THE ASIAN SCHOOL, DEHRADUN
HOLIDAY HOMEWORK- SUMMER VACATION 2017 FOR CLASS X

English:

1. Read the prescribed novel – "The Diary of a Young Girl" by Anne Frank (the first half) and based on the reading, attempt a character sketch of the following in about 150 words : a) Anne Frank b) Edith Frank c) Otto Frank
   (To be done on ruled sheets and put in a file)
2. Correct the spellings of the following misspelt words, look up the dictionary to find the meaning of each word, and, then use the appropriately spelt word in sentence of your own.
   a) catelogeu b) restorent c) magnefy d) dworf e) explaination f) stringth g) quallefy
   h) priceous i) decieve j) mathimatics k) axcersion l) sincireily m) temprary n) duit
   o) invistegate
   (To be done neatly in Homework notebook)
3. Read any book written by the famous author – 'P.G. Wodehouse'' and write a review on that in about 250 words. Include the following details:
   a) Name of the Book b) Published by c) Number of Pages d) Theme and Plot e) Style of Writing
4. Make a habit of reading the Newspaper every day. Do silent reading (without any sound or lip movements), as well as loud reading of the articles you wish to, so as to work upon and improve your skills required for Assessment of Speaking and Listening Skills conducted by CBSE.

Hindi:

1. डिजिटल माध्यम के लाभ तथा हानि विषय पर 300 शब्दों में निबन्ध लिखिए।
2. वन के महत्व को बताते हुए मित्र को एक पत्र लिखिए।
3. मोबाइल फोन खो जाने की सूचना देते हुए थानाध्यक्ष को एक पत्र लिखिए।
4. रेखांकित पदों का पद परिचय दीजिए– क) संध्या सुन्दरी धीरे–धीरे उतर रही थी। ख) यह मेरी पुस्तक है।
   ग) वह लड़का कक्षा में प्रथम आया। घ) पेड़ पर पक्षी बैठे है।
5. सूरदास, नेताजी का चश्मा, बाल गोबिन भगत, लखनवी अंदाज, मानवीय करूणा की दिव्य चमक, आत्मकथ्य, देव के प्रश्न–उत्तरों को अपनी गृहकार्य कॉपी में करे।

