WORKSHEET (APRIL)

ENGLISH

Q-1. Read the extracts and answer the questions that follow.

Margie even wrote about it that night in her diary. On the page headed 17 May 2157, she wrote, "Today Tommy found a real book!" It was a very old book. Margie's grandfather once said that when he was a little boy his grandfather told him that there was a time when all stories were printed on paper. They turned the pages, which were yellow and crinkly, and it was awfully funny to read words that stood still instead of moving the way they were supposed to — on a screen, you know. And then when they turned back to the page before, it had the same words on it that it had had when they read it the first time.

Questions:

a. What had Margie grandfather told her once?

b. They turned the pages. What does 'they' refer to?

c. What was funny about the book?

d. Find a word in the passage that means 'very much'.

Q-2.   Then took the other,
                as 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,

a. Which road did the poet take?

b. Why did the poet take the other road?

c. Was it a worn out road or a less travelled path?

Q-3. Answer the following questions in 30-40 words each.

a. What made the child move on from the snake charmer?

b. Where did the child finally decide to ask his parents to let him enjoy the delights at the fair? Why?

हिंदी

1. निम्नलिखित पद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर के लिए सही विकल्प का चयन कीजिए –

I. अब कैसे छूटे राम नाम रट लागी।

प्रभु जी, तुम चंदन हम पानी, जाकी अँग-अँग बास समानी।

प्रभु जी, तुम घन बन हम मोरा, जैसे चितवत चंद चकोरा।

प्रभु जी, तुम दीपक हम बाती, जाकी जोति बरै दिन राती।

प्रभु जी, तुम मोती हम धागा, जैसे सोनहिं मिलत सुहागा।

प्रभु जी, तुम स्वामी हम दासा, ऐसी भक्ति करै रेदासा॥

(i) प्रस्तुत पद्यांश में रैदास किसकी भक्ति कर रहे हैं?

(क) श्री कृष्ण   (ख) राम   (ग) प्रेम   (घ) देवी मां

(ii) रैदास ने खुद को पानी तो भगवान को क्या बोला?

(क) बर्फ   (ख) चंदन   (ग) अमृत   (घ) इनमे से कोई नहीं

(iii) रैदास ने खुद को मोर तो भगवान को क्या बोला?

(क) बादल   (ख) मोरनी   (ग) बसंत   (घ) इनमे से कोई नहीं

(iv) रैदास ने खुद को चकोर तो भगवान को क्या बोला?

(क) सूरज   (ख) चंद्रमा   (ग) बादल   (घ) बसंत

II. ऐसी लाल तुझ बिनु कउनु करै।

गरीब निवाजु गुसईआ मेरा माथै छत्रु धरै ॥

जाकी छोति जगत कउ लागै ता पर तुहीं ढरै।

नीचहु ऊच करै मेरा गोबिंदु काहू ते न डरै॥

नामदेव कबीरू तिलोचनु सधना सैनु तरे।

कहि रविदासु सुनहु रे संतहु हरिजीउ ते सभै सरै॥

i. प्रस्तुत पद्यांश में रैदास जी ने "गरीब निवाजु" किसको कहा है?

(क) श्री कृष्ण   (ख) राम   (ग) प्रेम   (घ) देवी मां

ii. रैदास ने खुद को दास तो भगवान को क्या बोला?

(क) राजा   (ख) मालिक   (ग) पिता   (घ) बड़ा भाई

iii. रैदास किसकी तरह अपने प्रभु की भक्ति करते हैं?

(क) दास   (ख) सेवक   (ग) भिक्षुक   (घ) बेटा

iv. रैदास के अनुसार उनके प्रभु गरीब लोगों पर किस प्रकार की कृपा करते हैं?

(क) धन धान्य से समृद्ध कर देते हैं   (ख) उनकी सारी ख्वाहिश पूरी करते हैं

(ग) उनको सद्बुद्धि देते हैं   (घ) उपर्युक्त सभी

2. बुढ़िया की स्थिति पर समाज के लोगों की प्रतिक्रिया पर लेखक क्या कहना चाहता है?

