

DELHI PUBLIC SCHOOL ALIGARH

HOLIDAY HOMEWORK / CLASS-X / 2019-20

**ENGLISH**

**Q.1. Read the long reading text “The Story of My Life” by Helen Keller . On the basis of your reading answer the following questions in English literature notebook.**

- Write the character sketches of Ms. Helen Keller, Ms. Sullivan and Dr. Graham Bell in about 150 words .
- Write the main incidents of the novel .
- Summarize the story in your own words in about 200-250 words.

**Q.2. Write an article (100-150 words) or poem on any one of the following topics on A4 size sheet :**

- One area that Indians need to improve on the most.
- Health – physical , mental and social well being .
- Atrocities on women.
- Addiction to Whatsapp and Facebook.
- Role of English in today’s life.
- Moral and ethics should be an indispensable part of personality.

**HINDI**

- किसीविशय परस्वरचितकविता (16–20 पंक्तियाँ), कहानी (200–250 भाब्द) तथा किसीसमसामयिकविशय परलेखयानिबंध (200–250 भाब्द) लिखकरपरियोजनाफाइल (Project File) मेंलगाकरअपनेविशय अध्यापक कोजमाकीजिए। कोईभीरचनाकिसी पत्रिका या इंटरनेटसेनहींलीगीहो।
- मनुश्यताकविता , कबीरतथाबिहारी के छह–छहदोहोंकोसस्वर यादकीजिए।
- कक्षामेंकरायागयासमस्तपाठ्यक्रम यादकीजिए तथाव्याकरण के कार्यकाअभ्यासकीजिए।

**SANSKRIT**

- कोईभीदो पत्र छँटकरमंजूशा की सहायतासेरिक्तस्थानभरकरपुनः लिखिए।
- कोईभीदोचित्र छँटकर उस परपाँचवाक्यसंस्कृतमेंलिखिए।
- अभ्यासपुस्तिकामेंकिए हुए कार्यको यादकरें।
- ग्रीष्मावका मेंजहाँ भीभ्रमणहेतुआपजाएँउसकावर्णनकरतेहुए दसवाक्यसंस्कृतमेंलिखिए।

**URDU**

Select any one contemporary topic of Social or Educational importance. Collect pictures related to that topic from Urdu/English/Hindi newspaper and from Urdu Magazine also (MahnamaUmang, BachchokiDuniya- latest issue) and prepare a Scrap Book. And also prepare a report on the same topic. (Word limit-500)

OR

Prepare a Chart Paper which will be decorated and write ISM (Noun) auruskiqismien, Sifat (Adjective) auruskiqismien and Fael (Verb) auruski qismien..

**MATHEMATICS**

Q.1. Prove that  $\sqrt{5} - 3\sqrt{2}$  is an irrational number.

Q.2. Find the HCF of 6, 72 and 120 using Euclid’s division algorithm.

Q.3. The length, breadth and height of a room are 6m 30 cm, 5 m 85 cm and 3m 60 cm respectively. What will be the greatest length of tape which can measure the dimensions of the room in exact number of times?

Q.4. Show that one and only one of  $n, n + 4, n + 8, n + 12$  and  $n + 16$  is divisible by 5, where  $n$  is any positive integer.

Q.5. Show that only one of the numbers  $n$ ,  $n + 2$  and  $n + 4$  is divisible by 3, where  $n$  is any positive integer.

Q.6. If zeroes of the quadratic polynomial  $x^2 + (a + 1)x + b$  are 2 and  $-3$ , then find the values of  $a$  and  $b$ .

Q.7. If the sum of the zeroes of the given polynomial  $ax^2 + 2x + 3a$  is equal to their product, find the value of  $a$ .

Q.8. Find a quadratic polynomial whose zeroes are  $\frac{1}{\alpha}$  and  $\frac{1}{\beta}$ , if  $\alpha$  and  $\beta$  are the zeroes of the polynomial

$$p(x) = -2x^2 - 5x - 3.$$

Q.9. If the zeroes of the given polynomial  $x^3 - 6x^2 + 3x + 10$  are of the form  $a$ ,  $a + b$  and  $a + 2b$  for some real numbers  $a$  and  $b$ , then find the values of  $a$  and  $b$  as well as the zeroes of the given polynomial.

Q.10. If  $x^2 - 1$  is a factor of  $px^4 + qx^3 + rx^2 + sx + t$ , show that  $p + r + t = q + s = 0$ .

Q.11. For which value(s) of  $p$  and  $q$  will the pair of linear equations  $2x + 3y = 7$ ,  $2px + py = 28 - qy$  has infinitely many solutions?

Q.12. When a two-digit number is divided by the sum of the digits, the quotient is 8. If the tens digit is diminished by 3 times the units digit, the remainder is 1. What is the number?

Q.13. The sum of two natural numbers is 8 and the sum of their reciprocals is  $\frac{8}{15}$ . Find the numbers.