Mathematics NOTE: WORKSHEET TO BE DONE IN HOME WORK NOTE BOOK & ACTIVITY IN A SEPARATE FILE

WORKSHEET

1) Find HCF of 56, 96 and 324 by Euclid's algorithm.
2) Prove that the square of any positive integer is of the form $5q$, $5q + 1$, $5q + 4$ for some integer, q.
3) Show that one and only one of n, $n + 2$, $n + 4$ is divisible by 3.
4) If unit's digit of 7^3 is 3 then what will be the unit's digit of 7^{11}.
5) Given that HCF (135, 225) = 45. Find LCM (135, 225).
6) If $a = 4q + r$ then what are the conditions for a and q. What are the values that r can take?
7) What is the smallest number by which $\sqrt{5} - \sqrt{3}$ be multiplied to make it a rational no? Also find the no. so obtained.
8) What is the digit at unit's place of 9^{6}?
9) Find one rational and one irrational no. between 3 and 5.
10) Prove that $\sqrt{2} + \sqrt{7}$ is not rational number.
11) Why $17 + 11 \times 13 \times 17 \times 19$ is a composite number? Explain.
12) If the HCF of 210 and 55 is expressible in the form $210 \times 5 + 55y$ then find y.
13) If α and β are the zeroes of the polynomial $2x^2 + 7x - 3$. Find the sum of the reciprocal of its zeroes.
14) If the polynomial $6x^3 + 16x^2 + px - 5$ is exactly divisible by $3x + 5$, then find the value of p.
15) Find a quadratic polynomial whose zeroes are $5 - 3\sqrt{2}$ and $5 + 3\sqrt{2}$.
16) Find zeroes of $\sqrt{3}x^2 - 8x + 4\sqrt{3}$.
17) If sum of the zeroes of $kx^2 + 3k + 2x$ is equal to their product. Find k.
18) If one zero of $4x^2 - 9 - 8kx$ is negative of the other find k.
19) If $f(x) = 2x^4 - 5x^3 + x^2 + 3x - 2$ is divided by $g(x)$ the quotient $q(x) = 2x^2 - 5x + 3$ and $r(x) = -2x + 1$ find $g(x)$.
20) If $2 + \sqrt{3}$ and $2 - \sqrt{3}$ are two zeroes of $x^4 - 4x^3 - 2x^2 + 36x - 63$ find the other two zeroes..
21) What must be subtracted from $8x^4 + 14x^3 - 2x^2 + 7x - 8$ so that the resulting polynomial is exactly divisible by $4x^2 + 3x - 2$.
22) Form a pair of linear equations for : The sum of the numerator and denominator of fraction is 3 less than twice the denominator. If the numerator and denominator both are decreased by 1, the numerator becomes half the denominator.
23) Amar gives Rs. 9000 to some athletes of a school as scholarship every month. Had there been 20 more athletes each would have got Rs. 160 less. Form a pair of linear equations for this.
24) Find the value of k so that the equations $x + 2y = -7$, $2x + ky + 14 = 0$ will represent concident lines.
25) Give linear equations which is coincident with $2x + 3y - 4 = 0$
26) What is the value of a for which $(3, a)$ lies on $2x - 3y = 5$
27) The sum of two natural nos. is 25 of their difference is 7. Find the nos.
28) For what value of K the following system of equation are parallel.
    $2x + Ky = 10$
    $3x + (k + 3)y = 12$
29) Determine the value of K for which the given system of o linear equations has infinitely many solutions:
    $Kx + 3y = K - 3$ $12x + Ky = K$
30) Solve for x and y $37x + 43y = 123$, $43x + 37y = 117$
31) If from twice the greater of two nos., 20 is subtracted, the result is the other no. If from twice the smaller no., 5 is subtracted, the result is the greater no. Find the nos.
32) The area of a rectangle remain the same if its length is increased by 7 cm and the breadth isdecreased by 3 cm. The area remains unaffected if length is decreased by 7 cm and the breadthis increased by 5 cm. Find length and breadth.
33) A two digit no. is obtained by either multiplying the sum of the digits by 8 and adding 1; or by multiplying the difference of the digits by 13 and adding 2. Find the no. How many such nos. are there.
34) A boatman rows his boat 35 km upstream and 55 km down stream in 12 hours. He can row 30 km. upstream and 44 km downstream in 10 hours. Find the speed of he stream and that of the boat in still water. Hence find the total time taken by the boat man to row 50 cm upstream and 77 km downstream.

35) The distance between school and metro station is 300 m. Kartikay starts running from school towards metro station, while Ashu starts running from metro station to school. They meet after 4 minutes. Had Kartikay doubled his speed and Ashu reduced his speed to third of the original they would have met one minute earlier. Find their speeds.

36) A mobile company charges a fixed amount as monthly rental which includes 100 minutes free per month and charges a fixed amount these after for every additional minute. Abhishek paid Rs. 433 for 370 minutes and Ashish paid Rs. 398 for 300 minutes. Find the bill amount under the same plain, if Usha use for 400 minutes.

ACTIVITY NO. 2

Topic : System of Linear Equations

Objective : To verify the conditions for consistency and inconsistency of a system of linear equations in two variables graphically.

Physics:

Q1. Two resistances when connected in parallel give resultant value of 2 ohm. when connected in series the value becomes 9 ohm. Calculate the value of each resistance.

Q2. How can three resistance of resistance 2Ω, 3 Ω, and 6 Ω be connected to give a total resistance of (i) 4 Ω, (ii) 1 Ω?

Q3. A piece of wire of resistance R is cut into five equal parts. These parts are then connected in parallel. If the equivalent resistance of this combination is R', then find the ratio $\frac{R}{R'}$.

Q4. How many 176 Ω resistors (in parallel) are required to carry a current of 5A when a potential difference of 220 V is applied across the combination?

Q5.A wire of resistance 5 ohms is bent in the form of a closed circle. What is the effective resistance between the two points at ends of any diameter of the circle?

Q6. An electric iron has a rating of 750 W, 220 V. Calculate:

i) the current passing through it, and

ii) its resistance, when in use.

Q7. A geyser is rated 1500 W, 250V. It is connected to 250V mains. Calculate (i) the current drawn, (ii) the energy consumed in 50 hours, and (iii) the cost of energy consumed at Rs 2.20 per kWh.

Q8. Two resistors of 4Ω and 6 Ω are connected in parallel. The combination is connected across a 6 volt battery of negligible resistance. Calculate (i) the power supplied by the battery, (ii) the power dissipated in each resistor.

Q9. An electric bulb is rated 220 V and 100W. Calculate the power consumed when it is operated on 110 V.

