



St. Mary's School, Dwarka
Holiday Homework
Class X
Worksheet 3

Subject: English

General Instructions:

- 1) The work should be done neatly and in a systematic way.
- 2) The given questions are to be done in the English notebook.
- 3) Attempt all questions.

Q1. Read the passage given below.

Rain and vegetation are intimately connected. The monsoon and the natural habitats of the subcontinent have co-existed for millions of years. The huge winds that come from the Arabian Sea, crash into the Himalayas and then return. This massive weather system, shapes the forests across the country, especially like Wayanad, India. According to research, these forests behave like a pump that draws the winds in from the ocean. The mountains of the Western Ghats are partly responsible for condensing the rain out of the air. Forests release organic chemicals and create a vapour deficit area above them, a low-pressure zone that pulls in air from the ocean. Therefore, the lost forest cover has a negative effect on the monsoon. In our habitat, we are seeing visible changes in the rain now. Until 2018, average rainfall had been reducing. But in the last three years, it increased again. The pattern of rain has changed - the onset, duration and course of the monsoon is becoming unpredictable. Along with delays in the monsoon, it can also just disappear after arrival. There can be clouds but no rain. You can get drought-like conditions with sunshine and heat after its onset or short deluges of high intensity. That's extremely worrying in terms of the impact on vegetation and small life forms. To name just one, the amphibians of the Western Ghats are dependent on these moisture patterns. The monsoon signifies steady downpours, filling up lakes, ponds and paddy fields, and keeping the ground wet for months, which they need to spawn and tadpoles to form. In Wayanad, previously, there was 100% humidity for several months. It was like living underwater. Now, we get varying humidity, sometimes even less than 90%. Water dependent creatures like amphibians are very sensitive to this. Trees are also very vulnerable because their flowering and fruiting are timed to the monsoon. Entire cycles of life get affected by changes in the rain. In the wild, small and tender plants literally anticipate the monsoon, from pre-monsoon showers with heavy electrical activity to the arrival of the southwest monsoon, an adaptation which has taken place over millennia. Tuberos plants like ground orchids put out energy-intensive new tubers timed to the rain. If the monsoon does not arrive properly,

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these plants, ready to put out new leaves, risk being deprived of the nutrition and moisture they need to grow and create flowers and seeds.

Based on your reading of the passage, choose the correct option:

I. Complete the sentence appropriately: (1)

Average rainfall after 2018 has seen an _____ trend.

II. Why has changed monsoon pattern affected amphibians in Wayanad? (2)

III. Complete the following table: (1)

Reason	Outcome

IV. Plants foresee the monsoon because of _____ . (1)

- a) humidity
- b) winds
- c) moisture
- d) electrical activity

Q2. You are Vipul / Vipasha, living at D-78, Island Avenue, Ernakulum. You have seen an advertisement about a diploma course in French language soon to be organised by Maxwell Institute of Languages, Fort Road, Kochi. Write a letter in 100-120 words to the adviser seeking all relevant information like admission procedure, fee structure, duration of the course, timings, transport facilities etc.

(5)

Q3. Complete the following tasks, as directed. (1X5=5)

I. Identify the error and supply correction for the given sentence from a commercial company's current marketing strategy.

Language is a wonderful gift give to humans. Let us learn together and be skillful.

ERROR	CORRECTION

II. Choose the most suitable option:

Vidya _____ since 4 p.m. today.

- a. was reading
- b. had been reading
- c. has been reading
- d. will be reading

III. He said, "My sister has been a great mentor throughout the career."

- a. He said that his sister had been a great mentor throughout his career.
- b. He said that his sister would be a great mentor throughout his career.
- c. He said that his sister has been a great mentor throughout his career
- d. He said that his sister was a great mentor throughout his career.

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IV. None of the paintings created by the famous painters _____ sold at the exhibition.

- a. have been
- b. are
- c. were
- d. was

V. Don't disturb others. Follow the rules of sitting in a library. You _____ speak in the library.

- a. must not
- b. dare not
- c. need not
- d. could not

Q4. Though owning average appearance, Ausable possessed extraordinary intelligence. How does it help him as a secret agent? (5)

Q5. You recently read the poem, 'Tiger in the Zoo.' Prepare a fact file on Tiger Conservation in India. You may include the following points:

- Sub-species of tigers found.
- Their natural habitat
- Threats
- Conservation Efforts
- Protection Status

Use a scrapbook to collect relevant pictures. (5)

Subject: Hindi

प्रश्न 1 निम्न गद्यांश पर आधारित प्रश्नों के उत्तर निर्देश के अनुसार दीजिए : (1×5 = 5)

