

**CLASS IX  
HOLIDAY HOMEWORK**

**ENGLISH**

**HAPPY VACATIONS!**

What's a vacation without having read some books? So, children let us jumpstart our reading habit by picking up the most unputdownable books which are not only fantastic but also provide us a unique memorable experience of its own kind. The book world is galore with the choice of genres the moment you decide to embark on a reading journey: from contemporary fiction, literary fiction, historical fiction, light or humorous fiction, mysteries and thrillers, dystopias to classics, nonfiction, or memoirs. You may definitely share the list of titles you actually pick up and read with your English teacher. Happy reading!

**1. ART INTEGRATED PROJECT**

Present a comparative study between Delhi and the Union Territories of Lakshadweep islands and Andaman and Nicobar Islands with respect to the following focus areas:

- A. Geographical Features**
- B. Traditional Dress**
- C. Cuisine**
- D. Music and Dance**
- E. Festivals**
- F. Traditional Crafts**
- G. Occupation of the Natives**
- H. Tourism (Key Attractions)**
- I. Poets and Writers**

Your content should be well integrated with art work, photographs & decorations. You may use your creativity to make your project visually appealing, interesting and informative. You may also use maps, charts & graphs to present any statistical data.

**2. Complete the Revision Worksheet which comprises of the questions from your PA I syllabus and revise whatever has been covered so far in English.**

**3. Spend some time daily reading National, International, Sports and Business Articles given in the newspaper and improve your reading skills and vocabulary. Also read 'Five Tales from Shakespeare' by Charles and Mary Lamb. This book includes Shakespeare's best-loved plays – three of his finest comedies: The Merchant of Venice, Twelfth Night and A Midsummer Night's Dream, and two of his greatest tragedies: Macbeth and Romeo and Juliet. Acquaint yourself with the life and times of William Shakespeare.**

**4. For those who are interested in submitting the content for our school magazine; you may choose to write poems, articles, short story, comic strips, sketches, etc on an A4 size sheet and submit it latest by 5 July 23. Please note that it should be self-composed. You may choose any topic from the following:**

- a. Nature**
- b. Friendship & Happiness**
- c. Childhood Memories**
- d. Dreams and experiences**

e. Hopes and Aspirations, etc.

Delhi Police Public School

**CLASS IX ENGLISH REVISION WORKSHEET**

[NOTE: MCQ's to be done in the worksheet itself and subjective type questions in the notebook]

**SECTION A: READING (CASE-BASED PASSAGE) Q.1**

Read the following passage carefully.

(1) Have you ever wondered how naturalists and park guides track tigers? Tigers are highly territorial and they use different ways of keeping the rivals out of their territory. They mark their territories by spray marking the trees with urine, or scratching the tree with their claws. They also defecate in the middle or side of pathways and later scrape the ground, so the scat is visible to other rival tigers.

(2) Naturalists and park guides usually look for scat, or spray markings on the tree. If it's fresh and wet, it is easy to know that the animal might have passed a few minutes ago. A fresh tiger spray-mark will smell like boiled basmati rice!

To avoid getting injured by thorns on forest floor, tigers like to walk on open trails. These leave behind their pugmarks. So, it's easy for naturalists and guides to check and follow the fresh pugmarks on the jungle roads, leading to a tiger sighting.

(3) Even if the tiger walks silently through the jungle, there are always other prey animals keeping a watch. Langurs are like watchmen of the jungle, sitting atop trees and keeping an eye on their surroundings. Once the tiger is spotted, the langur monkeys and deer start giving alarm calls. So, naturalists and guides are always on an alert, tuned to the sounds of the jungle. These alarm calls move with the predator and it's easy to pin point the direction in which it is going.

(4) Another way of tracking tiger is by communication with local guides. Before the safari begins and one enters the park, naturalist and guides discuss sightings of previous safaris and then a plan is made to go and check the particular area first. Even inside the park when we meet each other in our jeeps, we share the sightings, so that all guests can go back with happy faces and lovely memories.