3. कवि रैदास ने गरीब निवाजु किसे कहा है और क्यों ?

5. बुढ़िया को समाज से किस प्रकार की असंवेदनशीलता का सामना करना पड़ा?

6. नीचे दिए गए शब्दों में उचित स्थान पर अनुस्वार का प्रयोग करके शब्दों को पुनः लिखिए –
   नालदा, अतर, अबर, चद्रमा, सघर्ष, नितात, अक, गंगा, सबध, पखुड़ी

7. नीचे दिए गए शब्दों में उचित स्थान पर अनुनासिक का प्रयोग करके शब्दों को पुनः लिखिए-
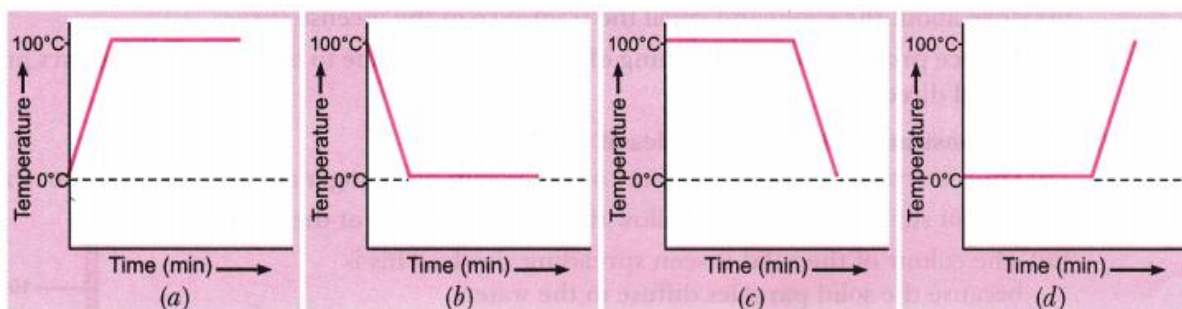   बटवारा, आंख, हसमुख, अगड़ाई, आचल, सास, आवला, ऊघना, आसू, जाच, टाग, डाट,

Mathematics

1. Find the value of the polynomial $5x – 4x^2 + 3$ at $x = 2$ and $x = –1$.

2. Compute the perimeter of a rectangle whose area is $25x^2 – 35x + 12$.

3. Find the value of $x^3 + y^3 + z^3 – 3xyz$ if $x^2 + y^2 + z^2 = 83$ and $x + y + z = 1$.

4. If $(x – 1/x) = 4$, then evaluate $(x^2 + 1/x^2)$ and $(x^4 + 1/x^4)$.

5. Factorize: $64m^3 – 343n^3$.

6. If $3x + 2y = 12$ and $xy = 6$, find the value of $9x^2 + 4y^2$.

7. Locate the points on a Cartesian plane: $(-2,4)$, $(3, -1)$, $(-1, 0)$, $(1,2)$, $(-3, -5)$.

8. What is the Abscissa of all the points on x-axis?

9. What is the Ordinate of all the points of y-axis?

10. Draw a quadrilateral whose vertices are $(3,2)$, $(2,3)$, $(-4,5)$, $(5,-3)$.

SCIENCE

1. Do we always need to heat or change pressure for changing the state of matter? Can you quote some examples from everyday life where change of state from liquid to vapour takes place without the liquid reaching the boiling point? In the case of liquids, a small fraction of particles at the surface, having higher kinetic energy, is able to break away from the forces of attraction of other particles and gets converted into vapour. This phenomenon of change of a liquid into vapours at any temperature below its boiling point is called evaporation.
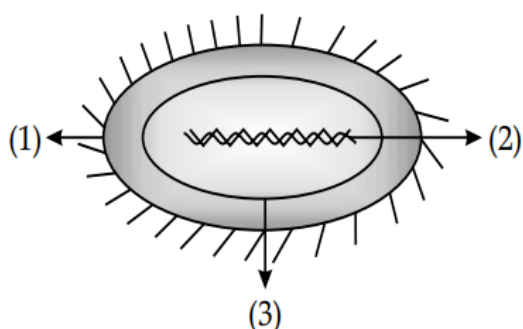
a. Why do wet clothes dry quickly in the sun than in the shade?

b. Why do we feel comfortable under a fan when we are perspiring?

c. Why do people sprinkle water on the roof after a hot sunny day?