Q.14. Draw the graphs of the equations  $x = 3$ ,  $x = 5$  and  $2x - 5 - 4 = 0$ . Also find the area of the quadrilateral formed by the lines and the  $x$ -axis.

Q.15. A railway half ticket cost 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 the stations A to B costs Rs. 2530. Also, one reserved first class ticket and one reserved first class half ticket from stations A to B costs Rs. 3810. Find the full first class fare from stations A to B and also the reservation charges for a ticket.

Q.16. Out of a group of swans,  $\frac{7}{2}$  times the square root of the total number are playing on the shore of a pond. The two remaining ones are swimming in water. Find the total number of the swans.

Q.17. Find the positive value of  $k$ , for which the equation  $x^2 + kx + 64 = 0$  and  $x^2 - 8x + k = 0$  will both have real roots.

Q.18. Find the value of  $:\sqrt{6 + \sqrt{6 + \sqrt{6 + \dots\infty}}}$

Q.19. If the roots of the equation  $x^2 + 2cx + ab = 0$  are real and unequal, prove that the equation

$$x^2 - 2(a + b)x + a^2 + b^2 + 2c^2 = 0 \text{ has no real roots.}$$

Q.20. For what value of  $k$ ,  $(4 - k)x^2 + (2k + 4)x + (8k + 1) = 0$  is a perfect square?

Q.21. If 9<sup>th</sup> term of an AP is zero, prove that its 29<sup>th</sup> term is double the 19<sup>th</sup> term.

Q.22. If  $p$ th,  $q$ th and  $r$ th terms of an AP are  $a$ ,  $b$ ,  $c$  respectively, then show that

(i)  $a(q - r) + b(r - p) + c(p - q) = 0$

(ii)  $(a - b)r + (b - c)p + (c - a)q = 0$ .

(iii) If the numbers  $a$ ,  $b$ ,  $c$ ,  $d$ ,  $e$  form an AP, then find the value of  $a - 4b + 6c - 4d + e$ .

Q.23. The sum of  $n$  terms of two AP's are in the ratio  $(3n + 8) : (7n + 15)$ . Find the ratio of their 12<sup>th</sup> terms.

Q.24. The sum of four numbers in AP is 50 and the greatest number is four times the least. Find the numbers.

Q.25. If an AP consists of  $n$  terms with first term  $a$  and  $n$ th term  $l$ , show that the sum of the  $m$ th term from the beginning and  $m$ th term from the end is  $a + l$ .

## **SCIENCE**

### **(PHYSICS)**

**Instruction: Do in a separate project file.**

Q.1. Write your ideas of innovation (any five) on how to manage domestic waste and keep your locality clean.

Q.2. Write any three ways to promote greenery in your colony/village.

Q.3. Energy saved is energy generated. Write an article explaining how the energy saved by us can benefit our farmers and minimize their agricultural investment.

Q.4. Talk to your parents/ grandparents or any five different people about the technology or education system at their time and your time. Prepare a comparative project file on this.

( for example Television/Transportation/ Communication/Medicine etc)

Q.5. Solve the numerical given in Science exemplar. **(Chapter: Electricity)**

### **(CHEMISTRY)**

(Do as directed)

Practice all the one mark MCQ questions of NCERT Exemplar from page no. 1,2,3,4,9,10,11,12,13 and 14.

Q.1. Make a chart or model (on any one topic as discussed in class )

Q.2. Answer the following :

i. It has been found that marbles of Taj are getting corroded due to the development of industrial areas around it. Explain this fact giving a chemical equation.

ii. List two main sources of common salt in nature. Write any three uses of common salt. How is it connected to our freedom struggle?

### **(BIOLOGY)**

Q1. Draw a well labeled coloured diagram of Any one system (Digestive, Respiratory, Transporting or Nephron) on a chart paper.

Q2. Solve all the MCQ's of the lesson Cell-The fundamental unit of life from your science Exemplar.

Q3. Solve all the one mark questions of the lesson Cell-The fundamental unit of life from your science Exemplar.

Q4. "All plants give out carbon dioxide during night and oxygen during day time". Do you agree with this statement? Give reasons.

Read and revise the complete lesson-LIFE PROCESSES

## **SOCIAL SCIENCE**

Visit a nearby bank with your parent and find out what are the different types of loans a bank offers, Are they charges same rate of interest on all types of loans or not. If not, why.

Make a project report on the different types of loans offered by a bank with current rate of interest and also state the reason for the higher or lower rate of interest charged on a particular type of loan. (Maximum 4 to 5 pages).

## **COMPUTER**

Create a web sites with at least 10 -15 web pages(Home Page and linked pages). Topic may be taken as per your interest. For example Topic Environmental Issue , Security threats on Internet , Elections merits and demerits etc.

**Note :** Kindly submit the Holiday Homework of computers for all sections at email id [dps.aligarhup@gmail.com](mailto:dps.aligarhup@gmail.com)  
Mention your name and class section while sending email (e.g. Rahul Sharma XA)