**TIGERS IN THE WILD**

Bihar 31 Uttarakhand 442 UP 173 Andhra Pradesh 442 Telangana 26 Chhattisgarh 19 Madhya Pradesh 526 Maharashtra 312

Rajasthan 69 Karnataka 524 Kerala 190 Tamil Nadu 264 Arunachal 29 West Bengal 88 Odisha 28

On the basis of your understanding of the passage, attempt the following questions.

1. In the line...'tigers are highly territorial', the word 'territorial' means \_\_\_\_\_. a. providential b. provincial c. prudential d. professional

2.

3. One of the features that is important for tourists o tiger trails is \_\_\_\_\_. a. informing local guides b. communicating with local guides

In the territorial profile of the tiger, we learn that tigers keep rivals from their territory by \_\_\_\_\_.

a. spraying boiled basmati rice b. spraying scat on trees c. spraying trees with urine d. spraying trees with spit

- c. hiring local guides d. alerting local guides 4.
- 5.
6. In the graph of tiger sightings, the states with over 500 sightings are \_\_\_\_\_. a. Madhya Pradesh and Karnataka b. Madhya Pradesh and Maharashtra c. Maharashtra and Tamil Nadu d. None of the above.
7. The graph of tiger sightings shows states with a difference of one sighting are \_\_\_\_\_. a. Bihar and Arunachal b. West Bengal and Rajasthan c. Arunachal and Odisha d. Karnataka and Maharashtra
8. According to the table, the lowest sighting is in the state of \_\_\_\_\_. a. West Bengal and Bihar b. Chhattisgarh c. Bihar and Chhattisgarh d. None of the above
9. According to the passage, the animals that give out alarm calls are \_\_\_\_\_. a. tigers and langurs b. langurs and monkeys c. langurs and deer d. langurs and scouts

10.

## SECTION B: WRITING AND GRAMMAR

Q.2

Q.3

Choose the option that lists the correct answer for the following.

I. Smita is NRI, who loves animals and has come to India with the World Wildlife Fund to protect tiger.

II. Samir is an environmentalist working in a tiger resort to track tiger behaviour.

a. I is a concerned visitor and II is a knowledgeable visitor.

b. I is an animal activist and II is a research scholar.

c. I is a part-time naturalist and II is a full-time naturalist.

d. I is an interested animalist and II is a scholarly animalist.

Based on the options, list the relevant ways of tiger tracking.

I. Keep track of the tiger's rivals. III. Trace different smells.

V. Discuss tourist plans.

a. I and III

c. II and IV

II. Look for spray markings on trees. IV. Make alarm calls like langurs.

b. II and V d. III and V

Choose the statement that is true.

a. Tigers use different ways to keep rivals within their territory.

b. To save themselves from getting injured by thorns tigers walk on highways. c.

Local guides sit atop trees to keep an eye on their surroundings.

d. Inside the park, jeeps share their sightings.

Given below is some information about the guard of your school. Write a factual description about the guard of your school based on the information given below.

**CUES:**

5'5" – wheatish complexion – black hair – Gurkha – 40 yrs old – High School passed – married – 3 children – alert, caring – expert flute player

Select the correct form of the verb by choosing the correct option.

I. She \_\_\_\_\_ unconscious since 10 o'clock.

a. is b. has been c. was

II. I telephoned her when I \_\_\_\_\_ home.

a. will reach b. reach c. reached

III. He told me that she \_\_\_\_\_ ill for six weeks.

a. was b. had been c. has been

IV. The government \_\_\_\_\_ to take some stern steps to stop the strike. a. has b. should have c. would have d. had

d. had been d. reaches

d. were

**Q.4 Fill in the blanks with appropriate Modals.**

I. The trees \_\_\_\_\_ due to heavy winds.

a. ought to b. have to fall c. will fall d. shall fall

II. He \_\_\_\_\_ write fluently even without any schooling.

a. can b. must c. could

III. A judge \_\_\_\_\_ be upright.

a. may b. might c. could

IV. How \_\_\_\_\_ you ride a cycle without brakes? a. could b. dare c. may

d. should d. must

d. should

**SECTION D: LITERATURE Q.5**

I. The other road had a better claim because \_\_\_\_\_.

a. it was more grassy b. it wanted wear c. it seemed more adventurous d. all of these