2. A student heats a beaker containing ice and water. He measures the temperature of the content of the beaker as a function of time. Which of the following (shown in figure given below) would correctly represent the result? Justify your choice

3. Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in the kettle. Comment.

4. Study the given diagram of bacterial cell and answer any four questions from (i) to (iii).

    (i)   Label the parts marked 1, 2, and 3.
           (ii) Which structure present in the region 2 of a living cell bear gene?
           (iii) How nuclear region of a bacterial cell and nuclear region of an animal cell is different from each other?

5. Draw a plant cell and label the parts which
(a) determines the function and development of the cell
(b) packages materials coming from the endoplasmic reticulum
(c) provides resistance to microbes to withstand hypotonic external media without bursting
(d) is site for many biochemical reactions necessary to sustain life.
(e) is a fluid contained inside the nucleus

6. Each student was given five raisins of equal mass. The raisins were then soaked in distilled water at room temperature. The raisins were soaked in distilled water at room temperature for 10 minutes, overnight for B, and 60 minutes for C. They determined the amount of water that raisins absorb. Answer the following question:

(a) Name the student whose raisins have the highest percentage of water absorption.

(b) Name the student who will absorb the least amount of water from the raisins.

7. The picture shows the arrangement of particles in three different substances.

i. Identify Substance 1,2 and 3
ii. Compare their kinetic energy.
iii. What can be done to make the particles of Substance 1 move slower?

SOCIAL SCIENCE

I. Answer the following questions.

1. Mention the latitudinal and longitudinal extent of India.
2. Why is the time lag between Arunachal Pradesh and Gujarat almost two hours?
3. What is the standard meridian of India? Why is it used?
4. Write a short note on India's location with respect to the world.
5. What are the four factors of production? Explain each briefly.
6. What is the difference between physical capital and human capital?
7. Why do small farmers in Palampur borrow money?
8. What are the non-farming activities practiced in Palampur? Give two examples.
9. Explain any five features of a democratic government with suitable examples.
10. Compare democracy with any one nondemocratic form of government.
11. Discuss how democracy ensures the dignity of individuals and the freedom of its citizens.
12. What is the significance of the Tropic of Cancer in India's geography?

II. Assertion and Reasoning Questions.

Options:

A. Both A and R are true, and R is the correct explanation of A.

B. Both A and R are true, but R is not the correct explanation of A.

C. A is true, but R is false.

D. A is false, but R is true.

1. **Assertion (A):** Democracy is the most popular form of government in the world today.
    Reason (R): Democracy ensures that all citizens have equal rights and a say in decision-making.
2. **Assertion (A):** Modern farming methods have led to the overuse of natural resources in Palampur.
    Reason (R): Modern farming methods use HYV seeds, which require chemical fertilizers and a continuous supply of water.
3. **Assertion (A):** India has a strategic location at the head of the Indian Ocean.
    Reason (R): The Deccan Peninsula protrudes into the Indian Ocean, helping India establish close contact with West Asia, Africa, and Europe from the western coast and Southeast and East Asia from the eastern coast.
4. **Assertion (A):** Modern farming methods are not sustainable in the long run.
    Reason (R): They lead to overuse of chemical fertilizers and depletion of groundwater.
5. **Assertion (A):** China is not a democratic country.
    Reason (R): Elections in China are held, but only candidates approved by the Communist Party can contest.
6. **Assertion (A):** India is centrally located between East and West Asia.
    Reason (R): The Deccan Peninsula helps India establish maritime trade with both sides.

