APEEJAY SCHOOL
MAHAVIR MARG, JALANDHAR
HOLIDAYS HOMEWORK 2019
CLASS X

ENGLISH:

Q1. You are Priyanka Chopra, resident of 20, Paradise Colony, Mayur Vihar, Panchkula. There has been an alarming rise in accidents in your neighbourhood, especially on National Highway. More than 11 deaths have been reported in the previous month alone, yet the number is on the rise. Write a letter to the Editor, The Tribune, Chandigarh, expressing your concern and suggestion.

Q2. You are Hardeepak Singh, a brilliant student who has completed his class X from a small town in Himachal Pradesh. You friend has shown you an advertisement about a coaching centre for IIT-JEE. Write a letter to the Director of Surya Coaching Centre asking for more details.

Q3. You are Priya Khanna, librarian of your school, Aligarh. You have been asked to place an order for some books for the school library. Write a letter to the Sales Manager, Light House, Main Road, Noida, placing an order for the books that you need.

Q4. Write a letter to M/s. Captain Sports House, Jalandhar complaining that the items sent by them were not those you had ordered for. Ask for replacement. You are Varun Joshi, Sector-20, Chandigarh.

Q5. You are the librarian of Amla Public School. You had placed an order for textbooks with M/s Dhanpati & Sons. Since the books did not arrive on time, you have decided to cancel the order. Write a letter to the Manager, M/s Dhanpati & Sons, Chennai, cancelling the order.

Q6. Due to growing materialism, there is a shift in the values of youngsters. They continue pestering their parents for items like mobile phone, digital camera, bike, etc. for personal use even though there is no genuine need for these gadgets. Write an article in about 120 words expressing your views on the same. You are Sunil/Swati.

Q7. You are Nutan/Naman. Write an article on the topic 'India – A Tourist's Paradise' in 100-120 words.

Suggested Value Points:

- A vast country
- Diversity of culture
- Variety of races
- Climate – hills, rivers, plains, deserts
- Places of pilgrimage
- Huge coastline, friendly beaches
- Modern cities

GENERAL SCIENCE:

1. Completion of practical files of General Science of all experiments of first term and second term.(Compulsory for all)

2. Creative activity in General science to be performed.

a) Roll numbers- 1 to 15 Biology- By a creative activity demonstrate the functioning of any one organ system of the body (Digestive system, Respiratory system, Excretory system, Circulatory system etc.)

b) Roll numbers- 16 to 30 Physics- Construct a circuit by using a cardboard, battery, connection wires and L.Ed.

c) Roll numbers- 31 0nwards Chemistry- To make decoration pieces by using Plaster of Paris and make them presentable by colouring.

3. Assignment- There are 30 questions in assignment (10 questions each of Physics, Chemistry and Biology).

Compulsory for all and to be written in the class work note books of Physics, Chemistry and Biology separately.

Assignment Biology- (10 questions)

1) Name the cell organelle in which breakdown of pyruvate occurs to give carbon- di- oxide, water and energy.

2) Which component of food is not digested and why?

3) Give one similarity and two differences between pepsin and trypsin.

4) Design and experiment to demonstrate carbon-di-oxide is released in respiration.

5) Where does digestion of fats occur in body? How emulsification of fats is helpful in the process of digestion. Name the enzyme which helps in it.

6) Differentiate between Arteries and Veins. (Write 6 points)

7) Give reasons for the following-

a) Auricles have thin walls and less muscles as compared to ventricles.
b) Right kidney is little lower than than left kidney.
c) Left lung is smaller than right lung.
d) Cartilaginous rings are present in trachea.
e) Epiglottis is present over glottis.

8) Explain the following-

a) Mechanism of breathing.
b) Transport of respiratory gases in blood.
9) **a)** Draw the structure of nephron and label the following parts in it-
a) Renal artery **b)** Bowmann's capsule **c)** Glomerulus **d)** Collecting duct.
b) Explain the mechanism of Urine formation.
10) Draw the sectional view of human heart and label on it –
a) Doral Aorta, Pulmonary artery, Vena cava, Left Ventricle.
b) Why is double circulation of blood necessary for human beings?

Assignment Physics- (10 questions)

1) What is the difference between conductor and insulator?
2) What is the difference between open and closed circuits? Draw diagrams of both.
3) Define parallel connection and series connection.
4) What are the disadvantages of heating effect of current?
5) What is electric current?
6) What are the advantages of heating effect of current?
7) What is potential difference? Define it and give its unit?
8) A wire is 1 m long, 0.2mm in diameter and has resistance 10 ohms. Calculate the resistivity.
9) Calculate the energy consumed by 120 W toaster in 20 minutes
10) Define the terms Watt and Volts.

