

KENDRIYA VIDYALAYA NO.3 GWALIOR

HOLIDAY HOME WORK- ENGLISH CORE XII(2019-20)

- 1 What was conveyed by M Hamel during his last class? What was the effect?
2. The beauty of glass bangles stands in sharp contrast with the miserable life of the bangle makers of Firozabad. Explain with reference to the lesson Lost Spring.
3. Was the third level a medium of escape for Charley and Sam? Why/ why not?
- 4 .Do you think that the prediction made by the chief astrologer about the Tiger King proved true? How?
5. What is the significance of the parting words and smile of Kamala Das to her mother?
6. Pick all the lines where literary devices have been used in the poems **My Mother At Sixty-six** and **An Elementary School Classroom In A Slum** and name the device used.
7. How has Stephen Spender described the life of the slum children? How can it be improved?
8. Write the following (**Two Each**)
 - a. Letter of Complaint
 - b. Letter of Enquiry
 - c. Letter for placing an Order
 - d. Letter to Editor
 - e. Application for job
 - f. News Report
 - g. General Report
 - h. Posters
 - i. Notice
 - j. For Sale
 - K. Note Making and Summarisation

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ग्रीष्मकालीन अवकाश हेतु गृह-कार्य (सत्र-2019-20)

कक्षा-बारहवीं (हिन्दी केंद्रिक)

प्रश्न-1 विगत वर्षों के सी बी एस सी बोर्ड परीक्षा के प्रश्नपत्रों से किन्हीं दो अपठित अनुच्छेदों को लिखकर उनसे पाँच प्रश्न दो-दो अंक वाले तथा दो प्रश्न एक-एक अंक वाले जिसमें एक व्याकरण का तथा दूसरा शीर्षक से संबंधित हो, बनाकर उनके उत्तर कार्य-पुस्तिका में लिखिए ।

प्रश्न-2 विगत वर्षों के सी बी एस सी बोर्ड परीक्षा के प्रश्नपत्रों से किन्हीं दो अपठित काव्य-पंक्तियों को लिखकर उनसे चार प्रश्न एक-एक अंक वाले जिसमें एक शीर्षक से संबंधित हो, बनाकर उनके उत्तर कार्य-पुस्तिका में लिखिए ।

प्रश्न-3 निम्नलिखित विषयों पर लगभग 150 शब्दों में अनुच्छेद लिखिए-

क) शहरों में नारी जीवन की समस्याएँ

ख) विज्ञापन का महत्त्व

ग) बाजार : सकारात्मक और नकारात्मक पहलू

प्रश्न-4 (I) कन्या-भ्रूण हत्या पर चिंता प्रकट करते हुए किसी दैनिक समाचार-पत्र के मुख्य संपादक को लड़कियों के महत्त्व को बताते हुए जागरूकता फैलाने हेतु पत्र लिखिए।

(II) सरकारी प्राथमिक पाठशालाओं की बदहाली के कारण लोग अपने बच्चों को निजी विद्यालयों में पढ़ाते हैं और शोषण का शिकार होते हैं। इस विषय की जानकारी देते हुए अपने जिले के शिक्षा अधिकारी को पत्र लिखिए।

प्रश्न-5 विगत वर्षों के सी बी एस सी बोर्ड प्रश्नपत्रों से अभिव्यक्ति और जनसंचार माध्यम के एक-एक अंक वाले किन्हीं बीस प्रश्नों का चयन करके उनके उत्तर कार्य-पुस्तिका में लिखिए।

प्रश्न-6 निम्नलिखित विषयों पर लगभग 150 शब्दों में फीचर लिखिए-

क) मतदान का एक दिन

ख) महामनोरंजन का खजाना आई पी एल

ग) आतंकवाद एक अनजान खतरा

प्रश्न-7 स्वयं द्वारा पढ़ी गई किसी खेल या कला से संबंधित पुस्तक की समीक्षा लिखिए।

प्रश्न-8 कथाकार प्रेमचंद की कहानी 'ईदगाह' फाइल में लिखिए ।

प्रश्न-9 प्रख्यात लेखिका महादेवी वर्मा की पुस्तक 'मेरा परिवार' के कुछ प्रसंग पढ़िए।

MATHEMATICS

1. Let R be the relation in the set N given by

$R = \{(a, b) \mid a = b - 2, b > 6\}$. Whether the relation is reflexive or not? justify your answer.

