



# DELHI PUBLIC SCHOOL

## ASSIGNMENT CLASS: IX

### English

#### Section A-Reading

#### **1. Read the passage given below and answer the questions that follow:**

Every time a child takes a soft drink, he's laying the ground work for a dangerous bone disease. No, fizzy and sugary drinks don't cause osteoporosis. But, because they are often a substitute for a glass of milk, kids are not getting the calcium and vitamin D they need to build a strong skeleton. Many of them also lead a sedentary lifestyle, so they aren't getting the bone building benefits for vigorous exercise either. These children aren't just in jeopardy for brittle bones and fractures decades down the road. They could be at a risk of osteoporosis at a younger age than ever before.

The Indian Society for Bone and Mineral Research, a body of osteoporosis experts is trying to spread awareness about this bone crippling disease. Osteoporosis starts in childhood but has consequences later in life. The condition causes bones to become riddled with holes, like the framework of a house that's been attacked by termites. That can lead to broken bones, which in turn cause deformity, chronic pain or disability. Osteoporosis can be fatal: up to 25 per cent of older people who suffer a broken hip die within a year. Osteoporosis isn't just your grandmother's health threat. Although it strikes over 50 million women in India, it also menaces over 2 million men. Osteoporosis causes loss of height, pain in joints and back, fractures and a fear of fractures, and can be very depressing. So it is important that we adopt preventive measures, to save millions of people.

There is a new medical understanding of the best ways to protect ourselves and our children. "Simple lifestyle changes and nutrition will help save your bones," says Dr. Mittal. To get us moving in the right direction, he says, "It's never too late to adopt bone-friendly habits- exercise, get enough sunlight, and have adequate calcium. This way, we can keep our bones healthy and prevent Osteoporosis."

Based on your reading of the passage, answer the following questions:

- Why are fizzy and sugary drinks blamed for osteoporosis?
- Why do bones get weak?
- When does osteoporosis become apparent? Why is it called fatal?
- What are the measures to prevent osteoporosis?
- How is osteoporosis a menace in our country?
- Why do children need calcium and vitamin D?
- Which word in para 1 means the same as 'involving little exercise'.
- Which word in para 2 means the same as 'lasting a long time'.

#### **2. Read the passage given below and answer the questions that follow:**

1. It is rare to find someone with good technical and communication skills. You can get far ahead of your colleagues if you combine the two early in your career. People will judge, evaluate, promote or block you based on your communication skills. Since habits form by repeating both good and bad forms of communication, learn to observe great communicators and adopt their styles and traits — in written and verbal forms. The art of listening and learning from each and every interaction is another secret recipe. Develop the subconscious habit of listening to yourself as you speak and know when to pause.

2 Learning what not to say is probably more important than learning what to say. As your career develops, you will realize that the wise speak less. Speak when you have value to add, else refrain. Poorly constructed emails with grammatical errors are acceptable between friends, but they should be seriously avoided while communicating formally with your seniors. Avoid any communication in an emotional state when you might say things you will regret later. One unnecessary word uttered at the

wrong time or place can ruin a relationship, career or even your life. Such is the power of words. If such a thing happens, you should immediately apologise, else it may haunt you for life.

3. Another problem to overcome is speaking too fast. Since our minds are working faster than our speech, we are inclined to speak fast. This does not necessarily mean that the person hearing it will get it any faster. On the contrary, it is always the reverse. So slow down, and think before you speak. “When I get ready to speak to people,” Abraham Lincoln said, “I spend two-thirds of the time thinking what they want to hear and one-third thinking what I want to say.” Adding humour and wit is also essential. But realize that not all jokes are funny and observe certain boundaries. Never say anything that could offend. Remember you are not a comedian who must offend as many people as you can to be witty.

2.1 Answer the following questions briefly:

- (a) Why is it necessary to have good communication skills?
- (b) How can communication skills be developed?
- (c) What, according to the writer, should be avoided while communicating?
- (d) Why should you be careful when you tend to be humorous?