III. Map Skill - On a political map of India, mark and label the following:

1. The Standard Meridian (82°30′ E)
2. Tropic of Cancer (23°30′ N)
3. Any three neighboring countries
4. Southernmost point of India (Indira Point)
5. Easternmost and Westernmost states

INFORMATION TECHNOLOGY

1. What does ITeS stand for?*

a) Information Technology enabled Services

b) Internet Technology enabled Services

c) Internal Technology enabled Solutions

d) Information and Telecom enhanced Software

2. Which of the following is an example of IT in the healthcare industry?

a) Online shopping

b) Digital X-ray machines

c) Video gaming

d) Stock trading

3. Which service is commonly provided by BPO companies?

a) Classroom teaching

b) Call center support

c) Building construction

d) Cooking food

4. Which one of these is a benefit of using ICT?

a) Delayed communication

b) Limited access to information

c) Fast and easy sharing of information

d) Increased paperwork

5. What is the use of IT in education?

a) Booking movie tickets

b) Online learning platforms

c) cooking online

d) None of the above

6. Explain the term 'e-commerce' and give an example.

7. What is the role of IT in education?

8. Describe one disadvantage of ICT.

9. What is the full form of 'IT-BPM'?

10. Mention one precaution to ensure safe use of ICT.

ARTIFICIAL INTELLIGENCE

Multiple Choice Questions (MCQs):

1. Identifying your strengths and weaknesses is primarily important for:
   a) Completing tasks quickly.

   b) Improving self-awareness and personal growth.

   c) Comparing yourself to others.

   d) Avoiding challenging situations.

2. Feel-good sentences are used as a tool for:
   a) Criticizing oneself effectively.

   b) Boosting self-esteem and maintaining a positive mindset.

   c) Ignoring personal flaws.

   d) Communicating with others.

3. Setting personal and academic goals for the year helps in:
   a) Avoiding responsibilities.

   b) Increasing procrastination.

   c) Providing focus and direction.

   d) Making spontaneous decisions.

4. Creating a weekly schedule is a strategy for:
   a) Increasing stress levels.

   b) Effective time management.

   c) Avoiding planned activities.

   d) Making time feel longer.

5. Practicing deep breathing and meditation are examples of:
   a) Time-consuming activities.

   b) Stress management techniques.

   c) Methods for increasing anxiety.

   d) Physical exercises.

6. The "Beverly Hills Car Spotting" activity likely aims to introduce the concept of:

a) Car maintenance.

b) Traffic regulations.

c) Data patterns and observation.

d) Automotive history.

7. Image classification using Computer Vision is a practical application of:

a) Basic arithmetic.

b) Statistical analysis and pattern recognition.

c) Literary analysis.

d) Geographical mapping.

8. Recognizing and predicting patterns in numbers, figures, and shapes is crucial for developing:

a) Physical strength.

b) Logical reasoning and analytical skills.

c) Artistic talent.

d) Musical aptitude.

9. Conducting statistical analysis on a dataset helps in:

a) Ignoring data variations.

b) Understanding and interpreting data.

c) Manipulating data to fit a hypothesis.

d) Avoiding numerical information.

10. Performing probability experiments and recording results helps in understanding:

a) The certainty of all events.

b) The principles of chance and randomness.

c) How to avoid uncertain situations.

d) The importance of deterministic outcomes.

Short Answer Questions:

1. Explain the importance of identifying both strengths and weaknesses in personal development.
2. Describe how setting specific, measurable, achievable, relevant, and time-bound (SMART) goals can be beneficial for both personal and academic life.
3. In the context of the "Beverly Hills Car Spotting" activity, what kind of data patterns might one observe and why is identifying such patterns important in data analysis?
4. Briefly explain the role of statistical analysis in the field of Artificial Intelligence.
5. Why is understanding probability important when developing AI models, particularly in areas like prediction and decision-making?