Assignment Chemistry - (10 questions)

1) Why is Plaster of Paris stored in moisture proof containers?
2) What do you mean by neutralization reaction? Give to examples.
3) Mention two uses of baking soda and washing soda.
4) Why does a milk man add small amount of baking soda to fresh milk to shift the pH of fresh milk from 6 to slightly alkaline?
5) Why do acids not show acidic behavior in absence of water?
6) Define different type of chemical reactions and give examples of each.
7) Why is photosynthesis considered endothermic reaction? Give equation.
8) In electrolysis of water, why is the volume of gas collected over on electrode double that of other electrode?
9) What happens when water is added to solid calcium oxide taken in a container? Write the chemical formula of the same.
10) **(a)** Give one use of quick lime.
(b) Give three types of decomposition reactions.
(c) Name the compound used for testing of carbon-di-oxide gas.

Computer Science:

Make a "Report File" on any 8 web pages in HTML on following topics:

1. Hard work is the only key to success
2. Failure is good for Success
3. The importance of Positive Thinking
4. Summer Vacation
5. Childhood
6. Education Now a Fundamental Right
7. Examination System
8. Punctuality
9. Importance of Newspapers
10. India- A Country of Festivals
11. Junk Food – Enemy of Health
12. Swachha Bharat Abhiyan

Web pages may contain images, hyperlinks, text colours, text styles, headings, background colours or images etc.

Note: "Report File" should contain

- Title Page containing name of the school, submitted to, submitted by, subject.
- Acknowledgement.
- Hardcopy of bowser window or output of each. (Black & White or Coloured)
- Hardcopy of HTML code of each. (Black & White or Coloured)

SOCIAL SCIENCE:

1. Every student has to compulsorily undertake **any one project** on the following topics as guided by their subject teachers:

Consumer Awareness
OR
Social Issues
OR
Sustainable Development

2. Objective: The overall objective of the project work is to help the students gain an insight and pragmatic understanding of the theme and see all the Social Science disciplines from interdisciplinary perspective. It should also help in enhancing the Life Skills of the students.

Students are expected to apply the Social Science concepts that they have learnt over the years in order to prepare the project report.

If required, students may go out for collecting data and use different primary and secondary resources to prepare the project. If possible, various forms of art may be integrated in the project work

3. The distribution of marks over different aspects relating to Project Work is as follows:

S. No.	Aspects	Marks
a.	**Content accuracy, Originality and Analysis**	**2**
b.	**Presentation and Creativity**	**2**
c.	**Viva Voce**	**1**

4. The Project Report should be handwritten by the students themselves without incurring too much expenditure.

PUNJABI:

ਪੰਜ ਵਰਗੀਕ੍ਰਿਤ ਅਤੇ ਪੰਜ ਵਪਾਰਕ ਇਸ਼ਤਿਹਾਰ ਕਾਪੀਆਂ ਤੇ ਲਿਖੋ।

ਪੀ.ਏ.-2 ਦੇ ਸਿਲੇਬਸ ਦੀ ਦੁਹਰਾਈ ਕਰੋ ।

SANSKRIT:

1. समास :- बहुब्रीहि तथा ध्वं-धवं के २५ - २५ उदहारण लिखने हैं।
2. प्रत्यय :- मातुप , ठक ,त्व , तल ,टॉप , द्वीप ले २५ -२५ उदहारण लिखने हैं |

MATHS:

1. Solve the Assignment of 50 extra questions , given by the teacher, from the chapters…….3(Linear Equations), 2(Polynomials), 8(Trigonometry) and 6(Triangles); in a separate note – book.
2. Do the practical activities – 1(Linear Equations) and 2(Quadratic Polynomials) , from the book " Maths is Fun " , in your Practical File.
3. Revise the Chapters…. 3, 2, 8 and 6 , from the text book thoroughly.