2. Check whether the relation R is reflexive, symmetric and transitive.

$R = \{(x, y) : x - 3y = 0\}$ on $A = \{1, 2, 3, \dots, 13, 14\}$.

3. Let N be the set of all natural numbers & R be the relation on $N \times N$ defined by

$R = \{(a, b), (c, d) : a + d = b + c\}$. Show that R is an equivalence relation.

4. Let $A = R - \{3\}$ & $B = R - \{1\}$. Consider the function

$f: A \rightarrow B$ defined by $f(x) = \left(\frac{x-2}{x-3}\right)$. show that f is one-one & onto, hence find f^{-1} .

5. If $f: R \rightarrow R$ be defined as $f(x) = 10x + 7$. Find the function $g: R \rightarrow R$. Such that $g \circ f(x) = f \circ g(x) = I_R$.

6. Prove that: $\tan^{-1} \left(\frac{\cos x}{1 + \sin x} \right) = \frac{\pi}{2} - \frac{x}{2}, x \in \left(-\frac{\pi}{2}, \frac{\pi}{2} \right)$.

7. Prove that: $\tan^{-1} \left(\frac{\sqrt{1+x} - \sqrt{1-x}}{\sqrt{1+x} + \sqrt{1-x}} \right) = \frac{\pi}{2} - \frac{1}{2} \cos^{-1} x$.

12. Find value of x

$$\sin^{-1}(1-x) - 2 \sin^{-1} x = \frac{\pi}{2}$$

13. Find value: $\tan^{-1}\left(\frac{x}{y}\right) - \tan^{-1}\frac{x-y}{x+y}$

14.

If $A = \begin{bmatrix} a & b \\ 0 & 1 \end{bmatrix}$, prove that $A^n = \begin{bmatrix} a^n & \frac{b(a^n-1)}{a-1} \\ 0 & 1 \end{bmatrix}$, $n \in \mathbb{N}$

18.

If $A = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$, prove that $A^n = \begin{bmatrix} 3^{n-1} & 3^{n-1} & 3^{n-1} \\ 3^{n-1} & 3^{n-1} & 3^{n-1} \\ 3^{n-1} & 3^{n-1} & 3^{n-1} \end{bmatrix}$, $n \in \mathbb{N}$.

20.

Let $f, g: \mathbb{R} \rightarrow \mathbb{R}$ be defined by $f(x) = |x|$ & $g(x) = [x]$ where $[x]$ denotes the greatest integer function. Find $f \circ g\left(\frac{5}{2}\right)$ & $g \circ f(-\sqrt{2})$.

21.

If R_1 and R_2 are equivalence relations in a set A , show that $R_1 \cap R_2$ is also an equivalence relation.

23.

Prove that $\cot^{-1}\left(\frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}}\right) = \frac{x}{2}$, $x \in \left(0, \frac{\pi}{4}\right)$

24.

Write in the simplest form $\cos \left[2 \tan^{-1} \left(\sqrt{\frac{1-x}{1+x}} \right) \right]$

25.

For the following matrices A and B, verify $(AB)^T = B^T A^T$,

$$\text{where } A = \begin{bmatrix} 1 \\ -4 \\ 3 \end{bmatrix}, B = [-1 \quad 2 \quad 1]$$

26.

Express the matrix \bar{A} as the sum of a symmetric and a skew symmetric matrix, where:

$$A = \begin{bmatrix} 3 & -2 & -4 \\ 3 & -2 & -5 \\ -1 & 1 & 2 \end{bmatrix}$$

40. Prove that $\tan^{-1} 1 + \tan^{-1} 2 + \tan^{-1} 3 = \pi$

41.

Let $f: \mathbb{R} \rightarrow \mathbb{R}$ & $g: \mathbb{R} \rightarrow \mathbb{R}$ be defined as $f(x) = x^2$, $g(x) = 2x - 3$. Find $f \circ g(x)$.

