

ASCENT INTERNATIONAL SCHOOL, GR. NOIDA
HOLIDAY HOMEWORK (2017 - 18)
CLASS - X

ENGLISH

1. Answer the following questions briefly:-

- a) What were the qualities of the two boys that impresses the narrator?
- b) Appearances are deceptive. Discuss with reference to the two boys.
- c) What prompted Mrs. Packletide to shoot a tiger? Did she succeed in her plan?
- d) What impression do you form about Coachman Ali on reading the story, "The Letter"?
- e) How did the post office officials treat Ali?
- f) Give out the theme of the poem "Mirror"?

2. Value Base Questions (Write in about 120 words)

- a) "In the world of art , it is not enough to have just talent, you also need to know how to exploit it successfully." Comment on this statement with reference to the poem, "The Frog and the Nightingale."
- b) Nowadays hunting of wild animals, though banned, as is a craze among some people. There are many reasons behind hunting animals. What are they? How can it be stopped? Give your answer with reference to 'Mrs. Packletide's Tiger'.
- c) What lesson do you learn from the two boys on ' Two Gentlemen of Verona'.

3. Long Questions (Write in about 150 words)

- a) You are the Postmaster in the story 'The Letter'. You & Lakshmi Das leave the letter on Ali's grave and return home feeling very sad & remorseful. Write a diary page describing your feelings of guilt & how you have come to realize the importance of a letter.
- b) Both Nicola & Jacob have grown up & are successful and respectable citizens. They were asked to inaugurate a 'Home' for the abandoned

children. Imagine yourself to be Nicola, address the gathering expressing your views on 'Child Care'.

4. Writing (150 words)

- a) Rivers are considered sacred in our country. But they have been reduced to drains in the cities. You are deeply concerned about the plight of our rivers. As Nikhil/Neha write a letter to the editor voicing your concern regarding the plight of a river near your city.
- b) Write a letter to the District Magistrate drawing his attention to the nuisance of loud speakers in your locality.

5. Read Chapters 1 to 10 of the novel 'The Dairy of a Young Girl'.
On the basis of novel reading write a review in about 300 words.

MATHS

REAL NUMBER

1. Check whether the number 15^n , where n is a natural number ends with digit 0. Justify your answer.
2. Find the largest positive integer that will divide 1385, 1457 and 1628 leaving remainders 5, 2 and 8 respectively.
3. Show that only one of the numbers n , $n + 2$ and $n + 4$ is divisible by 3 where n is any positive integer.
4. Prove that the square of any positive integer is either of the form $5q$ or $5q + 1$ or $5q + 4$ for some integer q .
5. In a seminar, the number of participants in Hindi, English and Mathematics are 60, 84 and 108 respectively. Find the minimum number of rooms required if in each room the same number of participants is to be seated and all of them being in the same subject.
6. If two positive integers a and b are written as $a = x^3y^2$ and $b = xy^3$, where x, y are prime numbers, that HCF (a, b) is
7. If two positive integers p and q can be expressed as $p = ab^2$ and $q = a^3b$; where a, b being prime numbers, find LCM (p, q).
8. The least number that is divisible by all the number from 1 to 10 (both inclusive)
9. The product of two consecutive positive integers is divisible by 2: Is this statement true or false? Give reason.
10. The numbers 525 and 3000 are both divisible only by 3, 5, 15, and 25 and 75. What is HCF (525, 3000)? Justify your answer.

11. A rational number in its decimal expansion is 327.7081. What can you say about the prime factors of q , when this number is expressed in the form $\frac{p}{q}$. Give reasons.
12. Show that cube of any positive integer is of the form $4m, 4m + 1$ or $4m + 3$, for some integer m .
13. Prove that $\sqrt{3} + \sqrt{5}$ is irrational.
14. Show that 12^n cannot end with the digit 0 or 5 for any natural number n .
15. Prove that $\sqrt{p} + \sqrt{q}$ is irrational, where p and q are primes.

