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5

TEACHER **SUPPORT MATERIAL**

- ☒ **Helpful for Teachers**
- ☒ **Suitable for all Ideal Workbooks**



Looking Around **(Environmental Studies)**

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Preface

What does the new National Education Policy 2020 state?

- ◆ Inclusive and equitable quality education and lifelong learning opportunities for all must be ensured. Thus the entire education system must be reconfigured to achieve such a lofty goal while supporting and fostering learning.
- ◆ The teacher must be at the centre of the fundamental reforms in the education system. The new education policy must help re-establish teachers, at all levels, as the most respected and essential members of our society, because they truly shape our next generation of citizens. It must do everything to empower teachers and help them to do their job as effectively as possible.
- ◆ Teachers actually shape the future of children and hence they also build the nation. It is because of this noble contribution of teachers that they are the most honoured members of Indian society from the very beginning. To ensure the best future of our children and the nation it is necessary to further promote and empower the education process.
- ◆ The National Education Policy (NEP) emphasizes that to make the learning process more effective and practical, teachers need to be provided with the necessary resources. Additionally, their role in the evaluation process is crucial. Thus, teachers play a vital role in the entire learning and teaching process.

NEP-2020 and The Ideal

- ◆ Recognizing the crucial role of teachers in the learning and teaching process, Ideal Experiential Learning (P) Ltd has developed and provided Teacher Support Material. This aims to ensure that the core objectives of education are met through effective teaching and learning.
- ◆ The National Curriculum Framework (NCF) emphasizes that planning for teaching is important because "Good planning is at the heart of good education." To achieve desired learning outcomes, it's essential to plan classroom activities in advance. Key elements to consider while planning include learning objectives, competencies, outcomes, teaching-learning materials, content, annual planning, evaluation, etc.
- ◆ Therefore, we provide Teacher Support Material to assist educators.
- ◆ A teacher is a valuable resource, a treasure of knowledge. To simplify their educational tasks, we provide specific materials that teachers can adapt according to their school and students' environment.
- ◆ This material is created by the teachers, exclusively for teachers. Its sole purpose is to serve as a tool to help educators. It's not mandatory for Teachers to follow everything in this book; instead, they are encouraged to modify it according to their school's and students' needs.

Ideal with You Happy Teaching.

Teacher Support Material you get:

- ✓ Annual planning
- ✓ Format of timetable
- ✓ Formative Exam Pattern
- ✓ Semester Exam Pattern
- ✓ Softcopy of sample paper
- ✓ Exam pattern update on QR
- ✓ Softcopy of the necessary material as per NEP
- ✓ Essential questions and their answers

Annual planning

This is a trial plan that teachers and schools can modify as needed. A blank row is provided under the months for teachers to make changes that align with their school's curriculum.

Sem-1	Month	June	July	August	Sep. - Oct.	
	Chap No.	1	2, 3, 4	5, 6, 7	8, 9, 10	
	Chap No. As per School Plan					
Sem-2	Month	November	December	January	February	Mar. - April
	Chap No.	11, 12	13, 14, 15	16, 17, 18	19, 20, 21	22, 23
	Chap No. As per School Plan					
Date of First Formative Exam		Date of First Semester Exam		Date of Second Formative Exam		Date of Second Semester Exam

Timetable

(**Note:** In the blank timetable below, the teacher can write their schedule.)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Period - 1						
Period - 2						
Period - 3						
Period - 4						
Period - 5						
Period - 6						
Period - 7						
Period - 8						

If your school conducts formative examinations, paper patterns are provided here. It is not mandatory to follow this exact format. A QR code is included and if there are any changes to the printed pattern, simply scan the QR code to access the updated version.

First Formative Exam Pattern

(2 Hours)	(Unit - 1 to 4)	(40 Marks)
Q.1	(A) Choose the correct option for each of the following questions.	(4)
	(B) Answer each of the following questions in one sentence.	(4)
Q.2	(A) Fill in the blanks.	(4)
	(B) Answer each of the following questions in short. (Each carries 2 marks)	(4)
Q.3	(A) Mark the following as '✓' or '✗'.	(4)
	(B) Write two points to differentiate the following. (Each carries 2 marks)	(4)
Q.4	(A) Match the following.	(4)
	(B) Give Reasons.	(4)
Q.5	Do as directed.	(8)

First Semester Exam Pattern

(2 Hours)	(Unit - 1 to 10)	(40 Marks)
Q.1	(A) Choose the correct option for each of the following questions.	(4)
	(B) Answer each of the following questions in one sentence.	(4)
Q.2	(A) Fill in the blanks.	(4)
	(B) Answer each of the following questions in short. (Each carries 2 marks)	(4)
Q.3	(A) Mark the following as '✓' or '✗'.	(4)
	(B) Write two points to differentiate the following. (Each carries 2 marks)	(4)
Q.4	(A) Match the following.	(4)
	(B) Classify the following.	(4)
Q.5	(A) Describe the experiment.	(5)
	(B) Do as directed.	(3)

If your school conducts formative examinations, paper patterns are provided here. It is not mandatory to follow this exact format. A QR code is included and if there are any changes to the printed pattern, simply scan the QR code to access the updated version.

Second Formative Exam Pattern

(2 Hours)	(Chapter : 11 to 15)	(40 Marks)
Q.1	(A) Choose the correct option for each of the following questions.	(4)
	(B) Answer each of the following questions in one sentence.	(4)
Q.2	(A) Fill in the blanks.	(4)
	(B) Answer each of the following questions in short. (each carries 2 marks)	(4)
Q.3	(A) Mark the following '✓' or 'X'.	(4)
	(B) Do as directed.	(4)
Q.4	(A) Match the following.	(4)
	(B) Give reasons.	(4)
Q.5	Do as directed.	(8)

Second Semester Exam Pattern

(2 Hours)	(Chapter : 11 to 23)	(40 Marks)
Q.1	(A) Choose the correct option.	(4)
	(B) Answer the questions in one or two sentences.	(4)
Q.2	(A) Fill in the blanks.	(4)
	(B) Answer the questions in short. (Any two)	(4)
Q.3	(A) Mark the following as '✓' or 'X'.	(4)
	(B) Give reason.	(4)
Q.4	(A) Match the following.	(4)
	(B) Classify the following.	(4)
Q.5	(A) Describe an experiment.	(4)
	(B) Do as directed.	
	OR	
	Locate the following places in the given map.	(4)

Updation in Paper Pattern

If the paper pattern provided above changes for any reason,
Scan the given QR code.
The new pattern can be obtained as a soft copy by scanning it.



Sample paper

Scan the given QR code to access a sample paper according to the new paper pattern.

Guidance for Writing Answers

- ◆ According to NEP-20 and NCF-23, it is must for students to write meaningful answers in their own words, maintaining originality. Most educators recognize the importance of this practice. With this in mind, essential questions and answers are provided here.
- ◆ We believe that teachers do not require the answer key because they possess a wealth of knowledge. This book contains various answers written by teachers. The questions and answers provided can be modified by teachers in their own way and then shared with students through writing or explanation.
- ◆ Teachers often ask us certain questions. Based on those, we have provided some FAQs here. Read them carefully, as they will answer many of your queries.

FAQs (Frequently Asked Questions with their answers)

Q-1 These questions and answers are meant for whom?

A-1 These essential questions and answers are provided to support teachers in institutions that use Ideal's books (I-Mentor & Class Buddy).

Q-2 Are the questions and answers aligned with the series of Ideal Books used in our institutions?

A-2 Yes, it is aligned with Ideal Workbook Series. Approximately 90% (means almost) of questions from both series are included. This means there isn't a separate answer key for the series your institution uses. However, teachers can find essential questions and answers for revision or preparing question papers here. This saves teachers' time, enabling them to engage students in various activities as per the NEP guidelines.

Q-3 What should we do if a question isn't found in this resource?

A-3 If the question and answer from any series of Ideal aren't available here, so email a photo of the question with standard, semester, subject, chapter number, page no. to production@ideal.ind.in . You will receive a response within 72 hours.

Q-4 Will there be no errors in the answers provided in this resource?

A-4 The answers provided here are for teachers' reference. Teachers should carefully review them, correct any errors (mostly typographical or any other), and share accurate information with their students. If you identify any error or have suggestion, share on production@ideal.ind.in.

Q-5 Should we provide the same answers given here to the students?

A-5 No, these answers are solely for teachers' reference. Before you provide answer to student Review it once. Teachers can explain or write answers for their students in their own way.

Q-6 Are these questions and answers useful to us in other ways?

A-6 The questions are given according to question type, which helps teachers conduct chapter-wise oral or written tests.

Q-7 Here, answer of many question are not given, instead a blank line is provided; what does it mean ?

A-7 The Blank lines indicates that teachers should guide students to write their own answers based on their understanding, environment, or the information they've gathered. For these, in some questions, blank lines are provided instead of direct answers. Answer for Discuss/Activity is not given.

Q-8 What does it mean when some answers are labelled as 'Sample Answers'?

A-8 A question marked as having a 'Sample Answers' means it is only a suggested response. Teachers can modify it and write their own version if they wish.

Q-9 Here, some questions are marked with '+', what does it mean?

A-9 '+' mark means that the answer of the question is already provided in the workbook, thus, it is not provided here.

Scan the QR code to access information about changes or updates to the curriculum or this book. Also, you can find answer of those questions which are not given here.



Scan this QR code to access a soft copy of the material beneficial for teachers and students, in accordance with NEP-2020 guidelines.



**Note: Starting from July 1, 2024,
It will be updated gradually.**

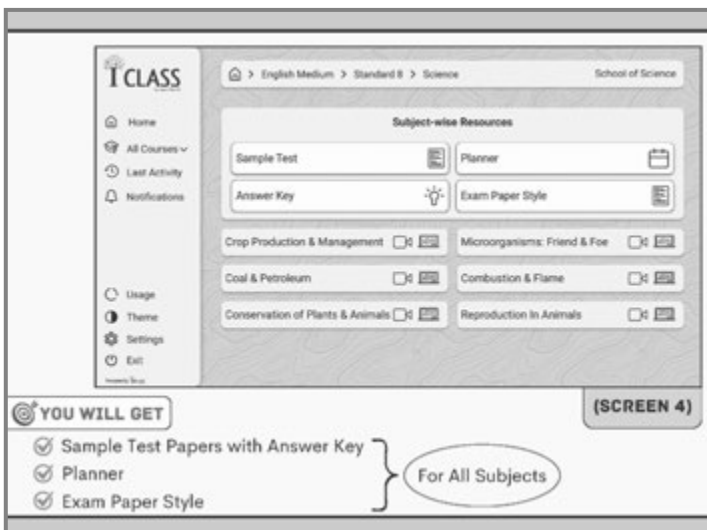
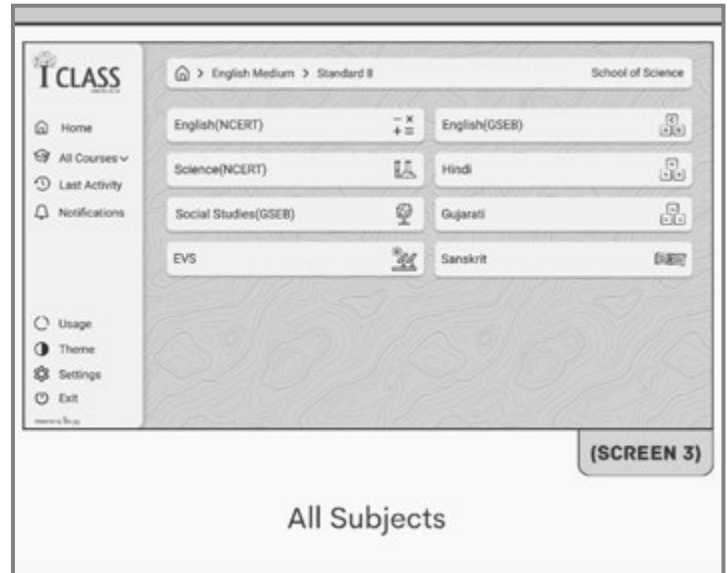
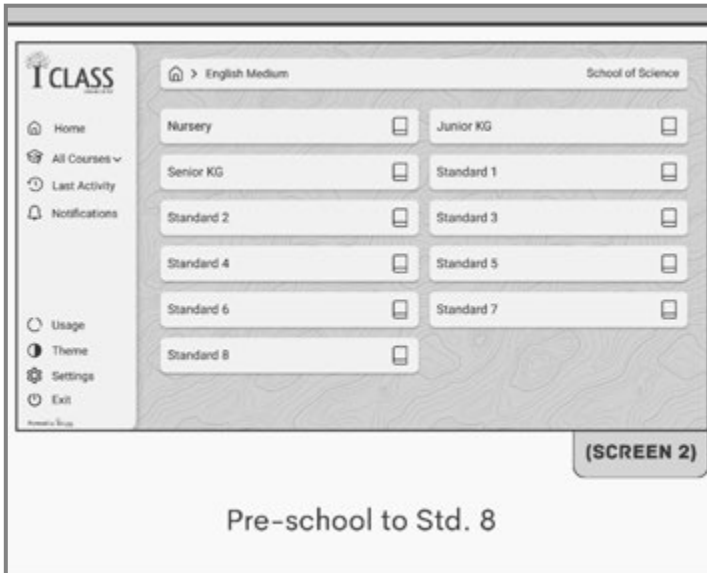
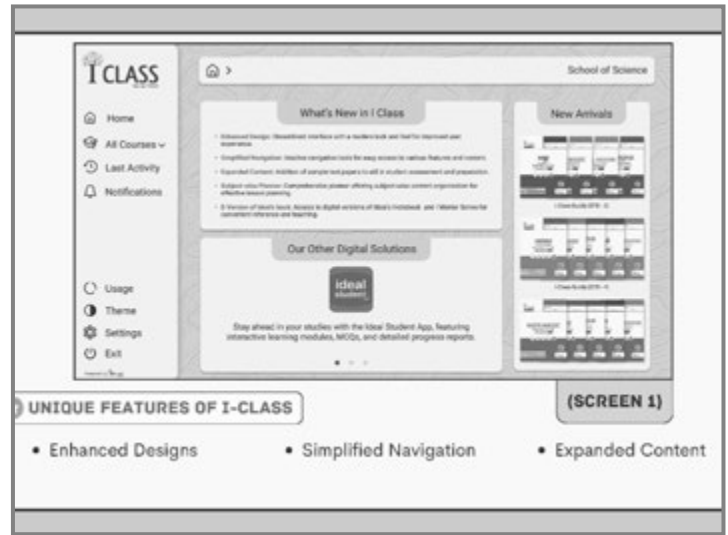
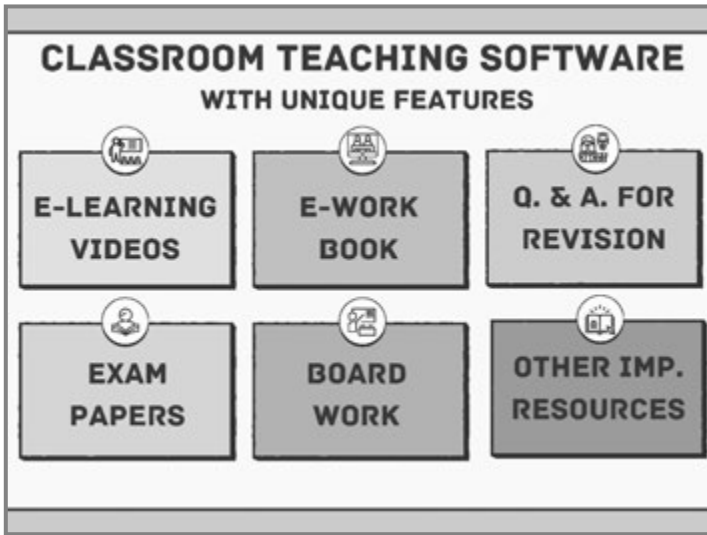
Note :

It is a better method for teachers to write the answers in their own workbook (Teacher's Copy - Specimen Copy), using the answers provided in this Teacher Support Material and making any necessary changes. This allows it to be effectively used in the classroom.

✓ Saves Time !!

✓ Engaging Teaching

✓ Multiple Resources



Available from July-2024

Happy Teaching



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1. Super Senses

1. Answer the following questions.

- ✦(1) What do ants do when their path is blocked ?
- ✦(2) How does the special sense of smell that dogs have, help them to guard our house ?
- ✦(3) In what ways do human beings make use of the special sense of smell of dogs?
- ✦(4) When do we find our sense of smell helpful to us ?
- ✦(5) What is the difference on looking things with our one eye and with our both eyes?
- ✦(6) How do people who live in forests come to know of a danger like earthquake or storm in advance ?

(7) Human beings are threat to animals. How?

- A. ✦ Human beings are threat to animals because they destroy the forest.
- ✦ By destroying the forest they destroy animals' home.
- ✦ Some people also kill animals for their body parts. So human beings are threat to animals.

(8) Why has our government made some forests as protected area ?

- A. ✦ Our government has made some forests as protected area to protect wild animals.
- ✦ In these areas nobody can hunt animals or destroy the jungle.

(9) How does the, tiger's mustache help the tiger ?

- A. ✦ The tiger's mustache is very sensitive and can sense the movement or vibrations in air.
- ✦ It helps the tiger move in the dark and find its prey.

(10) How do ants follow each other ?

- A. ✦ As an ant moves, it leaves a smell on ground.
- ✦ The ants follow each other with the help of the smell left by the ants before them.

(11) How do the mosquitoes find where you are?

- A. ✦ Mosquitoes can find us by the smell of our body.
- ✦ They also find us by the smell of the sole of our feet and the heat of our body.

(12) Which sense helps us to recognise a thing without seeing or touching it?

- A. The sense of smell helps us to recognise a thing without seeing or touching it.

