Dr. Virendra Swarup Education Centre Unnao

Holiday Homework

Class 11 (2024-25)

English:

Q1.Design a graceful poster in A-4 Sheet for the Inter-School Poetic Recitation contest that the English Literary Club of your school is organising to celebrate the birthday of Rabindranath Tagore.

Q2. You have to speak in the school's morning assembly on "The Harm that Mobile Phones and Smartphones are Creating in Students' Lives'. Write the speech in 150-200 words. You are Jyoti/Jyotsana of class XI-A/XI-B

Q3 Imagine yourself to be Doris Pearson from the chapter “Birth”. Write a dialogue between Doris Pearson and Cyril Pearson in 120 words. Follow the given example:

Doris Pearson: What happen to Mom today? Why is She behaving in this manner? **Cyril Pearson:** Yes, I have also noticed a drastic change in her behaviour.

Doris Pearson: _____

Cyril Pearson: _____

Q4. Undertake a project on any one of the famous personality in the field of literature/Art from Arunachal Pradesh(10-12 Pages) **The Project should include:**

1.Index

2.Certificate

3.Content

4.Biography

5.Literary works

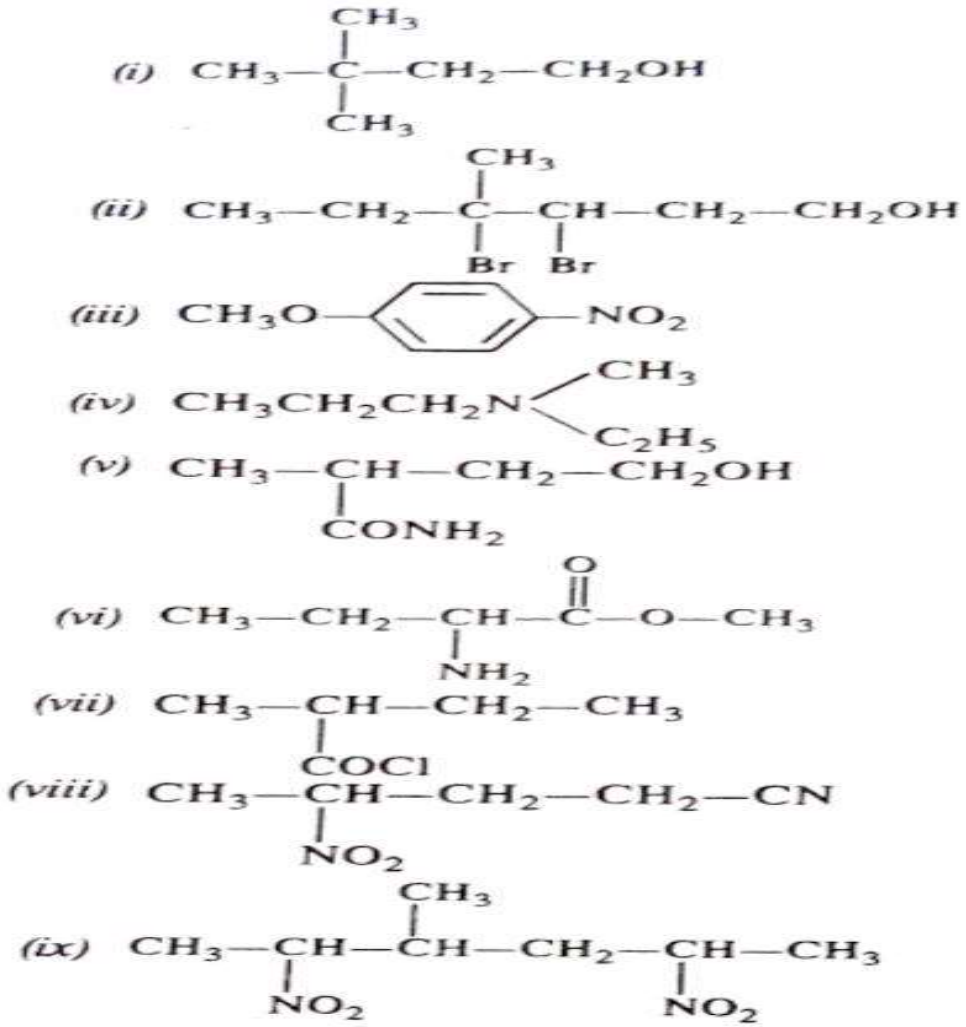
6.Awards

7.Photographs

8.Bibliography

Chemistry:

1. Explain why alkyl groups act as electron donors when attached to a π system.
2. Explain with example, how is the electronegativity of carbon atoms related to their state of hybridization in an organic compound?
3. What are electrophiles and nucleophiles? Explain with examples.
4. Make homologous series of alkenes, alcohols and ketones family of first five members with expended, condesed and bond line forms with IUPAC naming.
5. Do IUPAC naming of the following –



6. Write all possible isomers of the following with IUPAC Naming –

a) Hexanol
b) Methyl pentanoic acid
c) 3-hydroxyhexanal

7. Make a flow chart of organic compound classification with an example of each kind.
8. Give a brief description of the principles of the following techniques taking an example in each case.

   (a) Crystallisation (b) Distillation (c) Chromatography

9. Discuss the chemistry of Lassaigne's test.
10. Explain the principle of paper chromatography.

Biology:

1 Amino acids, as the name suggests, have both an amino group and a carboxyl group in their structure. In addition, all naturally occurring amino acids (those which are found in proteins) are called L-amino acids. From this, can you guess from which compound can the simplest amino acid be made?

2 Many organic substances are negatively charged e.g., acetic acid, while others are positively charged e.g., ammonium ion. An amino acid under certain conditions would have both positive and negative charges simultaneously in the same molecule. Name such a form of amino acid.

3 Select an appropriate chemical bond among ester bond, glycosidic bond, peptide bond and hydrogen bond and write against each of the following.

a. Polysaccharide

_____

b. Protein

_____

c. Between nitrogen base and sugar in a nucleotide

_____

d. between two nitrogen bases in a DNA_____

4 What is activation energy?

5 Starch, Cellulose, Glycogen, Chitin are polysaccharides found among the following. Choose the one appropriate and write against each.

Cotton fibre _____

Exoskeleton of cockroach

_____

Liver _____

Peeled potato _____

6 Schematically represent primary, secondary and tertiary structures of a hypothetical polymer say for example a protein.

7 How are prosthetic groups different from co-factors?

8 Formation of enzyme-substrate complex (ES) is the first step in catalysed reactions. Describe the other steps till the formation of product.

9 What are different classes of enzymes? Explain with the type of reaction they catalyse.

10 What is the difference between a nucleotide and nucleoside? Give examples of each.

11 Explain Watson and Crick model of DNA structure.

12 Explain competitive inhibition with the help of an example.

13 Give reasons:

a) Starch gives blue black colour with iodine solution.

b) Amino acid is called as substituted methane.

14 Locomotion is movement, but not all movements are locomotion. Justify. Which are the three types of movements exhibited by the cells of the human Body?

15 Mention which part of the body exhibits each movement. Make a table showing the different types of muscles, location and function. Muscle fibre is referred to us syncitium. Give reason.

16 Name the two types of contractile proteins present in myofibril. With the help of neat labeled diagrams describe the structures of actin and Myosin.
17 Explain the mechanism of muscle contraction and relaxation. Differentiate between red fibres and white fibres. Design a flow chart depicting different bones in our skeletal system.

18 What do you mean by true ribs and false ribs? What are floating ribs? Compare and contrast the structure of pectoral girdle and pelvic girdle.
19 Name the three types of joints. Give one example of each.
20 Identify one age-related disorder of skeletal system. Write its characteristics.

Computer:

1- Write a program to input a sentence. Count and display the frequency of each letter of the sentence in alphabetical order.

2- Write a program to accept a word and convert it into lower case, if it is in upper case. Display the new word by replacing only the vowels with the letter following it.

Sample Input: computer

Sample Output: cpmpvtfr

3- Write a program to accept a string. Convert the string into upper case letters. Count and output the number of double letter sequences that exist in the string.