LINEAR EQUATION IN TWO VARIABLES

16. Draw the graphs of the equations $x = 3, x = 5$ and $2x - y - 4 = 0$. Also find the area of the quadrilateral formed by the lines and the x -axis.
17. Are the following pair of linear equations consistent? Justify your answer.
 $2ax + by = a$ and $4ax + 2by - 2a + 0$; $a \neq 0, b \neq 0$
18. For which value(s) of k , do the pair of linear equations $kx + y = k^2$ and $x + ky = 1$ have
 = 1 have (i) no
 solution (ii) infinitely many solutions (iii) a unique solution ?
19. Solve the following pair of linear equations by the substitution method:
 i) $x + y = a + b$ ii) $2x + 3y = 9$
 $ax - by = a^2 - b^2$ $3x + 4y = 5$
20. Solve the following pair of linear equations by the elimination method:
 i) $\frac{2x}{a} + \frac{y}{b} = 2$ and $\frac{x}{a} - \frac{y}{b} = 4$ ii) $x + y = a + b$ and $ax - by = a^2 - b^2$
21. A railway half ticket costs half the full fare, but the reservation charges are the same on a half ticket as on a full ticket. One reserved first class ticket from station A to B costs Rs 2350. Also, one reserved first class ticket and one reserved first class half ticket from A to B costs Rs 3810. Find the full first class fare and also the reservation charges for a ticket.
22. In a competitive examination, one mark is awarded for each correct answer while $\frac{1}{2}$ mark is deducted for every wrong answer. Jayanti answered 120 questions and got 90 marks. How many questions did she answer correctly?
23. If $x = a$ and $y = b$ is the solution of the equation of the equation $x - y = 2$ and $x + y = 4$, then the value of a and b are, respectively
24. Aruna has only Rs. 1 and Rs. 2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is Rs 75, then the number of Rs. 1 and Rs. 2 coins are, respectively
25. The line represented by $x = 7$ is parallel to the X -axis, justify whether the statement is true or not.
26. If $(x + 1)$ is a factor of $2x^3 + ax^2 + 2bx + 1$, then find the value of a and b given that $2a - 3b = 4$.

27. If the angle of a triangle are x , y and 40° and the difference between the two angles x and y is 30° . Then, find the value of x and y .
28. Determine graphically, the vertices of the triangle formed by the lines $y = x$, $3y = x$ and $x = y = 8$
29. Determine, algebraically, the vertices of the triangle formed by the lines $3x - y = 3$, $2x - 3y = 2$ and $x - 2y = 8$.
30. A shopkeeper sells a saree at 8% profit and a sweater at 10% discount, thereby, getting a sum Rs. 1008. If she sold the saree at 10% profit and the sweater at 8% discount, she would have got Rs. 1028 then find the cost of the saree and list price (price before) of the sweater.

POLYNOMIALS

If the zeroes of the quadratic polynomial $x^2 + (a + 1)x + b$ are 2 and -3, then

31. If one of the zeroes of the cubic polynomial $ax^3 + bx^2 + cx + d$ is zero, the product of then other two zeroes is
32. Are the following statements 'true' or 'false'? Justify your answer.
- If the zeroes of a quadratic polynomial $ax^2 + bx + c$ are both positive, then a , b and c all have the same sign.
 - If the graph of a polynomial intersects the X - axis at only one point, it cannot be a quadratic polynomial.
 - If the graph of a polynomial intersects the X - axis at exactly two points, it need not be a quadratic polynomial.
 - If two of the zeroes of a cubic polynomial are zero, then it does not have linear and constant terms.
 - If all the zeroes of a cubic polynomial are negative, then all the coefficients and the constant term of the polynomial have the same sign.
 - If all three zeroes of a cubic polynomial $x^3 + ax^2 - bx + c$ are positive, then atleast one of a , b and c is non - negative.
 - The only value of k for which the quadratic polynomial $kx^2 + x + k$ has equal zeroes is $\frac{1}{2}$.
33. If the zeroes of the cubic polynomial $x^3 - 6x^2 + 3x + 10$ are of the form a , $a + b$ and $a + 2b$ for some real numbers a and b , find the values of a and b as well as the zeroes of the given polynomial.
34. Find k , so that $x^2 + 2x + k$ is a factor of $2x^4 + x^3 - 4x^2 + 5x + 6$.also, find all the zeroes of the two polynomials.
35. For which value of a and b , the zeroes of $q(x) = x^3 + 2x^2 + a$ are also the zeroes of the polynomial $p(x) = x^5 - x^4 - 4x^3 + 3x^2 + 3x + b$? Which zeroes of $p(x)$ are not the zeroes of $q(x)$?