II. Which road did the poet finally choose?

a. the first one b. the second one

c. none d. he went back home

III. "Though as for that the passing there" means that \_\_\_\_\_.

a. many people had trod that road b. both the roads were equally worn out c. he was afraid of walking that road d. when he had walked that road a little

IV. The rhyme scheme in the stanza is \_\_\_\_\_.

a. abaab b. aabbc c. free verse d. ababc

V. Name the figure of speech in 'wanted wear'.

a. metaphor b. simile c. alliteration d. anaphora

**Q.6 Answer the following questions in about 20-30 words. (Very short Answer Type)**

a. Margie says that a man is not smart enough. What does this tell us about the time she lived in?

b. How is a good teacher supposed to teach, according to Margie?

c. Do you consider the child's behaviour as depicted in the story normal? Why? Or why

not?

d. What did the child feel when he entered the village?

e. Very often, poets use colours to signify feelings. What does the colour "yellow" signify

in the poem 'The Road Not Taken'?

f. In which season do you think the poem 'The Road Not Taken' takes place? Why do you think so?

Read the following stanza and choose the correct option. Then too the other, just as fair,

And having perhaps the better claim,

Because it was grassy and wanted wear;

Though as for that the passing there Had worn them really about the same.

## SOCIAL SCIENCE

Prepare a project on

**Culture of Lakshadweep: Exploring the traditions,Art,Music and festivals. Inclusive of language used ,Cuisine of Lakshadweep**

ग्रीष्मावकाश गृहकार्यम्

संस्कृत

कक्षा- नवमी

1. अस्माकम् पर्यावरणम्/ स्वच्छ भारत - श्रेष्ठ भारत विषये सचित्र परियोजना कार्यम् रचयन्तु।
2. मम आदर्शः / मम विद्यालयम्/ मम अभिलाषा कोऽपि विषये संस्कृत अनुच्छेदम् लिख्यन्ताम्।
3. कक्षायाम् पठित सर्वेषाम् विषयानाम् पुनरावृत्तिम् कुर्यात्।
4. लक्षद्वीपस्य प्रसिद्ध टापूनाम् विषये सचित्र परियोजना कार्यम् रचयन्तु।

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ग्रीष्मावकाश गृहकार्य

कक्षा -नवीं(हिंदी )

- 1-प्रतिदिन हिंदी समाचार -पत्र पढ़िए और एक समाचारवाचक की भाँति छुट्टियों के बाद कक्षा में कुछ मुख्य समाचार प्रस्तुत कीजिए ।(समय 2 मिनट )
  - 2-अंडमान निकोबार और लक्षद्वीप की संस्कृति , भाषा और साहित्य पर जानकारी एकत्र कर चित्र सहित एक परियोजना बनाइए ।(स्क्रेप बुक में )
  - 3-दिए गए सभी अभ्यास-पत्र पूर्ण कीजिए ।
  - 4-जीव -जंतुओं के संरक्षण पर दो मित्रों के बीच संवाद लिखिए ।(उत्तर पुस्तिका में )
- नोट:उपर्युक्त दिए गए समस्त कार्य का मूल्यांकन किया

## SCIENCE

### AIL PROJECT

**Air is one of the basic necessity of our life. Due to human activities, day by day the quality of air is getting deteriorated which has a strong impact on human health. AQI index is a yardstick to measure the concentration of pollutants in air and its consequences on human's health. Make a report on comparative study of AQI index of Delhi with that of AQI index of Lakshadweep, Andaman and Nicobar islands. The report should include the following details**

- (a) Major pollutants responsible for increase in AQI level
- (b) Causes of these pollutants
- (c) Comparative study of AQI level of both the regions mentioned in the form of either a pie chart or bar diagram.

The project work should be done in a scrap book. Paste photographs wherever necessary.