2.2 Choose the most appropriate meanings of the given words from the options provided:

- (a) evaluate (para 1)
  - (i) Estimate
  - (ii) Assume
  - (iii) Punish
  - (iv) Evolve
- (b) trait (para 1)
  - (i) Treaty
  - (ii) Trail
  - (iii) Quality
  - (iv) Liberty
- (c) utter (para 2)
  - (i) flatter
  - (ii) speak
  - (iii) rot
  - (iv) unique
- (d) haunt (para 2)
  - (i) hunt
  - (ii) chant
  - (iii) trouble
  - (iv) av

**SECTION B: (WRITING AND GRAMMAR)**

3. Your parents have warned you not to spend too much time watching the T.V. and to avoid using the mobile phone as your exams are approaching. You feel deprived of entertainment. **Write a diary entry** expressing your feelings. (100-120 words)

OR

Children are the future of the nation. Schools and parents play an important role in the development of the all-round personality of a child. **Write an article** on the topic “Role of School in a Child’s Life”. (100-120 words)

4. **Write a story** with the beginning given below.

It was the month of December. Mr Sharma had gone for a morning walk but never returned.....

5. **In the following passage one word has been omitted in each line .Write the missing word, in any four sentences of the given paragraph, along with the word that comes before and the word that comes after it in the space provided .**

	Before	Missing Word	After
Himachal Pradesh a good place for Eco Camp	Eg. Pradesh	is	a
Pine Hill Eco Camp one of the ecotourism resorts	( a ) _____	_____	_____
near Barog Himachal Pradesh . Ecotourism is	( b ) _____	_____	_____
gaining popularity each passing day as more	( c ) _____	_____	_____
and more people want get away from the	( d ) _____	_____	_____
hectic schedules. This become a favourite tourist spot.	( e ) _____	_____	_____

**6. Rearrange any four of the following word clusters to make meaningful sentences.**

- ( a ) rain water / flooding / helps/ harvesting / in / chances of / reducing
- ( b ) storm / helps/ also/better/ water/ it / water management / in
- ( c ) plant growth / in/storing /rainwater / can/ help / improving
- ( d ) is/ from / stored/ natural and/ pollutants /rain water /free/ man- made
- (e) out/ the/street/ earthquake/another/on/people/ came/ fearing/

**7. Father: How was the interview?**

Son: I have performed well. There were nearly a hundred candidates.

Father: Are you confident that you will get the job?

Son: They will let me know the result in two days time.

Father asked his son (a)\_\_\_\_\_. The son replied that (b) \_\_\_\_\_ nearly a hundred candidates. The father wanted to know (c) \_\_\_\_\_ he would get the job. The son told that (d) \_\_\_\_\_ the result in two days time.

**SECTION C: (LITERATURE)**

**8. Read the extracts given below and answer the questions that follow.**

She seemed a thing that could not feel  
The touch of earthly years.

- i. Who is 'she' here?
- ii. Why did she seem a thing to the poet?
- iii. Why was she not able to feel the touch of earthly years?
- iv. What does the phrase 'earthly years' refer to here?

**9. Answer any five of the following questions in about 30-40 words each.**

- 1. How did Maria Sharapova learn that tennis excellence would only come at a price?
- 2. How did Gerrad manage to outwit the intruder?
- 3. In the story 'A House is Not A Home' how do the schoolmates change the author's understanding of life and people?
- 4. What did George and Harris offer to pack and why?
- 5. Why did Santosh's parents agree to pay for her schooling in Delhi?
- 6. What difference does Vikram Seth notice between the flute seller and the other hawkers?

**10. Answer any one of the following in about 100-150 words.**

How can you say that 'The Bond of Love' shows the kind and loving attitude of the narrator and his wife towards Bruno? How should we take care of animals?

**OR**

The Everest expedition shows Santosh's concern for her team-mates and for the environment. Elaborate.

**11. Answer any one of the following in about 100-150 words.**

Explain how the last leaf influenced Behrman to achieve his life's ambition?

**OR**

Sergei says, "I am happy that my words have taken effect." Is he right in saying so?