Note : Use A - 4 size sheets to do the homework.

SCIENCE

PHYSICS

1. What is meant by saying that a potential difference between two points is 1V?
2. Why are coil of electric toasters and electric irons made of an alloy rather than a pure metal?
3. 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' , find the ratio R/R' .
4. (a) Why an ammeter likely to burn out if you connect in parallel?
(b) Why is series arrangement not found satisfactory for domestic lights?
5. A wire of resistivity ' ρ ' is pulled to doubled its length. What will be its new resistivity?
6. Why is the tungsten used almost exclusively for filament of electric lamps?
7. n resistors each of resistance R are first connected in series and then in parallel. What is the ratio of the total effective resistance of the circuit in series combination and parallel combination?
8. Following table gives the resistivity of three samples in (Ωm)

Sample	A	B	C
Resistivity in Ωm	1.6×10^{-6}	7.5×10^{-7}	44×10^{-6}

- Which of them is a good conductor? And which of them is an insulator? And why?
9. Number of electric lamps designed to be used on a 220V electric supply are rated 10W each. Calculate the number of lamps that can be connected in parallel to each other across the two wires of 220V line if the maximum allowable current is 5A.
 10. In the house of Ram, there are 20 incandescent bulbs each of 100W, three geysers each of 2000W and 20 tubes each of 40W. All these appliances work for 5 hours in a day. Every month, he pays heavy amount as electricity bill. His son Sham studying in X standard asked his father to replace all incandescent bulbs with CFL bulb each of 40W to save electricity.
 - a) How much units of electricity are saved per month by replacing incandescent bulbs with CFL?
 - b) What values are shown by Sham?

BIOLOGY

1. What are the final products after digestion of carbohydrates and proteins?
2. Write one feature which is common to each of the following pairs of terms/organs.
 - a) Glycogen and starch
 - b) Chlorophyll and haemoglobin
 - c) Gills and lungs
 - d) Arteries and veins
3. Why is the inner wall of alimentary canal not digested although the digestive enzyme can digest all the materials that make calls?
4. State the two vital functions of the human kidney. Name the procedure used in the working of artificial kidney.

5. If one holds his breath after expiration about 30 sec., would there still be occurring any exchange of respiratory gases in the lungs during this period? Explain.
6. Which part of the human heart is considered as pace-maker? Why is it so called?
7. How are the lungs designed in human beings to maximize the area for exchange of gases?
8.
 - a) "The breathing cycle is rhythmic whereas exchange of gases is a continuous process." Justify this statement.
 - b) What happens if conducting tubes of circulatory system develops a leak? State in brief, how could this be avoided?
 - c) How opening and closing of stomata takes place?
9.
 - a) Draw a sectional view of the human heart and label on it- Aorta, Right ventricle and Pulmonary veins.
 - b) State the functions of the following components of transport system:
 - i) Blood
 - ii) Lymph
10.
 - a) Draw a schematic representation of transport and exchange of oxygen and carbon dioxide during transportation of blood in human beings and label on it:
Lung capillaries, Pulmonary artery to lungs, Aorta to body, Pulmonary veins from lungs.
11.
 - a) Describe the mechanism of breathing in human beings..
 - b)
 - i) Under normal conditions, what is the rate of breathing per minute?
 - ii) Why does the rate of breathing exercise by 20 to 25 times during vigorous exercise?
12. Draw a diagram of human respiratory system and label the following :
 - a) Part where air is filtered by fine hair and mucus
 - b) Part which terminates in balloon-like structures.
 - c) Balloon- like structures where exchange of gases takes place.