सोमेश्वर की घाटी के उत्तर में ऊँची पर्वतमाला है, उसी पर बिल्कुल शिखर पर कौसानी बसा हुआ है। कौसानी से दूसरी ओर फिर ढल शुरू हो जाती है। कौसानी के अड़े पर जाकर बस रुकी। छोटा-सा, बिल्कुल उजड़ा-सा गाँव और बर्फ का तो कहीं नाम-निशान नहीं। बिल्कुल ठगे गये हम लोग। कितना खिन्न था मैं। न चाहते हुए भी बस से उतरा कि जहाँ था वहीं पत्थर की मूर्ति-सा स्तब्ध खड़ा रह गया। कितना अपार सौंदर्य बिखरा था, सामने की घाटी में। इस कौसानी की पर्वतमाला ने अपने अंचल में यह जो कत्यूर की रंग-बिरंगी घाटी छिपा रखी है। इसमें किन्नर और यक्ष ही तो वास करते होंगे। पचासों मील चौड़ी यह घाटी, हरे मखमली कालीनों जैसे खेत, सुंदर गेरू की शिलाएँ काटकर बने हुए लाल-लाल रास्ते, जिनके किनारे-किनारे सफेद-सफेद पत्थरों की कतार और इधर-उधर से आकर आपस में उलझ जाने वाली बेलों की लड़ियों-सी नदियाँ। मन में तो बस यही आया कि इन बेलों की लड़ियों को उठाकर कलाई में लपेट लूँ, आँखों से लगा लूँ। अकस्मात हम एक-दूसरे लोक में चले आए थे। इतना सुकुमार, इतना सुंदर, इतना सजा हुआ और इतना निष्कलंक कि लगा इस धरती पर तो जूते उतारकर, पाँव पोंछकर आगे बढ़ना चाहिए। धीरे-धीरे मेरी निगाहों ने इस घाटी को पार किया और जहाँ ये हरे खेत और नदियाँ और वन, क्षितिज के धुंधलेपन में, नीले कोहरे में धुल जाते थे, वहाँ पर कुछ छोटे पर्वतों का आभास, अनुभव किया, उसके बाद बादल थे और फिर कुछ नहीं।

(i) रंग बिरंगी घाटी का नाम क्या था ?

- (क) सोमेश्वर
- (ख) कत्यूर
- (ग) यक्ष
- (घ) हरिता

(ii) लेखक पत्थर की मूर्ति-सा स्तब्ध खड़ा क्यों रह गया ?

- (क) नदी की सुंदरता देखकर
- (ख) आकाश की सुंदरता देखकर
- (ग) पानी की सुंदरता देखकर
- (घ) घाटी की सुंदरता देखकर

(iii) निम्नलिखित कथन (A) तथा कारण (R) को ध्यानपूर्वक पढ़िए तथा दिए गए विकल्पों में से कोई एक सही विकल्प चुनकर लिखिए।

कथन (A) इसमें किन्नर और यक्ष ही तो वास करते होंगे।

कारण (R) उसके बाद बादल थे और फिर कुछ नहीं।

1 कथन (A) तथा कारण (R) दोनों गलत हैं।

2 कथन (A) गलत है परन्तु कारण (R) सही है।

3 कथन (A) सही है परन्तु कारण (R) गलत व्याख्या करता है।

4 कथन (A) और कारण (R) दोनों सही हैं परन्तु कथन कारण की सही व्याख्या नहीं करता है।

(iv) लेखक के मन में क्या आया ?

(v) गद्यांश में प्रयुक्त 'नाम-निशान' शब्द में कौन सा समास है?

प्रश्न 2 निम्नलिखित वाक्यों को निर्देशों के अनुसार बदलिए — (1×2 = 2)

(क) जैसे ही महाराज आए वैसे ही सभा शुरू हो गई। (सरल)

(ख) पक्षी उड़कर पेड़ पर बैठ गया। (संयुक्त)

प्रश्न 3 निम्नलिखित वाक्यों में रेखांकित पदबंधों के भेद बताइए — (1×2 = 2)

(क) माताजी ने आज पकवान बनाए हैं।

(ख) मैं आज सुबह से गृहकार्य कर रहा हूँ।

प्रश्न 4 रिक्त स्थान की पूर्ति उचित मुहावरे से कीजिए — (1×1 = 1)

रक्षाबंधन के दिन मीना सुबह से शाम तक अपने भाई कीरही।

प्रश्न 5 मीरा श्रीकृष्ण की भक्ति से प्राप्त होने वाले किन लाभों के विषय में बताती हैं ?

