# ADARSH PUBLIC SCHOOL
## HOLIDAYS' ASSIGNMENT
## SESSION 2019-20
## CLASS-IX

**INSTRUCTIONS :**
- Do the work in respective notebooks.
- Revise the syllabus for Pre Mid Assessment.

**ENGLISH**

1. Refer site https://mycbseguide.com/ downloads/get contentfile/ 15115/and do question nos. 1,2,5 and 7 (CBSE English Language and Literature. Question paper for class 9).
2. Do Unit 3 and 4 of English Workbook.
3. Read lesson 3 and 4 from Moments and make 2 RTC's each from them.
4. Write an article in about 200 words for your school magazine on the topic 'Impact of Television Advertising on Children'.
5. You went to Shimla during winter break and you experienced snowfall. Write a diary entry in about 100-120 words about your experience that enthralls you whenever you recollect your visit.
6. One day you dreamt that you became invisible. Write a short story based on your dream.
7. Write an essay on the topic 'My Favourite South Korean Person in about 150-300 words on a fullscape Ruled Sheet.

**हिन्दी**

1. बेटी, भ्रष्टाचार या राजनीति से संबंधी दो कविताएँ लिखिए ।
2. बच्चों की सोशल मीडिया पर अत्यधिक व्यस्तता को लेकर स्वयं को उपेक्षित महसूस करते हुए दो वृद्धों के मध्य संवाद लिखिए ।
3. 'पर्वतीय स्थान पर घूमने का मजा' विषय पर दो मित्रों के मध्य संवाद लिखिए ।
4. अनुच्छेद लिखिए ।

   क. का बरखा जब कृषि सुखाने

   ख. ब्रेन ड्रेन की समस्या का हल
5. 'पेड़ लगाओ, जीवन बचाओ' की आवश्यकता को देखते हुए अपने आसपास दो पौधे लगाइए । उनकी देखभाल करिए और पंद्रह दिन के अंतराल में उसकी फोटो खीचिंए और उसका चित्र चिपकाकर 50-100 शब्दों में चित्र वर्णन कीजिए ।
6. 'आयोजन' नाम के (समर कैंप) कैंप का विज्ञापन तैयार कीजिए ।
7. बच्चों में बढ़ती अनुशासनहीनता पर चिंता व्यक्त करते हुए एक पिता का पुत्र के लिए पत्र लिखिए ।
8. देश- विदेश की विभिन्न भाषाओं को सीखने का महत्व बताते हुए चाचा की ओर से भतीज के नाम पत्र लिखिए ।

**MATHS**

1. If $a = 5 + 2\sqrt{6}$ and $b = \frac{1}{a}$, then find the value of $a^2 + b^2$.

2. If $\sqrt{2} = 1.414$, $\sqrt{3} = 1.732$, find the value of

$$\frac{4}{3\sqrt{3}-2\sqrt{2}} + \frac{3}{3\sqrt{3}+2\sqrt{2}}$$

3. Express $0.6 + 0.\overline{7} + 0.4\overline{7}$ in the form of p/q, where p and q are integers and $q \neq 0$.

4. Find a and b in each of the following :

(i) $\frac{3-\sqrt{5}}{3+2\sqrt{5}} = a\sqrt{5} - \frac{19}{11}b$

(ii) $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = a + \frac{7}{11}\sqrt{5}b$

5. Find the value of

$$\frac{4}{(216)^{-2/3}} + \frac{1}{(256)^{-3/4}} + \frac{2}{(243)^{-1/5}}$$

6. Rationalise

(i) $\frac{1}{1+\sqrt{2}-\sqrt{3}}$ 　　　　　　　(ii) $\frac{1}{\sqrt{5}-\sqrt{11}+\sqrt{6}}$

7. Factorise :

(i) $(x - 2y)^3 + (2y - 3z)^3 + (3z - x)^3$

(ii) $8p^3 + \frac{12}{5}p^2 + \frac{6}{25}p + \frac{1}{125}$

(iii) $1 - 64a^3 - 12a + 48a^2$

(iv) $16x^2 + 4y^2 + 9z^2 - 16xy - 12yz + 24xz$

(v) $2x^3 - 3x^2 - 17x + 30$

(vi) $7\sqrt{2}x^2 - 10x - 4\sqrt{2}$

(vii) $8x^2y^3 - x^5$

8. Simplify :

(i) $\frac{0.75 \times 0.75 \times 0.75 + 0.25 \times 0.25 \times 0.25}{0.75 \times 0.75 - 0.75 \times 0.25 + 0.25 \times 0.25}$

(ii) $\frac{(a^2-b^2)^3 + (b^2-c^2)^3 + (c^2-a^2)^3}{(a-b)^3 + (b-c)^3 + (c-a)^3}$

9. If both (x-2) and $\left(x - \frac{1}{2}\right)$ are factors of $px^2 + 5x + r$, show that p = r.

10. Without actual division, prove that $2x^4 - 5x^3 + 2x^2 - x + 2$ is divisible by $x^2 - 3x + 2$.

11. If a,b,c are all non – zero and a+b+c=0, prove that $\frac{a^2}{bc} + \frac{b^2}{ac} + \frac{c^2}{ab} = 3$.

12. When two coins are tossed simultaneously, what is the probability of getting

(i) atmost one head 　　　(ii) exactly two heads 　　　(iii) atleast one tail

13. In a single throw of two dice, find the probability of getting a sum of 11.

14. Cards marked with numbers 2 to 101 are placed in a box and mixed thoroughly. One card is drawn from this box. Find the probability that the number on the card is

(i) a number which is perfect square. 　　　　(ii) a prime number less than 20.