- (13) How do dogs know that another dog has come into their area ?**
A. Dogs come to know that another dog has come into their area by the smell of its urine or potty (latrine).
- (14) Name the birds having eyes on either side of their head.**
A. Most of the birds like crow, parrot, sparrow, koel, pigeon, kite, kabar, peacock etc. have eyes on either side of their head.
- (15) Why do birds move their neck very often ?**
A. In most of the birds, eyes are fixed and cannot move. So birds have to turn their head to see around.
- (16) Name five things whose smell you like. (Students will answer on their own.)** _____

- (17) Name five things whose smell you do not like. (Students will answer on their own.)** _____

- (18) Name some animals having strong sense of smell.**
A. Animals like ant, mosquito, silk worm, dog, cat, tiger, etc. have a strong sense of smell.
- (19) Write the name of a bird which has eyes in front of its head like in human beings.**
A. Owl has eyes in front of its head like in human beings.
- (20) What do ants do with the food they find ?**
A. Ants carry the food to their hole.
- (21) Name some birds that can see four times as far as we can see.**
A. Kites, eagles, vultures, etc. can see four times as far as we can see.
- (22) How does a bird estimate the distance of an object?**
A. When a bird focuses both the eyes on an object it can estimate the distance of the object.
- (23) When is the bird's range of vision increased ?**
A. When a bird's eyes focus on two different things, it increases its range of vision.
- (24) Name some of the animals whose ears can be seen easily.**
A. We can see the ears of dog, goat, cow, buffalo, monkey, rabbit, elephant, deer, tiger, lion, zebra, etc.

(25) How do snakes hear?

- A. Snakes do not have external ears. They only feel the vibrations on the ground.

(26) How do birds or animals warn other animals about the danger of enemies ?

- A. Birds or animals warn other animals about the danger of enemies by giving special warning call.

(27) In the sanctuaries how do the officers come to know of the direction of animals like tiger, lion, etc. ?

- A. In the sanctuaries the officers come to know of the direction of animals like tiger, lion, etc. by the sound of alarm calls of birds.

(28) Name a few animals and birds which can be identified by their sound.

- A. Dog, monkey, cat, parrot, crow, sparrow, etc. can be identified by their sound.

(29) Do some animals understand your language ? Name them.

- A. Animals like parrot, monkey, dogs, etc. can understand our language, if they are trained or if we spend time with them.

(30) How does a sloth sleep?

- A. A sloth sleeps hanging upside down on a tree branch.

(31) When does a sloth move to another tree?

- A. When sloth has eaten enough leaves from the tree on which he lives, it moves to the nearby tree.

(32) What does sloth do to relieve itself?

- A. To relieve itself, once a week sloth comes down from the tree on which it lives.

(33) For how many hours a day do the following animals sleep ?

- A. **Cow** - 4 hours | **Python** - 18 hours | **Giraffe** - 2 hours | **Cat** - 12 hours

(34) What enables the tiger to catch the sounds from all around ?

- A. The ears of the tiger can move in different directions which helps to catch the sounds from all around.

(35) How do tigers mark their area?

- A. Tigers mark their area with their urine.

(36) Name two bird sanctuaries of India.

- A. Gujarat - Nal Sarovar, Rajasthan- Ghana Bird Sanctuary.

(37) Name two national parks of Gujarat.

- A.** Gir National Park, Marine National Park of Kutch.

2. Give reason.**(1) We cannot see birds' ears easily.**

- A.** Birds have small holes in place of ears that are covered with feathers. So we can not see birds, ears easily.

3. Name two animals for each of the following.

- | | |
|--|---------------------------------|
| (1) animals having sharp eye sight | - Eagle, Vultures, Kites |
| (2) animals having sharp hearing capacity | - Monkey, Elephant, Tiger |
| (3) animals having sharp sense of smell | - Dog, Tiger, Lion |
| (4) animals killed for their skin | - Tiger, Snake, Crocodile, Deer |

4. Choose the correct option.

- (1) How does an ant come to know whether the other ants are from its group or not ? **A. (C)**
(A) By their steps (B) By their colour
(C) By their smell (D) By their sound
- (2) Which of the following birds can see four times farther than us ? **A. (D)**
(A) Sparrow (B) Pigeon (C) Koel (D) Kite
- (3) Vultures can see things from a distance of _____ metres, what we can see from a distance of two metres. **A. (C)**
(A) ten (B) twelve (C) eight (D) four
- (4) _____ awake at night and sleep during the day. **A. (B)**
(A) Kites (B) Owls (C) Crow (D) Sparrow
- (5) Birds have _____ in place of ears. **A. (B)**
(A) wings (B) small holes (C) feathers (D) tail
- (6) Ears of which of the following animals are the biggest ? **A. (C)**
(A) Cat (B) Goat (C) Elephant (D) Deer
- (7) Fishes give alarm call by _____. **A. (B)**
(A) vibrations (B) electric signals
(C) changing their colour (D) splashing water
- (8) Which of the following animals go into a long sleep in a certain season ? **A. (D)**
(A) Monkey (B) Tiger (C) Mouse (D) Lizard
- (9) In which season we do not find any lizards in our house ? **A. (A)**
(A) Winter (B) Summer
(C) Monsoon (D) All of these

- (10) The sloth eats the _____ of the same tree on which it lives. **A. (A)**
 (A) leaves (B) fruits (C) branch (D) roots
- (11) How long does a sloth live? **A. (D)**
 (A) 50 years (B) 20 years (C) 30 years (D) 40 years
- (12) Sloth moves around only _____ trees during its entire life. **A. (B)**
 (A) 4 (B) 8 (C) 10 (D) 20
- (13) Up to how many kilometres can a tiger's roar be heard ? **A. (B)**
 (A) up to 2 kilometres (B) up to 3 kilometres
 (C) up to 4 kilometres (D) up to 5 kilometres
- (14) Tigers, crocodiles and snakes are killed for their _____. **A. (A)**
 (A) skin (B) nails (C) teeth (D) mustache
- (15) In which state is Ghana National Park situated ? **A. (A)**
 (A) Rajasthan (B) Madhya Pradesh
 (C) Gujarat (D) Karnataka

5. Fill in the blanks.

- (1) Human beings have **five** sense organs.
- (2) **Skin** is an organ to sense touch.
- (3) Ants can perceive smell with their **antennae**.
- (4) A **silk worm** can find its female worm by her smell.
- (5) Human beings have eyes **in front of** their head.
- (6) Birds' eyes are **small** as compared to the size of their head.
- (7) Owls can see things only in **black** and **white** colours.
- (8) A sound is produced due to **vibrations** .
- (9) **Langur** gives a special warning call to warn other animals of dangers like a tiger or leopard.
- (10) **Dolphins** make different sounds to give messages to one another.
- (11) **Sloth** is an animal which looks like bear.
- (12) Sloth sleeps for almost **18** hours a day.
- (13) A tiger can see **six** times better at night than most of us.
- (14) The tigers can sense the movements or vibrations in air with the help of its **mustache** .
- (15) A tiger's sense of **hearing** is very sharp.
- (16) Tigers make different **sounds** for different purposes.
- (17) Elephants are killed for their **tusks** .
- (18) **Rhinoceros** are killed for their horns.
- (19) **Musk deer** are killed to make a little scent from its musk.
- (20) People who kill animals are called **hunters** .

6. Mark the following sentences as '✓' or 'X'.

- (1) We speak with the help of tongue. (✓)
- (2) Animals also have different senses. (✓)
- (3) Ants can recognise a friend and an enemy. (✓)
- (4) Like human beings ants also live in groups. (✓)
- (5) As an ant moves, it leaves a smell on the ground. (✓)
- (6) A silkworm can find its female worm by her smell only if it is within a few metres. (X)
- (7) People who work near the heap of garbage, like the smell of garbage. (X)
- (8) Sense of smell is same for all living beings. (X)
- (9) Birds' eyes can focus on two different things at a time. (✓)
- (10) When birds look straight ahead, both of their eyes focus on the same objects. (✓)
- (11) Human beings can even see with one eye. (✓)
- (12) Birds cannot hear. (X)
- (13) There is some relation between the size of animals' ears and their hearing capacity. (✓)
- (14) Animals also have their own language. (✓)
- (15) In 2004, the islands of Andaman were hit by tsunami. (✓)
- (16) Animals do not sleep. (X)
- (17) A python sleeps for three - fourth of a day. (✓)
- (18) A tiger can come to know if there is another tiger in its area by the smell of the urine. (✓)
- (19) Human beings can also be a threat to animals. (✓)

7. Match the following.

A		B		Answer
(1)	Gujarat	(A)	Kaziranga National Park	(1) → (C)
(2)	Uttarakhand	(B)	Kanha National Park	(2) → (D)
(3)	Assam	(C)	Vansda National Park	(3) → (A)
(4)	Karnataka	(D)	Jim Corbett National Park	(4) → (E)
(5)	Madhya Pradesh	(E)	Bandipur National Park	(5) → (B)

A		B		Answer
(1)	Gir National Park	(A)	Marine Creatures	(1) → (D)
(2)	Velavadar National Park	(B)	Bear	(2) → (C)
(3)	Marine National Park	(C)	Blackbuck	(3) → (A)
(4)	Vansda National Park	(D)	Lion	(4) → (B)

2. A Snake and Snake Charmer

1. Answer the following questions.

- ✦(1) How did snake charmers use to earn their livelihood ?
- ✦(2) How did snake charmers use to help people?
- ✦(3) What do young snake charmers learn about snakes from their elders?
- ✦(4) Snakes do not have ears. Then why does it dance on playing a been?
- ✦(5) What kind of questions come to your mind after seeing any animal show?
- ✦(6) Today what do snake charmers do with their knowledge about snakes?
- ✦(7) Manoj throws stones at a dog in the street near his house. Is this fair ? Why?

(8) What are Naag Gumphan ?

- A. Naag Gumphan are special designs used in rangoli, embroidery and as wall decoration in Saurashtra, Gujarat and South India.

(9) Nowadays why is it difficult for snake charmers to earn their livelihood?

- A. ✦ The government has made a law that no one can catch and keep snakes.
- ✦ So it has become difficult for snake charmers to earn their livelihood.

(10) No one can catch and keep wild animals.- What do you think about this law? Give reasons for your answer.

- A. ✦ This law is made to save wild animals from human beings.
- ✦ It is fair enough to give protection to animals as they are as important as human beings.

(11) How do people tease animals?

- A. ✦ People tease animals by throwing stones or by sprinkling water on them.
- ✦ Sometimes people also copy their sounds to tease them.

(12) Ritu is fond of parrots. Is it fair if she keeps a parrot in a cage at her house ? Why?

- A. ✦ No, Ritu should not keep a parrot in a cage because no animal or bird would like to live in a cage.
- ✦ They also like to enjoy their freedom.

(13) Like snake-charmers, which other people depend on animals for their livelihood?

- A. Like snake-charmers other people like milkman, poultry farmer, tonga wala, farmer, fisherman, etc. depend on animals for their livelihood.

(14) How do the people who keep hens earn their livelihood ?

- A. ♦ Hens lay eggs and non-vegetarian people use them as their food.
♦ So by selling the eggs and meat, hen owners earn their livelihood.

(15) Do animals ever fall ill? How are they treated ?

- A. ♦ Yes, animals also fall ill.
♦ When animals fall ill, their keepers look after them and if needed they are taken to veterinary hospital for proper treatment.

(16) Are you afraid of snakes? Why? (Students will answer on their own.)

(17) What do milch animals eat?

- A. Milch animals mostly eat grass, leaves, vegetables, grains, husk, green fodder, etc.

(18) Who are Kalbeliyas?

- A. Kalbeliyas are the people who make the snakes dance by playing the been.

(19) Why did farmers use to call snake charmers ?

- A. Farmers used to call snake charmers to catch the snake from their fields.

(20) Which musical instruments are used in been party ?

- A. Instruments like been, tumba, khanjiri and dhol are used in been party.

(21) Where have you seen animals being used for entertainment of people?

- A. We can see animals being used in a circus, in a zoo, on the road, or in a park for entertainment of people.

(22) Which animal show have you seen ? (Students will answer on their own.)

(23) Name four types of poisonous snakes found in India.

- A. Cobra, Common Krait, Russel's Viper (Duboiya), Saw-scaled Viper (Afai) are poisonous snakes found in India.

(24) Which animals do milkmen generally keep?

- A. Milkmen generally keep milch cattle like cows, buffaloes, etc.

(25) How do shepherds earn their livelihood?

- A.** Shepherds keep sheep or goats, so they sell their milk and wool and earn their livelihood.

(26) Which animals do farmers generally keep with them?

- A.** Farmers generally keep cow, buffalo, ox, etc.

(27) Which animals are used to carry load?

- A.** Animals like ox, camel, horse, donkey, elephant, etc. are used to carry load.

2. Give reason.**★(1) Snakes are farmer's friends.****3. Choose the correct option.**

- (1) In which of the following states is the art of 'Naag Gumphani' used? **A. (A)**
 (A) Gujarat (B) Punjab (C) Assam (D) Meghalaya
- (2) Snake charmers keep the snakes in a _____. **A. (C)**
 (A) box (B) cage
 (C) bamboo basket (D) all of these
- (3) Which of the following was used by snake charmers to make the snakes dance? **A. (A)**
 (A) Been (B) Flute (C) Khanjiri (D) Tumba
- (4) Which of the following is not a wild animal? **A. (B)**
 (A) Tiger (B) Goat (C) Lion (D) Snake
- (5) Snake charmers consider _____ as their treasure. **A. (B)**
 (A) been (B) snakes (C) plants (D) all of these
- (6) Most of the instruments used in Kalbeliya dance are made up of _____. **A. (C)**
 (A) dried cucumber (B) dried sponge gourd
 (C) dried gourd (D) dried wood
- (7) _____ are friends of the farmers. **A. (C)**
 (A) Mouse (B) Nilgai (C) Snakes (D) All of these
- (8) How many types of poisonous snakes are found in India? **A. (B)**
 (A) 3 (B) 4 (C) 5 (D) 7
- (9) A _____ keeps sheep or goat. **A. (C)**
 (A) washerman (B) snake charmers
 (C) shepherd (D) farmer

4. Fill in the blanks.

- (1) Aryanath has learnt the art of playing **been** from his family members.
- (2) Kalbeliyas are also known as **snake charmers**.
- (3) The name of Aryanath's grandfather was **Roshan Nathji**.
- (4) In past, villagers used to call **snake charmers** when someone had been bitten by a snake.
- (5) **Kalbeliya** dance has movements similar to the dance of the snake.
- (6) The medicine for snake-bites is made from the **snake's poison** only.
- (7) **Fisherman** earns his livelihood by catching fish.
- (8) Farmers are also engaged in **animal husbandry** along with farming.

5. Mark the following sentences as '✓' or 'X'.

- (1) From the marks of the bite, snake charmers can find out which snake had bitten the person. (✓)
- (2) People of Kalbeliya community pass on their family business to their children. (✓)
- (3) In olden days people didn't like to watch snake shows. (X)
- (4) The government has made a law that no one can catch and keep wild animals. (✓)
- (5) Snake charmers killed snakes and sold their skin. (X)
- (6) Kalbeliyas gift snakes to their daughters when they get married. (✓)
- (7) Animals do not like to be caged. (✓)
- (8) All snakes are poisonous. (X)
- (9) Some people also keep hens. (✓)
- (10) There should be a separate place to keep animals. (✓)

6. Activity

- (1) Talk to some people in your neighbourhood who keep animals. Ask them what do they do for their animals and what do their animals do for them.
- (2) What would you do if you are kept in a cage ? Think how you would feel.

3. From Tasting to Digesting

1. Answer the following questions.

- ✦(1) Why can you not taste food properly when you are suffering from cold ?
- ✦(2) Why are we told to hold our nose before taking a medicine ?
- ✦(3) Chew a piece of roti thirty to thirty-two times. Is there any change in its taste ? Why ?
- ✦(4) What type of experiments did Dr. Beaumont perform ?
- ✦(5) Why does Jayesh look older than his age ?

(6) Wipe the front part of your tongue with a clean cloth so that it is dry. Put some sugar or jaggery there. Could you taste anything? Why?

- A.**
- ✦ No, I could not taste anything.
 - ✦ It is because there is no saliva on the tongue. When the food mixes with the saliva, then only we get its taste.

(7) Imagine you are eating something hard like a green guava. What kind of changes take place in it – from the time you bite a piece and put it in your mouth to swallow it ?

- A.** When I bite off a piece of guava, it is hard and may taste somewhat bitter, after chewing it for some more time it becomes soft and tastes sweet.

(8) What is the function of saliva present in your mouth ?

- A.**
- ✦ Saliva helps us to identify the taste.
 - ✦ It makes the food soft and easy to swallow.
 - ✦ It helps in the initial digestion of food in mouth.

(9) What would happen if you do not eat anything for two days ?

A. (Sample answer)

- ✦ If I do not eat anything for two days, I will feel completely exhausted and irritated.
- ✦ I will be very weak and may fall ill.

(10) Why do we feel weak if we do not eat food for a few days ?

- A.**
- ✦ Food that we eat gives our body energy to do work.
 - ✦ If we don't eat food we will not get enough energy and we feel weak.

(11) Why does a person suffering from vomiting and loose motions become weak ?

- A. ♦ In the case of vomiting and loose motions the amount of water, salt and sugar decreases in the body.
- ♦ As the amount of water decreases our body becomes weak.

(12) Who can use glucose ? How is it used ?

- A. ♦ Glucose is also available in powder form.
- ♦ Hence sick people, children, athletes, old people can take glucose dissolved in water to get instant energy.

(13) Do you think Jayesh would like games and sports ?

- A. ♦ Jayesh would not like games and sports.
- ♦ He is fat, usually fat people face difficulty in doing physical activities like running, jumping, etc.
- ♦ Moreover, he is fond of watching television and eating junk food.

(14) What do you understand by 'balanced diet' ?

- A. Adequate and nutritious food cooked at home having lots of green vegetables, fruits, milk, rice, chapatti, etc. can be called 'balanced diet'.

(15) Why is nutritious food necessary ?