ASSIGNMENT (MATHS)

1 If $tan\emptyset = \frac{12}{13}, evaluate\ \frac{2sin\emptyset\ cos\emptyset}{cos^2\emptyset - sin^2\emptyset}$

2 If 5 $\tan\propto = \frac{4}{5}$, show that $\frac{5\ sin\propto - 3\ cos\propto}{5\ sin\propto + 2\ cos\propto} = \frac{1}{6}$

3 If $tan\theta + \frac{1}{tan\theta} = 2$ find the value of $tan^2\theta + \frac{1}{tan^2\theta}$

4 If $cot\emptyset = \frac{1}{\sqrt{3}}$ show that $\frac{1-cos^2\emptyset}{2-sin^2\emptyset} = \frac{3}{5}$

5 If $3cos\emptyset - 4sin\emptyset = 2cos\emptyset + sin\emptyset$ then find $tan\emptyset$

6 If $secA = \frac{5}{4}$, verify that $\frac{3sinA-4sin^3A}{4cos^3A-3cosA} = \frac{3tanA-tan^3A}{1-3tan^2A}$

7 Solve each of the following equations for $0^0 < \emptyset < 90^0$

(i) $2cos3\emptyset = 1$

(ii) $2sin2\emptyset = 1$

(iii) $tan5\emptyset = 1$

8 Find an acute angle $\emptyset$ when $\frac{cos\emptyset-sin\emptyset}{cos\emptyset+sin\emptyset} = \frac{1-\sqrt{3}}{1+\sqrt{3}}$

9 Verify that $4\ sin^4 30^0 + cos^4 60^0\ - 3\ cos^2 45^0 - sin^2 90^0\ = 2$

10 Given that sin(A+B)= sinA cosB+ cosA sinB find the value of $sin75^0$

11 If $A + B = 90^0$, prove that $^2\ \frac{tanAtanB+tanAcotB}{sinAsecB} - \frac{sin^2B}{cos^2A} = tanA$

12 If $sec5A = cosec(A + 36^0)$where 5A is an acute angle, find the value of A

13 If A,B and C are interior angles of ΔABC. Prove that $tan\frac{B+C}{2} = cot\frac{A}{2}$

14 If θ is a positive acute angle such that $sec\theta = cosec\ 60°$, find the value of $2cos^2\theta - 1$

15 Evaluate $\frac{\cos 58°}{\sin 32°} + \frac{\sin 22°}{\cos 68°} - \frac{\cos 38° cosec\ 52°}{tan18° \tan 35° \tan 60° \tan 72° \tan 55°}$

16 Prove $tan^2\emptyset + cot^2\emptyset + 2 = sec^2\emptyset\ cosec^2\emptyset$

17 Prove $cos^4A - cos^2A = sin^4A - sin^2A$

18 Prove (a) $\frac{tan^2A-tan^2B}{1} - \frac{cos^2B-cos^2A}{cos^2Bcos^2A} = \frac{sin^2A-sin^2\ B}{cos^2A\ cos^2B}$

(b) $cot^2A\ \frac{secA-1}{1+SinA}\ + sec^2A\ \frac{sinA-1}{1+secA}\ = 0$

19 If $sec\emptyset + tan\emptyset = p$, $show\ that\ \frac{p^2-1}{p^2+1} = sin\emptyset$

20 If $\frac{cos\alpha}{cos\beta} = m\ and\ \frac{cos\alpha}{sin\beta} = n$ then show that $(m^2 + n^2)cos^2\beta = n^2$

21 Find the zeroes of the polynomial $f\ x\ = x^3 - 5x^2 - 2x + 24$ if it is given that product of its two zeroes is 12.

22 What must be subtracted from $8x^4 + 14x^3 - 2x^2 + 7x - 8$ so that the resulting polynomial is exactly divisible by $4x^2 + 3x - 2$

23 Find the values of $a\ and\ b$ so that $x^4 + x^3 + 8x^2 + ax + b$ is divisible by $x^2 + 1$

24 Find all the zeroes of the polynomial$f\ x\ = 2x^4 - 2x^3 - 7x^2 + 3x + 6$ if its two zeroes are $-\sqrt{\frac{3}{2}}$ and $\sqrt{\frac{3}{2}}$

25 Obtain all zeroes of $f\ x\ = x^3 + 13x^2 + 32x + 20$, if one of its zeros is -2

26 If $\alpha\ and\ \beta$ are the zeroes of the quadratic polynomial$p\ x\ = x^2 - 5x + 4$, find the value of $\frac{1}{\alpha} + \frac{1}{\beta} - 2\alpha\beta$

27 If $\alpha\ and\ \beta\ are$ the zeroes of the quadratic polynomial$p\ s\ = 3s^2 - 6s + 4$, find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} + 2\ \frac{1}{\alpha} + \frac{1}{\beta}\ + 3\alpha\beta$