### ASSIGNMENTS

#### PHYSICS

#### CHAPTER- MOTION

1. A ship is moving at speeds of 56km/hr. One second later it is moving at 58km/hr. What is its acceleration?
2. A scooter acquires a velocity of 36km/hr in 10 seconds just after the start. Calculate the acceleration of the scooter.
3. A racing car has uniform acceleration of 4m/s<sup>2</sup>. What distance will it cover in 10 seconds after start?
4. A body starts to slide over a horizontal surface with an initial velocity of 0.5m/s. Due to friction it's velocity decreases at the rate of 0.05m/s. How much time will it take for the body to stop?
5. A train starting from rest moves with a uniform acceleration of 0.2 m/s<sup>2</sup> for 5 minutes. Calculate the speed acquired and the distance travelled in this time.
6. A bus was moving with a speed of 54kmph. On applying brakes, it stopped in 8 seconds. Calculate the acceleration and the distance travelled before stopping.
7. A motor cycle moving with a speed of 54km/hr is subjected to an acceleration of 0.2 m/s<sup>2</sup>. Calculate the speed of the motorcycle after 10 seconds, and the distance travelled in this time.
8. The breaks applied to a car produces an acceleration of 6m/s<sup>2</sup> in the opposite direction to the motion. If the car takes 2seconds to stop after the application of brakes, calculate the distance it travelled during this time.
9. A train starting from rest attains a velocity of 72 km/hr in 5 minutes. Assuming that the acceleration is uniform find (i) acceleration and (ii) the distance travelled by the train during this time.
10. A car accelerates uniformly from 18km/hr to 36km/hr in 5 seconds. Calculate (i) the acceleration and (ii) distance covered by the car in that time.

**CHEMISTRY**  
**MATTER IN OUR SURROUNDING**  
**SECTION-A**

( Multiple choice questions)

1. During summer , water kept in an earthen pot becomes cool because of the phenomenon of
  - (a) Diffusion
  - (b) Transpiration
  - (c) Osmosis
  - (d) Evaporation
2. Which condition out of the following will increase the evaporation of water?
  - (a) Increase in temperature of water
  - (b) Decrease in temperature of water
  - (c) Less exposed surface area of water
  - (d) Adding common salt to water
3. Seema visited a Natural Gas Compressing Unit and found that the gas can be liquefied under specific conditions of temperature and pressure. While sharing her experience with friends she got confused. Help her to identify the correct set of conditions
  - (a) Low temperature, low pressure
  - (b) High temperature, low pressure

- (c) Low temperature, high pressure  
 (d) High temperature, high pressure
4. Which of the following will sublime on heating?  
 (a) Iodine  
 (b) Camphor  
 (c) Naphthalene  
 (d) All of these
5. On converting 250C , 380C and 660C to Kelvin scale , the correct sequence of temperature will be  
 (a) 298K , 311 K and 339K  
 (b) 298 K , 300 K and 338K  
 (c) 273 K, 278 K and 543 K  
 (d) 298 K, 310 K and 338 K
6. During rainy season , rate of evaporation decreases because  
 (a) Humidity is high in air  
 (b) Humidity is low in air  
 (c) Humidity does not change  
 (d) There is no effect of humidity
- In the following questions (7-10 ) a statement of assertion followed by a statement of reason is given. Choose correct answer out of the following
- a) Assertion and reason both are correct statements and reason is correct explanation for assertion.  
 b) Assertion and reason both are correct statements but reason is not the correct explanation for assertion.  
 c) Assertion is a correct statement but reason is an incorrect statement.  
 d) Assertion is an incorrect statement but reason is a correct statement
7. ASSERTION- Solid CO<sub>2</sub> is also known as dry ice.  
 REASON- Molecules of a gas move randomly at high speeds
8. ASSERTION- We use cotton clothes in summer  
 REASON- We observe water droplets on the outer surface of glass containing ice.
9. ASSERTION- Boiling is a bulk phenomena  
 REASON- Evaporation is a surface phenomena
10. ASSERTION-Humidity is the amount of water vapours present in air.  
 REASON- Evaporation becomes faster at lower temperature.