- A. ♦ Our body is constantly working.
- ♦ We need energy to work, which we get from nutritious food.
- ♦ Also, if we do not take nutritious food we may fall ill.

(16) List five things you like to eat and describe their taste. (Students will answer on their own.) _____

(17) Do you like only one kind of taste or different ones ? Why ?
(Students will answer on their own.) _____

(18) How do you feel when you are hungry ? Discuss. (Students will answer on their own.) _____

(19) What do Gomti and her family eat when she does not get any work ?

A. When Gomti does not get any work she and her family eat leaves and roots from the jungle

(20) How many types of basic tastes can we identify ? Which are they ?

A. We can identify four types of different tastes. They are salty, sour, bitter and sweet.

(21) Name some food items that can be identified only by their smell without seeing or tasting them.

A. We can identify onion, garlic, tea, coffee, orange, chickoo, etc. by their smell.

(22) When does our mouth water ?

A. When we see or smell one of our favourite food items our mouth water.

(23) If a few seeds of Saunf (aniseed) are put on your tongue, would you be able to identify it with your eyes closed ? How ?

A. Yes, we can identify Saunf (aniseed) with our eyes closed due to its smell.

(24) What is saliva ?

A. Saliva is a watery substance seen on our tongue. It helps us to identify the tastes.

(25) Name the organs involved in digestion.

A. Mouth, food-pipe, liver, large-intestine, small-intestine, etc. are the organs involved in digestion.

(26) What should be given to the person suffering from vomiting and loose motions?

A. Sugar and salt solution should be given to the person suffering from vomiting and loose motions.

(27) When does a person suffer from acidity ?

A. When a person has not eaten well or the food is not digested properly he suffers from acidity.

(28) Rashmi is 5 years old still she looks about 3 years old. Why ?

A. Rashmi is 5 years old still she looks about 3 years old because she does not get enough food to eat in the whole day.

(29) Why could Rashmi eat only one roti in the whole day?

- A.** Rashmi is too poor to afford proper meal. That is why she could eat only one roti in the whole day.

2. Give reason.

✦(1) **We should chew the food properly.**

✦(2) **Doctors advice to give glucose drip to a person suffering from vomiting and loose motions.**

3. Do as directed.**(1) Describe the taste of the following :**

Tomato - Sweet, sour and juicy

Onion - Pungent

Saunf - Sweet with nice smell

Garlic - Bitter with pungent smell

4. Name three food items for each of the following.

(1) items sweet in taste : Sugarcane, sugar, halwa, banana

(2) items sour in taste : Lemon, raw mango, tamarind

(3) items spicy in taste : Chilli, cloves, black-pepper

(4) items bitter in taste : Bittergourd, coffee, fenugreek seeds

(5) items identified by its smell : Orange, chilli, tea, garlic

5. Choose the correct option.

(1) How many different basic tastes can we identify ? **A. (A)**

(A) 4 (B) 5 (C) 6 (D) 8

(2) On which part of the tongue salty and sour taste can be identified ? **A. (B)**

(A) Front side (B) Left or right side

(C) Backside (D) All of these

(3) After eating which of the following food items does one say "Sssee, sssee, sssee..." ? **A. (C)**

(A) Ice-cream (B) Chocolate (C) Chilli (D) Jalebi

(4) What is the place where a lot of grain stored is called ? **A. (C)**

(A) House (B) Garage (C) Godown (D) Mandi

(5) Gomti is a native of _____. **A. (A)**

(A) Odisha (B) Karnataka (C) Gujarat (D) Maharashtra

(6) How does glucose taste ? **A. (C)**

(A) sour (B) bitter (C) sweet (D) salty

6. Fill in the blanks.

(1) We can identify garlic with its smell.

(2) Tongue is a sense organ to taste.

- (3) **Front** side of the tongue can identify sweet taste quickly.
- (4) Digestion begins from the **mouth**.
- (5) Our stomach has a liquid called **digestive juices** that help in digestion.
- (6) The temperature of our stomach is approximately **30** °C.
- (7) When we are **sad** food is not digested properly.
- (8) The juices in the stomach are **acidic**.
- (9) The only treatment for Rashmi and Jayesh was **balanced diet**.
- (10) It is the **right** of every child to get proper food.
- (11) **Rice** grows in most of the areas of Kalahandi.

7. Mark the following sentences as '✓' or 'X'.

- (1) We like to eat same type of food every day. (X)
- (2) We cannot make out the taste of lemon juice with just a few drops of it. (X)
- (3) Taste of some items can be identified without chewing them. (✓)
- (4) Salt and sugar can be identified just by smelling them. (X)
- (5) Tastes can be identified on every part of the tongue. (X)
- (6) Back side of the tongue identifies the bitter taste. (✓)
- (7) On putting a food item under the tongue or on the lips, we can identify its taste quickly. (X)
- (8) We can see many tiny bumps on the surface of the tongue. (✓)
- (9) It is difficult to describe the taste of many food items. (✓)
- (10) We should chew the food properly. (✓)
- (11) If we chew a piece of roti only three to four times and swallow it, there is no change in its taste as we chew it. (✓)
- (12) We can remain without water for two to three days. (X)
- (13) Glucose is available only in liquid form. (X)
- (14) Glucose is also kept in the first – aid box in schools. (✓)
- (15) Fruits and vegetables help our body grow big and strong. (✓)
- (16) According to Dr. Beaumont digestion is affected by our mental health. (✓)
- (17) Our stomach churns the food to digest it. (✓)
- (18) In our country many children do not get one proper meal a day. (✓)

8. Activity

- (1) Go to your nearby slum area and find out what do the people living there eat.
- (2) Do you know any child who does not get enough to eat in the whole day ? What are the reasons for that ?

4. Mangoes Round the Year !

1. Answer the following questions.

- ✦(1) Is there any effect of season on spoilage of food ? Explain with examples.
- ✦(2) Why did Harsh's Grandma return the packet of bread to the shopkeeper?
- ✦(3) What changes can you see on a piece of wet bread or roti after 2-3 days ? Why ?
- ✦(4) List some seasons and conditions in which food spoils quickly.
- ✦(5) What preparations are made before making aam papad?
- ✦(6) Write down the step by step process of making aam papad.
- ✦(7) What can we do to enjoy mangoes throughout the year ?
- ✦(8) Why are jaggery and sugar mixed into the mango pulp and the mixture is dried in the sun to make aam papad ?
- ✦(9) How do you come to know that any food item has got spoilt?
- (10) How could cooked rice be kept fresh for 1-2 days ?**
 - A.** Cooked rice can be put in a bowl and then keeping the bowl in a container with some water, keeps the rice fresh for 1-2 days.
- (11) Why are ripe mangoes preferred for making aam papad ?**
 - A.** ✦ Ripe mangoes contain more juice and less fibres.
✦ Also they taste the sweetest. Hence, ripe mangoes are preferred for making aam papad.
- (12) Other than mangoes which things are required to make pickles?**
 - A.** Other than mangoes, salt, red chilli powder, turmeric powder, asafoetida, fenugreek seeds, coriander seeds, mustard seeds, fennel seeds, oil, etc. are required to make pickles.
- (13) List the ingredients needed to make papad.**
 - A.** ✦ Papad is made from different kinds of lentils and also from potatoes.
✦ With this, other ingredients are pepper powder, cumin seeds, salt, baking soda, water, etc.
- (14) What happens when you eat spoiled food?**
 - A.** By eating spoiled food we fall sick and suffer from food poisoning which may result in vomiting and diarrhea.
- (15) Name a few things that can be made from potatoes by drying them.**
 - A.** Wafers, papad, fryums, etc. can be made from potatoes by drying them.
- (16) List some food items which can be made from ripe mangoes.**
 - A.** Mango shake, shrikhand, sweets, jam, jelly, juice, etc. can be made from ripe mangoes.

(17) List different types of pickles made from fruits and vegetables.

A. Mango pickle, lemon pickle, amla pickle, chilli pickle, radish pickle, carrot pickle, etc.

(18) What things are made in your house from ripe and unripe mangoes ?

(Students will answer on their own.) _____

(19) Name some food items that can be dried and kept throughout the year.

A. Rice papad, potato wafers, urad papad, fryums, badiyan, etc. can be dried and kept throughout the year.

(20) List some of the food items which can be stored throughout the year without drying them in the sunlight.

A. Tomato ketchup, fruit jam, pickles, etc. can be stored throughout the year without drying them.

(21) How do you come to know that the potato sabzi has got spoilt?

A. When the potato sabzi smells bad and becomes sticky or slimy we can come to know that it had got spoilt

(22) Name some food items that should be used within a day.

A. Cooked food like dal, rice, vegetables, Khichdi should be used within a day.

(23) Name some food items that can get spoilt in 2-3 days.

A. Milk, bread, cooked vegetables, etc.

(24) Name some food items that can be kept for a week.

A. Raw vegetables, fruits, sweets, etc.

(25) Name some food items that would not spoil till one month.

A. Items like flour, ghee, oil, jaggery, sugar, masala, pickles, jams, potato chips, etc. will not spoil till one month.

(26) What can we know from what is written on the packets of food items ?

A. We can know about the price, weight, date of manufacturing, date of expiry, ingredients, etc.

(27) When do green vegetables get spoilt ?

A. If green vegetables are kept at hot and humid place for 2-3 days they get spoilt.

(28) How can we preserve cooked food for longer period ?

- A.** To preserve cooked food for a longer period we should keep it in a refrigerator.

(29) How could milk be kept fresh for 1-2 days ?

- A.** We should boil the milk 1 or 2 times in a day to keep it fresh.

(30) Which different items can be made from raw mangoes ?

- A.** Different items like chutney, pickles, salad, etc. can be made from raw mangoes.

2. Give reason.

- ★(1) Glass jars and bottles are dried well in the sun before filling them with pickles.

(2) Some food items that are to be stored throughout the year are dried well in the sunlight.

- A.** To remove moisture from the food items they are dried well in the sunlight so that they can be stored throughout the year.

3. Differentiate the following.**(1) Spoilage of food and Wastage of food.**

Spoilage of food	Wastage of food
(1) When the food gets spoilt in the garbage naturally it is called spoilage of food.	(1) When food is thrown due to our mismanagement it is called wastage of food.
(2) For example, when banana is kept for some days its skin turns black, it is spoilage of food.	(2) When half of the banana is eaten and remaining half is thrown in the garbage, it is wastage of food.
(3) Spoilage of food is a natural process.	(3) Wastage of food is due to our carelessness.

4. Do as directed.

- (1) Fill up the table given below to describe the changes that can be observed on a wet piece of bread or roti.

Changes in the bread or roti

Day	By touch	By smell	By looking through magnifying lens	By colour
1.	Clammy soft	Light smell	Normal	Normal
2.	Clammy soft	Light stinking smell	velvet like white layer	Slightly white
3.	Moist and soft	stinking smell	velvet like white layer	White
4.	Moist and soft	stinking smell	Greenish-white coloured small grass like structure	Greenish-white
5.	Moist and soft	stinking smell	Greenish coloured small grass like structure	Green
6.	Moist and soft	stinking smell	Greenish-black coloured small grass like structure	Greenish-black

5. Choose the correct option.

- (1) Among the following food items which will spoil at the last ? **A. (C)**
 (A) Cooked vegetables (B) Milk
 (C) Paratha (D) All of these
- (2) Which of the following is the first thing that should be taken care of when we buy any food packet from the market ? **A. (D)**
 (A) Price (B) Weight (C) Ingredients (D) Expiry date
- (3) In which season grains and pulses spoil quickly ? **A. (A)**
 (A) Monsoon (B) Winter (C) Summer (D) All of these
- (4) How could onion and garlic be kept fresh ? **A. (B)**
 (A) By keeping them in a dark place
 (B) By keeping them in a dry open place
 (C) By keeping them in water
 (D) By keeping them in moist cloth
- (5) Which of the following can be used as a preservative? **A. (D)**
 (A) Jaggery (B) Salt (C) Sugar (D) All of these

- (6) Which of the following items can be dried and preserved ? **A. (D)**
(A) Apricots (B) Figs (C) Plums (D) All of these
- (7) Which season is mango season in India ? **A. (C)**
(A) Autumn (B) Winter
(C) Summer (D) Throughout the year
- (8) At least _____ are required to make aam papad. **A. (B)**
(A) two weeks (B) four weeks
(C) one week (D) six weeks

6. Fill in the blanks.

- (1) The food spoils quickly in **summer** season.
(2) Fungus develops very quickly on **cooked** food.
(3) A **preservative** is a substance that can be added to some of the food items to preserve them for many days.
(4) **Vinegar** is added to tomato ketchup to preserve it.
(5) **Mango** is known as the king of fruits.
(6) String made of coconut husk is called **coir** .
(7) Aam papad looks like a thick **golden cake** .
(8) Pickle is made from **raw** mangoes.

7. Mark the following sentences as '✓' or 'X'.

- (1) Eating spoiled food can make you sick. (✓)
(2) Fried snacks do not get spoilt quickly. (✓)
(3) Curd can last for two days. (✓)
(4) We should throw the spoilt food in the dust bin. (✓)
(5) Different kinds of food items spoil due to different reasons. (✓)
(6) Green coriander can be kept fresh by wrapping it in a damp cloth. (✓)
(7) Jaggery can be used as a natural preservative. (✓)
(8) Mango pickles last through the year until the next mango season. (✓)
(9) Sunlight is not required for making aam papad. (X)
(10) Mango shake is made from ripe mangoes. (✓)

8. Activity

- (1) Take a piece of bread or roti. Sprinkle a few drops of water on it and put it in a box. Close the box. Note the changes you see on bread or roti till one week
(2) List the things you will carry with you on a journey for two to three days by a train.
(3) Make a list of things made in your house to be stored throughout the year.

5. Seed, Seed, Seed

1. Describe an experiment.

- ✦(1) To prove that air and water are necessary for the seeds to sprout.
- ✦(2) To show that different types of seeds take different time to germinate.

2. Answer the following questions.

- ✦(1) Why are pulses soaked overnight before cooking ?
- ✦(2) Why did the chanas soaked by Gopal overflow from the vessel ?
- ✦(3) How are birds and animals helpful in dispersal of seeds?
- ✦(4) What would happen if seeds do not spread and remain at one place only ?
- ✦(5) Describe the incident which inspired George Mestral to come up with a new idea of making velcro.
- ✦(6) How are seeds dispersed?
- ✦(7) Write a short note on pitcher plant.

(8) Make a list of seeds which are used as food.

- A. Pulses like chana, peas, rajma, moong, etc. spices like mustard cumin, sesame etc. and grains like wheat, rice, bajra, etc. are the seeds which are used as food.

(9) Do plants grow without seeds? How?

- A. ✦ Yes some plants can grow without seeds.
✦ Some plants may grow from other parts of plants. For example, potato, rose, banana, etc. grow without seeds.

(10) Name some fruits and vegetables which were grown originally in India.

- A. Vegetables like brinjal, radish, bitter gourd, spinach, fenugreek, etc. and fruits like mango, orange, banana, etc. were originally grown in India.

(11) Have you ever seen trees growing on a wall or in a well ? Name them.

A. (Sample answer)

Yes, I have seen banyan tree, pipal tree, neem tree etc. growing on a wall or in a well.

(12) What is a seed ?

- A. A seed is a part of a plant which grows into a new plant when it gets enough air, water and warmth.

(13) Which things can be eaten after sprouting ?

- A. Moong, chana, moth, etc. can be eaten after sprouting.

(14) What are the things needed for a plant to grow ?

A. Air, water, sunlight and soil are needed for a plant to grow.

(15) Why do leaves of some plants turn yellow ?

A. If a plant does not get proper amount of air, water and sunlight, its leaves turn yellow.

(16) Give examples of the plants which grow without seeds.

A. Rose, mogra, champa, mint, neem, asopalav, etc. grow without seeds.

(17) Name some of the places in the world where pitcher plant is found.

A. The pitcher plant is found in Australia, Indonesia and India in the state of Meghalaya.

(18) Name some hunter plants.

A. Pitcher plant, venus fly trap, cobra lily, monkey cup, butterwort, etc.

(19) On what basis can we classify the seeds?

A. We can classify the seeds on the basis of their shape, size, colour, texture, uses, etc.

(20) Who all are helpful in dispersal of seeds?

A. Animals, birds, human beings, air, water, trees, etc. are helpful in dispersal of seeds.

(21) How do seeds reach on a wall or in a well ?

A. Air, water or birds could carry the seeds to a wall or in a well.

(22) List some of the things in which velcro is used.

A. Velcro is used in bags, shoes, sandals, clothes, etc.

(23) Name the plants that have reached all over the world from South America.

A. Chillies, potatoes, groundnut, tomatoes, French beans, etc. have reached all over the world from South America.

3. Give reason.

★(1) Doctors advise us to eat sprouted pulses.

★(2) All seeds do not germinate.

★(3) Tuar dal cannot be sprouted.

4. Classify the following.

(1) Seeds on the basis of its texture (smooth or rough).