Q10. Two conducting wires of the same material and of equal lengths and equal diameters are first connected in series and then parallel in a circuit across the same potential difference. Find the ratio of heat produced in series and parallel combination.

Q11. Which has a higher resistance: a 50W – 220 V lamp or a 25W – 220 V lamp? Calculate the ratio of the resistances.

Q12. An electric iron consumes energy at a rate of 840 W when heating it at the maximum rate and 360 W when the heating it at the minimum. The applied voltage is 220 V. What is the value of current and the resistance in each case?

Q13. Two lamps, one rated at 40W – 220 V and the other at 60W – 220V, are connected in parallel to the electric supply at 220 V.

i) Draw a circuit diagram to show the connections.

ii) Calculate the current drawn from the electric supply source.

iii) Calculate the total energy consumed by the two lamps together when they operate for one hour.

Q14. Two resistors, with resistances 5 Ω and 10 Ω respectively are to be connected to a battery of emf 6V so as to obtain:

i) minimum current ii) maximum current

Q15. Resistance of a metal wire of length 1 m is 26 Ω at 20°C. If the diameter of the wire is 0.3 mm, what will be the resistivity of the metal at that temperature?

Chemistry :

Q1. Describe one activity to show a chemical reaction.

Q2. What is chemical equation? Give suitable example.

Q3. Balance the following equations :

i) $CH_4 + O_2 \longrightarrow CO_2 + H_2O$

ii) $Na + H_2O \longrightarrow FeCl_3 + H_2O$

iii) $Fe_2O_3 + HCl \longrightarrow FeCl_3 + H_2O$

iv) $C_2H_6 + O_2 \longrightarrow CO_2 + H_2O$

v) $Fe + O_2 \longrightarrow Fe_2O_3$

vi) $KClO_3 \longrightarrow KCl + O_2$

vii) $Fe + H_2O \longrightarrow Fe_3O4 + H2$

viii) $KMnO_4 + HCl \longrightarrow KCl + MnCl_2 + H_2O + Cl_2$

ix) $KOH + H_2SO_4 \longrightarrow K_2SO_4 + H_2O$

x) $KNO_3 \longrightarrow KNO_2 + O_2$

Q4. What is slaked lime? State its one use.

Q5.What is a voltameter? How can you make a working model of a voltameter. Describe the process of electrolysis of water using this model.

Q6. Name two compounds which are decomposed absorbing light. How these reactions are useful?

Q7. An iron Knife kept dipped in a blue copper sulphate solution turns the blue solution light green. Why?

Q8. A copper coil is kept in a solution of silver nitrate for sometime what will happen to the coin and the colour of the solution.

Q9. When potassium iodide solution is added to a solution of lead (ii) nitrate in a testtube, a precipitate is formed.

i) What is the colour of this precipitate.

ii) Name the compound precipitated.

iii) Write a balanced chemical equation for this reaction.

iv) What type of reaction is this?

Q10. What do you understand by precipitation reaction? Explain with suitable example.

Q11. Identify the substance oxidised and the substance reduced in the following reactions :

a) $CuO(s) + H_2(g) \longrightarrow Cu(s) + H_2O$

Biology: Make an investigatory project report on **"Diabetes mellitus"** emphasizing the following points :

i) Pancreas : Structure, Function and its secretions.
ii) Types of Diabetes.
iii) Causes and Symptoms.
iv) Treatment.
v) Prevention and Control.
vi) A Case Study.

Instructions : i) The project report should be handwritten in A-4 size pages and should be of 15-20 pages.

ii) The project report should be presented in the following order- a) Cover Page showing title of the project, student information, name of school and academic session. b) Acknowledgements c) Chapters with relevant headings d) Summary and Conclusion based on findings e) Bibliography

iii) Credit will be awarded to the original drawings, illustrations and creative use of materials.

iv) All photographs and sketches should be labelled and acknowledged.

Social Studies:

History :

I) Make a project file on the topic: "Contribution of Munshi Premchand towards Hindi Novels."

"Premchand's novels are filled with all kinds of powerful characters drawn from all levels of society." Keeping this in mind :-

* Read any two novels written by Premchand. (i) Godan (ii) Sevasadan (iii) Rangbhoomi (iv) Nirmala (v)Idgaha (vi) Gaban vii) Karmaboomi
* Write the summary and illustrate the topic with pictures. (500 words each)
* Project should not exceed more than 15 pages.
* Project should be handwritten.
* The sequence of the project should be as follows :

a) Acknowledgement b) Certificate c) Index d) Content e) Bibliography

II) Write answers of all these questions in your homework notebook.

