



Holiday Homework: Class-XII-A (22-23)

Important Instructions:

- *The holiday homework will be assessed as internal assessment.*
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English

Your holiday homework this year is a fine blend of all the aspects of the language. It has been designed to ensure that you learn with fun.

1. Draft the following ADVERTISEMENTS in your fair notebook:

- a. You are Manisha of 10, Rajaji Nagar, Bangalore. You want a Maths teacher for your son who is a class 10 student. Draft a suitable advertisement in not more than 50 words stating your requirements.
- b. You want to sell your newly built flat. Draft a suitable advertisement in not more than 50 words to be inserted in the classified columns of 'The Hindu' giving all necessary details. You are Niranjana, 247, J.P. Nagar, Bengaluru.

2. Draft the following NOTICES in your fair notebook:

- a. You are Secretary of the History Club of Vidya Mandir School. Draft a notice in not more than 50 words informing students of a proposed visit to some important historical sites in your city.
- b. As Sports Secretary of G.D.G. Public School, Pune, draft notice in not more than 50 words for your school notice board informing the students about the sale of old sports goods of your school. You are Rohini/Rohit.

3. Draft the following POSTERS in your fair notebook:

- a. Your school, Kendriya Vidyalaya, Burdwan is going to organise a Diwali Mela. Design a poster to inform the students about various activities connected with it. Ask them to participate in the Mela. You are Divya/Dewan.
- b. As President of the Residents Welfare Association of Mayur Colony, Delhi, design a poster in not more than 50 words for promoting cleanliness in the surroundings of your colony.

4. Draft the following LETTERS in your fair notebook:

- a. You are Nitu/Nihal. You bought a Microwave oven from Algrawal Electronics and electricals, Anuppur. It does not function properly. Write a letter to the Sales Manager of the shop, complaining about the defect and asking for immediate replacement or repair, as necessary. (120-150 words)
- b. Write a letter to the editor of a national newspaper expressing your concern about the careless behaviour of the people of not following the lockdown properly. Also suggest ways how to remain safe and protected from this deadly disease. (120-150 words)
- c. Write a letter to the Editor of The Hindu on the fear that is spreading among people due to their anxiety over the pandemic in the world. Give suggestions to overcome this global crisis. You are Vikram/Varsha. (120-150 words)
- d. You are a resident of Mahalakshmi Apartments, Patparganj, Delhi. Your residential area is flooded with roadside dwellers who are deprived of the basic civic amenities like light, public toilets and bathrooms. Write a letter to the Editor of The Hindustan Times, highlighting the problems of these roadside dwellers, and also the problems posed by them to the public. Give suggestions for improvement. (120-150 words)

5. CREATIVE MINDS ACTIVITY: Write articles / poems / stories for the school magazine on an A4 sheet of paper. Make it as interesting and colour to be displayed for the other students. Also keep a soft copy ready to be sent to the Editor of the magazine.

6. MEET THE LITTERATEUR:

a) Read and explore about the given writers –

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|-------------------------|-----------------------|
| ➤ Alphonse Daudet | ➤ John Keats |
| ➤ Anees Jung | ➤ Robert Frost |
| ➤ William Douglas | ➤ Adrienne Rich |
| ➤ Selma Lagerlof | ➤ Jack Finney |
| ➤ Louis Fischer | ➤ Kalki |
| ➤ Asokamitran | ➤ Tishani Doshi |
| ➤ Christopher Silvester | ➤ Pearl S. Buck |
| ➤ A. R. Barton | ➤ John Updike |
| ➤ Kamala Das | ➤ Susan Hill |
| ➤ Stephen Spender | ➤ Colin Dexter |
| ➤ Pablo Neruda | ➤ Zitkala-Sa and Bama |

Use A4 Sheets & colours. On the sheets, provide the following information about the author-

- Date of birth, name of parents & education
- Popular literary works
- Awards received.

Also draw or paste pictures. It shall be explained by you in the class as a part of **internal assessment** when the school reopens.