CHEMISTRY

1. A silver spoon is kept immersed in aqueous solution of copper sulphate. What changes would be observed in spoon as well as in the solution.
2. Which one is chemical change- fermentation of fruit juice or diluting fruit juice?
3. A silver white metal in form of ribbon when ignited gives white powder. When water is added to it powder Y, it partially dissolves to form a substance Z which is used as an antacid.
 - i) Name the metal X and white powder Y.
 - ii) What is substance Z?
 - iii) Write the chemical equation taking place.
4. Select which is the combination reaction or double displacement reaction:
 - a) Addition of water in quick lime
 - b) Heating of ferrous sulphate solution
 - c) Putting of iron nail in copper sulphate solution
 - d) Mixing solution of sodium sulphate and barium chloride

- e) Lead nitrate solution is mixed with Potassium Iodide solution
5. Which gas is released after fermentation? How will you test the presence of this gas?
 6. A housewife wanted her house to get white washed. She brought 10 Kg of quick lime from the market and dissolved in 30 litres of water. She noticed that water started boiling even though it was not being heated? Give reason for her observation. Write the equation and name the product formed.
 7. a) Write the chemical name of coating that forms on silver article when exposed to moist air. Write reaction involved.
b) Explain what is galvanization? What purpose is served by it?
 8. a) What change in colour will you observe when iron nails are kept in copper sulphate solution for 30 minutes?
b) If hydrochloric acid drops fall down on zinc metal object, what changes will you observe ,happen to its surface? Write the reaction.
c) What will be change in colour observed in this reaction- $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$
 9. Complete the reaction and balance them-
a) Barium chloride reacts with aluminium sulphate
b) When a solution of potassium chloride e is mixed with silver nitrate solution.
c) Magnesium reacts with hydrogenchloride
d) Pottasium bromide + Barium iodide
 10. In electrolysis of water:
a) Name the gas collected at cathode and anode respectively.
b) Why is the volume of one gas collected at one electrode is double that at the other? Name the gas.
c) How will you test the evolved gases?
 11. A metal X acquires a green coating on its surface on exposure top air.
a) Identify the metal X? Name the process responsible for the change.
b) Name and write chemical formula of green coating formed on metal.
c) List two important methods to prevent the process.
 12. All combustion reactions are oxidation reactions. Justify by giving example of natural gas.
 13. Why are eatables preferably packed in aluminium foil?
 14. Identify the substance oxidised and reduced in following equation
a) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
b) $\text{H}_2\text{S} + \text{Cl}_2 \rightarrow \text{HCl} + \text{S}$
 15. State one example each characterized by the following along with chemical equation
a) Change in state
b) Evolution of gas
c) Change in temperature

SOCIAL SCIENCE

ECONOMICS

1. Difference between Economic and Non -Economic Activities.
2. Is per- capita income is a true measure of economic development.
3. Prepare a flowchart to show the comparative study of human Development index (HDI) of any seven countries.
4. Prepare a Flow chart to show the Interdependence of various sectors in the Indian Economy.
5. How can more employment opportunities be created?

CIVICS

1. How is Belgium different from Sri Lanka? Give reasons.
2. Write three objectives of power sharing.
3. What do you understand by majoritarianism?
4. How is India a federal country? Explain with examples.
5. Differentiate between coming together and holding together federations.

HISTORY

1. Write a notice from the Bengal smoke Nuisance commission to the owner of a factory pointing out the dangers and harmful effects of Industrial smoke.
2. Imagine that you are a young person living in a chawl. Describe one day in your life.
3. In many cities of India today, there are moves to clear away slums where the poor people live. Discuss whether or not it is the responsibility of the the Government to make arrangements for houses for these people.