वे गिरिधर से अलग क्यों नहीं होना चाहती ? (1½×1 = 1½)

प्रश्न 6 'मनुष्यता' कविता के माध्यम से कवि क्या संदेश देना चाहते हैं? (1½×1 = 1½)

प्रश्न 7 ठाकुरबारी के विषय में गाँव के लोगों की क्या मान्यता थी ? (1×1 = 1)

प्रश्न 8 "संपत्ति के कारण अपने भी पराए बन जाते हैं।" "हरिहर काका' कहानी के आधार बताइए क्या यह सत्य है ? (1×1 = 1)

प्रश्न 9 'नवजीवन अपार्टमेंट' के सचिव की ओर से सोसाइटी में रहने वाले लोगों को जल संरक्षण हेतु सचेत करने के लिए 25 से 30 शब्दों में सूचना तैयार कीजिए । (5×1=5)

गतिविधि :

प्रश्न 10 किसी समुद्री जीव या शंख का आकार देते हुए एक पेपर वेट बनाइए । (5×1=5)

Subject: Mathematics

- Q-1 Given that L.C.M.(91,26) =182, find H.C.F(91,26). (2)
- Q-2 State fundamental theorem of arithmetic with an example. (2)
- Q-3 Explain why $(17 \times 5 \times 11 \times 3 \times 2 + 2 \times 11)$ a composite number. (2)
- Q-4 Find the value of 'k' such that the polynomial $x^2 - (k+6)x + 2(2k-1)$ has sum of its zeroes equal to half of their product. (2)
- Q-5 If two positive integers are expressed in the form of $a=pq^2$ and $b= p^3q$ where a and b being prime numbers, then find the H.C.F (a,b). (2)
- Q-6 Prove that $\sqrt{5}$ is irrational hence prove that $\sqrt{5} + 2$ is an irrational number. (3)
- Q-7 A fraction becomes $\frac{9}{11}$ if 2 is added to both the numerator and the denominator. If, 3 is added to both the numerator and the denominator it becomes $\frac{5}{6}$. Find the fraction. (3)
- Q-8 Check graphically whether the pair of linear equations $3x-y=9$, $x-3y= 4$ is consistent or not. (3)
- Q-9 Solve by Substitution method.
 $x+y=4$ (i) , $2x-3y=11$(ii) (3)
- Q-10 Find the zeroes of the polynomial $4x^2 - 4x - 8$. Also, establish a relationship between the zeroes and coefficients (3)

Fun Activity:

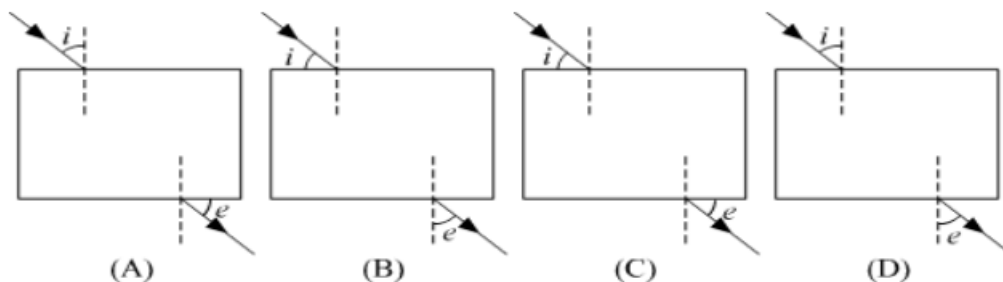
Brain teasers

1. I am an odd number. Take away one letter and I become even. What am I?
2. I add five to nine, and get two. The answer is correct, but how?
3. Think of a number. Double it. Add 10. Halve it. Take away your original number. Your answer is 5!
Explain how this works?
4. Create more Brain teasers and try with your sibling.

Subject: Science**General Instructions:**

- 1) Neatly write all the answers in your science notebook.
- 2) Attempt the questions keeping in mind the weightage of each question

Q1. A student performs an experiment by tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Which of the following diagram shows the correct measure of the angle of incidence and the angle of emergence? (1)



- i) Figure A
- ii) Figure B
- iii) Figure C
- iv) Figure D

Q2. A student notices that her mother's silver jewellery had turned dull and had a grey-black film over it. Which of the following options justifies the cause of change in colour of the silver metal? (1)

- (a) The polish over the jewellery was removed after wearing for a few months.
- (b) The jewellery lost its sheen after coming in contact with atmospheric gases.
- (c) Dust deposits over the jewellery led to changes in its colour.
- (d) Wear and tear of silver results in its rusting.

Question no. 3 is Assertion-Reason type question. These consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (1)

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true and R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true

Assertion (A): When a concave mirror is held underwater, its focal length will decrease.