(rajma, moong, chana, peas, papaya, chickoo, mango, cumin, bhindi, watermelon, sesame, apple)

Smooth seeds – rajma, moong, peas, papaya, apple, chickoo, sesame, bhindi, watermelon

Rough seeds – chana, cumin, mango

5. Name the following.

- | | |
|-------------------------------------|----------------------------------|
| (1) two big seeds | – mango, avocado |
| (2) two small seeds | – sesame, mustard |
| (3) two light seeds | – cumin, fennel, carrom |
| (4) two seeds used as grains | – maize, bajra |
| (5) two seeds used as spices | – fenugreek, cumin, black-pepper |
| (6) two seeds of fruits | – watermelon, muskmelon |
| (7) two flat seeds | – rajma, field beans |
| (8) two seeds of vegetables | – tomato, bhindi |
| (9) two oil seeds | – peanuts, sesame, mustard |

6. Choose the correct option.

- (1) Which of the following can be eaten after sprouting ? **A. (B)**
 (A) Tuar dal (B) Moong (C) Fennel seed (D) Rice
- (2) Which of the following is not required to sprout pulses ? **A. (C)**
 (A) Air (B) Water (C) Soil (D) Both (A) and (B)
- (3) Which of the following is necessary for the growth of the plants ? **A. (D)**
 (A) Air (B) Water (C) Soil (D) All of these
- (4) Where is pitcher plant found in India ? **A. (A)**
 (A) In Meghalaya (B) In Assam (C) In Kerala (D) In Maharashtra
- (5) Fenugreek and coriander have come from _____. **A. (C)**
 (A) America (B) China (C) India (D) Europe
- (6) Where did black coffee come from ? **A. (D)**
 (A) China (B) America (C) Europe (D) Africa
- (7) Seeds of lady's finger are _____ in shape. **A. (C)**
 (A) flat (B) oval (C) round (D) long

7. Fill in the blanks.

- (1) To get seeds sprouted they have to be **soaked**.
- (2) Most of the sprouted **pulses** can be eaten raw.
- (3) Soaked pulses are tied in a **damp** cloth to sprout.
- (4) When a plant emerges out from the seed, **leaves** are seen first.
- (5) There is a **seeding** inside the seed.
- (6) The **pitcher plant** is one of the hunter plants found in the state of Meghalaya.
- (7) Seeds of papaya are **black** in colour.
- (8) Seeds of peas are **white** and **green** in colour.
- (9) Mustard seeds are **smooth** in texture.
- (10) **Light** seeds are dispersed by wind.

- (11) Butterflies are helpful in dispersing the seeds of **flowers**.
- (12) **Soyabean** plant spread their seeds themselves over long distance.
- (13) **George Mestral** discovered velcro.
- (14) Velcro was discovered by taking inspiration from **nature**.
- (15) With the help of **microscope** very small object can be seen big.
- (16) Peas have come from **Europe**.

8. Mark the following sentences as '✓' or 'X'.

- (1) Grams should be soaked overnight before cooking. (✓)
- (2) All pulses take same time to sprout. (X)
- (3) Different types of seeds take different time to germinate. (✓)
- (4) All seeds do not germinate. (✓)
- (5) If the plants do not get proper amount of water it dries up. (✓)
- (6) Trees can move from one place to another. (X)
- (7) Seeds can travel far and wide. (✓)
- (8) Human beings do not help in dispersal of seeds. (X)
- (9) Some seeds get stuck on clothes. (✓)
- (10) Some plants spread their seeds themselves over long distances. (✓)
- (11) The velcro strips do not stick together easily. (X)
- (12) Potatoes have come from America. (X)

9. Match the names of plants in column A to the places from where each of them has come in column B.

A		B		Answer
(1)	Cabbage	(A)	China	(1) → (C)
(2)	Lady finger	(B)	India	(2) → (E)
(3)	Soyabean	(C)	Europe	(3) → (A)
(4)	Bitter gourd	(D)	South America	(4) → (B)
(5)	Chillies	(E)	Africa	(5) → (D)

10. Activity

- (1) Look carefully at sprouted chanas and make its drawing.
- (2) What would happen if plants could walk ? Think and draw its picture.

6. Water is Life

1. Answer the following questions.

- ✦(1) What was special about Ghadsisar lake ?
- ✦(2) Today why Ghadsisar is no more in use ?
- ✦(3) What did Al-Biruni write in his notes about the ponds in India ?
- ✦(4) Why did people build lakes in earlier times?
- ✦(5) The rivers of Gujarat and Rajasthan do not have water through out the year. Yet most of the villages in these areas did not have a shortage of water. Why ?
- ✦(6) From where does water come in wells and stepwells ?
- ✦(7) Even today, many people do not get sufficient water. Why?
- ✦(8) Which measures are taken by the government to store water?
- ✦(9) How did Darki Mai stop people of Alwar district from migrating?
- ✦(10) What can be done to store water ?
- (11) What kind of water arrangements were made for travellers many years ago ? Now, what do people do about water when they travel ?**
 - A. ✦ Wells , stepwells , piau were made for the travellers to drink water.
 - ✦ Today most of the people carry water bottles with them during their journey.
- (12) What was made around the lake Ghadsisar ?**
 - A. Many ghats with steps leading to the water, decorated verandahs, large halls, rooms and much more, were made around the lake Ghadsisar.
- (13) Which skills of Indian people were praised by Al-Biruni in his notes?**
 - A. ✦ More than a thousand years ago Al-Biruni came to India.
 - ✦ He praised Indian people for their skill of making ponds.
- (14) Is rain water stored in your nearby areas ? How ? (Students will answer on their own.)** _____

- (15) What is a stepwell ?**
 - A. A well having steps that go down several storeys deep so that people could go down and reach the water is called a step well.

(16) Who made the lake Ghadsisar ? When ?

A. King Ghadsi of Jaisalmer got the lake Ghadsisar made, 650 years ago.

(17) Why did children come to Ghadsisar lake ?

A. Children came to study in the school on the ghat built on Ghadsisar lake.

(18) According to Al-Biruni's notes which things were used to build 'chabutaras' in India ?

A. According to Al-Biruni's notes huge rocks and iron rods were used to make 'chabutaras' in India.

(19) How is water soaked into the ground ?

A. There are very small holes in the ground, through which water from lakes, rivers, springs, etc. soak into the ground .

(20) Where did people get drinking water from in olden days ?

A. Wells , stepwells , piau were made for the travellers to drink water. Today most of the people carry water bottles with them during their journey.

(21) When do people gather around the lake to celebrate ?

A. When the lake is fully filled up with water people gather around it to celebrate.

(22) Earlier, which type of utensils were used to store water ?

A. Earlier, shinning yellow pots of brass and copper were used to store water.

(23) How do you get drinking water at your home? [Students will answer

on their own.] _____

(24) Which sources of water are used by people today?

A. Today people use municipality taps, handpumps, borewells, wells, rivers, etc. to get water.

2. Give reason.

★(1) The wells which were full of water fifteen or twenty years ago are now dried up.

3. Choose the correct option.

(1) Where is lake Ghadsisar situated ?

A. (B)

(A) Jodhpur

(B) Jaisalmer

(C) Barmer

(D) Ajmer

- (2) Why did people come to Ghadsisar lake ? **A. (D)**
(A) To celebrate festivals
(B) To enjoy programmes of music and dance
(C) To walk
(D) Both (A) and (B)
- (3) Who took care to keep the lake clean ? **A. (D)**
(A) King (B) People (C) Soldiers (D) All of these
- (4) Which of the following is a source of history that helps us to know about our past ? **A. (D)**
(A) Old coins (B) Old buildings
(C) Paintings (D) All of these
- (5) Al-Biruni was a native of _____. **A. (B)**
(A) Pakistan (B) Uzbekistan (C) Afghanistan (D) Baluchistan
- (6) According to number of entrances, how many types of stepwells are there ? **A. (C)**
(A) Two (B) Three (C) Four (D) Five
- (7) What is distributed when lake is fully filled up with water in the villages of Gujarat ? **A. (C)**
(A) Rasgulla (B) Jalebi (C) Meghladu (D) Meghdhanush
- (8) In the year 1980 people of _____ cleaned the old stepwell and got water. **A. (A)**
(A) Jodhpur (B) Jaisalmer (C) Ajmer (D) Jadavpur
- (9) More than _____ trucks of garbage was taken out from the old stepwell of Jodhpur. **A. (B)**
(A) 400 (B) 200 (C) 100 (D) 150

4. Fill in the blanks.

- (1) 'Sar' means a **lake**.
- (2) King Ghadsi made the lake Ghadsisar with the help of the **people**.
- (3) Rainwater collected in the Ghadsisar lake spread over many **miles**.
- (4) Writing of various travellers helps us to study **history**.
- (5) The writings of Al-Biruni are a **written** source to know history.
- (6) Jaisalmer gets very **less** rainfall.
- (7) At the places where it rains very less **underground tanks** are made to collect rain water in every house.

- (8) We can still see **underground tanks** to store water in some old parts of Ahmedabad city.
- (9) Rivers in India are considered as **lokmata**.
- (10) It was our custom that the person who was going to fill water from a well, stepwell or a lake took out the **slippers**.
- (11) It is the responsibility of **government** to see that every citizen gets enough water.

5. Mark the following sentences as '✓' or 'X'.

- (1) There was a garden near Ghadsisar lake. (X)
- (2) Water of Ghadsisar is still in use as it was used before. (X)
- (3) In Gujarat most of the rivers have water throughout the year. (X)
- (4) Rainwater harvesting is still practiced in new houses. (X)
- (5) A Nanda stepwell has five entrances. (X)
- (6) Earlier steel utensils were used to store water. (X)
- (7) Earlier, stone carvings were made near the place of drinking water. (✓)

6. Match the following.

A		B		Answer
(1)	Nanda	(A)	Four entrances	(1) → C
(2)	Bhadra	(B)	Three entrances	(2) → D
(3)	Jaya	(C)	One entrances	(3) → B
(4)	Vijaya	(D)	Two entrances	(4) → A

7. Activity

- (1) Look at a water bill from municipal corporation. Note which information is given in it.
- (2) How does the water reservoir in your nearby area get filled up ? How clean and useful it is?
- (3) Visit a dam built on a river. What are its advantages ?

7. Experiments with Water

1. Describe an experiment.

- ✦(1) To show that some objects float and some objects sink in water.

2. Answer the following questions.

- ✦(1) What is special about the Dead Sea ?
- ✦(2) We cannot see the salt when it is dissolved in water. Does it mean that now the water does not have salt ?
- ✦(3) How is salt obtained from sea water ?
- ✦(4) What things will you put in water to prepare tea ? Which of those things will dissolve in water ?
- ✦(5) When chalk powder is mixed in water what happens to the mixture after keeping it for some time ?
- ✦(6) Suggest some ways to dissolve lumps of sugar in water quickly.

(7) Suggest some ways to dissolve sugar quickly in water.

A. Following methods can be followed to dissolve sugar quickly in water;

- (1) Add sugar to the water and stir the mixture thoroughly.
- (2) Add sugar to the water and warm the mixture over a flame.

(8) How could you differentiate between 'the water with salt' and 'the water with chalk powder' ?

A. Water with salt looks clear and transparent whereas the water with chalk powder looks whitish with some chalk powder settled down at the bottom of the glass.

(9) What will you do if you want to dry your washed handkerchief quickly ?

A. (Sample answer)

- (1) To dry my handkerchief quickly I will squeeze it to drain extra water and then hang it in the sun.
- (2) I will squeeze my handkerchief properly and press it with hot iron.

(10) At your house which things are made by drying in the sun ? (Students will answer on their own.) _____

(11) What was Gandhiji's view about the salt law ?

- A. According to Gandhiji, any law could not stop us to use freely what nature has given to us.

(12) Where was Dandi yatra started from and where was it ended?

- A. Dandi yatra was started from Ahmedabad and it ended at Dandi seashore in Gujarat.

(13) Why can we not see salt after it dissolves in water?

- A. We cannot see salt after it dissolves in water because salt completely dissolves in water.

(14) Which of the two, salt or chalk powder could be separated from water by straining with a cloth ?

- A. Chalk powder could be separated from water by straining with a cloth.

(15) What happens when we strain muddy water with a fine cloth ?

- A. When we strain muddy water with a cloth, mud gets separated from water as it remains on the cloth.

(16) What happens when oil is mixed in water ?

- A. Oil doesn't get dissolved in water. It forms a layer on the surface of the water.

(17) What happens on tilting a plate having two drops of oil and two drops of water at some distance ?

- A. On tilting the plate the drops of water slide down quickly while the drops of oil are left behind.

(18) When water in a pan is kept boiling for some time, its quantity reduces. Why ?

- A. When water is kept boiling for some time, its quantity reduces as water gets evaporated and turns into vapour.

3. Give reason.

- ★(1) An iron nail sinks in water while a plate or katori floats on water.

- ★(2) A steamer is heavier than a needle, still it floats on water.

(3) A puffed puri sinks in water after sometime.

- A. ♦ A puffed puri is filled with air.

- ♦ On putting it in water, after some time it soaks water and becomes heavier than water. So it sinks in water.

- (4) **An empty plastic bottle floats on water while a bottle full of water sinks in water.**
- A. The weight of an empty plastic bottle is less than the weight of water displaced by it but when the bottle is filled with water its weight becomes more than the weight of water displaced by it.
- (5) **Aluminium foil floats on water, when spreads out but sinks when pressed tightly into a ball.**
- A. The weight of flat aluminium foil is less than the weight of water displaced by it but the weight of aluminium ball is more than that of the water displaced by it.
- (6) **Mixture of mango pulp and sugar is kept in the sun to dry it.**
- A. Mixture of mango pulp and sugar is kept in the sun so that the water from the mixture could evaporate due to the heat of the sun and gets dried up.
4. **Classify the following.**
- (1) **Objects as those that float on water and that sink in water.**
[a piece of wood, an iron nail, an empty plastic bottle, coin, brush, pencil, stone, leaf, chalk, steel spoon]
Objects that float on water – a piece of wood, an empty plastic bottle, brush, pencil, leaf.
Objects that sink in water – an iron nail, coin, stone, chalk, steel spoon.
- (2) **Substances as those that get dissolved in water and that do not dissolve in water :**
[chalk powder, sugar, milk, stone, oil, salt, sand, saw-dust, mishri]
Substances that dissolve in water – sugar, milk, salt, mishri
Substances that do not dissolve in water – chalk powder, stone, oil, sand, saw-dust
5. **Do as directed.**
- ◆ **Which of the following will float and which will sink in water ?**
- | | |
|-----------------------------------|-------------------|
| (1) Empty bowl | – floats on water |
| (2) Bowl full of small pebbles | – sinks in water |
| (3) Iron nail or pin | – sinks in water |
| (4) Bottle half filled with water | – floats on water |
| (5) Bottle full of water | – sinks in water |
| (6) Aluminium foil | – floats on water |
| (7) Soap cake | – sinks in water |
| (8) Soap cake on a plastic plate | – floats on water |
| (9) Ice-cube | – floats on water |

- ♦ The things listed in the given table are mixed in water in different glasses.

Complete the table as per the results.

Things	Did it dissolve or not ?	What happened after keeping for 2 minutes ?
(1) Salt	(1) Yes	(1) Salt and water mixed together completely. Water remained transparent.
(2) Soil	(2) No	(2) Soil settled down at the bottom. Water became muddy.
(3) Chalk Powder	(3) No	(3) Chalk powder settled down at the bottom. Water became whitish.
(4) 1 Spoon Milk	(4) Yes	(4) Milk and water got mixed together completely. Water became whitish.
(5) Oil	(5) No	(5) Oil floats on the surface of water.

6. Choose the correct option.

- Which of the following objects float on water ? **A. (B)**
(A) A stone (B) A leaf (C) An iron nail (D) A steel spoon
- How much salt is there in one litre of water in Dead Sea ? **A. (C)**
(A) 100 grams (B) 200 grams (C) 300 grams (D) 400 grams
- Which of the following doesn't dissolve in water ? **A. (C)**
(A) Salt (B) Sugar (C) Soil (D) Indigo blue powder
- Which of the two slides down faster sugar solution or plain water? **A. (B)**
(A) Sugar solution (B) Plain water
(C) Both slide with same speed (D) None of the two slides
- Water exists in nature in _____ forms. **A. (C)**
(A) 1 (B) 2 (C) 3 (D) 4

- (6) We drink _____ form of water. **A. (A)**
(A) liquid (B) vapour (C) solid (D) none of these
- (7) _____ is the gaseous form of water. **A. (B)**
(A) Air (B) Vapour (C) Ice (D) Smoke
- (8) When was Dandi yatra started by Gandhiji? **A. (D)**
(A) 1945 A.D (B) 1942 A.D (C) 1940 A.D (D) 1930 A.D
- (9) Gandhiji started Dandi yatra from _____. **A. (C)**
(A) Porbandar (B) Delhi (C) Ahmedabad (D) Surat
- (10) What is left in the strainer after straining tea? **A. (C)**
(A) Sugar (B) Water (C) Tea leaves (D) Nothing

7. Fill in the blanks.

- (1) A puffed puri **floats** in oil.
- (2) Dough of puri **sinks** in water.
- (3) An object which is **lighter** than water floats on water.
- (4) An object which is heavier than water **sinks** in water.
- (5) On putting a lemon in a glass of water it **sinks**.
- (6) An egg floats on **salty** water.
- (7) An egg **sinks** in plain water.
- (8) The Dead Sea is the **saltiest** of all oceans.
- (9) Oil is **lighter** than water.
- (10) From the lid of a hot cooking vessel, drops of **water** fall down while drops of **oil** remain stuck to the lid.
- (11) On heating liquid, it changes into **vapour**.
- (12) On boiling water, water **vapours** are formed.
- (13) **Gandhiji** protested against the salt law.