42. If $y = f(x) = \frac{3x+4}{5x-3}$, then find $(f \circ f)(x)$ i.e. $f(y)$

43. Let $f(x) = \frac{x-1}{x+1}$. Then find $f(f(x))$

44. $\cos^{-1} \left(\cos \frac{2\pi}{3} \right) + \sin^{-1} \left(\sin \frac{2\pi}{3} \right)$

HOME WORK CLASS = XII B

➤ Solve example of chapter derivative and continuity.

- Draw the graph of trigonometric function, Inverse trigonometric function, logarithm, Exponential functions.
- Write domain and range of above all functions.
- Solve 20 objective type question of derivative.
- Solve all last 5 years questions of derivative which are asked in CBSE exams.

HOME WORK ASSIGNMENT(FOR SUMMER VACATION)

SUBJECT **PHYSICS** CLASS XII

Q.1 Prepare a activity file consists of following:

SECTION A (Any three from following)

- (a) To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
- (b) To assemble the components of a given electrical circuit.
- (c) To study the variation in potential drop with length of a wire for a steady current.
- (d) To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.

SECTION B (Any two from following)

- (a) To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items
- (b) To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
- (c) To study the nature and size of the image formed by a (i) convex lens, (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).

Q.2 State Gauss theorem and Explain its all three applications.

Q.3 State the Principle of capacitor. Find an expression for energy stored in a capacitor & also find energy density.

Q.4 Define following: (a) dielectric constant (b) Equipotential surface (c) Electric dipole and dipole moment, S I unit (d) Electric flux with S I unit

Q.5 Find an expression for torque on the dipole when it is placed in uniform electric field. Also find the work done in rotating the dipole. Explain stable and unstable equilibrium.

Q.6 Check that the ratio $ke^2/Gm_p m_e$ is dimensionless. Determine the value of this ratio. What does the ratio signify?

Q.7 A point charge causes an electric flux of $-2.0 \times 10^3 \text{ Nm}^2\text{C}^{-1}$ to pass through a spherical Gaussian surface of 10 cm radius centered on the charge. (a) if the radius of Gaussian surface were doubled, how much flux would pass through the surface? (b) What is the value of point charge?

Q.8 Eight charged water droplets, each with a radius of 1mm and a charge of 10^{-10} C, coalesce to form a single drop. Calculate the potential of bigger drop. (Ans: 3.6×10^4 Volt)

Q.9 Three point charges each of 10^{-7} C are arranged at three vertices of an equilateral triangle of side 10cm. Find the electric potential energy of the system.

Q.10 A parallel plate capacitor is charged by a battery. After some time, the battery is disconnected and a dielectric slab of dielectric constant K is inserted between the plates. How would (i) the capacitance (ii) the electric field between the plates and (iii) the energy stored in the capacitor, be modified. Explain.

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Summer Holiday Assignment
Chemistry
Class XII

- Solve the following questions in homework copy-
- 1. Why is vapour pressure of aqueous solution of glucose less than that of water?
- 2. Why is osmotic pressure most suitable colligative property for determination of molar masses of macromolecules over other properties?
- 3. Why do we observe abnormal colligative properties?
- 4. What kind of solutions can't be separated by distillation and why? Explain with example.
- 5. How does temperature change when a solution show-
(a) Positive deviation (b) Negative deviation