### SECTION- B

(Very short answer questions)

11. Pressure and temperature determine the state of matter, Comment.  
 12. How are gases liquefied? Name a gas which can be solidified and is also called as dry ice.  
 13. Convert a)300 K b) 573 K into Celsius scale.  
 14. Why is ice at 273 K more effective in cooling than water at the same temperature?

### SECTION-C

(Short answer questions)

**15. Give reasons**

- (a) After a hot shower, your bathroom mirror is covered with water.
- (b) In cold countries ice on roads are melted by sprinkling solid calcium chloride rather than sodium chloride.
- (c) Surgeons often spray some ether on skin before performing minor injury.

**16. Differentiate between evaporation and boiling.**

**17. Justify the following statements**

- (a) It is easier to remove fresh stains of ink from a cloth than stains caused a few days ago.
- (b) People sprinkle water on their roof top during summer.
- (c) When water spills on the ground we prefer to clean it with a mop.

**18. A sample of water under study was found to boil at 102°C and normal atmospheric pressure. Is the water pure? Will this water freeze at 0°C ? Comment.**

#### **SECTION-D**

**(Long answer questions)**

- 19. (a) What type of clothes should we wear in summer? Why?**
- (b) Doctors advice to put strips of wet cloth on the forehead of a person having high temperature. Explain.**
- (c) Suggest two methods to convert a solid into liquid.**

#### **SECTION- E**

**(Case study based question)**

**20. Wet clothes dry up similarly when we spill water on the floor it dries up after sometime. In both the cases change of state from liquid to vapour takes place without reaching the boiling point.**

- (a) What is this phenomena called?**
- (b) Explain how the changes occur at temperature lower than the boiling point?**
- (c) Mention any 3 factors which determine the rate at which the change of state from water to vapour occurs at room temperature.**

### **BIOLOGY**

#### **THE FUNDAMENTAL UNIT OF LIFE**

**Choose the correct option:**

**1. A cell will swell up if**

- (a) the concentration of water molecules in the cell is higher than the concentration of water molecules in surrounding medium.**
- (b) the concentration of water molecules in surrounding medium is higher than water molecules concentration in the cell.**
- (c) the concentration of water molecules is same in the cell and in the surrounding medium.**
- (d) concentration of water molecules does not matter.**

**2. Following are a few definitions of osmosis. Read carefully and select the correct definition.**

- (a) Movement of water molecules from a region of higher concentration to a region of lower concentration through a semi-permeable membrane.
- (b) Movement of solvent molecules from its higher concentration to lower concentration.
- (c) Movement of solvent molecules from higher concentration to lower concentration of solution through a permeable membrane.
- (d) Movement of solute molecules from lower concentration to higher concentration of solution through a semi-permeable membrane.

3. Plasmolysis in a plant cell is defined as

- (a) breakdown (lysis) of plasma membrane in hypotonic medium
- (b) shrinkage of cytoplasm in hypertonic medium
- (c) shrinkage of nucleoplasm
- (d) none of them

4. The phenomenon where cytoplasm shrink in a hypertonic medium is called:

- (a) Frontolysis
- (b) Plasmolysis
- (c) Acidolysis
- (d) Allolysis

5. The process by which water moves through a semi-permeable membrane from a region of high concentration to a region of lower concentration, thereby equalizing water concentration is called:

- (a) Evaporation
- (b) Diffusion
- (c) Osmosis
- (d) All of the above

Write short answers for the following:

1. How is bacterial cell different from an onion peel cell?

2. What is the normal location of nucleus in-

- (i) In animal cell
- (ii) In plant cell

3. Name the two types of cell division in multi cellular organisms. Explain both with the help of diagram.

4. Which cell organelle controls most of the activities of the cell? Explain with the help of a diagram.

### MATHS HOLIDAYS HOMEWORK CHAPTER-1 (NUMBER SYSTEM)

Q1) Find the value of

(i)  $(256)^{0.16} \times (256)^{0.09}$

(ii)  $(49)^{1/3} \times (7)^{1/3}$

(iii)  $2\sqrt{50} + 3\sqrt{32} + 4\sqrt{18}$

Q2) Show that  $(2 + \sqrt{3})(2 - \sqrt{3})(5 + \sqrt{2})(5 - \sqrt{2})$

Q3) Find three rational numbers between and .