8. Mark the following sentences as '✓' or 'X'.

- (1) A soap cake sinks in water. (✓)
- (2) A lemon floats in salty water. (✓)
- (3) We can see salt after it is dissolved in water. (X)
- (4) On straining the mixture of salt and water with a cloth, salt gets separated from water. (X)
- (5) On heating water, it changes into ice. (X)
- (6) Water from the wet clothes evaporates in the sunlight. (✓)
- (7) Many people took part in Dandi yatra. (✓)

8. Mosquitoes : Diseases and Treatment

1. Answer the following questions.

- ✦(1) How did people use to treat malaria in earlier times?
- ✦(2) What steps can be taken to prevent ourselves from mosquitoes ?
- ✦(3) How can we know that a person suffers from anaemia ?
- ✦(4) What are the effects of anaemia on children ?
- ✦(5) What posters are put up by the government during monsoon ?
- ✦(6) Why does government put posters during rainy season to keep our surroundings clean ?
- ✦(7) List some measures that can be taken to reduce mosquito breeding.
- ✦(8) Why are pictures of a tank, cooler, old tyres, pits and pots shown in the poster ?
- ✦(9) On your terrace there is a pot filled with water since many days. What may be seen in it ? What will you do with it ?
- (10) Which food items should a person suffering from anaemia eat more?**
 - A.** A person suffering from anaemia should eat jaggery, amla, beetroot, apple, guava and green leafy vegetables, as these are iron-rich food.
- ✦(11) Which diseases are spread by flies ? How ?
- ✦(12) What efforts did Ronald put for his discovery?
- ✦(13) What are the symptoms of malaria?
- (14) How was Vipul's blood test performed ?**
 - A.**
 - ✦ For Vipul's blood test his finger was pricked with a needle.
 - ✦ 2-3 drops of blood was taken and placed on a glass slide which was sent for testing.
 - ✦ Then it was investigated with the help of microscope.
- (15) How do mosquitoes spread diseases ?**
 - A.** Mosquitoes spread diseases through their bite. They carry disease causing germs from one person to another.
- (16) What are the similarities in the symptoms of malaria and dengue?**
 - A.** Like malaria, in dengue also a patient has high fever with chills and experiences weakness and body ache.
- (17) What is the main reason for the cause of anaemia ?**
 - A.** Anaemia is caused due to the decrease of iron or haemoglobin in the blood.

(18) Why is it advised to put fish in water tanks ?

A. It is advised so because fish eat larvae of mosquitoes that develop in water.

(19) What happens when oil is spread on the water?

A. The oil on the water cuts off the oxygen supply to eggs and larvae of mosquitoes in water and thus they are killed.

(20) Where are the posters put up by the government?

A. The government put up posters at the places like dispensaries, public places, schools, government offices, crossroads, etc.

(21) Who is responsible for keeping public places clean?

A. Though it is the responsibility of the government to keep the public places clean, it is possible only with the cooperation of people and the local sweeper.

(22) What can be seen in stagnant water?

A. Tadpoles, eggs of fish, larvae of mosquitoes, litter, algae, etc. can be seen in stagnant water.

(23) Where else can you see algae?

A. Algae can be seen on the surface of ponds and pools, on damp walls near handpumps etc.

(24) How can we know that a patient is suffering from malaria ?

A. Blood test is done to know that if a patient is suffering from malaria.

(25) Name some diseases that are caused by mosquito bites.

A. Diseases like malaria, dengue, chikungunya, etc. are caused by mosquito bites.

(26) What are the symptoms of chikungunya ?

A. In chikungunya a patient suffers from high fever with headache and joint-pain.

(27) Name some food items that contain iron.

A. Green leafy vegetables, fruits, jaggery, peas, etc.

(28) Where are larvae commonly found ?

A. Larvae are commonly found in stagnant water, air coolers, muddy grounds, old tyres, pits, pots, etc.

(29) If you find that, area around your house or school is not clean, to whom will you write the letter to clean it? (Students will answer on their own.) _____

(30) Who discovered that malaria is spread by mosquitoes ?

- A.** A scientist named Ronald Ross discovered that malaria is spread by mosquitoes.

(31) How was the disease named malaria?

- A.** Earlier people thought that the disease was caused by the dirty air of the mud. That's why they gave it the name 'malaria'.

2. Choose the correct option.

- (1) How many drops of blood are sufficient to test blood for malaria ? **A. (D)**
 (A) 10 mL (B) 5 to 10 drops
 (C) 3 to 5 drops (D) 2 to 3 drops
- (2) In which season are mosquitoes more common? **A. (B)**
 (A) Summer (B) Monsoon (C) Winter (D) All of these
- (3) Which of the following disease is spread by mosquitoes? **A. (C)**
 (A) Diabetes (B) Anaemia (C) Dengue (D) Paralysis
- (4) Which of the following diseases is common in rainy season ? **A. (A)**
 (A) Chikungunya (B) Beri-Beri (C) Anaemia (D) Headache
- (5) What is the normal range of haemoglobin in human body ? **A. (C)**
 (A) 8 to 10 gm/dl (B) 10 to 12 gm/dl
 (C) 12 to 16 gm/dl (D) 16 to 20 gm/dl
- (6) Which of the following is the colour of larvae? **A. (C)**
 (A) Black (B) Red (C) Grey (D) White
- (7) Algae spreads a lot during the _____ season. **A. (C)**
 (A) winter (B) summer (C) rainy (D) all of these

3. Fill in the blanks.

- (1) Malaria is a disease caused by **mosquitoes**.
- (2) Malaria spreads through the bite of **female anopheles** mosquito.
- (3) To protect ourselves from mosquitoes we should wear **full-sleeved** clothes.
- (4) Anaemia is also called **iron** deficiency.
- (5) The blood test for anaemia requires a **syringe full of** blood.
- (6) In anaemia the amount of **iron** in the blood decreases.
- (7) Baby mosquitoes are called **larvae**.
- (8) Larvae look like **tiny threads**.
- (9) **Government** is responsible to get gutters and drains repaired.
- (10) Presence of algae can make a place **slippery**.
- (11) Ronald Ross was studying to become a **doctor**.

- (12) Ronald Ross found that a different looking **brown** and coloured **female** mosquito spreads malaria.

4. Mark the following sentences as '✓' or 'X'.

- (1) All mosquitoes look the same. (X)
- (2) Every mosquito bite causes malaria. (X)
- (3) Tablets made from the powder of the bark of cinchona tree are given to the patients suffering from malaria. (✓)
- (4) We cannot get infected by chikungunya if we take vaccine against it. (X)
- (5) A person suffering from anaemia has less haemoglobin in the blood. (✓)
- (6) When we have less iron in the blood we should eat iron or iron powder. (X)
- (7) Regular health check-ups should be done in schools. (✓)
- (8) Iron tablets cannot be given to anaemic children. (X)
- (9) Baby mosquitoes and larvae both are same in appearance. (X)
- (10) Algae is a kind of plant. (✓)
- (11) Algae can also be seen in open grounds. (✓)
- (12) Earlier it was believed that malaria means 'bad air'. (✓)

5. Match the following.

A		B		Answer
(1)	malaria	(A)	a kind of plant	(1) → C
(2)	anaemia	(B)	baby mosquito	(2) → D
(3)	algae	(C)	spreads by mosquitoes	(3) → A
(4)	larvae	(D)	iron deficiency	(4) → B
(5)	green-leafy vegetables	(E)	rich in iron	(5) → E

9. Climbing High !

1. Answer the following questions.

- ✦(1) Why was Sangeeta madam afraid to climb the mountain on the second day of her camp ?
- ✦(2) When did Sangeeta madam realise that there was a special kind of discipline at the mountaineering camp?
- ✦(3) What are the responsibilities of a group leader?
- ✦(4) Why do mountaineers need extra energy and strength during mountaineering ?
- ✦(5) How is a river crossed by trekkers ?
- ✦(6) What were Sangeeta madam's experiences while crossing the river?
- ✦(7) What does the instructor do before asking the group members to climb the rock ?
- ✦(8) What is the difference between climbing a wall and climbing a high rock ?
- ✦(9) How did Sangeeta and Khondonbi inform their group members when they lost their way ?
- ✦(10) Why did Sangeeta Ma'am and others find it difficult to put up a tent ?
- ✦(11) Which childhood incident shows the adventurous quality of Bachendri Pal ?
- ✦(12) How did Bachendri manage to stand on the top of the mountain ?
- ✦(13) Which qualities should a mountaineer possess ?

(14) What is mountaineering ?

- A.** ✦ Mountaineering is the set of activities that involves ascending mountains.
- ✦ It includes other activities like trekking, crossing rivers, etc.

(15) What does a monitor in your class have to do?

A. (Sample answer)

In our class a monitor has to do the following work:

- (1) Maintaining discipline in the class in the absence of teacher.
- (2) Conveying the problems of students to the teacher.
- (3) Arranging necessary items like chalk, duster, etc.

(16) What kind of food do mountaineers eat ?

- A.** During mountaineering mountaineers eat energy giving food which keeps them warm and provides strength to do a lot of physical work.

(17) Where have you seen a hook and rope being used for anything else?

- A.** A hook and rope are used for drawing water from a well, for trekking, to hang a trolley on a ropeway, for paragliding, etc.

(18) What kind of food do mountaineers carry with them ?

- A.** Mountaineers carry food packets, glucose, jaggery, chana, some snacks and food items that can be cooked quickly like pasta, noodles, oats, daliya, etc.

(19) List the things that may be needed while climbing a mountain ?

- A.** Thick rope, hook sling, torch, windcheater, whistle, stick, axe, hunter shoes, hand gloves, water bottle, plastic sheet, food packets, sleeping bag, tent, oxygen cylinder, glucose, etc.

(20) Why should we first observe the rock before climbing it ?

- A.** Before climbing we should first observe the rock carefully so that we can identify hold places where we can put our hands and feet.

(21) While climbing in which position should we keep our body to easily climb the rock ?

- A.** ♦ While climbing we should keep our body at an angle of 90° and should keep our back straight.
♦ The rock should be imagined as flat ground to climb it easily.

(22) Why would have Khondonbi sang loudly ?

- A.** Khondonbi would have sung loudly to get over her fear and also to let her group members listen to her voice so that they could come towards them.

(23) What special things people do to get over their fear?

- A. (Sample answer)**

To get over their fear some people shut their eyes, some shout loudly, some remember God while some sing loudly.

(24) When did Bachendri Pal step on to the peak of Mount Everest ?

- A.** On 23rd May, 1984 at seven minutes past one o'clock in the afternoon, Bachendri Pal stepped on to the peak of Mount Everest.

(25) What incident did Bachendri Pal face before reaching the peak of Mount Everest ?

- A.** ♦ Before reaching the peak, Bachendri had to face a terrible snowstorm on the night of 15th May.
♦ She was almost buried under the snow and was hurt on her head.

(26) How would you feel if you were made a leader in such a camp ?

(Students will answer on their own.) _____

- (27) **Would you like to be the class monitor? Why ? (Students will answer on their own.)** _____

- (28) **Why are Vitamin-C and iron tablets taken by mountaineers ?**
A. Vitamin-C and iron tablets give them strength and keep them warm in cold.
- (29) **How will you talk with someone if you do not understand his language ? (Students will answer on their own.)** _____

- (30) **What will you do if you are lost on your way ? (Students will answer on their own.)** _____

- (31) **How did everyone enjoy on the snow covered mountain ?**
A. On the snow covered mountain everyone enjoyed by throwing snowballs at one another and making a big snowman.
- (32) **When did Bachendri Pal step on to the peak of Mount Everest?**
A. On 23rd May, 1984 at seven minutes past one o'clock in the afternoon, Bachendri Pal stepped on to the peak of Mount Everest.
- (33) **Why did Bachendri Pal put up the Indian flag on the peak ?**
A. Bachendri Pal is an Indian. So, she put up the Indian flag on the peak to honour our country.
- (34) **When have you seen our national flag being hoisted ? (Students will answer on their own.)** _____

- (35) **Have you seen the flag of any other country? Where ? (Students will answer on their own.)** _____

(36) How are the paths on the mountains ?

A. The paths in the mountains are narrow, rough, curved as well as steep.

(37) What kind of tools are used to cross a river ?

A. To cross a river, tools like thick rope, sling, pitons, etc. are used.

(38) Who was first asked to cross the river from the group?

A. From the group Sangeeta madam was first asked to cross the river.

(39) What was used to put up the tent and to cover the ground in the tent?

A. Double layered plastic sheets were used to put up the tent and to cover the ground in the tent.

(40) Why was a drain dug around the tent ?

A. Around the tent the drain was dug to keep away insects, scorpions, snakes, etc.

(41) How did they cook food when they camped on a mountain ?

A. On the mountain they collected firewood, stones and other materials to make chulha and cooked food on it.

(42) How did the members of the camp clean the camp site ?

A. They collected the material used to cook food and all other waste in a bag to clean the campsite.

(43) Who was given the 'Best Performance Award' by Brigadier Gyan Singh?

A. The 'Best Performance Award' was given to Sangeeta Arora by Brigadier Gyan Singh.

(44) From which institute did Bachendri Pal take training of mountaineering ?

A. Bachendri Pal took training in mountaineering from Nehru Institute of Mountaineering of Uttarkashi.

(45) What did Bachendri do after completing her training in mountaineering ?

A. After completing her training she started to train women in mountaineering courses.

2. Choose the correct option.

(1) Which of the following activities is not included in adventurous sports?

A. (C)

(A) Rock climbing

(B) Skiing

(C) Drawing water

(D) Rappelling

- (2) Who was the Director of Sangeeta madam's adventure course ? **A. (C)**
 (A) Bachendri Pal (B) Mohan Singh Kohli
 (C) Brigadier Gyan Singh (D) All of these
- (3) While climbing a mountain the group leader stays _____ the group. **A. (B)**
 (A) ahead (B) behind
 (C) in the middle (D) as per his choice
- (4) Which language is spoken by the people of Mizoram ? **A. (B)**
 (A) Malayalam (B) Mizo (C) Hindi (D) English
- (5) Which vitamin tablets do mountaineers take while in a camp ? **A. (B)**
 (A) Vitamin-A (B) Vitamin-C
 (C) Vitamin-D (D) Vitamin-E
- (6) Which of the following tools is not needed for rock climbing ? **A. (D)**
 (A) Rope (B) Axe (C) Sling (D) Water bottle
- (7) While climbing with the help of a rope, body should be kept at an angle of _____. **A. (C)**
 (A) 30° (B) 60° (C) 90° (D) 110°
- (8) While coming down, the rope is used in a special way called _____. **A. (A)**
 (A) Rappelling (B) Climbing (C) Hacking (D) Trekking
- (9) Which of the following is used to put up a tent on a mountain ? **A. (B)**
 (A) Paper sheets (B) Plastic sheets
 (C) Cloth sheets (D) All of these
- (10) What was dug around the tent ? **A. (A)**
 (A) Drain (B) Pit (C) Well (D) Both (A) and (B)
- (11) What is used by mountaineers to sleep in a tent on mountains? **A. (C)**
 (A) Mattress (B) Quilts
 (C) Sleeping bags (D) Mats
- (12) Bachendri Pal grew up in a small village of _____. **A. (D)**
 (A) Jammu-Kashmir (B) Punjab
 (C) Haryana (D) Uttarakhand
- (13) In which year was Bachendri Pal selected as a team member to climb the Mount Everest ? **A. (C)**
 (A) 1980 (B) 1982 (C) 1984 (D) 1990

3. Fill in the blanks.

- (1) The one who does the activity of mountaineering is called a **mountaineer**.
 (2) Mountaineering is an **adventurous** activity.
 (3) Bachendri Pal is a **mountaineer** .

- (4) A group leader should be ready to be punished even when **someone else** may have made a mistake.
 - (5) Before crossing the river **width** and **depth** of the river is estimated.
 - (6) **Pitons** are used to tie a rope on both the sides of a river.
 - (7) In the mountaineering camp **Bachendri Pal** came as a special guest.
 - (8) **Plastic sheets** are used to cover the ground in a tent on a snow covered mountain.
 - (9) Bachendri Pal is a well-known **mountaineer**.
 - (10) **Brigadier Gyan Singh** was the guide of Bachendri Pal.
 - (11) In Bachendri Pal's team, to climb the Mount Everest, there were **7** women members.
 - (12) The height of Mount Everest is **8848** metres.
 - (13) Mount Everest is called **Sagarmatha** in Nepal.
 - (14) Bachendri Pal became the **first** Indian woman and the **fifth** woman in the world to reach the peak of Mount Everest.
 - (15) **Stick** is used to walk on the snow covered mountains.
- 4. Mark the following sentences as '✓' or 'X'.**
- (1) Mountaineering is a sports activity. (✓)
 - (2) Mountaineering includes the only activity of climbing mountains. (X)
 - (3) There are no special rules to be followed while climbing a mountain. (X)
 - (4) The group leader is not responsible for those who have difficulty in climbing the mountain. (X)
 - (5) Climbing a tree is not similar to climbing a rock. (✓)
 - (6) Bachendri Pal was selected as a part of the team to climb Mount Everest. (✓)
 - (7) Sangeeta Ma'am and others cleaned the camp site. (✓)
 - (8) The sleeping bag that Sangeeta Ma'am used was filled with cotton. (X)
 - (9) Various cultural programmes are also held during mountaineering. (✓)
- 5. Activity**
- (1) How far have you walked at one time ? How far can you walk ?
 - (2) How are the paths on the mountains ? Draw a picture.
 - (3) Have you ever climbed a tree ? How did you feel ? Were you scared ? Did you ever fall ?
 - (4) Make groups of 6-8 children. Design a flag for your group. Explain why you chose that design ?

10. Story of Walls

1. Answer the following questions.

- ✦(1) Why is a small window made above the gate of Uparkot fort ?
- ✦(2) Why were bastions made in the fort wall ?
- ✦(3) How would the soldiers find, peeping from the holes in the bastions, useful while attacking?
- ✦(4) What would happen if there was no electricity at our house for a week ?
- ✦(5) Why could Siddhraj Jaysinh's army not enter the Uparkot fort ?
- ✦(6) What kind of destruction would have been caused because of the wars ?
- ✦(7) Why did emperors and kings fight such wars ?
- ✦(8) What was written on the board in the Buddhist caves ? Why this board has been put there ?
- ✦(9) What information do we get from museums ?
- (10) What can we speculate by looking at these old buildings such as the fort of Uparkot ?**
 - A. ✦ We can speculate that the people at that time also had scientific knowledge.
 - ✦ The meticulous work done in these buildings proves that they were very good engineers.
- (11) What does the map of the fort indicate ?**
 - A. ✦ The map of the fort indicates that not only the king but many others would have lived in the fort as it shows some places too.
 - ✦ So it must have been a whole town.
- (12) Why is a small gate made in the big gate ?**
 - A. ✦ A small gate is made in the big gate so that at a time only one person can enter through it.
 - ✦ So, it also ensures the safety of the fort.
- (13) What is a bastion ?**
 - A. At some places the thick walls of the fort protrudes in a circular shape towards the front. It is called a bastion.
- (14) Why were big and small holes made in the walls of the fort?**
 - A. ✦ To increase the viewing area big holes were made in the walls of the fort.
 - ✦ Soldiers could look through these holes and could keep a better vigilance.