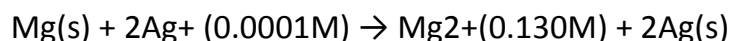
6. When dried fruits and vegetables are kept in water, they come in their original shape. Why? Can this process be accelerated by increase in temperature?
7. 'Henry's Law is special case of Raoult's Law. Explain how?
8. Equimolar solutions of NaCl and glucose are not isotonic. Why?
9. Arrange in increasing order of boiling points-
 - (a) 1 m solution of NaCl
 - (b) 1 m solution of glucose
 - (c) 1 m solution of $K_4[Fe(CN)_6]$
 - (d) 1 m solution of $K_2Cr_2O_7$
10. Two liquids 'A' and 'B' boil at 145°C and 190°C respectively. Which of them will have higher vapour pressure at 80°C ?
11. Why is camphor preferred as a solvent for determination of depression in freezing point of a solution?
12. Addition of KI in aq. solution of HgI_2 , increases the vapour pressure of solution. Why?
13. Which is more concentrated 1M or 1m solution? Justify.
14. During making of ice-creams, salt is kept aside the churner. Explain why?
15. The solubility of $Ba(OH)_2 \cdot H_2O$ at 298 K is 5.6 g per 100 g of water. What is the molality of OH^- ions in saturated solution?
16. A solution contains 25% H_2O , 25% C_2H_5OH and 50% CH_3COOH by mass. Calculate mole fraction of each component.
17. What mass of 68% H_2SO_4 will be required to make 2L solution of 5M molarity?
18. Calculate the partial pressures of benzene and toluene in the solution having –
 - (a) Equal moles of benzene and toluene
 - (b) 1 mole of benzene mixed with 4 moles of toluene
 - (c) Equal mass of benzene and toluene
 - (d) vapor pressures of pure benzene and pure toluene are 160 mm and 60 mm respectively.
19. Calculate vapour pressure of solution containing 0.6% of urea (NH_2CONH_2) at 25°C . the vapour pressure of pure water is 24 mm Hg and density of solution is 1g/mL.
20. A solution containing 18 g of non volatile solute in 200 g of water, freezes at 270.07 K. calculate molar mass of the solute. (K_f for water = 1.86 K/m)

21. NCERT Exercise Chapter 3- Electrochemistry, following questions are to be solved-

(i) How would you determine the standard electrode potential of the system $\text{Mg}^{2+} | \text{Mg}$?

(ii) Can you store copper sulphate solutions in a zinc pot?

(iii) Represent the cell in which the following reaction takes place



(iv) Calculate the potential of hydrogen electrode in contact with a solution whose pH is 10.

(v) Calculate the emf of the cell in which the following reaction takes place



22. The following practicals are to be written in practical file-

- (i) To prepare Lyophilic sol of starch.
- (ii) To prepare Lyophobic sol of Ferric Hydroxide.
- (iii) To separate the coloured components of mixture of Dye by paper chromatography.
- (iv) To study the effect of concentration of Hydrochloric acid on reaction between Sodium thio sulphate and Hydrochloric acid.
- (v) To prepare a double salt Ferrous Ammonium Sulphate by crystallization method.

KENDRIYA VIDYALAYA NO.3 MORAR CANTT GWALIOR
HOLIDAY HOMEWORK (SUMMER VACATION)
CLASS XII: COMPUTER SCIENCE

1. Explain the Use of all Python Operators with the help of examples
2. Write a (i.) Program and (ii) Functions for the following
 - a) To calculate factorial
 - b) To calculate sum and average of given list
 - c) To print Multiplication Table of a given number
3. Write and Explain functions used in with
 - a. List

- b. String
 - c. Dictionary
 - d. Tuple
4. Solve the Unsolved Questions (Q.NO 2,10 to 20) given in the Chapter 2 Functions.
 5. Paste and Solve the Question paper of Class Test (April) in your Copy.

Summer vacation assignment 2019-20

Class -xii

Subject-Biology

Note-Do the following in the separate note book.

- 1.Do solve the questions of previous years question papers of CBSE Bio those covers unit 1 of biology text book of class xii. Reproduction.
- 2.Write the function of the following-: (a)corpus luteum (b) Endometrium
© Acrosome (d)sperm tail (e)Fimbriae.
- 3.Removal of gonads can not be considered as contraceptive option.why?
4. Draw labelled diagrams of male and female reproductive system of human.
- 5.What is sterilization? Explain with the help of diagram 1.Vasectomy and
2.Tubectomy.
- 6.Suggest some methods to assist infertile couples to have children.
7. What is STD? Write its full form and explain this in detail.
8. What are various contraceptive method, explain them in detail.

9. What is Medical Termination of pregnancy? Explain.
10. Draw a labelled diagram of sperm.
11. Draw labelled diagrams of a section through ovary and through testes.
12. Name the hormones involved in regulation of spermatogenesis.
13. Write on embryonic development in human. (Human foetus within the uterus).
14. What is self-incompatibility? Why does self-pollination not lead to seed formation in self-incompatible species.
15. Do solve the questions of monthly test (of April 2019) again.