7. BOOK MARK MAKING ACTIVITY: Make a beautiful bookmark for your English Book. Decorate it and write an inspirational quotation which inspires you. Get the bookmark laminated.

Biology

1. Open the link, watch the video and complete the Practical File:

- i. https://www.youtube.com/watch?v=uixn83fA5_Q
- ii. <https://www.youtube.com/watch?v=FjlFG7QS7T0>

2. Make the Project on any of the given topics:

- Gene Therapy
- Drug abuse
- IVF Treatment
- Transgenic animal
- PCR
- Sewage Treatment
- Organ trade
- Embryogenesis
- Human genome project
- Cancer

Chemistry

- **The holiday homework will be assessed as internal assessment.**
- **All the home assignments must be completed.**
- **All the practicals should be done by using O Lab and students need to maintain records.**

Chromatography

- (i) Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of R_f values.
- (ii) Separation of constituents present in an inorganic mixture containing two cations only. (constituents having large differences in R_f values to be provided).

A. Preparation of Inorganic Compounds

Preparation of double salt of Ferrous Ammonium Sulphate or Potash Alum. Preparation of Potassium Ferric Oxalate.

B. Tests for the functional groups present in organic compounds:

Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) groups.

C. Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.

D. Determination of concentration/ molarity of $KMnO_4$ solution by titrating it against a standard solution of:

- (i) Oxalic Acid,
 - (ii) Ferrous Ammonium Sulphate
- (Students will be required to prepare standard solutions by weighing themselves).

E. Qualitative analysis

Determination of one cation and one anion in a given salt.

Cation : Pb^{2+} , Cu^{2+} , As^{3+} , Al^{3+} , Fe^{3+} , Mn^{2+} , Zn^{2+} , Cu^{2+} , Ni^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+

Anions: $(\text{CO}_3)^{2-}$, S^{2-} , $(\text{SO}_3)^{2-}$, $(\text{NO}_2)^{-}$, $(\text{SO}_4)^{2-}$, Cl^{-} , Br^{-} , I^{-} , PO_3^{4-} , $(\text{C}_2\text{O}_4)^{2-}$, $\text{CH}_3\text{COO}^{-}$, NO_3^{-}

(Note: Insoluble salts excluded)

Project work (any two) Adulteration is compulsory

Scientific investigations involving laboratory testing and collecting information from other sources.

A few suggested Projects.

- Study of the presence of oxalate ions in guava fruit at different stages of ripening.
- Study of quantity of casein present in different samples of milk.
- Preparation of soyabean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc.
- Study of the effect of Potassium Bisulphate as food preservative under various conditions (temperature, concentration, time, etc.)
- Study of digestion of starch by salivary amylase and effect of pH and temperature on it.
- Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc.
- Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi(cardamom).
- Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.
Note: Any other investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.

Physics

- ❖ 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.
- ❖ Analyze the applications of Electrostatics in The Van de Graaff Generator, Xerography, Laser Printers, Ink Jet Printers and Electrostatic Painting, Smoke Precipitators and Electrostatic Air Cleaning

Prepare a report on the following topics:-

(a) The Risks of Static Electricity in the Petroleum Industry.

(b) Static Electricity as Strong as Lightning can be Saved in a Battery.

THE ABOVE-MENTIONED ACTIVITIES NEEDS TO BE DONE IN A SEPARATE ACTIVITY FILE.

Prepare a record file of practical's given below:-

1. Determine resistivity of two / three wires by plotting a graph between potential differences versus current.
2. Find resistance of a given wire / standard resistor using metre bridge.
3. Verify the laws of combination (series) of resistances using a metre bridge.
4. Verify the laws of combination (parallel) of resistances using a metre bridge.
5. Compare the EMF of two given primary cells using potentiometer.

6. Determine the internal resistance of given primary cell using potentiometer.
7. Determine resistance of a galvanometer by half-deflection method and to find its figure of merit.
8. Convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same.
9. Convert the given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same.