GEOGRAPHY

1. Point out five locations from each category in the map- a) Reserved forest of India, b) protected forest c) unclassed forest d) place of Chipko movement and Beej Bachao Andolan.
2. Find out stories prevalent in your region which are about the harmonious relationship between human beings and nature.
3. Write a short essay on any practices which you may have observed and practiced in your everyday lives that conserve and protect the environment around you.

HINDI

1. 'हरिहर काका' पाठ के आधार पर उत्तर लिखिए।
 - क. गाव की अपेक्षा ठाकुरबारी का विकास कैसे हुआ ?
 - ख. 'नेता जी के पास राजनीत की जादुई छडी है' , इस कथन को स्पष्ट किजिए।
 - ग. हरिहर काका जीते जी किसी को अपने जाएजाद का स्वामी न बनाने का निर्णय क्यों लिया ?
2. 'बडे भाई साहब ' पाठ के आधार पर उत्तर लिखिए।
 - क. बडा भाई मेहनत करके भी उत्तीर्ण क्यों नही हो पाता ? उसका व अपना मत लिखिए।
 - ख. बडे भाई ने किस तर्क के आधार पर लेखक को असफल खिलाडी कहा ?
 - ग. छोटे भाई की शालीनता किस बात में थी ? क्या उसने शालीनता निभाई ?
 - घ. अधिक मुल्य किस बात का है – पठाई का , बडे होने का , अनुभव का
3. 'साखी ' और 'मीरा' पाठ के आधार पर उत्तर लिखिए।
 - क. विरह को भुवंमग क्यों कहा गया है? भुवंमग का मंत्र से क्या संबंध है ?

ख. कबीर के अनुसार राम के दर्शन के लिए क्या आवश्यक है?

ग. कबीर के अनुसार निदंक कौन होता है ? उन्होने उसे अपना सबसे बड़ा सुभचिंतक क्यों माना है?

घ. मीरा कृष्ण को अपना प्रियतम मानती है । उनकी भक्ति में प्रेम पुट अधिक है । सिद्ध कीजिए ।

ङ. मीरा बाई और आधुनिक मीरा ने अपने-अपने अराध्यदेव से मिलने के लिए क्या क्या युक्तियाँ अपनाई ?

लेखन

4. खेल का सामान बेचने वाली कंपनी 'स्पोर्ट्स इंटरनेशनल' से आपने जो सामान मंगवाया था , वह घटिया स्तर का और महंगा भेजा गया। कंपनी के प्रबंध निदेशक को इसकी शिकायत करने हुए पत्र लिखिए।

5. सहायक अध्यापक के पद के लिए शिक्षा निर्देशक के नाम आवेदन पत्र लिखिए।

6. 'गाँव से शहरो में पलायन' विषय पर अपने विचार को कलमवद्ध कीजिए।

COMPUTER SCIENCE

1. Collect the photographs of your family members and make a collage of the same. Design a Birthday card for your friend.
 - a) Add image of a flower and text to the card
 - b) Fill the background with the texture format
2. Make abstract painting depicting Independence Day. Scan the image of any car and transform the image and use rotating features of GIMP.
3. Make a collage depicting the different seasons such as Rainy, Summer, Autumn, Winter. Transform an image using perspective tool.
4. Visit the school website www.aisgrnoida.org for the content including photographs. Your poster should contain the following things:
 - School Logo & Name
 - Photographs
 - Quotes
 - Name and Class
5. Create a PowerPoint presentation on "Cash Less Transaction" showing its journey before and after its adoption by Nation.

You can mail your project (PPT and POSTER) on the following ID : sengardipti@gmail.com

6. Complete all the application based questions (chapter-2, pg. no.-51) and Lab Session (pg. no.-52) with good picture based presentation.

Note: Q. NO.1 to 4 and Q.NO.6 you must do in practical file along with softcopy to be mailed.