

शरदकालीन अवकाश कार्य कक्षा 9

1 AUTUMNBREAKHOLIDAYHOMEWORK

SUB: MATHS

CLASS: IX

1. A bicycle wheel has a diameter of 70 cm. How many complete revolutions will it make while travelling 220 m?
2. Find the perimeter and area of a semicircle of radius 7 cm. Remember to include the diameter when calculating the perimeter.
3. Two circles have radii in the ratio 2 : 3. Find the ratio of their circumferences and the ratio of their areas.
4. A circular track has a circumference of 440 m. Find its radius. How far will a runner travel in 5 rounds?
5. Find the area of a triangle whose sides are 13 cm, 14 cm and 15 cm using Heron's formula.
6. The perimeter of a triangular plot is 48 m. Its sides are in the ratio 3: 4: 5. Find the length of each side and the area of the plot.
7. Revise the Chapter 5 and Chapter 6 from Ganita Manjari for Monthly test.

2 SCIENCE HOLIDAY HOMEWORK

Autumn Break — Class IX

Textbook: NCERT Exploration

Chapters: Work, Energy and Simple Machines; How Forces Affect Motion; Exploring Mixtures and Their Separation

General Instructions

- Attempt all eight questions.
- Use diagrams, tables, photographs or illustrations wherever required.
- Perform experiments only under adult supervision and use safe household materials.
- Present your work neatly in a separate notebook or on A4 sheets.

Questions

Q1. Work, Energy and Simple Machines: Identify four simple machines used at home or school. Draw or paste their pictures and explain how each makes work easier.

Q2. Work, Energy and Simple Machines: A student lifts a 5 kg bag through a height of 2 m. Calculate the work done against gravity. Take $g = 10 \text{ m/s}^2$.

Q3. Work, Energy and Simple Machines: Trace the energy transformations in a solar cooker and an electric fan. Present your observations in a flowchart.

Q4. How Forces Affect Motion: A bicycle accelerates when the rider pedals harder and slows down when the brakes are applied. Explain how forces change the speed and motion of the bicycle.

Q5. How Forces Affect Motion: A toy car travels 6 m in 3 s and then 10 m in 2 s. Calculate its average speed over the entire journey.

Q6. Exploring Mixtures and Their Separation: A mixture contains sand, salt and iron filings. Describe a suitable sequence of steps to separate all three components.

Q7. Exploring Mixtures and Their Separation: You are given muddy water. Suggest a method to obtain clearer water and explain why the method may not remove all dissolved impurities or kill microorganisms.

Q8. Creative Science Activity: Design a low-cost method to separate a mixture of different waste materials, such as paper clips, sand, plastic pieces and salt. Draw the setup and explain the principle behind each step.

— Complete and submit after the autumn break

3 शरदकालीन अवकाश कार्य कक्षा 9 विषय हिंदी

1. पढ़ाए गए सभी पाठ का वाचन अभ्यास करे

प्रत्येक पाठ से दो-दो संक्षिप्त प्रश्नोत्तर करें।

2 निम्नलिखित विषयों में अनुच्छेद लिखे

क) प्लास्टिक और पर्यावरण प्रदूषण सुरक्षित भविष्य के लिए प्रकृति में निवेश
(प्रकृति का संरक्षण)

ख) यदि विद्यालय न होते तो क्या होता?

ग) सोशल मीडिया का दुष्प्रभाव

घ) मन की एकाग्रता और योग साधना

3 पत्र लेखन

क) संपादक के नाम कोई एक पत्र

ख) नगर निगम नि के अधिकार के नाम

ग) अपने दादा-दादी को जीवन लक्ष्य के बारे

में बताते हुए 300 शब्दों में पत्र लिए लिखिए

कक्षा- नवमी विषय:- संस्कृतम्

1. "नैतिकमूल्यानाम् अस्माकं जीवने महत्त्वं" इति विषयोपरि एकं निबन्धं शतद्वयं शब्देषु लिखतु। Write an essay in two hundred words on the topic "Importance of moral values in our lives".

2. विंशतिः नीतिवचनानि अनुविश्य स्फोरकपत्रेषु लिखतु। Follow twenty proverbs and write them on A4 paper.

3. स्वदिनचर्या त्रिंशत् पङ्क्तिषु सम्यक् रूपेण लिखतु। दिनचर्या समयबद्धविधिना लिखतु। Write your daily routine in thirty lines properly. Write the routine in a timed manner.

4. प्लास्टिक-वस्तुनां विकल्पं किम् अस्ति, दश पङ्क्तिषु लिखतु। Write in ten lines what is the alternative to plastic goods.

5. "बिलस्य वाणी न कदापि मे श्रुता" इत्यस्य पाठस्य सारं स्वविवेकेन लिखतु। Write the gist of the text "I never heard Bill's voice" in 100 words at your discretion.

PM SHRI KENDRIYA VIDYALAYA MATI, SHIFT 2

Class: IX

Sub: English Language & Literature (Code 184)

Homework (Autumn Break)

1 – Reading Skill

Read an English newspaper every day. Cut out **one article of your interest** and:

- Write its **headline**
- Summarize it in **80– 100 words**
- Note **5 new words** and use them in sentences

2 – Writing Skill

Write an essay (200– 250 words) on the topic:
“ **Books vs Screens – Which is Better for Learning?**”

3 – Grammar Practice

Do 10 sentences each on:

- Direct & Indirect Speech

4 – Writing Skill

Write a **formal letter** to the Editor of a newspaper expressing concern about increasing road accidents in your city.

5 – Reading Comprehension

Solve one unseen passage from your practice book/reference material. (10 marks pattern)

6 – Creative Writing

Write a short story (200– 250 words) on the following beginning:
“ It was a dark evening and I was walking alone when suddenly... ”

7 – Project Work

Prepare a creative cover page/poster on the theme:
“ Power of Reading ”
(Use drawings, slogans, and quotes).

 **Submission:** All homework should be done neatly in the English notebook and submitted on the reopening day after Autumn Break.

Holiday Homework

Artificial Intelligence

Class 9th

Section A: Objective Type Questions

1. Rearrange the steps of AI project cycle in correct order:
a. Data Acquisition
b. Problem Scoping
c. Modelling
d. Data Exploration
e. Deployment
f. Evaluation
2. The process of breaking down the big problem into a series of simple steps is known as:
a. Efficiency
b. Modularity
c. Both a) and b)
d. None of the above
3. The primary purpose of data exploration in AI project cycle is:
a. To make data more complicated
b. To simplify complex data
c. To discover patterns and insights in data
d. To visualize data
4. Which of the following domains is primarily responsible for enabling machines to understand human language?
a. Data Sciences
b. Computer Vision
c. Natural Language Processing (NLP)
d. Deep Learning
5. In a Confusion Matrix, what does a 'False Positive' mean?
a. The model predicted True, and the reality is True.
b. The model predicted False, and the reality is False.
c. The model predicted True, but the reality is False.
d. The model predicted False, but the reality is True.

Section B: Subjective Type Questions

6. What makes a machine intelligent? How can a machine be Artificially Intelligent?
7. Can Artificial Intelligence be a threat to Human Intelligence? How?
8. Compare and contrast Rule-based and Learning-based approach in AI modeling indicating clearly when each of these may be used.
9. What is evaluation? What are various Model evaluation techniques?
10. What do you understand by the terms True Positive and False Positive?
11. What is deployment?
12. Identify A, B and C to describe how AI, ML & DL are related to each other.

13. Differentiate between Ethics and Moral with suitable examples.

14. Write Major Issues around AI Ethics.