Reason (R): The focal length of a concave mirror is independent of the medium in which it is placed.

Q4. Draw a diagram of human respiratory system and label the following: (2)

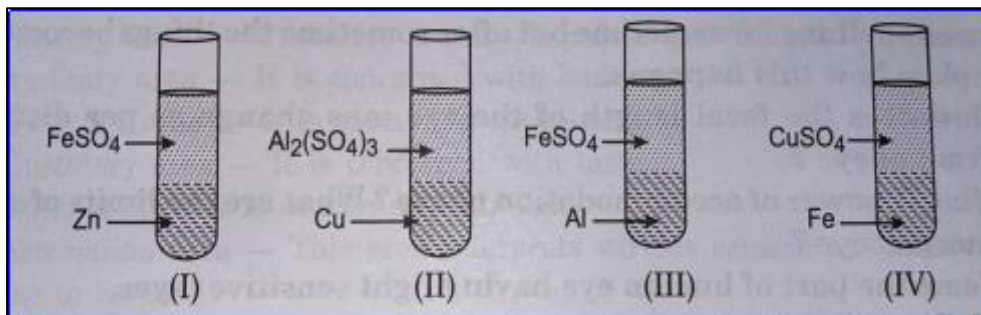
- a) part where air is filtered by fine hair and mucus
- b) part which terminates in balloon – like structures
- c) balloon – like structures where exchange of gases takes place.
- d) part which separates chest cavity from abdominal cavity

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Q5. In the dial of a clock, lines are marked instead of numbers. Observing through a plane mirror the time appeared to be 7:25 as shown in the diagram given below. What was the actual time shown on the clock's dial? Justify the answer. (2)

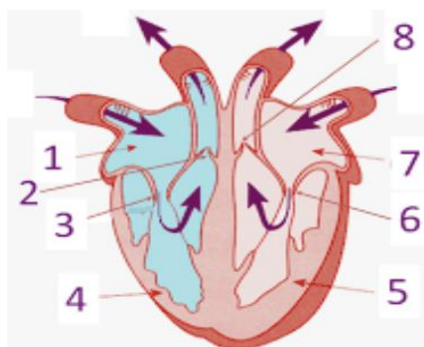


Q6. Four test tubes containing different solutions and different metals are shown in the given figure: (3)



Tabulate your observation and inference about the changes which will take place in the test tubes I, II, III, IV. Arrange the elements copper, zinc, aluminium, and iron, in the increasing order of their reactivity, based on your observations. Write the relevant chemical equations.

Q7. Observe the diagram and answer the questions given below: (2+1=3)



- (a) Name all the parts shown in the diagram.
- (b) Name the blood vessels which are bringing blood towards the heart in the given diagram.
- (c) Name the blood vessels which are taking blood away from the heart in the given diagram.

Q8. An object is placed at a distance of 60 cm from a concave mirror of a focal length 30 cm. (3)

- (i) Use the mirror formula to find the distance of the image from this lens.
- (ii) List the characteristics of the image formed by the mirror in this case.
- (iii) Draw a ray diagram to justify your answer to part (ii).

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Q9. During your commute on the Delhi metro, you may have noticed that a large spherical mirror is installed on the platform for safety purposes. When a metro train was 2 meters away from the mirror, the image of the train appeared to be at 5 cm in the mirror. (4)

1. Name the type of spherical mirror used here.
2. Find the focal length of the mirror.
3. Calculate the magnification of the image.
4. State the nature of the image formed.

Q10. (ACTIVITY) (5)

Explore the phenomenon of refraction of light in glass objects and unravel the intriguing role that thickness plays in changing the path of light.

- Choose two different glass objects like glass bottle and glass jar of varying thickness.
- With the help of a light source (torch or flashlight) set up a simple experimental arrangement.
- Shine the light source through each glass object one by one, and trace the path of light as it passes through each object.
- Record the angle of incidence and refraction.
- Reflect on your findings and observations.
- How thickness of the glass objects influences the bending of the light ray?

Subject: Social Science

General Instructions:

- 1) The work should be done neatly and in a systematic way.
- 2) The given questions are to be done in your respective subject notebooks.