Resources: -

1. <https://byjus.com/cbse/physics-practicals-class-12/>
2. <https://www.learncbse.in/cbse-class-12-physics-lab-manual/>
3. <https://ncert.nic.in/science-laboratory-manual.php>

Mathematics

PROJECT WORK

(PREPARE A PROJECT FILE)

Write the biography of Aryabhata OR Brahmagupta, including their mathematical achievements. Also paste photograph (post card size).

LAB MANUAL ACTIVITY

(TO BE DONE IN MATH ACTIVITY NOTE BOOK)

- 1) To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \perp m\}$ is symmetric but neither reflexive nor transitive.
- 2) To demonstrate a function which is not one-one but is onto.
- 3) To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \parallel m\}$ is an equivalence relation.
- 4) To demonstrate a function which is one-one but not onto.

WORKSHEET

(RELATION AND FUNCTIONS)

(TO BE DONE IN MATHS CLASS WORK NOTE BOOK)

Q.1: Let T be the set of all triangles in a plane with R a relation in T given by $R = \{(T_1, T_2) : T_1 \text{ is congruent to } T_2\}$. Show that R is an equivalence relation.

Q.2: Let L be the set of all lines in a plane and R be the relation in L defined as $R = \{(L_1, L_2) : L_1 \text{ is perpendicular to } L_2\}$. Show that R is symmetric but neither reflexive nor transitive.

Q.3: Show that the relation R in the set R of real numbers, defined as $R = \{(a, b) : a \leq b\}$ is neither reflexive nor symmetric nor transitive.

Q.4: Check whether the relation R defined in the set $\{1, 2, 3, 4, 5, 6\}$ as $R = \{(a, b) : b = a + 1\}$ is reflexive, symmetric or transitive.

Q.5: Show that the function $f : N \rightarrow N$, given by $f(x) = 2x$, is one-one but not onto.

Q.6: Let $f : N \rightarrow Y$ be a function defined as $f(x) = 4x + 3$, where, $Y = \{y \in N : y = 4x + 3 \text{ for some } x \in N\}$. Show that f is invertible. Find the inverse.

Q.7: Let $f : N \rightarrow R$ be a function defined as $f(x) = 4x^2 + 12x + 15$. Show that $f : N \rightarrow S$, where, S is the range of f , is invertible. Find the inverse of f .

Q.8: Consider $f : N \rightarrow N$, $g : N \rightarrow N$ and $h : N \rightarrow R$ defined as $f(x) = 2x$,

$g(y) = 3y + 4$ and $h(z) = \sin z, \forall x, y$ and z in N . Show that $h \circ (g \circ f) = (h \circ g) \circ f$.

Q.9: Let $f: \{2, 3, 4, 5\} \rightarrow \{3, 4, 5, 9\}$ and $g: \{3, 4, 5, 9\} \rightarrow \{7, 11, 15\}$ be functions defined as $f(2) = 3, f(3) = 4, f(4) = f(5) = 5$ and $g(3) = g(4) = 7$ and $g(5) = g(9) = 11$. Find $g \circ f$.

Q.10: Let $A = \{1, 2, 3\}, B = \{4, 5, 6, 7\}$ and let $f = \{(1, 4), (2, 5), (3, 6)\}$ be a function from A to B . Show that f is one-one.

REFERENCES: -

1) **N.C.E.R.T. TEXT BOOK**

2) **R.D. SHARMA TEXT BOOK**

Physical education

1. Prepare any 5 Yoga asana and write benefits and contraindication in your Physical Education project file and submit the same when the school reopens.

2. Prepare a project File of any one game of your choice out of the list given below. Make a labeled diagram of the field and the Equipments (Rules, Terminologies and Skills)

- Basketball
- Football
- Kabaddi
- Kho-Kho
- Volleyball
- Handball
- Hockey
- Cricket
- Bocce
- Unified Basketball [CWSN(Children with special Needs-Divyang)]