Q4) Express the following in the form, where and q are integers and  $q \neq 0$ .

(i)  $0.2353535\dots$

(ii)  $19.9999\dots$

(iii)  $0.777777\dots$

Q5) If  $(4)^{2x-1} - (16)^{x-1} = 384$ , then find the value of x.

Q6) Insert 10 Rational Numbers between and .

Q7) Write the rationalizing factor of .

Q8) Rationalise the denominator of :

(i)

(ii)

(iii)

Q9) Write three numbers whose decimal expansions are non-terminating and non-recurring.

Q10) If  $a = 5 + 2\sqrt{6}$  then find  $a^2$  and also find  $1/a$ .

FILL IN THE BLANKS:(Questions 11-14)

Q11)  $(49/4)^{1/2} \times (81/16)^{-1/4} =$  \_\_\_\_\_

Q12) If  $(81)^{5/x} = 243$ , then  $x =$  \_\_\_\_\_

Q13) The value of  $(2 + \sqrt{3})(2 - \sqrt{3})$  is \_\_\_\_\_

Q14) The decimal representation of the rational number is \_\_\_\_\_

Q15) Find the values of  $1/x$ , if

(i)  $= x$

(ii)  $+ = x$

## CHAPTER-2 (POLYNOMIALS)

Q1) How many zeros does cubic polynomial has?

Q2) Write the coefficient of  $x^2$  in the expansion of  $(x-2)^3$ .

Q3) Find the value of  $k$ , if  $y + 3$  is a factor of  $3y^2 + ky + 6$ .

Q4) If  $f(z) = z^2 - 3\sqrt{2}z - 1$ , then find  $f(3\sqrt{2})$ .

Q5) Find  $513^2 - 512^2$  using suitable Identity.

Q6) If  $x + = 4$ , then find the value of  $x^2 + 1/x^2$ .

Q7) Find  $x +$ , If  $x^2 + 1/x^2 = 62$ .

Q8) Expand using suitable Identity:

(i)  $(-2x + 5y - 3z)^2$

(ii)  $(-p + 4q - 3r)^2$

(iii)  $(2x + 5y)^3$

(iv)  $(-a + 2b)^3$

Q9) If  $p(x) = x^2 - 4x + 3$ , evaluate:  $p(2) - p(-1) + p(1/2)$

Q10) If  $(x+1)$  is a factor of  $ax^3 + ax^2 - 2x + 4a - 9$ , find the value of  $a$ .

Q11) Find the remainder when  $f(x) = 4x^3 - 12x^2 + 14x - 3$  is divided by  $g(x) = (2x-1)$  using remainder theorem.

Q12) For what value of  $m$ , is  $x^3 - 2mx^2 + 16$  divisible by  $x-2$ ?

Q13) Factorise the following polynomials:

(i)  $48x^3 - 36x^2$

(ii)  $5x^2 - 15xy$

(iii)  $4x^2 - 9y^2 - 2x - 3y$

(iv)  $9x^2 - 30xy + 25y^2$

(v)  $X^2 + 4y^2 + 9z^2 - 4xy - 12yz + 6xz$

(vi)  $X^2 + y^2 + 9z^2 + 2xy + 6yz + 6xz$

**Q14) Factorise the following by splitting the middle terms:**

(i)  $2x^2 - 7x - 15$

(ii)  $X^2 - 23x + 120$

(iii)  $\sqrt{3}x^2 + 11x + 6\sqrt{3}$

**Q15) Using suitable Identities, find the value of:**

(i)  $101^2$

(ii)  $98^2$

(iii)  $(0.97)^2$

(iv)  $190 \times 190 - 10 \times 10$

**ACTIVITY: Prepare a Square Root spiral to represent Irrational Numbers on Number Line.**

#### **ART INTEGRATED PROJECT**

The major tribal communities that dwell in Lakshadweep comprise Aminidivi, Koyas, Malmis and Melacheris. Analyze the demography i.e. the population growth rate of Lakshadweep over the past few decades and predict its future population growth.