- (15) What is the difference between looking from a straight flat wall and a bastion at a height ?**
- A. ♦ Bastions are built at a height and provide space to look at distant places from several directions.
♦ While with flat walls one could see in one particular direction only.
- (16) What arrangements would have been made in the palace for air and light ?**
- A. ♦ Large windows, doors and ventilators allowed natural sunlight to enter the palace.
♦ These also allowed lot of fresh air to come in.
- (17) What is the peculiarity of Navghan well ?**
- A. ♦ There are stairs around the well.
♦ The stairs have open windows with large lattice at certain distances to allow sunlight and air to enter.
- (18) What is a museum ?**
- A. A museum is a place where antique things, scientific equipment, cultural and craft items, etc. of ancient times are preserved and displayed.
- (19) What did the children see at the museum in Junagadh ?**
- A. At the museum in Junagadh children saw pots, vessels, jewellery, swords, howdah (ambadi), palanquin (doli), etc. in the museum.
- (20) List some of the measures taken for the protection of the fort.**
- A. Thick-wide walls, huge gates, and many bastions in the outer wall were made for the protection of the fort.
- (21) What kind of tools would have been used for beautiful carvings on the walls of the palace ?**
- A. For beautiful carvings on the walls, tools like chisel and hammer made of iron would have been used.
- (22) In which war were Neelam and Manek both cannons used ?**
- A. Neelam and Manek both cannons were used in the battle of 1538 between the Sultan of Gujarat and the Portuguese.
- (23) How is water drawn without electricity ?**
- A. Without electricity, water is drawn using pulley and hand-pumps.
- (24) Name the museum you have seen. What did you see there ? (Students will answer on their own.)** _____
- _____
- _____

(25) When was the Uparkot fort built ?

- A.** The Uparkot fort was built during the time of Chandragupta Maurya in B.C 319.

(26) Who would have lived in the Uparkot fort ?

- A.** The king and many others would have lived in the fort.

(27) What does the map of the Uparkot fort show ?

- A.** The map shows trees, wells, caves, palaces, etc.

(28) By whose order was 'Neelam' cannon brought to the Uparkot fort ?

- A.** The 'Neelam' cannon was brought to the Uparkot fort by the order of Sultan Bahadur Shah.

(29) Name some objects made of bronze that you have seen. (Students will answer on their own.) _____

(30) Name same objects made of copper used in your house. (Students will answer on their own.) _____

(31) Name some objects made of brass that you have seen. (Students will answer on their own.) _____

(32) Are the items made from bronze still used in your house ? (Students will answer on their own.) _____

(33) How long and wide is Adi – Kadi Vav ?

- A.** Adi – Kadi Vav is 310 feet long by east – west and 10.5 feet wide by north – south.

(34) Where would have water come from into the wells and stepwells ?

- A.** Water would have come from the ground into the wells and stepwells . Moreover, rain water also would have collected in them.

(35) Today how is underground water drawn to higher places ?

- A.** Underground water is drawn to higher places using electric motors.

2. Do as directed.

- ✦ **Answer the following questions on the basis of the map given on page number 90 of your textbook.**

- (1) **Lashkari Vav** is beside the main gate of the fort.
- (2) If you go inside the main door and head towards North you will first reach at _____. **A. (D)**
 (A) Kadthal Top (B) Dhakka Bari
 (C) Jama Mosque (D) Neelam-Manek Top
- (3) **Kadthal Top** is towards the South of the main gate.
- (4) Dhakka Bari is in the eastern part of the fort. (✓ or ✗) **A. (✓)**
- (5) In which direction is the main gate of the fort ? **A. (D)**
 (A) North (B) South
 (C) East (D) West
- (6) Buddhist caves are to the **North** of Jama Mosque.
- (7) Water springs are to the **South** of Buddhist caves.
- (8) Which of the following is located between the Neelam Manek Top and Buddhist caves? **A. (C)**
 (A) Water springs (B) Grain storage
 (C) Jama Mosque (D) Navghan Kuvo
- (9) From Adi-Kadi Vav in which direction should we go to reach the main gate? **A. (B)**
 (A) North (B) South (C) East (D) West
- (10) What comes between Adi-Kadi Vav and Navghan Kuvo ?**
- A.** Temple of Khodiyar Mata and theatre comes between Adi-Kadi Vav and Navghan Kuvo.
- (11) Dargah is in the _____ part of the fort. **A. (C)**
 (A) Northern (B) Southern (C) Eastern (D) Western
- (12) What are the arrangements for water inside the fort ?**
- A.** Adi-Kadi Vav, Navghan Kuvo and water springs are made inside the fort for water.
- (13) In which direction should we go from Dargah to reach Dhakka bari ?**
- A.** From Dargah we should go to south and then to east or first go to east and then go towards south to reach Dhakka bari.

(14) Where are water springs located in the fort ?

A. Water springs are located in the east of the main gate.

(15) In which direction is Kadthal Top to the water springs ?

A. Kadthal Top is to the west of water springs.

(16) On the map, 1 cm distance is equal to a distance of 45 metres on the ground. If on the map the distance between Adi-Kadi Vav and Dhakka bari is 12 cm then what is the distance on the ground between the two?

A. 540 metres

3. Choose the correct option.

(1) Which fort of Junagadh is very old?

A. (D)

(A) Mohabbat fort

(B) Rani fort

(C) Red fort

(D) Uparkot

(2) What have been installed on the gate of the Uparkot fort ?

A. (B)

(A) Rings

(B) Sharp iron spokes

(C) Diamonds

(D) Bows

(3) Bastions of Uparkot fort are even _____ than the wall.

A. (A)

(A) higher

(B) smaller

(C) equal

(D) weaker

(4) In _____ A.D. the Uparkot fort was renovated?

A. (D)

(A) 950

(B) 960

(C) 975

(D) 976

(5) Which of the following is there in the fort of Uparkot ?

A. (A)

(A) Navghan Kuvo

(B) Bhamariyo Kuvo

(C) Adalaj Vav

(D) Ran ki Vav

(6) Which cannon was brought from the plunder of Diu to the Uparkot fort?

A. (B)

(A) Manek

(B) Neelam

(C) Palam

(D) Karnad

(7) Which two metals are mixed to make bronze ?

A. (D)

(A) Iron and copper

(B) Copper and brass

(C) Iron and tin

(D) Copper and tin

(8) How many steps are there in Adi – Kadi Vav ?

A. (D)

(A) 100

(B) 120

(C) 150

(D) 166

(9) Navghan Kuva was built during the time of Navghan Kings of _____.

A. (B)

(A) Chalukya

(B) Chudasama

(C) Gandhar

(D) Chola

- (10) How deep is Navghan well ? **A. (C)**
(A) 100 feet (B) 150 feet (C) 171 feet (D) 200 feet
- (11) How many steps are there in Navghan well ? **A. (B)**
(A) 200 (B) 204 (C) 210 (D) 215

4. Fill in the blanks.

- (1) **Girnar** hill is located in Junagadh.
- (2) There are **iron** spokes on the main door of the Uparkot fort.
- (3) The walls of the Uparkot fort are **thick** and **wide**.
- (4) Many **bastions** are made in the outer wall of Uparkot fort.
- (5) The Uparkot fort was constructed during the time of **Chandragupta Maurya**.
- (6) On the walls of the palace, meticulous **carving** work could be seen.
- (7) **Malek Eiaz** brought the 'Neelam' cannon to the Uparkot fort.
- (8) The army of **Siddhraj Jaysing** could not enter in the fort.
- (9) 'Neelam' and 'Manek' cannons are made of **bronze**.
- (10) **Adi-Kadi Vav** is an example of wonderful arrangement for water.
- (11) The name of the well, built by Navghan Kings is **Navghan Kuvo**.
- (12) Historical places are our **national** heritage. It is our **duty** to preserve them.
- (13) **Mashak** is a leather bag used to carry water, by the travellers in olden days.
- (14) It is easy to lift heavy objects along a **slope**.

5. Mark the following sentences as '✓' or 'X'.

- (1) The Uparkot fort is built at a great height. (✓)
- (2) The entrance of the Uparkot fort is very weak. (X)
- (3) There is a small gate made in the big gate of the Uparkot fort. (✓)
- (4) The gate of the Uparkot fort cannot be opened or closed easily. (✓)
- (5) The Uparkot fort remained aloof for long time after its construction. (X)
- (6) Nowadays, many countries have atomic bombs. (✓)
- (7) People living in the fort used the water from Adi-Kadi Vav to fulfill their water requirements. (✓)
- (8) Buddhist monks stayed in the Buddhist caves. (✓)

6. Match the following.

A	B	Answer
(1) Girnar	(A) Stepwell	(1) → B
(2) Navghan	(B) Mountain	(2) → C
(3) Adi-Kadi	(C) Well	(3) → A
(4) Uparkot	(D) Fort	(4) → D

7. Activity

- (1) Visit a historical monument and make notes on it.
- (2) Collect some old things and make an album.

11. Sunita in Space

1. Answer the following questions.

- ✦(1) Describe Sunita's experience in the spaceship.
- ✦(2) Why do children always slide down the slide and not slide up? If this slide were there in Sunita's spacecraft, would children slide like this? Why?***
- ✦(3) Write a similarity and a difference between a photograph of the earth and a globe of the earth?
- ✦(4) Looking at the earth from space, Sunita said, "One cannot see the different countries. Division into countries has been done by us. All the lines on the maps are made by us, they are in our minds."
What do you understand by this statement? ***
- (5) What cannot be seen on the globe? Why?**
 - A.** The sun, moon, stars, sky cannot be seen on the globe of the earth, because they are in space and our earth is also in space. But a globe represents only the earth.
- (6) Name the countries which can be seen in the lower half of the globe.**
 - A.** The countries such as Brazil, Argentina, Chile, Botswana, Australia, New Zealand, etc. can be seen in the lower half of the globe.
- (7) The earth is round like a sphere, but why do we not fall off?*****
 - A.** The surface of the earth pulls us towards it due to the gravitational force of the earth. As a result, we can stand up straight and we do not fall off.
- (8) Why does water flow downwards on any slope? On mountains too water flows downwards, not upwards. Why?*****
 - A.** The earth has a gravitational force, due to the earth's gravitational force the earth pulls everything towards itself. Thus, water flows downwards on any slope.
- (9) Read the activity 'A mouse lifts an elephant!' given in your textbook on page number 104 and answer the following question. Who pulls whom? How does this happen? Explain.**
 - A.** When the small stone i.e., the mouse rotates, it creates a force due to which the bigger stone i.e., the elephant is being pulled up.
- (10) What are the festivals related to the moon? *****
 - A.** Festivals related to moon are Karwa Chauth, Sharad Poonam, Eid etc.
- (11) Name the countries which can be seen in the upper half of the globe.**
 - A.** Greenland, Canada, Russia, Norway, etc. can be seen in the upper half of the globe.

(12) What is a globe?

A. A small replica or model of the earth is called a globe of the earth.

(13) How many continents are there? Name them.

A. There are seven continents. They are : (1) Asia (2) Europe (3) Africa (4) North America (5) South America (6) Australia (7) Antarctica.

(14) How many oceans are there? Name them.

A. There are five oceans. They are: (1) Atlantic Ocean, (2) Indian Ocean, (3) Pacific Ocean, (4) Arctic Ocean (5) Southern (Antarctic) Ocean

(15) What colours are used to represent the land area on the globe?

A. Green, brown, yellow, orange, etc. are used to represent the land area on the globe.

(16) Do the people in Argentina stand upside down? Why?***

A. No, they don't stand upside down. There is no concept like standing upwards or downwards, everything is relative.

(17) Why does everything on the earth remain in its place?

A. Due to the gravitational pull of the earth, everything on the earth remains in its place.

(18) Define gravitational pull of the earth.

A. The force by which the earth attracts everything towards itself is called the gravitational pull of the earth.

(19) When did Sunita start her space journey?

A. Sunita started her space journey on December 9, 2006.

(20) On the earth, when we fill a glass or bucket with water, it stays there because...

A. On the earth, when we fill a glass or bucket with water, it stays there because the earth pulls everything towards itself.

(21) What difficulty did Sunita face while working in the spacecraft?

A. In the spacecraft she could not sit or stand stable, she was floating in the air holding the table with one hand and working with the other hand.

(22) Why did Sunita's hair stand in space? ***

A. Due to the zero gravity in the space Sunita's hair kept standing.

(23) How does the earth look from the spaceship?

A. From the spaceship, the earth looks very beautiful and amazing. Its round shape could be seen clearly from there.

(24) What lines can be seen on the globe?

- A. Boundary lines between two countries and different continents, latitudes and longitudes can be seen around the globe.

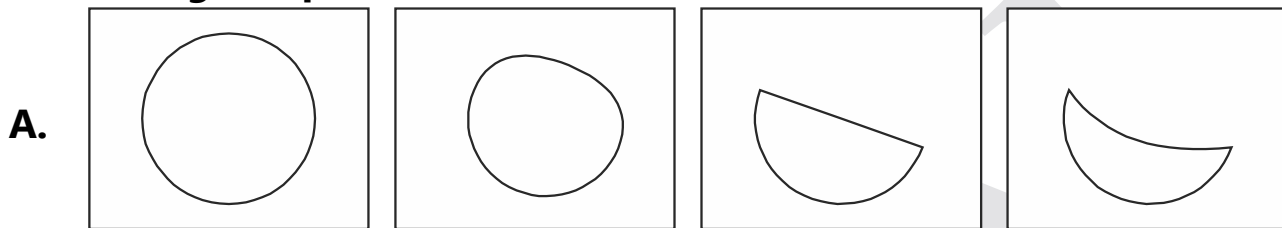
(25) What can we see in the sky?

- A. In the sky we can see the sun, moon, stars, clusters of stars, planets, etc.

(26) How does the moon appear on a full moon night?***

- A. On a full moon night, the moon rises just after the sunset. The moon looks like a complete white circle.

(27) Draw some shapes of the waxing moon in the order the moon appears during this period.



(28) Do you see anything moving in the sky? What do you think it could be?***

(Sample Answer)

- A. Yes, sometimes we can see something moving in the sky, it may be a shooting star if it moves very fast. It may also be a satellite if it moves slowly.

(29) If you saw the moon rising at 7 pm today, would you see it at the same time tomorrow ?

- A. No, I will not see the moon at the same time tomorrow.

(30) Why can't we easily see the moon or stars during the day?***

- A. Due to the sunlight during the day, we cannot see the moon or stars.

(31) Why do we see stars mostly at night?***

- A. There is no sunlight during the night. As a result the light from stars is not hidden by the sun's glare and we are able to see them at night.

(32) Who was Neil Armstrong?

- A. Neil Armstrong was an American astronaut who was the first man to walk on the moon.

(33) Which record was set by Sunita Williams?

- A. Sunita Williams set a new record for the longest space flight by a woman.

(34) Sunita Williams came to India to fulfil whose dream?

- A. Sunita Williams came to India to fulfil the dream of her friend Kalpana Chawla.

(35) How did Sunita dine in space?

- A. Sunita could not sit in the spacecraft; she remained floating all the time . Food packets also kept floating and she had to catch them.

(36) Which countries and continents can be easily identified in a photograph of the earth taken from a spacecraft?

- A. In the photographs of the earth taken from spacecraft, countries like India, Sri Lanka, while continents like North America, South America, Australia can be easily identified.

(37) How can one identify the sea in a photograph of the earth taken from a spaceship?

- A. The blue part that appears in the photograph of the earth is the sea.

(38) Why are lines drawn on the globe?

- A. Boundary lines between different continents and countries on the globe have been drawn to identify the borders of different countries.

(39) What is a shooting star ?

- A. A shooting star is actually a meteorite which catches fire when it enters the earth's atmosphere.

2. Do as directed.**[1] Imagine that your class is a spaceship and your spaceship is now going around the earth. Answer the following questions :*******(1) Are you able to sit at one place?**

- A. No, I am not able to sit at one place, everyone seems to be floating inside the spacecraft.

(2) How will your hair be?

- A. Our hair will stand up.

(3) What will happen to your bags and books?

- A. Our bags and books will be floating in the air.

(4) What do your teachers do? Where will their chalk be?

- A. Our teachers teach floating in the air and if they want to teach from one place, they have to tie themselves to that place and then teach. The chalk will also float here and there.

(5) What happens if you throw a ball into the spacecraft?

- A. If we thrown a ball into the spacecraft, it starts floating instead of falling down.

[2] What happens if ***

(1) We drop a 5 rupee coin and a piece of paper about one-fourth the size of the coin at the same time?

A. When dropping the coin in one hand and the paper in the other, the coin reaches the ground faster than the paper.

(2) We place the tiny paper on the coin and drop them together?