15. From a pack of cards, a card is drawn randomly, find the probability of getting.

(i) Face cards 　　　　(ii) Black jack 　　　　(c) Red cards

16. Represent $\sqrt{5}$, $\sqrt{6.8}$ on the number line. Also, write down the justification.

17. Do the following activities in Maths Lab manual File.

(i) to interpret geometrically the factors of quadratic expression $x^2 + 5x + 6$.

(ii) to represent linear equations in two variables graphically.

$2x + 3y = 7$

**SCIENCE**
**Answer the following questions :**
1. Comment on the following statements :
   (a) Evaporation produces cooling.
   (b) Rate of evaporation of an aqueous solution decrease with increase in humidity.
   (c) Sponge through compressible is a solid
2. You want to wear your favourite shirt to a party, but the problem is that it is still wet after a wash. What steps would you take to dry it faster ?
3. Why does the temperature of a substance remain constant during its melting point or boiling point ?
4. Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations.
5. Classify the following into Osmosis / Diffusion
   (a) Swelling up of raisin on keeping in water.
   (b) Spreading of virus on sneezing.
   (c) Earthworm dying on coming in contact with common salt.
   (d) Shrinking of grapes kept in thick sugar syrup.
   (e) Spreading of smell of cake being baked throughout the house.
6. Why does the skin of your finger shrink when you wash clothes for a long time ?
7. If you are provided with some vegetables to cook, you generally add salt into the vegetables during cooking process. After adding salt, vegetables release water. What mechanism is responsible for this ?
8. Name the organelles with show the analogy written as under.
   (a) Transporting channels of the cell.
   (b) Powerhouse of the cell.
   (c) Packing and dispatching unit of the cell
   (d) Digestive bag of the cell.
   (e) Control room of the cell.
9. If cells of onion peel and RBC are separately kept in hypotonic solution, what among the following will take place ? Explain the reason for your answer.
   (a) Both the cells will swell
   (b) RBC will burst easily while cells of onion peel will resist the bursting to some extent.
   (c) a and b both are correct.
10. What are the consequences of the following conditions ?
    (a) A cell containing higher water concentration than the surrounding medium.
    (b) A cell having low water concentration than the surrounding medium.
    (c) A cell having equal water concentration to its surrounding medium.
11. The displacement of a moving object in a given interval of time is zero. Would the distance travelled by the object also be zero ? Justify your answer.
12. Draw a speed verses time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.
13. A motorcycle drives from A to B with a uniform speed of 30 Kmh$^{-1}$ and returns back with a speed of 20kmh$^{-1}$. Find its average speed.
14. Derive the following equations of motion by the graphical method :
    (i) $v = u + at$
    (ii) $s = ut + \frac{1}{2}at^2$
    (iii) $v^2 - u^2 = 2as$
    (b) Do the following Practicals in the Practical Files.
       (i) To determine the melting points of ice and boiling point of water.

(ii) To prepare stained temporary mounts of onion peel and draw their labelled diagrams.
(c) Make a working model on any one of the following themes :
   (i) Resource management
   (ii) Health and hygiene
   (iii) Agriculture
   (iv) Mathematical Modelling.

**SOCIAL SCIENCE**

**I. Make a creative and illustrative project on the topic Managing Disasters covering the following sub- headings :**
1. Meaning of the term Disaster Management.
2. Types of disaster with special reference to India.
3. Do's and Don'ts before, during and after the disaster.
4. Mitigation strategies to be taken.
5. Map work, newspaper cuttings, recent data from the Internet to support the project work.
Note : Project should contain 15-20 A 4 size sheets and cover it with white chart paper.

**II. Answer the following question in social science register.**
1. What is the advantage of opening of Suez Canal for India ?
2. How have the Deccan peninsular been valuable for India ?
3. What do you mean by 'Doab' and 'Punjab' ?
4. What are Duns ? Give any two examples of duns.
5. How the Himalayas are divided on the basis of the regions from West to East ?
6. Explain the main features of non – democratic government with examples from Myanmar, Soudi Arabia, Pakistan and China.
7. What are the different ways of increasing production on the same piece of Land ? Use examples to explain.
8. Draw up a list of democratic rights we enjoy today whose origins could be traced to the French Revolution.
9. Draw and explain the significance of different political symbols used during French Revolution.
10. Describe the work of farmer with one hectare of Land.

**ART EDUCATION**
1. Make a Madhbani or WORLI ART on an Earthern Pot.
   Using Fabric Colours.
   Minimum height of the pot should be 10 inches.

*Have a Fun-Filled Vacation !*