NEW LIGHT EDUCATION CENTRE
Holiday's Home Work Class XII

विषय- हिंदी

ग्रीष्मकालीन गृह कार्य कक्षा- 12

1- हिंदी गद्य खंड में पाठ 1 से पाठ -4तक पढ़कर सारांश समझते हुए प्रश्न उत्तर याद करके लिखेंगे।

2.हिंदी काव्य खंड में पाठ 1 से पाठ -4 तक पढ़कर भावार्थ समझकर प्रश्न उत्तर लिखकर याद करेंगे।

3. वितान में पाठ 1 से पाठ-5 तक पढ़कर प्रश्नोत्तर लिखेंगे ।

4-नारी शिक्षा ,अनुशासन का महत्व ,बड़े- बुजुर्गों से सीखे गए संस्कार ,आदर्श मानव जीवन कैसे बने आदि विषयों पर सृजनात्मक लेख लिखेंगे ।

5- अपनी पाठ्य पुस्तक के किसी एक लेखक और किसी एक कवि का जीवन चरित्र ,रचनाएं, और शिक्षा में योगदान फाइल के पृष्ठ पर लिखकर अपनी हिंदी की प्रोजेक्ट फाइल में लगाइए ।

6. "कहानी मनोरंजन का सुगम साधन है" विषय पर लेख लिखिए।

7. "आपकी प्रिय कहानी" लिखकर उसका चित्र बनाएं।

ENGLISH

Q1. Complete project file work on ‘ The lost spring ‘
Q2. Complete the assignment work on ‘The third level ‘
Q3. As the principal of a reputed college, you have been invited to inaugurate a book exhibition in your neighborhood. Draft a reply to the invitation in not more than 50 words, expressing your inability to attend the function. You are Tarun/ Tanvi.
Q4. Write a summary on ‘The Tiger King ‘
Q5. Students will study about Job application(Formal Letter).

PHYSICS -

1. Prepare the following derivations
i) Demonstration Newton's third law from Coulomb law of electrostatic force.
ii) The derivation of the torque on an electric dipole in uniform electric field.
ii) The derivation of electrostatic potential at a distance **r** due to a point charge **Q.**
iii) potential energy of an electric dipole in uniform electric field.
iv) The derivation of capacitance of a parallel plate capacitor with air between the plates.
2. Write all formulas used in first two chapters at a place with respective diagrams and meanings of symbols used.
3. Solve and prepare the examples 1.7, 1.8, 1.10, 1.11, 1.12 from the exercise 1.18, 1.19, 1.20, 1.21
4.solve and prepare the examples 2.1, 2.4, 2.5
5. Complete the following project work in the file
To estimate the charge induced on each one of two identical styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb’s law.

BIOLOGY

You can choose one out of the following -

1 Sustanable development in agriculture.

2 Adaptations in plants for cross pollination.

3 Biological pollinators.

4 Assisted reproductive techniques

5 Deviations from Mendelian genetics

6 Types of Mutations/Causes of mutations.

7 Gel electrophoresis

8 Artificial vegetative propagation.

9 Air/Water/Soil pollutants in your area.

10 Insect diversity in your area.

Make a synopsis with these points-

- **Introduction**
- **Syntax/Type/Structure etc. (according to your topic) of the.....**
- **Methods used in the study of project.**
- **Importance or uses of.....**
- **Conclusion**
- **Reference**

If it helps you please upvote. If you still have any problem inform me, i will try to provide you an answer according to your understanding

Thanks,,

CHEMISTRY

1. Why is the boiling point elevated when a non – volatile solute is dissolved in a liquid?
2. A solution is prepared by dissolving 11g glucose in 200 cm3 water at 300 C. What is the mass Percentage of glucose in solution? The density of water 300C is 0.996 glcm3?A solution is prepared by dissolving 11g glucose in 200 cm3 water at 300 C. What is the mass Percentage of glucose in solution? The density of water 300C is 0.996 glcm3?

3. The density of 85% phosphoric acid is 1.70 g/cm3. What is the volume of a solution that contains 17g of phosphoric acid?

4. Explain why aquatic species are more comfortable in cold water rather than in warm water.

5. State Raoult's law. How is it formulated for solutions of non-volatile solutes?

6. State Henry's law and mention two of its important applications.

7. Why do mountaineers carry oxygen cylinder while climbing mountains?

8. Define an ideal solution and write one of its characteristics

9. The vapour pressure of CS2at 5000C is 854 mm Hg .A solution of 2.0g sulphur in 100g of CS2 has a vapour pressure of 848.9 mm Hg .Calculate the formula of sulphur molecule.

10. Calculate the mole fraction of ethanol and water in a sample of rectified spirit which contains 46% ethanol by mass?

11. How much urea (molar mass 60 g/mol) should be dissolved in 50g of water so that its vapour pressure at room temperature is reduced by 25%?

12. N2 gas is bubbled through water at 293K, how many millimoles of N2 gas would dissolve in 1 litre of water? Assume that N2 exerts a partial pressure of 0.987 bar. Given that Henry's law constant for N2 at 293K is 76.48 k bar.