- Q1. Differentiate between stock resources and reserves. (1)
- Q2. Which Act did not permit plantation workers to leave the tea garden without permission? (1)
- Q3. Name the female allegory representing the Republic of France. (1)
- Q4. Mention any four negative factors which since pre-independence to the present period have contributed significantly to the fearful depletion of flora and fauna in India. (2)
- Q5. Explain any three steps that can be taken to solve the problem of land degradation? (3)
- Q6. What does the cartoon represent? Identify the two leaders shown in the cartoon. (3)



- Q7. What was the language policy of India? Write in detail. (3)
- Q8. In Tamil Nadu, 75% of the people living in rural areas use a ration shop, whereas in Jharkhand only 8% of rural people do so. Where would people be better off and why? (3)
- Q9. What is development? Explain the indicators used by UNDP for measuring development. (3)
- Q10. Explain any five effects of the Non-cooperation Movement on the economy of India. (5)

Subject Artificial Intelligence

Prepare a presentation of minimum 10 slides on the following topic: (Use Adobe Express)

(10)



Consider the following points to prepare the same.

- Introduction
Definition of Artificial Intelligence (AI):
- Brief overview of what AI is.
Types of AI (narrow AI, general AI, super intelligent AI).
Definition of Human Intelligence:
- Components of human intelligence (cognitive abilities, emotional intelligence, creativity).
- Positive Impacts of AI on Human Intelligence
 - Enhancement of Cognitive Abilities:**
AI as a tool for enhancing problem-solving and decision-making.
AI-driven educational technologies that personalize learning experiences.
 - Augmentation of Human Skills:**
AI-assisted creativity in art, music, and writing.
AI in scientific research to accelerate discoveries and innovation.
 - Improvement in Healthcare:**
AI in diagnostics and personalized medicine.
AI-driven mental health support systems (e.g., chatbots for therapy).
 - Increased Accessibility:**
AI technologies for aiding individuals with disabilities (e.g., speech-to-text, vision assistance).
- Negative Impacts of AI on Human Intelligence
 - Dependence and Cognitive Offloading:**
Over-reliance on AI tools leading to reduced problem-solving and critical thinking skills.
Potential decline in memory and knowledge retention due to easy access to information.

- **Job Displacement and Skill Degradation:**
Impact of AI automation on employment and skill requirements.
The need for continuous learning and adaptation to new technologies.
- **Ethical and Psychological Concerns:**
Issues of privacy, surveillance, and data security.

Case Studies and Examples:

Real-world examples of AI impacting human intelligence positively and negatively.

Case studies from various sectors like healthcare, education, and industry.

Subject: Home Science

Q1. How often should a household budget be reviewed and adjusted? (1)

- a) Annually
- b) Quarterly
- c) Monthly
- d) Never

Q2. What should be the responsibilities as a consumer? (1)

- a) Saving receipts
- b) Asking questions at point of sale
- c) Always read terms and conditions before buying a product
- d) All the above

Q3. Ways to reduce fatigue include- (1)

- a) avoiding difficult jobs
- b) working only when you feel like
- c) developing motivation
- d) None of these

Q4. What is the benefit of having a separate savings account for specific goals? (1)

- A) It complicates financial management
- B) It increases the temptation to spend
- C) It helps in tracking and achieving financial goals
- D) It provides no real advantage

Q5. An expenditure plan should prioritize which of the following? (1)

- A) Luxuries
- B) Non-essential items
- C) Needs over wants
- D) Impulse buys

Q6. Which of these is a type of compulsory saving? (1)

- A) Banks
- B) Provident funds
- C) Life insurance
- D) Unit trust of India

Q7. Very short answer type questions- (1x5= 5)

- I. State the types of real income.
- II. Name any factors affecting expenditure.
- III. Give examples of Voluntary savings.
- IV. Write the full form of PPF.
- V. State the type of family budget in which income and expenditure are almost same.

Q8. Short answer type questions- (2x2= 4)

- I. Highlight two benefits of having a saving plan.
- II. Give two examples of how technology can assist in managing household expenditure and saving plans.

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Q9. Make a collage or paste pictures showing ways of how handling of food and equipment can be done properly while working in a kitchen. (5)

Q10. List down the name of food items present in your kitchen based on their storage need under each category. (5)

Perishable foods	Semi-Perishable foods	Non -Perishable foods

Subject –Hindustani Music Vocals

Q.1) Write the difference between Jyati and Thaati. (2)

Q.2) Write the difference between Meend and Murki. (2)

Q.3) Define the Aroha and Avroha. (2)

Q.4) What is Pakad/Swaroop of a Raga (2)

Q.5) What do we mean by Gayan Samay of a Raga. (2)

Q.6) How do we determine the Jaati of a Raga? (2)

Q.7) Draw the diagram of Tanpura (3)

Subject – Painting

Instruction: Please do theory questions in your note book and practical in your art file

Q1. What do you understand by perspective? (5)

Q2. Draw object using 2 D & 3 D perspective (5)

Q3. Draw a portrait of any freedom fighter (5)