Class 12th Science Assignment 8.1.26

English

Key Points: Going Places (A. R. Barton)

The story centres on Sophie, a teenage girl from a lower-middle-class family.

Sophie dreams of a glamorous and adventurous life, far removed from her reality.

She frequently imagines having a boutique, becoming an actress or fashion designer.

Sophie idolises Danny Casey, a famous Irish footballer.

She invents a story about meeting Danny Casey, which is not real.

Sophie shares her fantasies with her friend Jansie, who is more practical and realistic.

Jansie warns Sophie about spreading unrealistic dreams, but Sophie ignores her.

Sophie's family, especially her father, represents harsh reality and practicality.

Sophie waits for Danny at the canal, but he never comes.

Her disappointment reveals the gap between dreams and reality.

The story highlights adolescent fantasies, hero worship, and escapism.

Sophie's character shows the psychological need to escape poverty through imagination.

Unsolved Competency-Based Questions

Going Places

Q1. How do Sophie's dreams reflect her dissatisfaction with her social and economic background?

Q2. Compare Sophie and Jansie as two contrasting personalities. What life skills does Jansie display?

Q3. Sophie often confuses imagination with reality. What consequences of this habit are shown in the story?

Q4. Analyze the role of Danny Casey in Sophie's emotional world.

Q5. How does Sophie's relationship with her father highlight the theme of realism versus fantasy?

Q6. Examine the significance of the canal scene in revealing Sophie's inner conflict.

Q7. What does the story suggest about the dangers of hero worship among teenagers?

chemistry

Instructions

1. Solve all the questions on sheets.
2. Write answers according to marks mention above the question .

Questions

1.Haloarenes are less reactive than haloalkanes and haloarenes. Explain.(3)

2.Compound 'A' with the molecular formula C_4H_9Br is treated with aq. KOH solution. The rate of this reaction depends upon the concentration of the compound 'A' only. When another optically active isomer 'B' of this compound was treated with aq.KOH solution, the rate of reaction was found to be dependent on concentration of compound and KOH both.

(i) Write down the structural formula of both compounds 'A' and 'B'.

(ii) Out of these two compounds, which one will be converted to the product with inverted configuration?(3)

3.Write the structures and names of the compounds formed when compound 'A' with the molecular formula C_7H_8 is treated with Cl_2 in the presence of $FeCl_3$.(3)

Subject : Math

Date: 08.01.2026

General Instructions:

Do all questions neatly in the fair notebook.

Mention Date, and Day on each day's work.

All steps must be shown clearly.

Each question carrying 4 marks.

1.Mega wants to prepare a handmade gift box for her friend's birthday at home.For making lower part of box, she takes a square piece of cardboard of side 20 cm.Based on the above information answer the following questions.

(I) If x cm be the length of each side of the square cardboard which is to be cut off from corners of the square piece of side 20 cm,then find the possible value of x.

(II)Find the volume of the open box formed by folding up the cutting corner.

(III) Write the value of x for which

OR

Find the maximum value of the volume.

2.Logarithmic differentiation is a powerful technique to differentiate functions of the form f(x) =u(x)^v(x), where both u(x) and v(x) are differentiable functions and f and u need to be positive functions.

Let function y=f(x) =(u(x))^v(x), then [(v(x) /u(x)) u'(x) +v'(x). log [u(x)]].On the basis of above information, answer the following questions.

Differentiate

Differentiate

If $y=(2-x)^3$

OR

If y=

3.A coach is training 3 players.He observes that the player A can hit a target 4 times in 5 shots.Player B can hit 3 times in 4 shots and the player C can hit 2 times in 3 shots.

From this situation answer the following:

Let the target is hit by A, B and C . Find the probability that A, B and C all will hit.

What is the probability that B, C will hit and A will lose?

What is the probability that any two of A, B and C will hit?

OR

What is the probability that none of them will hit the target?

Biology

Here I am sharing questions from chapter Ecosystem with you.Solve these questions in your fair note book.

Case 1: Energy Flow

In a grassland ecosystem, green plants capture solar energy and convert it into chemical energy. Herbivores feed on plants and carnivores feed on herbivores. At each trophic level, only a small fraction of energy is transferred to the next level.

Questions: a) Identify the producers in this ecosystem.

b) Name the law that explains energy loss at each trophic level.

c) Why are food chains usually short?

d) What happens to the remaining energy at each trophic level?

Case 2: Decomposition

In a forest ecosystem, large amounts of leaf litter accumulate on the forest floor. Microorganisms act on this litter under suitable conditions.

Questions:

a) Name the process involved in breaking down litter.

b) Mention two factors affecting this process.

c) Name two decomposers involved.

d) Why is decomposition slower in cold climates?

Case 3: Ecological Pyramids

A study of an aquatic ecosystem shows that phytoplankton have less biomass than zooplankton, yet energy flow remains consistent.

Questions:

a) Which pyramid is inverted here?

b) Why is the pyramid of energy never inverted?

c) Name the primary producers in this ecosystem.

d) What does each bar of an ecological pyramid represent?

◆ Assertion–Reason Questions

Q1 Assertion (A): Energy flow in an ecosystem is unidirectional.

Reason (R): Energy is lost as heat at each trophic level.

Q2 Assertion (A): The pyramid of biomass in a forest ecosystem is upright.

Reason (R): Trees have maximum biomass among all trophic levels.
Q3 Assertion (A): Decomposers are essential for ecosystem stability.
Reason (R): They recycle nutrients back to the ecosystem.
🔷 Source-Based / Data Interpretation Questions
Q Given below is the energy content at different trophic levels:
Trophic Level
Energy (kJ)
Producers
10,000
Physics
Chapter: Ray Optics and Optical Instruments
Introduction
Ray optics deals with the behavior of light when it travels in straight lines as rays.
It explains reflection, refraction, image formation by mirrors and lenses, and optical instruments.
Reflection of Light
Laws of Reflection
Angle of incidence = Angle of reflection
Incident ray, reflected ray, and normal lie in the same plane
Spherical Mirrors
Types
Concave mirror – Converging mirror
Convex mirror – Diverging mirror
Important Terms
Pole (P), Focus (F), Centre of curvature (C)
Focal length (f), Radius of curvature (R)

Mirror Formula

Magnification
Refraction of Light
Laws of Refraction (Snell's Law)

Where μ = refractive index
Total Internal Reflection (TIR)
Occurs when:
Light travels from denser to rarer medium
Angle of incidence > critical angle
Applications:
Optical fibers
Mirage
Diamonds

Lenses
Types
Convex lens – Converging
Concave lens – Diverging
Lens Formula

Magnification
Optical Instruments
Human Eye
Defects:

Myopia – Corrected by concave lens
Hypermetropia – Corrected by convex lens
Microscope & Telescope
Used to view small and distant objects respectively.
Refraction at Spherical Surface
(Convex or Concave Surface)
General Formula
Lens Maker's Formula
(Important Derivation-Based Formula)

Where:
μ = refractive index of lens material
R_1 = radius of curvature of first surface
R_2 = radius of curvature of second surface

Where:
μ_1 = refractive index of first medium
μ_2 = refractive index of second medium
u = object distance
v = image distance
R = radius of curvature
Instructions
Students you have t use the following link to start the quiz. After completion of quiz you will get the certificate of participation and grade marks .you have to save it for further assessment in future .
Link of quiz- https://www.proprofs.com/quiz-school/ugc/story.php?title=ndu2mtqxnw8fik