A. When placing the tiny paper on the coin and dropping them together, both reach the ground at the same time.

3. Choose the correct option.

- (1) We can see all the _____ continents of the earth on a globe. **A. (C)**
 (A) 5 (B) 6 (C) 7 (D) 8
- (2) On a globe, seas and oceans are depicted in _____ colour. **A. (B)**
 (A) green (B) blue (C) white (D) yellow
- (3) Which of the following countries is located in the upper half of the globe? **A. (D)**
 (A) India (B) Brazil (C) Australia (D) Canada
- (4) Sunita was born in _____. **A. (B)**
 (A) India (B) America (C) Canada (D) Africa
- (5) Sunita Williams went _____ kilometres away from the earth, in the spaceship. **A. (D)**
 (A) 200 (B) 250 (C) 300 (D) 360
- (6) How many days are there in a fortnight? **A. (C)**
 (A) 5 (B) 8 (C) 15 (D) 30
- (7) On which day the moon does not appear at all? **A. (D)**
 (A) Full moon day (B) On the first day of the month
 (C) On the tenth day of the month (D) New moon day
- (8) Artificial satellites are used for _____. **A. (D)**
 (A) TV (B) telephones
 (C) weather reports (D) all of these
- (9) Sunita saw a photo of _____ at the age of five. **A. (B)**
 (A) Bachendri Pal (B) Neil Armstrong
 (C) Rakesh Sharma (D) Isaac Newton
- (10) When did Sunita get out of the spacecraft into space? **A. (D)**
 (A) 11/12/2006 (B) 12/12/2006 (C) 14/12/2006 (D) 16/12/2006
- (11) When did Neil Armstrong land on the moon? **A. (C)**
 (A) 1950 (B) 1955 (C) 1969 (D) 1963

4. Fill in the blanks.

- (1) The shape of the earth is **round** like an orange.
- (2) The earth's **gravitation** pulls everything towards itself.
- (3) Sunita Williams is an **astronaut**.
- (4) Sunita Williams remained in space for **322** days.
- (5) In space, the force of gravity is **0 (zero)**.
- (6) If we throw something up on the earth it comes **down**.
- (7) The **sun** appears in the sky every day.
- (8) The moon is a natural satellite of the **earth**.
- (9) The waxing moon rises just after the **sunset**.
- (10) A shining object which seems to move with a constant speed in the sky can be a **satellite**.
- (11) There are **five** oceans on the earth.

5. Mark the following sentences as '✓' or 'X'.

- (1) We can't see oceans on a globe. (X)
- (2) Water and land areas can be clearly seen on the globe. (✓)
- (3) From space, the earth looks just like a sphere. (✓)
- (4) We can see our country India on the globe. (✓)
- (5) The people of Argentina stand upside down. (X)
- (6) If there was no gravitational force, sea water would go into space. (✓)
- (7) In a spacecraft, one could work easily by sitting in one place. (X)
- (8) The border lines drawn between two countries which are there on the globe are also there on the earth. (X)
- (9) There are lines drawn on the ground between the states. (X)
- (10) The moon does not have its own light. (✓)
- (11) The moon is round like a ball. (✓)
- (12) Sometimes the moon can be seen even at sunrise in the early morning. (✓)
- (13) There is a fixed time at which the moon rises at a particular place. (X)
- (14) The stars do not twinkle. (X)

6. Show the following places in the map of India given below.

Gujarat, Maharashtra, Madhya Pradesh, Rajasthan, Pakistan, Nepal, Bhutan, Sri Lanka, Bangladesh, Indian Ocean, Bay of Bengal, Arabian Sea, Andaman and Nicobar Islands, Lakshadweep.



7. With the help of the map of India given in Question number 6, answer the following questions:

(1) Which are the neighbouring states of Gujarat?

A. Rajasthan, Maharashtra and Madhya Pradesh are the neighbouring states of Gujarat.

(2) Pakistan is located on the **western** border of Gujarat.

(3) Name the neighbouring countries of India.

A. Nepal, Bhutan, Pakistan, Bangladesh and Sri Lanka are the neighbouring countries of India.

(4) Which seas surround India?

A. India is surrounded by the Arabian Sea, the Indian Ocean and the Bay of Bengal.

(5) India is surrounded on **three sides** by the sea.

(6) Indian Ocean is located to the _____ of India.

A. (D)

(A) North

(B) East

(C) West

(D) South

12. What if this will be Finished?

1. Answer the following questions.

- ✦(1) What is done with the oil after it is pumped out from inside the earth?
- ✦(2) Suggest some ways to deal with the problems arising out of the growing number of vehicles.***
- ✦(3) Where is fuel used ?***
- ✦(4) What would happen if you don't get petrol or diesel for a week in your village or town?***
- ✦(5) Suggest some ways to save fuel.***
- ✦(6) What difficulties do people who cook food using wood or cow dung cakes face due to smoke?***

(7) Why don't people travel by buses?***

- A. ✦ Buses are overcrowded and hence people avoid to travel by bus.
- ✦ Poor people prefer bicycles, in order to save money.
- ✦ Rich people use cars and bikes for convenience.

(8) Why are the prices of petrol and diesel going up?***

- A. ✦ As the use of vehicles increases, the demand for petrol and diesel increases but their production and quantity are limited.
- ✦ This increases the price of petrol and diesel.

(9) We should use petrol and diesel judiciously. Why?***

- A. ✦ Petrol and diesel should be used judiciously because they are limited and will soon get exhausted.
- ✦ Moreover, they also cause a lot of pollution if used extensively.

(10) Which vehicles do you see on the road?*** (Students will answer on their own.) _____

(11) What happens when there are many vehicles constantly moving on the road?***

- A. When there are many vehicles constantly moving on the road there is a lot of noise of honking and smoke coming out of the vehicles.

(12) Name the vehicles which need petrol or diesel as fuel.***

- A. Vehicles like scooters, bikes, auto-rickshaws, cars, buses, lorries, trains, etc. need petrol or diesel as fuel.

- (13) Name the vehicles which run without petrol and diesel.*****
A. Handcarts, pedal-rickshaws, bicycles, bullock carts, camel carts, etc. run without petrol or diesel.
- (14) What kind of problems can we face from the noise of vehicles (honking)?*****
A. Noise coming from vehicles causes headache, deafness, irritation, etc.
- (15) How does the smoke coming out from vehicles cause problems?*****
A. Smoke coming from vehicles can cause nausea, cough, lung diseases, headache and skin allergy.
- (16) What problems can we face from the speeding vehicles?*****
A. Speeding vehicles increases the risk of accidents along with other traffic problems.
- (17) How do you go to school?*** (Students will answer on their own.)**

- (18) How do your family members go to work from home?*** (Students will answer on their own.)**

- (19) Which states of India have oil fields?*****
A. Following states of India have oil fields: Assam, Gujarat, Maharashtra and Andhra Pradesh.
- (20) Besides oil, what else is found deep inside the earth?*****
A. Besides oil many minerals are found deep inside the earth such as coal, gold, iron, copper, diamond, potassium, magnesium and zinc.
- (21) From where do we get CNG?**
A. Like mineral oil we get CNG from deep inside the earth.
- (22) Where in Gujarat are oil refineries located?**
A. There are oil refineries at Vadodara and Jamnagar in Gujarat.
- (23) What makes all vehicles run ?*****
A. Vehicles can run on petrol, diesel, LPG, solar energy, CNG, electricity, etc.
- (24) What kinds of problems will we face, if the number of vehicles keep on increasing?*****
A. If the number of vehicles keep on increasing it would lead to many problems like, increased traffic on the road, air pollution, noise pollution and accidents.

- (25) What are the benefits, if we switch off the engine of the vehicles at the red light on the road?*****
- A. It will save fuel if we switch off the engine of the vehicles at the red light on the road. It also reduces air and noise pollution.
- (26) In one month how much petrol and diesel is used in your home? What is it used for?*** (Students will answer on their own.)** _____
- _____
- (27) Name two vehicles that run on diesel.**
- A. Tractor, truck, etc.
- (28) Mention two vehicles that run on petrol.**
- A. Scooter, motorcycle (bike), etc.
- (29) Where is diesel used?*****
- A. Diesel is used as fuel for cars, buses, trucks, tractors, trains and generators. Additionally, diesel is also used for running machines in factories.
- (30) What things can be used as fuel to light a chulha?**
- A. Dry wood, sawdust, coal, dried leaves, cow dung cakes, etc. can be used as fuel to light a chulha.
- (31) In the past 10 years the use of which cooking fuel has increased in your area? Use of which fuel has decreased?*** (Students will answer on their own.)** _____
- _____
- (32) The use of which fuel would increase and which would decrease in the next 10 years?*****
- A. In the next 10 years use of LPG, solar energy, biogas and electricity will increase. Use of cow dung, kerosene and wood will decrease.
- (33) What causes air pollution?**
- A. Smoke from vehicles, factories, burning garbage, etc. cause air pollution.
- (34) Do you ride a bicycle? If yes, where do you go on it? (Students will answer on their own.)** _____
- _____
- (35) How is mineral oil extracted from the earth's crust?**
- A. Special techniques and machines are used to find out where the oil is present in the earth's crust. The oil is then pumped up using big machines and pipes.

(36) **Complete the sentence: The mineral oil when extracted from the earth is a smelly, thick, dark coloured liquid.**

(37) **What is separated from mineral oil by refining it?**

A. Mineral oil is refined to produce kerosene, diesel, petrol, engine oil and aircraft fuel (gasoline). Also LPG, wax, asphalt, grease, etc. are obtained from it.

(38) **Petroleum supplies raw materials for which industries?**

A. Petroleum supplies raw materials for plastics, dyes, chemicals, drugs, fertilizers, paints, etc.

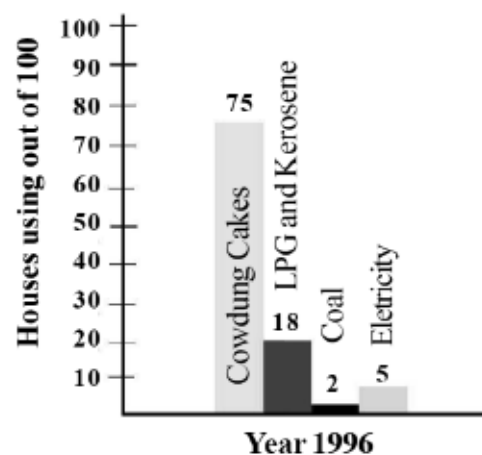
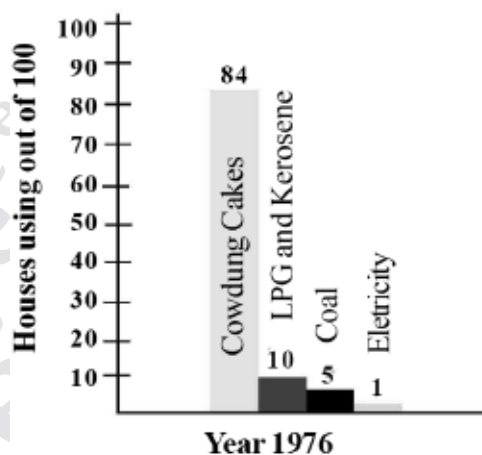
2. **Give reason.**

✦(1) **Many people in our country use dry wood, twigs and cow dung cakes for cooking.**

3. **Do as directed.**

1. **Look at the following graphs that show change in fuel use over twenty years and answer the following questions :*****

Change in fuel use over twenty years



(1) **In the year 1976, out of 100 how many houses used cow dung cake and wood? *****

A. 84 houses.

(2) **Which was the fuel used the least in 1976? *****

A. Electricity.

(3) In 1976, LPG and kerosene were used in 10 houses and in 1996 this increased to 18. This means that in twenty years their use increased by 80 %

(4) **Out of 100, how many houses were using electricity in 1996?*****

A. 5 houses.

(5) Which fuel was used the least in 1996? What percentage of houses used it in the year 1976? ***

A. Coal was used the least in 1996. In 1976 it was used in 5% of houses.

4. Choose the correct option.

- (1) Which of the following vehicles are seen less on a highway? **A. (D)**
(A) Cars (B) Trucks (C) Buses (D) Bicycle
- (2) Which of the following vehicles does not need petrol as fuel? **A. (B)**
(A) Car (B) Bicycle (C) Scooter (D) Bike
- (3) Which of the following vehicles give off smoke? **A. (D)**
(A) Car (B) Bus (C) Scooter (D) All of these
- (4) _____ is found from deep down under the ground. **A. (D)**
(A) Petrol (B) Diesel (C) Plastic (D) Both (A) and (B)
- (5) Which of the following Indian states produces mineral oil? **A. (C)**
(A) Rajasthan (B) Meghalaya (C) Maharashtra (D) Delhi
- (6) Vehicles which run on _____ give less smoke. **A. (B)**
(A) petrol (B) CNG (C) diesel (D) coal
- (7) Which of the following is not a component of petroleum? **A. (C)**
(A) Petrol (B) Diesel (C) Biogas (D) Kerosene
- (8) What does a generator run on? **A. (A)**
(A) Diesel (B) Petrol (C) Gas (D) Kerosene
- (9) _____ is used in lanterns. **A. (D)**
(A) Diesel (B) Petrol (C) Gas (D) Kerosene
- (10) Which fuel is used in an aeroplane? **A. (B)**
(A) Petrol (B) Gasoline (C) Gas (D) Diesel

5. Fill in the blanks.

- (1) All the vehicles at the crossings are stopped if there is a **red** signal.
- (2) Petrol, diesel, etc. are obtained from **mineral oil**.
- (3) Various substances are separated from the oil in a **refinery**.
- (4) The main source of energy is the **sun**.
- (5) The energy from the sun is called **solar energy**.
- (6) **Petrol** is used for dry cleaning clothes.
- (7) **Kerosene** is used in lanterns.
- (8) **Gasoline** fuel is used in an aeroplane.
- (9) Earlier, about **two-third (2/3)** people in our country used cow dung cakes, wood and dry twigs, etc.

6. Mark the following sentences as '✓' or 'X'.

- (1) Mineral oil is made naturally. (✓)
- (2) Mineral oil can be made by human beings using machines. (X)
- (3) Mineral oil can be pumped out easily from anywhere. (X)
- (4) Electricity can be used to run vehicles. (✓)
- (5) Petrol prices are the same in every city. (X)
- (6) Current-prices of petrol and diesel are the same as they were in 2014. (X)
- (7) Burning damp wood produces a lot of smoke. (✓)

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13. Shelter High !

1. Answer the following questions.

- ✦(1) Which states would one pass through while travelling from Mumbai to Kashmir?***
- ✦(2) What are the different types of houses that you have seen?***
- ✦(3) During winter, Tashi and his family live on the ground floor. Why do they do so?***
- ✦(4) What type of roof does your house have? What is the roof used for?***
- ✦(5) Who are 'Changpas'?
- ✦(6) List five ways in which different animals are a part of your life.***
- ✦(7) What kind of houses do Bakarwal people live in during the summer? ***
- ✦(8) What are the similarities and differences in the life of Bakarwal people and the life of the Changpas?***
- ✦(9) Describe how different types of shelters in Jammu and Kashmir suit the needs of the people who live there.***
- ✦(10) How are shelters in Jammu and Kashmir different from the house you live in?
- (11) Why do the people in Ladakh dry fruits and vegetables?**
 - A. ✦ During the summer season people in Ladakh dry many fruits and vegetables.
 - ✦ They store them for winters when they do not get fresh fruits and vegetables.
- (12) Why is Manali famous?**
 - A. Manali is a hill station and is famous for its natural beauty.
- (13) Who generally uses a tent?**
 - A. Tents are used by nomads or travellers.
- (14) If you have to stay alone in a small tent for two days and only ten things could be taken along with. Make a list of those ten things. *****
 - A. (1) Clothes (2) Sleeping bags (3) Sweaters (4) Torch (5) Food packets (6) Water (7) Mosquito nets (8) Shoes (9) Camera (10) Small stove.
- (15) What does 'Jule-Jule' mean?**
 - A. 'Jule-Jule' means 'Welcome'.
- (16) Why did Gaurav Jani say – "This place is so high that it is difficult to breathe normally?"*****
 - A. The air usually becomes thinner to breathe when going to high altitudes. Hence the oxygen levels would have gone down so Gaurav Jani said so.

- (17) How do the Changpas move all their belongings from one place to another?**
- A. The Changpas carry all their belongings from one place to another on their horses and yaks.
- (18) What does 'Changthang' mean?**
- A. 'Changthang' means - a place where very few people live.
- (19) What is a 'lekha'?**
- A. The Changpas call the place 'lekha' where they keep sheep and goats. The walls of a lekha are made with stones.
- (20) How do the Changpas keep a record of their animals?**
- A. Each family puts a special mark on their own animals. The women and young girls count and take the animals out of the lekha.
- (21) Do sheep and goats need their own fur? Why?*****
- A. Goats and sheep which live in cold regions need their own fur and wool to keep their body warm.
- (22) Which things did Gaurav take with him on the journey?**
- A. Gaurav took a small tent, sleeping bag, plastic sheet, warm clothes and food that would remain fresh for some days. He also took his camera and extra cans for petrol.
- (23) What preparations do you make for a two-month trip? (Students will answer on their own.)** _____

- (24) What is required to build a tent?**
- A. Tent sticks, thick rope, nails, nylon or plastic tent sheets required to build a tent.
- (25) Have you ever been to a hilly place? Where? At what height was it? Did you have any difficulty in breathing there? *** (Students will answer on their own.)** _____

2. Give reason :

- ✦(1) The Changpa's goats and sheep are their only treasure.

3. Complete the following sentence :

- (1) **The houses in Delhi were made of** cement, bricks, glass and steel.
(2) **Tents can be made up of** nylon, plastic or tarpaulin.
(3) **If a Changpa family has more animals it is considered** more rich and important.

