assertion.
 - c) A is true, but R is false.
 - d) A is false, but R is true.

Assertion (A): Plane mirror may form real image

Reason (R): Plane mirror forms virtual image if object is real.

3. Explain why a ray of light passing through the centre of curvature of a concave mirror, gets reflected along the same path?
4. A 6 cm tall object is placed perpendicular to the principal axis of a concave mirror of focal length 30 cm. The distance of the object from the mirror is 45 cm. Use mirror formula to determine the position, nature and size of the image formed. Also draw labelled ray diagram to show the image formation in this case.
5. If the image formed by mirror for all positions of the object placed in front of it is always virtual and diminished, state the type of the mirror. Draw a ray diagram in support of your answer. Where are such mirrors commonly used and why?
6. A 5 cm tall object is placed at a distance of 30 cm from a convex mirror of focal length 15 cm. Find the position, size and nature of the image formed.
7. To construct a ray diagram, we use two rays which are so chosen that it is easy to know their directions after reflection from the mirror. List two such rays and state the path of these rays after reflection in case of concave mirror. Use these two rays and draw ray diagram to locate the images of an object placed between the pole and focus of a concave mirror.
8. A concave mirror produces three times magnified image on a screen. If the object is placed 20 cm in front of the mirror, how far is the screen from the object?
9. Suppose you have three concave mirrors, A, B and C of focal lengths 10 cm, 15 cm and 20 cm. For each concave mirror you perform the experiment of image formation for three values of object distances of 10 cm, 20 cm and 30 cm. By giving reason, answer the following.
 - (i) For the three object distances identify the mirror/mirrors which will form an image of

magnification -1. (ii) Out of the three mirrors identify the mirror which would be preferred to be used for shaving purpose/ makeup.

(iii) For the mirror B draw ray diagram for image formation for object distances 10 cm and 20 cm.

CASE STUDY BASED QUESTIONS

1.

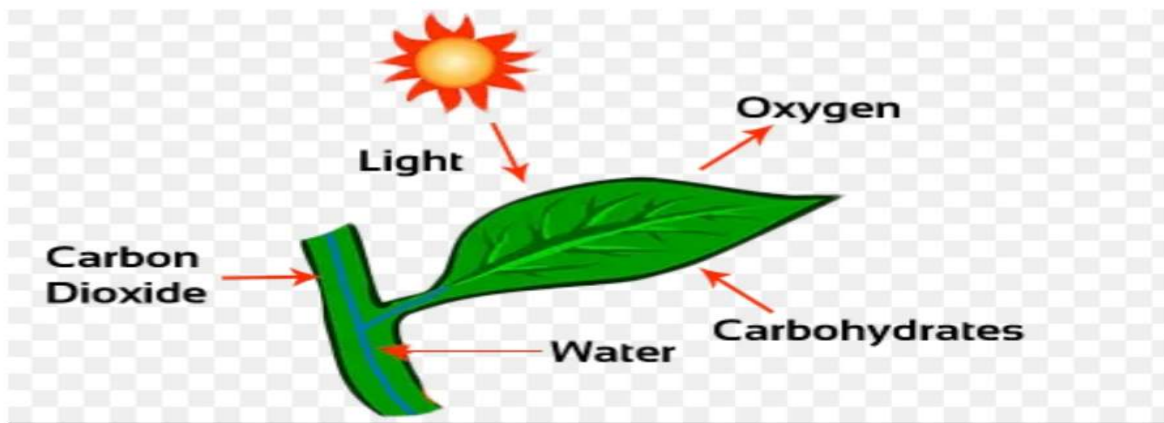


Blood transport food and waste materials in our bodies. It consists of plasma as a fluid medium. A pumping organ is required to push the blood around. The blood flows through the chambers of the organ in a specific manner and direction. While flowing throughout the body, blood exerts a pressure against the wall of a vessel.

Answer the following questions:

- Which life process is depicted by the above passage?
- Name the blood pumping organ.
- Oxygenated blood from lungs enters left atrium through _____.
- Deoxygenated blood leaves through the right ventricle through _____.

2.



Plants are living things that need some form of energy. They have cells and tissues. They also grow in size and girth likewise human beings. They are the producers of the ecosystem. So, in order to synthesize food, they do have nutrient requirements. Of course, the kind of nutrient requirements varies. Plants too have their special capability to form their own food.

Answer the following questions:

- What is the kind of mode of nutrition opted by plants?
- Plants are green in colour because _____.
- The most important function of chlorophyll is to _____.
- Which element is not present in chlorophyll?
- Process by which plants prepare their food is _____.

SOCIAL SCIENCE

How did nationalism and the idea of the nation state emerge?

What was Zollverein? What were their wider implications?

What were the various impacts of French Revolution?

Explain any four reasons how the initial enthusiasm of the people of France soon turned to hostility after Napoleon takeover of France.

What were the major proposals of the Vienna Congress?

Why did Frederic Sorrieu present Utopian vision in his prints in 1848?

How did ideas of national unity in early nineteenth century allied to the ideology of liberalism?

How had revolutionaries spread their ideas in many European states after 1815.Explain with examples.

Explain the term Conservatives .Explain with special reference to Europe.

How did nationalism develop through culture in Europe?

How had Napoleonic Code exported to the regions under French control?

What were various impacts of French Revolution?

Lesson-1

1. What is sustainable economic development? Suggest any two ways in which resources can be used judiciously.
2. India is rich in certain types of resources but deficit in some other resources. If you agree, justify your answer.
3. Why is resource planning essential? Explain its three stages .
4. Explain the land use pattern of India.

9. Distinguish between Khadar and Bangar .

10. Explain the factors of soil formation.

11. Suggest any six measures to solve the problem of land degradation.

Map

On the political map of India , show the regions of black soil, arid soil, mountainous, or forest soil, laterite soil

Artificial Intelligence Summer Work
Python Programming

I. Write scripts using the Python programming language for the given questions.

1. To check whether the given number is palindrome or not.

2. To print prime numbers between 100 to 1.

3. To print the sum of the digits of the given number.

7. An electric power distribution company charges its domestic consumers as follows :

Consumption Units	Rate of Charge
0-100	Rs. 1 per unit
101-300	Rs. 100 plus Rs. 1.25 per unit in excess of 100
301-500	Rs. 350 plus Rs. 1.50 per unit in excess of 300
500 and above	Rs. 650 plus Rs. 1.75 per unit in excess of 500

8. Write a program to generate the following Fibonacci series:

0 1 1 2 3 5 8 13..... N terms

9. Write a program to convert given seconds into hrs : mins : secs format.

10. Write a program to check whether the entered number is Armstrong or not.

11. Five sustainable Development Goals are mentioned below. Write 2 problems under each goal that you think should be addressed for achieving the goal.

- a. Quality Education
- b. Reduced Inequalities
- c. Life on Land
- d. No Poverty
- e. Clean Water and Sanitation

12. Name all the stages of an AI Project cycle.

13. What are sustainable development goals?



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