## MATHS

- 1 If  $x + y = 18$ ;  $y + z = 12$ ;  $z + x = 16$ , find  $x, y, z$
2. Which of the following is not a linear equation in two variables?
  - (i)  $px + qy + c = 0$
  - (ii)  $ax^2 + bx + c = 0$
  - (iii)  $3x + 2y = 5$
3. Write the linear equation whose solution is  $x = 1, y = 1$ ?
4. The point  $(m, m)$  always lies on which of the following lines?  
 $x + \frac{1}{2}y = 0$  or  $x + y = 2m$
5. How many linear equations in  $x$  and  $y$  can have a solution as  $(x = 1, y = 3)$ ?
6. Determine rational numbers  $p$  and  $q$  if

$$\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = p - 7\sqrt{5}q.$$

7. Simplify:  $\frac{3\sqrt{2}}{\sqrt{6}-\sqrt{3}} + \frac{2\sqrt{3}}{\sqrt{6}+2} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$

$$8. \text{ Show that: } \frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$$

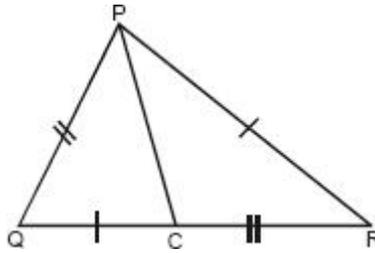
9. If:

$$x = \frac{\sqrt{p+q} + \sqrt{p-q}}{\sqrt{p+q} - \sqrt{p-q}}, \text{ then find the value of } qx^2 - 2px + q.$$

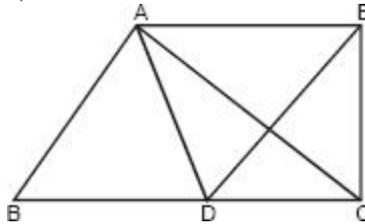
$$10. \text{ Show that: } \frac{x^{-1}+y^{-1}}{x^{-1}} + \frac{x^{-1}-y^{-1}}{x^{-1}} = \frac{x^2+y^2}{xy}$$

11. If  $x = 2 + 3\sqrt{2}$ , then find the value of  $\left(x + \frac{14}{x}\right)$ .
12. L, M, N, K are mid-points of sides BC, CD, DA and AB respectively of square ABCD, prove that DL, DK, BM and BN enclose a rhombus.
13. PQRS is a parallelogram. PS is produced to meet M so that SM = SR and MR is produced to meet PQ produced at N. Prove that QN = QR.
14. In a  $\Delta ABC$ , DE is parallel to BC and D is the mid-point of side AB. Find the perimeter of  $\Delta ABC$  when AE = 4.5 cm, DE = 5 cm and DB = 3.5 cm.
15. If an angle of a parallelogram is  $\frac{4}{5}$  of its adjacent angle, then find the measures of all the angles of the parallelogram.
16. ABCD is a trapezium in which AB is parallel to CD. If  $\angle A = 36^\circ$  and  $\angle B = 81^\circ$ , then find  $\angle C$  and  $\angle D$ .
17. In a  $\Delta ABC$ , DE is parallel to BC and D is the mid-point of side AB. Find AE and BC if DE = 6 cm and EC = 5 cm.
18. In a parallelogram ABCD find the measure of all the angles if one angle measures  $68^\circ$ .
19. The lengths of diagonals of a rhombus are 24 cm and 18 cm respectively. Find the length of each side of the rhombus.

20. In the given figure, triangles PQC and PRC are such that  $QC = PR$  and  $PQ = CR$ . Prove that  $\angle PCQ = \angle CPR$ .

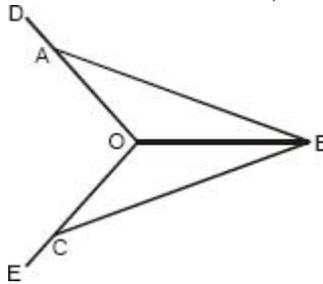


21. In the given figure,  $AB = AD$ ,  $AC = AE$  and  $\angle BAD = \angle EAC$ , then prove that  $BC = DE$ .



22.  $\triangle PQR$  is given and the sides QP and RP have been produced to S and T such that  $PQ = PS$  and  $PR = PT$ . Prove that the segment  $QR \parallel ST$ .

23. In the given figure,  $AB = BC$  and  $\angle ABO = \angle CBO$ , then prove that  $\angle DAB = \angle ECB$ .



24. AB and CD are parallel sides of trapezium ABCD. Diagonals AC and BD intersect at O. prove that  $\text{ar}(\triangle AOD) = \text{ar}(\triangle BOC)$ .