13. When 20g of a non – volatile solid is added to 250 ml of water, the freezing point of water becomes -0.90C. Calculate molecular mass of the solid if kf of water is 1.860Ckg/ mol.

14. A solution is prepared by dissolving 10 g of non-volatile solute in 200 g of water. It has a vapour pressure of 31.84 mm Hg at 308 K. Calculate the molar mass of the solute.
(Vapour pressure of pure water at 308 K = 32 mm Hg)

15. An aqueous solution of glucose, $C_6H_{12}O_6$ has osmotic pressure of 2.72 atm at 298k. How many moles of glucose were dissolved per litre of solution?

16. The osmotic pressure of a 0.0103 molar solution of an electrolyte is found to be 0.70 atm at 2730C. Calculate van't Hoff factor. R=0.082 L atm/1 mol/k?

17. The molecular mass of a solute is 120 g/mol and van't Hoff factor is 4. What is its abnormal molecular mass?

18. The boiling point elevation of 0.6 g acetic acid in 100g benzene is 0.1265k. What conclusion can you draw about the state of solute in solution? Molar elevation constant for benzene is 2.53 deg per molar?

19. Give various expressions for van't Hoff factor?

20. When does the measurement of colligative property leads to abnormal molecular mass?

21. 0.90g of a non – electrolyte was dissolved in 87.90g of benzene. This raised the boiling point of benzene by 0.250C. If the molecular mass of non – electrolyte is 103.0 g/mol, calculate the molal elevation constant for benzene?

22. How is osmotic pressure of a solution related to its concentration?

23. Obtain a relationship between relative lowering of vapour pressure and mole fraction of solute?

24. A mixture of chlorobenzene and bromobenzene is a nearly an ideal solution but a mixture of chloroform and acetone is not Explain? 25. Carbon tetrachloride and water are immiscible whereas alcohol and water are miscible. Explain on the basis of molecular structures of there compounds.

MATHS

Find $\frac{dy}{dx}$ for the following functions:

1. $y = \log(\sin x)$
2. $y = \tan^{-1}\left(\frac{\cos x+\sin x}{\cos x-\sin x}\right)$
3. $y = \tan^{-1}(e^x)$
4. $y = \sin^{-1}\left(\frac{2^{x+1}}{1+4^x}\right)$
5. $y = \sec^2[\log(\cot x)]$
6. $y = \tan^{-1}\left(\frac{6x}{1+16x^2}\right)$
7. $y = \log[\sin(5^x)]$
8. $y = \tan^{-1}\left(\frac{5x}{1-6x^2}\right)$
9. $x^3 + y^3 = 3xy$
10. $y = \tan^{-1}\left(\frac{2x}{1+15x^2}\right)$
11. $\cos(xy) = \sin x + \sin y$
12. $y = (x\tan x)^{\sec x}$
13. $\log[x^2 + y^2] = 2$
14. $y = x^{\tan^{-1}x}$
15. $y = \log\left[5^{7x}\frac{(x-3)^3(x+6)^5}{(2x-7)^{3/4}}\right]$
16. $y = \frac{(\sin x)^{\log x}}{1+x^2}$
17. $y = \log\left[e^{5x}\frac{(x-4)^{3/2}(3x+7)^{4/7}}{(2x+5)^{7/4}}\right]$
18. $y = x^x + (\tan x)^x$
19. $y = \cot^{-1}\left(\frac{1}{\sqrt{x}}\right)$
20. $x^m y^n = (x+y)^{m+n}$
21. $y = \sin(2\cos^{-1}x)$
22. $y = \sqrt{\sin x + \sqrt{\sin x + \sqrt{\sin x + \cdots \infty}}}$
23. $y = \sin^{-1}(\cos 3x)$
24. $x = \sin(\log t),\ y = \log(\sin t)$
25. $y = \cos^{-1}\sqrt{\frac{1+\cos x}{2}}$
26. $x = e^{\cos 2t}, y = e^{\sin 2t}$

27. Find second order derivative of:
    a. $x\log x$ b. $\tan^{-1}x$ c. x^n d. $e^x\sin 3x$

28. Show that:
    a. $y = x^2e^x$; *show that* $\frac{d^2y}{dx^2} - \frac{dy}{dx} - 2(x+1)e^x = 0$
    b. $y = 3\cos(\log x) + 4\sin(\log x)$;
    show that $x^2\frac{d^2y}{dx^2} + x\frac{dy}{dx} + y = 0$

PHYSICAL EDUCATION

Unit:- ll ' children and women in sports

1. Exercise guidelines of WHO for different age groups.
2. Common postural deformities - knock knees ,flat foot,raund shoulder, Lordosis,Kyphosis, Scoliosis and bow lega and their respective corrective measures.
3. Women's participation in sports - physical psychological and social benefits.
4. Special consideration (menarche and menstrual dysfunction).
5. Female athlete triad Costeoposis, amenorrhea,eating disorders.

Note:- Do given holiday homework in notebook.