Sample Input: "SHE WAS FEEDING THE LITTLE RABBIT WITH AN APPLE"

Sample Output: 4

4- Find errors and rewrite the same after correcting the following code:

(a) d1 = {1:10, 2.5:20, 3:30, 4:40, 5:50, 6:60, 7,70}

(b) d1 (9)=90

(c) del d1 (2)

(d) pop d1 [4]

(e) d1.item ()

(f) d1.key()

(g) d1.value ()

(h) d1.gets (4,80)

(i) d1.len ()

(j) d1.clears ()

5- Write a program to input ‘n’ classes and names of their class teachers to store them in a dictionary and display the same. Also accept a particular class from the user and display the name of the class teacher of that class.

6- Write a program to store student names and their percentage in a dictionary and delete a particular student name from the dictionary. Also display the dictionary after deletion.

7- Write a Python program to input names of 'n' customers and their details like items bought, cost and phone number, etc., store them in a dictionary and display all the details in a tabular form.

8- Write a program that repeatedly asks the user to enter product names and prices. Store all of these in a dictionary whose keys are the product names and whose values are the price.

When the user is done entering products and price, allow them to repeatedly enter a product name and print the corresponding price or a message if the product is not in dictionary.

9- Write a Python program that accepts a value and checks whether the inputted value is part of given dictionary or not. If it is present, check for the frequency of its occurrence and print the corresponding key otherwise print an error message.

10- Consider the following dictionary stateCapital:

stateCapital = {"Assam" : "Guwahati", "Rajasthan":"Jaipur", "Bihar": "Patna", "Maharashtra": "Mumbai","Rajasthan":"Jaipur"}

Find the output of the following statements:

(a) print (stateCapital.get ("Bihar"))

(b) print (stateCapital.keys ())

(c) print (stateCapital.values())

(d) print (stateCapital.items())

(e) print (len (stateCapital))

(f) print ("Maharashtra" in stateCapital) (g) print (stateCapital.get ("Assam"))

(h) del stateCapital ["Assam"]

print (stateCapital)

Physical Education:

Draw the diagram in kho-kho,Athletics track,Volleyball(any one) on chart paper And its measurements and rules.

Mathematics:

Do, Chapters From NCERT -

Conic Sections

Three Dimensions

Probability

Limits& Derivatives

Physics:

1. Why curved roads are banked ?
2. Give the limitations of first law of thermodynamics.
3. If work required to blow a soap bubble of radius r is W, then what additional work is required to be done to blow it to radius 3r ?
4. What would be the velocity of the top end at the time of touching the ground if a rod of length ℓ and mass M held vertically is let go down, without slipping at the point of contact ?
5. Find the height to which it raises above the earth surface if a particle is projected vertically upwards from the surface of earth of radius R with kinetic energy equal to half of the minimum value needed for it to escape.
6. Deduce the height at which the value of g is the same as at depth of R/2 ?
7. Calculate the angular and rotational kinetic energy of earth about its own axis. (Mass of earth = 6.0×10^{24} kg , radius of earth = 6.4×10^{6} m)
8. If a copper plate has an area of 250 cm^2 at 0^oC, then calculate the area of this plate at 60^o . The coefficient of linear expansion of copper = $1.7 \times 10^{-50} C^{-1}$.
9. Differentiate different mode of heat transformation.
10. Derive an expression for excess pressure inside a liquid drop.
11. Derive Mayer's relation $C_P - C_V = R$.
12. Why $C_P > C_V$. Explain .

13. State first law of thermodynamics and apply it for (i) adiabatic process (ii) isothermal process.
14. State and prove Bernoullie's theorem.
15. A liquid drop of diameter 4 mm breaks into 1000 droplets of equal size. Calculate the change in surface energy. The surface tension of the liquid is 0.07 N/m.

Hindi:

कक्षा ११ (हिंदी)

शीतकालीन अवकाश कार्य

निम्नलिखित विषयों को ध्यान पूर्वक पढ़कर किसी एक विषय पर सुधारात्मक, प्रेरणात्मक तथा शिक्षाप्रद नाटक लिखिए संवाद पात्रानुकूल देशकाल को ध्यान में रखते हुए प्रभावशाली हों

नाटक के विषय 👇

रूढ़िवादिता, नारी- सम्मान, गौरवशाली भारत, कृत्रिम बुद्धिमत्ता, (आर्टिफिशियल इंटेलिजेंस), मानव - अस्तित्व खतरे में , आज भी हम गुलाम है' सभी समस्याओं का समाधान , शिक्षा सर्वधर्म समभाव, आत्मा का विकास समाज का विकास ।