25. If D is the mid .point of side of side BC of a  $\triangle ABC$ , P and Q are two points lying respectively on the sides AB and BC such that DP is parallel to QA. Prove that  $\text{ar}(\triangle CQP) = \frac{1}{2} \text{ar}(\triangle ABC)$ .

## CHEMIISTRY

- An element is sonorous and highly ductile .Under which category would you classify this element ?Give few expected characteristics of this element.
- Arun prepared 0.01% (by mass) of the NaCl solution in water.Calculate the mass of NaCl taken for preparing 1 Kg of the solution.
- A sample of ethane gas ( $C_2H_6$ )has same mass as  $1.5 \times 10^{20}$  molecules of methane ( $CH_4$ ). How many ethane molecule does the ethane gas contain?
- Write the formula of i.lead phosphate ii.Ferric chloride iii. Mercurous iodide.
- What are ionic and molecular compounds?Give an example for each.
- How many protons are present in an atom of C-14,C-13 and  $He^{2+}$ ,He?What do you conclude from the above data?
- If an atom has 6 electron in the outer most shell and it attains octet by accepting electrons, what would be the charge on it? Justify your answer.

8. Complete the following table:-

Elements	Atomic number	Mass Number	Protons	Electrons	Neutrons	Electronic configuration	
Chlorine	17				18		
Silicon		28		14			
Fluorine			9				

9. Which of the two will be more reactive an element A with atomic number 18 or B with atomic number 13? Justify your answer.

10. Compute the number of ions present in 234 g of NaCl.

### BIOLOGY (HOTS)

- Q1) Which organism is more complex and evolved among Bacteria, mushroom and mango tree. Give reasons
- Q2) Differentiate between flying lizard and bird.
- Q3) Why do we keep both snake and turtle in the same class?
- Q4) Thallophyta, Bryophyta and Pteridophyta are called as 'Cryptogams'. Gymnosperms and Angiosperms are called 'phanerogams'. Discuss Why?
- Q5) Why is balanced diet essential for maintaining healthy body?
- Q6) Why are antibiotics not effective for viral disease?
- Q7) Why is AIDS considered to be a 'Syndrome' and not a disease?
- Q8) Why is immune system essential for our health?
- Q9) Which bacterium causes peptic ulcers? Who discovered the above pathogen for the first time?
- Q10) 'Our surroundings should be free of stagnant water'. Explain why?

### HISTORY / POLITICAL SCIENCE / ECONOMICS

1. Explain the type of economy that prevailed in Russia, during the beginning of the 20<sup>th</sup> century.
2. Highlight the role of Lenin in the Russian Revolution.
3. Highlight the impact of First and Second World War on forests.
4. Why did people of Bastar rise in revolt against the British? Explain.
5. What is the process of nomination of a candidate to contest a specific election?
6. Describe the process of polling in India.
7. What is Mandal Commission and why was it recommended by the government?
8. Describe the powers and functions of the Prime Minister of India.
9. Do you think economic growth is linked with the reduction of poverty? Give any three arguments in support of your answer.
10. What is White Revolution?

## **GEOGRAPHY (HOTS -I)**

1. Why is the difference between the durations of day and night hardly felt at Kanniyakumari but not so in Kashmir?
2. How is the opening of Suez Canal important to India?
3. 'The Indian landmass shows a great physical contrast'. Explain this statement.
4. How were the northern plains formed?
5. Why does Indian subcontinent experience milder winter as compare to central Asia?
6. Why is the distribution of rainfall uneven in India?
7. Why are the southern slopes in Himalayan region covered with thick vegetation cover as compared to northern slopes of the same hills?
8. How do the human beings influence the ecology of a region?
9. What is the significance of studying population?
10. Why do Northern plains and Kerala have very high density of population?

## **GEOGRAPHY (HOTS -II)**

1. Define Life expectancy.
2. What do you mean by Adolescence?
3. Why are the Northern Plains and south of Kerala have high to very high population densities?
4. What do you understand by Dependency Ratio?
5. Give an account of weather conditions and characteristics of the cold season.
6. Discuss the mechanism of monsoons.
7. Give the characteristics and effect of the monsoon rainfall in India.
8. Why has India a rich heritage of flora and fauna?
9. Describe the characteristics of Tropical Evergreen Forest.
10. "Forests are playing a vital role in enhancing the quality of environment" - explain this statement.