Q1. Throw light on production during the proto industrialisation phase in Europe in 17th and 18th century with an example.
Q2 . Explain the miserable conditions of Indian weaven during the East-India compant's regime in the 18th Century.
Q3. What role did a jobber play for an industrialist?
Q4. Why did the aristocratic class prefer handmade products in 19th Century?
Q5. Name any three managing agencies in India before the First World War, what were their main functions?
Q6. Why did Manchesteo export to India decline after the First World War?
Q7. Explain, how power is shared among different organs of government?
Q8. State are prudential reason and moral reason for power sharing with an example from the India context.
Q9. Why the ethnic composition of Belgium was is very complex?
Q10. Differentiate between Horizontal and Vertical division of powers?

Geography :

I) Prepare a project on following 'Multipurpose Projects'.

* Nagarjuna Sagar Dam * Hirakud Dam

Also collect the information regarding their use and limitations.

Guidelines : Collect information from magazines, newspapers, reference books and internet.
Also paste the pictures relevant to the topic.

Objective : To familiarize the students with the term 'Multipurpose'.
To bring awareness among the students about the usage of water resources.

Skills Developed : Spread awareness among the students about significance of water and to avoid wastage of water resources.

Instructions : * The Project should be 10 to 15 pages.

- **The Project should be presented in the following order – (a) Cover Page showing title of the project. (b) Index (c) Acknowledgment (d) Bibliography.**

II) Write answers of all these questions in your homework notebook.

Q1. Give example of non- renewable resources.
Q2. Define Resources.
Q3. Classify resources on the basis of ownership.
Q4. Classify resources on the basis of status of development.
Q5. What is sustainable development?
Q6. What is Resource Planning?
Q7. Write about the Alluvial Soil?
Q8. With the help of map explain the distribution of soil types in India?
Q9. Difference between Flora and Fauna.
Q10. How are species classified by IUCN. Explain them.
Q11. State some measure of forest and wildlife conservation.
Q12. Explain the classification of forest in India.
Q13. How have human activities affected the depletion of flora and fauna? Explain.

Economics:

I) **Topic :** Prepare a project file on "Use of Banking Service i.e How to open and operate a bank account, concept of KYC etc" .

Method : Visit a bank and enquire the procedure to open a bank account, operate it and facilities associated with it. Stick an account opening form, deposit slip, withdrawal form, cheque pay in slip etc. duly filled by you. Write your experiences.

Objective : To know about the working of banks in India and improve the ability of understanding banking service.

II) **Write answers of all these questions in your homework notebook.**

Q1. What is a National Income?
Q2. Define per Capita Income?
Q3. What is Birth Rate?
Q4. World bank uses..... to compare nation.

Q5. What is meant by 'Sustainable Development'.
Q6. "Development for one, may be destruction for other' explain with the help of an example.
Q7. "Per Capita Income of Country A is more than Country B, but Country B ranks higher in development index." Comment.
Q8. With the help of the example explain that development goals are different for different persons.
Q9. What is the drawback of using per capita income to compare nation?
Q10. What is indicated by high birth rate and death rate in an economy?
Q11. What is the importance of public facility specially in an economy like India.
Q12. Write short notes on HDI explaining that why is it most suitable to compare nation.

Computer: Q1. Define the following in atleast 25 words:

1. DNS 2. Routers 3. WWW 4. ISP 5. Backbone Network 6.Primary Key 7.Reports 8. Form 9. Gateway 10. NewsGroup 11. TELNET 12. IETF 13. WI-MAX.

Q2. Explain any 10 protocols used in INTERNET. Explain each one of them in 25 words.
Q3. Design a database for "Railway Reservation System" . Specify the fields .
Mention their data type and field properties. Specify which attribute can be designated as primary key.
Q4. Write 5 advantages of DBMS.
Q5. What is null and default values in DBMS. Explain with an example.
Q6. What are validation rules and validation text?
Q7. Write the steps(each part—web crawler, indexing and search algorithm) to perform search in a search engine.

French:

Q1. Faites un article sur "Mon héro : Bhagat Singh".

Q2. Ecrivez une histoire d' un film ce que vous avez vu récemment.

Note : Do not use Google Translator.

Principal

Vice-Principal