28 Solve $4x + \frac{6}{y} = 15\ and\ 6x - \frac{8}{y} = 14$ and hence find p if y=px-2

29 Solve $\frac{1}{2(2x+3y)} + \frac{12}{7(3x-2y)} = \frac{1}{2}\ and\ \frac{7}{2x+3y} + \frac{4}{3x-2y} = 2$

30 Solve $37x + 41y = 70$

$41x + 37y = 86$

31 Solve $x + y = a - b$

$ax - by = a^2 + b^2$

32 Find the values of p and q for which the following system of equations has infinite number of solutions

$2x + 3y = 7$

$p + q\ x + \ 2p - q\ y = 21$

33 Determine the values of m and n so that the following system of linear equations have infinite number of solutions $2m - 1\ x + 3y - 5 = 0$

$3x + \ n - 1\ y - 2 = 0$

34 X takes 3 hours more than Y to walk 30 km. But if X doubles his pace, he is ahead of Y by $1\frac{1}{2}$ hours.Find their speed of walking.

35 Find the four angles of a cyclic quadrilateral ABCD in which $\angle A = \ 2x - 1\ °,\ \angle B = \ y + 5\ °,\ \angle C = \ 2y + 15\ °and\ \angle D = (4x - 7)°$

36 Solve the following system of linear equations of graphically $x - y = 1\ and\ 2x + y = 8$. Shade the area bounded by these two lines and Y-axis. Also determine the area.

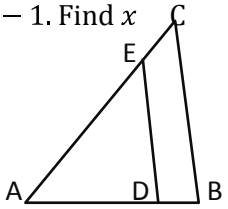
37 Draw the graphs of the following equations $2x - y = 2$, $4x + 3y - 24 = 0$ $and\ y + 4 = 0$. Write the vertices of the triangle so obtained.

38 The sum of a two digit number and the number obtained by reversing the order of its digits is 121 and the two digits differ by 3. Find the number.

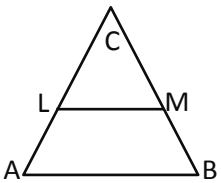
39 The numerator of a fraction is 4 less than the denominator. If the numerator is decreased by 2 and the denominator is increased by 1 then the denominator is eight times the numerator. Find the fraction.

40 Two years ago, a father was five times as old as his son. Two years later, his age will be 8 more than three times the age of son. Find the present ages of father and son.

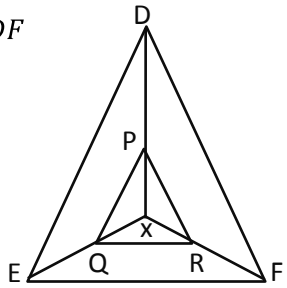
41 In the figure, $DE \parallel BC. If\ AD = x, DB = x - 2, AE = x + 2\ and\ EC = x - 1$. Find x



42 In figure, $LM \parallel AB$.If AL=x-3, AC-2x, BM=2x+3, find the value of x.



43 Any point X inside ΔDEF is joined to its vertices. From a point P in DX , PQ is Drawn parallel to DE meeting XE at Q and $QR \parallel EF$ meeting XF in R. Prove that $PR \parallel DF$

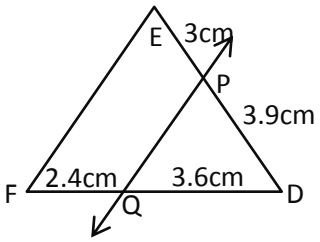


44 If $tan\emptyset + sec\emptyset = m\ and\ tan\emptyset - sec\emptyset = n$. Show that $m^2 - n^2 = 4\sqrt{mn}$

45 Prove that $tan^2Asec^2B - sec^2Atan^2B = tan^2A - tan^2B$

46 In$\Delta ABC, D\ and\ E$ are points lying on the sides AB and AC respectively. AB=12 cm, AD =8 cm, AE =12 cm and AC=18cm. Show that DE is parallel to BC.

47 In figure check whether PQ is parallel to EF.



48 If tan $A + B$ $= 1$ and sin $2A - B$ $= 1. Find\ A\ and\ B$.

49 Graphically, solve the following pair of equations $2x + y = 6\ \ and\ \ 2x - y = -2$. Find the ratio of areas of the triangles formed by the lines representing these equations with the x-axis and the lines with the y-axis.

50 If 1 is a zero of the polynomial $p\ x\ = ax^2 -\ 3a - 1\ x - 1$, then find the value of a