4. Choose the correct option :

- (1) Where did Gaurav Jani start his journey from? **A. (B)**
(A) Delhi (B) Mumbai
(C) Kashmir (D) Pune
- (2) How long was Gaurav Jani's journey going to be? **A. (C)**
(A) 6 months (B) 4 months (C) 2 months (D) 1 month
- (3) It took Gaurav _____ days to reach Delhi from Mumbai on his motorcycle. **A. (C)**
(A) 1 (B) 2 (C) 3 (D) 4
- (4) Where did Gaurav Jani reach after a two-day journey from Delhi? **A. (B)**
(A) Shimla (B) Manali (C) Kashmir (D) Srinagar
- (5) Manali is located in which state? **A. (C)**
(A) Haryana (B) Uttar Pradesh
(C) Himachal Pradesh (D) Uttarakhand
- (6) Which of the following is a cold desert? **A. (C)**
(A) Manali (B) Kullu (C) Ladakh (D) Kashmir
- (7) What were the walls of Tashi's house made of? **A. (B)**
(A) bricks (B) stones (C) wood (D) clay
- (8) The stairs leading to the first floor of Tashi's house were made of _____. **A. (A)**
(A) wood (B) stone (C) bricks (D) steel
- (9) The most important part of the house for the people of Ladakh is the _____. **A. (C)**
(A) first floor (B) ground floor
(C) roof (D) all of these
- (10) How many metres above the sea level is Changthang? **A. (B)**
(A) 4000 m (B) 5000 m (C) 6000 m (D) 7000 m

- (11) Where did Gaurav Jani see the 'Changpa' people? **A. (D)**
 (A) In Himachal Pradesh (B) In Uttarakhand
 (C) In Srinagar (D) In Changthang
- (12) Changpa's _____ are their only treasure. **A. (A)**
 (A) sheep and goat (B) yak and goat
 (C) sheep and yak (D) fields
- (13) The goats of the Changpa tribe are known for the special _____ they produce. **A. (B)**
 (A) milk (B) wool (C) horn (D) all of these
- (14) What do the Changpas call a place where they keep sheep and goats? **A. (C)**
 (A) Shed (B) Stable (C) Lekha (D) Rebo
- (15) _____ is a special window found in some old houses in Kashmir. **A. (D)**
 (A) Jharokha (B) Mehraab (C) Lekha (D) Dab
- (16) Every lane in Kashmir has a _____. **A. (A)**
 (A) Bakery (B) Vegetable Market
 (C) Flower Market (D) Lake
- (17) What is the distance between Mumbai and Delhi? **A. (C)**
 (A) 1200 km (B) 1300 km (C) 1400 km (D) 1600 km
- 5. Fill in the blanks.**
- (1) Gaurav planned to do his two months journey on his **motorcycle**.
 (2) From Mumbai, Gaurav reached Delhi, passing through the states of **Maharashtra, Gujarat and Rajasthan**.
 (3) Gaurav had to travel through difficult roads of the state of **Jammu and Kashmir** to reach Leh in **Ladakh**.
 (4) High, dry and flat lands of Leh are called **cold desert**.
 (5) In the houses at Ladakh, **tree trunks** were used to strengthen the roof.
 (6) The goats from which soft Pashmina wool is obtained are found at a height of **5000 m**.
 (7) The Changpa's tent is called **Rebo**.
 (8) In Srinagar some houses are on the **mountains**, while some are on **water**.
- 6. Mark the following sentences as '✓' or 'X'.**
- (1) Gaurav Jani found Delhi different from Mumbai. (✓)
 (2) Manali is a hilly area. (✓)
 (3) A tent is a temporary home. (✓)
 (4) Ladakh gets very heavy rainfall. (✓)
 (5) The houses in Leh-Ladakh have sloping roofs. (X)
 (6) 'Changthang' is a rocky plain. (✓)
 (7) The Changpa tribe has only about 5000 people. (✓)

- (8) Goats and sheep are the life and livelihood of the Changpa tribe. (✓)
- (9) The goats from which fine hair is collected to make Pashmina wool shed some of their fur in winter. (X)
- (10) Pashmina shawls are woven on machines. (X)
- (11) The Changpas carry everything that they own on their goats and sheep. (X)
- (12) The design of 'Rebo' is more than a thousand years old. (✓)
- (13) Tourists who come to Srinagar love to stay in houseboats. (✓)
- (14) From inside, the 'Donga' is just like a house with different rooms. (X)
- (15) There are 'shikaras' in the dal lake. (✓)
- (16) Kashmir people do not cook rotis in their home, they buy it from bakeries. (✓)

7. Match the following.

(1) States in column A with the respective capitals in column B.***

A	B	Answer
(1) Gujarat	(A) Shimla	(1) → D
(2) Maharashtra	(B) Chandigarh	(2) → C
(3) Rajasthan	(C) Mumbai	(3) → E
(4) Haryana	(D) Gandhinagar	(4) → B
(5) Himachal Pradesh	(E) Jaipur	(5) → A

(2)

A	B	Answer
(1) Changthang	(A) Donga	(1) → C
(2) Leh-Ladakh	(B) Shikara	(2) → D
(3) Srinagar	(C) Rebo	(3) → A
(4) Dal Lake	(D) Cold desert	(4) → B

14. When the Earth Shook !

1. Answer the following questions.

- ✦(1) A lot of people from other places came to Jasma's village. Who were these people? In what ways would they have helped the villagers?***
- ✦(2) Where and how did the people in Kutch manage to live when they had no houses to live in after the earthquake?
- ✦(3) What was the role of scientists in Kutch after the earthquake?
- ✦(4) How did engineers and architects try to help the villagers after the earthquake?
- ✦(5) Describe the houses the people in Jasma's village built after the earthquake.
- ✦(6) What should be done if there is an earthquake?
- ✦(7) If the buildings are made in a way that they would not fall in the earthquake, would the damage be reduced? How?***
- ✦(8) In situations like earthquakes whose help would be needed and for what?
- ✦(9) What type of difficulties are faced by people during floods?***
- ✦(10) Write down what people need to do to make their life normal again after the flood.***

(11) What will you do to save pet animals during a natural disaster?***

A. (Sample Answer)

- ✦ We will quickly evacuate and move out the pet to a safer place during a natural disaster.
- ✦ We will also prepare an emergency kit for the pet, which consists of medical need, water, food, etc. along with the shelter.

(12) Why should one go under a table during an earthquake?

- A. In case of collapse of a house during an earthquake, the table can save the person from injury. Hence one should go under a table during an earthquake.

(13) What is an earthquake?

- A. A sudden shaking of a part of the earth's surface is called an earthquake.

(14) If there were an earthquake where you live, would your house be safe?*** (Students will answer on their own.)

A. _____

(15) Compare your house with that of Jasma. List what materials were used in making both the houses.***

- A. **Materials used in Jasma's House :** Clay, cowdung, mirror, etc.
Materials used in my house : Bricks, cement, iron, wood, etc.

(16) At times, when people have lost their homes and all their belongings, what kind of help would they need?***

A. At such times people will need tents to prepare huts and basic needs like cloth, food, water and medicines.

(17) Why do people live together in a neighbourhood?***

A. People live together in a neighbourhood so that they can happily celebrate all the occasions together and help each other during times of crisis.

(18) Which Indian states are prone to floods?

A. Assam, Bihar, West Bengal, Uttar Pradesh, etc. are prone to frequent floods.

(19) What kind of school do children have to go to after the flood? ***

A. After the flood, children are usually forced to study in a make shift school.

(20) Why was Jasma's mother crying?

A. Jasma's mother was crying because Jasma's grandfather(nana) was buried under the rubble.

(21) How did the sarpanch of Jasma's village help the villagers?

A. The house of the sarpanch of the village was not much damaged. He gave rice and wheat to everyone from his godown. For many days, the village women cooked food together at the sarpanch's house and fed everyone.

(22) What should not be done during an earthquake?

A. Following things should not be done during an earthquake:

(1) Do not run (2) Do not stand near electricity poles or big trees. (3) Do not run on the stairs of high-rise buildings. (4) Do not stand in the gallery of the house. (5) Do not stand near glass objects or windows, etc.

★(23) How would you feel if there were no other houses or people around your house? (Students will answer on their own.) ***

A. _____

2. Give reason.

★(1) After the earthquake, villagers decided to build their houses on their own with the help of the engineers and architects.***

3. Choose the correct option :

(1) Where does Jasma live? **A. (A)**

(A) Kutch (B) Ahmedabad (C) Surat (D) Vadodara

(2) Whose house in Jasma's village was not badly damaged due to the earthquake? **A. (A)**

(A) Sarpanch (B) Leader (C) Doctor (D) Postmaster

- (3) After the earthquake, who showed the villagers special designs for the houses? **A. (D)**
 (A) Engineers (B) Architects (C) Scientists (D) Both (A) and (B)
- (4) To construct the walls of the houses people in Jasma's village brought the clay from the _____. **A. (B)**
 (A) river (B) pond (C) city (D) debris
- (5) Which place is safer during an earthquake? **A. (A)**
 (A) Open field (B) Gallery of the house
 (C) Stairs of the house (D) Inside the house
- (6) Which of the following helpers can help people during an earthquake? **A. (D)**
 (A) Doctor (B) Nurse (C) Fireman (D) All of these
- (7) Which of the following animals can help people during an earthquake? **A. (B)**
 (A) Cow (B) Dog (C) Goat (D) Mice
- (8) Which of the following numbers can be dialed to call the police? **A. (A)**
 (A) 100 (B) 102 (C) 108 (D) 101

4. Fill in the blanks.

- (1) Earthquake is a **natural** disaster.
- (2) A drought is a **natural** disaster.
- (3) War is a **man-made** disaster.
- (4) **Famine** is a widespread scarcity of food, which may be caused due to a drought.
- (5) **Floods** are caused by heavy rains.
- (6) An earthquake in the ocean could cause a **tsunami**.
- (7) You need to dial **101** to call the fire station.

5. Mark the following sentences as '✓' or 'X'.

- (1) Jasma was eleven years old when an earthquake struck Kutch. (✓)
- (2) Jasma's entire village was sad and disturbed due to the flood. (X)
- (3) Everyone worked together to rehabilitate Jasma's village after the earthquake. (✓)
- (4) The houses of the villagers were built by the engineers after the earthquake. (X)
- (5) It is not advisable to stand under a big tree during an earthquake. (✓)

15. Cold or Hot ?

1. Describe an experiment.

- ✦(1) To show that the hot air goes up, while the cold air comes down.

2. Answer the following questions.

- ✦(1) Put your hands at some distance from your mouth, and blow hard. Does the air from your mouth feel warm? Why?***
- ✦(2) What would you do if, while playing you are hit on the eye by your friend's hand? Why? ***
- ✦(3) You bang your head while playing and your forehead is swollen. A warm handkerchief is put over the swollen area to give you relief. Why is it so?
- ✦(4) Name some things which produce melodious or pleasing sounds when we blow into them.***
- ✦(5) How does the air from the mouth help in cleaning the spectacles?***
- ✦(6) Take a glass. Bring it near your mouth and blow hard on it. Do this two or three times. Does the glass look hazy?
- ✦(7) Can you make a mirror hazy by blowing air on it? What makes it hazy?***
- (8) What happens to our chest when we breathe in and out ? Why ?*****
 - A.** ✦ When we breathe in, we inhale air from outside due to which our chest expands.
 - ✦ When we breathe out, we exhale air due to which our chest contracts and takes its original size.
- (9) What does a doctor hear using a stethoscope? Where is the sound coming from?**
 - A.** ✦ A doctor hears the heartbeat using a stethoscope.
 - ✦ The sound of the heartbeat comes from the heart.
 - ✦ Heart is not a clock, but an organ which is on the left side of the chest.
- (10) What do you do to warm your hands when they are frozen due to the cold in winters ? (Students will answer on their own.)**

A. _____

(11) Why do we blow at the hot tea?

- A.** We blow at the hot tea to make it cooler.

(12) How is the air blown from your mouth as compared to the air around you?

- A.** The air blown from our mouth is warmer than the air around us in winter while it is cooler than the air around us in summer.

- (13) Have you warmed your hands in winter by blowing on them when they are cold ? How does it feel ?*****
- A. (Sample answer) Yes, blowing on my hands made my hands warmer in winter. It feels warmer and comfortable.
- (14) Blow hard from your mouth onto your hands. How did you find the air from your mouth as compared to the air around? Was it hotter, or cooler?*****
- A. (Sample answer) Blowing hard from my mouth onto my hands, the air from the mouth was hotter than the outside air around me.
- (15) Balishtiye saw that the woodcutter was trying to cool the hot potatoes by blowing on them. What would have happened if he had eaten the potatoes without cooling them?*****
- A. Eating the potatoes without cooling them could cause burns in the mouth.
- (16) For what other things do you blow air from your mouth?*****
- A. (Sample Answer) Some of the other activities which can be done by blowing air from the mouth are as follows : (a) Whistling, (b) Playing with a firkin, (c) For removing dust from something, (d) For cleaning the spectacles.
- (17) If whistles of the following things are made then write in a sequence— from the loudest to the softest whistle.*****
- Wrapper of a toffee – A leaf
 - A balloon – The cap of a pen
 - Any other thing
- A. The sequence from the loudest to the softest whistle is given below:
- The cap of the pen
 - By putting fingers in the mouth
 - By wrapper of a toffee
 - By a balloon
 - By a leaf
- (18) Name a wind musical instrument. Why is it called so?**
- A. Flute is a wind instrument. It is called so because it is played by blowing air in it.
- (19) Put your finger under your nose. Can you feel any air when you breathe out from your nose?**
- A. (Sample answer) Yes, I can feel the air which we breathe out when I put my finger under my nose.

(20) Name some of the activities that can increase the rate of breathing.

- A.** The activities like jumping, skipping, running, climbing stairs, etc. can increase the rate of breathing.

(21) Why does the hot air rise up?

- A.** The hot air is lighter and thus it rises up.

(22) What did the woodcutter do to burn the damp wood?

- A.** The woodcutter lit a fire, bent down and blew on the fire to help the damp wood burn.

(23) What do you do if you want to eat a hot 'pakora'?

- A.** To eat a hot 'pakora' we blow air from our mouth on it so that it cools down and we can eat it comfortably.

3. Choose the correct option.

- (1) What did the woodcutter do to cool down the hot potatoes quickly ? **A. (C)**
 (A) He put them in cold water (B) He kept them in his cold hands
 (C) He blew air on them (D) Both (A) and (B)
- (2) Our breath is ____ a hot chapati hence we can make it cool by blowing on it. **A. (A)**
 (A) colder than (B) warmer than
 (C) equally hot to (D) none of these
- (3) When we fan or blow on burning coal or wood we _____ the fire. **A. (B)**
 (A) reduce (B) increase (C) extinguish (D) none of these
- (4) Which of the following things will make the loudest whistle? **A. (D)**
 (A) Wrapper of a toffee (B) A leaf
 (C) A balloon (D) A cap of a pen
- (5) When we breathe in, our chest comes _____. **A. (B)**
 (A) in (B) out (C) down (D) up
- (6) How many times does a normal person breathe in and out in one minute? **A. (B)**
 (A) 10 to 16 (B) 12 to 20 (C) 15 to 30 (D) 20 to 25
- (7) _____ is an instrument used to listen to our heartbeat. **A. (D)**
 (A) Earphones (B) Stethoscope (C) Binocular (D) Stethoscope

4. Fill in the blanks.

- (1) The woodcutter was blowing hard on his hands to warm them.
- (2) We can blow on our spectacles to wipe them clean.
- (3) The air we breathe out contains water vapours which turns into drops when they touch a cold surface.
- (4) Our chest shrinks a little when we exhale .

- (5) If we jump 25 to 30 times, we feel **breathless** .
- (6) Like the ticking of a clock, there is a constant **thumping** sound inside our chest.
- (7) Hot air goes **up** .
- (8) The cold air comes down because it is **heavier** .

5. Mark the following sentences as '✓' or 'X'.

- (1) Our fingers sometimes become numb due to cold. (✓)
- (2) In winter, the air that comes out of our mouth is cooler than the air outside. (X)
- (3) We feel the air from our mouth sometimes hot and sometimes cold. (✓)
- (4) Eating or drinking a very hot thing could cause burns in the mouth. (✓)
- (5) The air you blow from your mouth is dry. (X)
- (6) When we breathe in, our chest expands. (✓)
- (7) The rate of our breathing decreases when we do physical exercise. (X)
- (8) Cold air comes down. (✓)
- (9) Whenever the air flows upward, the paper snake moves clockwise. (✓)

6. Match the musical instruments in column A with their correct description given in column B.

A	B	Answer
(1) Flute	(A) It is made of wood and a membrane of leather. It is played by beating on the leather membrane. It is a type of percussion instrument.	(1) → C
(2) Dholak	(B) It is made of wood and metal strings. It is a type of string instrument.	(2) → A
(3) Been	(C) It is made of bamboo and is played by blowing air in it. It is a type of wind instrument.	(3) → D
(4) Guitar	(D) It is made of dry pumpkin which is hollowed out. It is a type of wind instrument.	(4) → B

16. Cleaning is our job

1. Answer the following questions.

- ✦(1) What should we do to keep all our places clean?***
- ✦(2) What happens if the sweepers don't do the cleaning?***
- ✦(3) What difficulties do people like Shankarbhai face in doing cleaning work?***
- ✦(4) What kind of work would you like to do amongst the people that you know? Why? (Write any five.)

(5) Why is Shankarbhai angry with the villagers?

- A.**
- ✦ Shankarbhai does not like to do this work, but he does this work to get employment.
 - ✦ He is angry with the villagers because they throw garbage around instead of throwing it in the designated place.

(6) Gandhiji said that every man should do all kinds of work. Why?

- A.**
- ✦ According to Gandhiji, every man should do all kinds of work.
 - ✦ If this happens, the whole society will change, the distinction between rich and poor will disappear.
 - ✦ Our country will become self-sufficient.

(7) What do sweepers do?

- A.** Sweepers clean public places, roads, schools, streets, offices, sewers, toilets, etc.

(8) What does Shankarbhai do?

- A.** Shankarbhai cleans the village.

(9) Why do people like Shankarbhai do cleaning work?

- A.** People like Shankarbhai do cleaning work due to poverty and lack of education.

(10) What is the job of most cleaners' children?***

- A.** Most of the children of the janitors are educated and they do not like to do this work. They have turned to professions like teacher, doctor, clerk, engineer, etc.

(11) What kind of work you don't like to do? Why? (Students will answer on their own.)

(12) What do you think people don't like to do? Why?***

A. In my opinion, people do not like to do cleaning work, collecting garbage, pulling lorries, etc. Because they consider this work to be low and dirty.

(13) What work did everyone have to do in Gandhiji's ashram?

A. The work of cleaning the toilet in Gandhiji's ashram had to be done by everyone.

(14) What did Gandhiji and his associates do in the village?

A. Gandhiji and his associates started cleaning toilets in the village.

(15) Who cleans your school? What all have to be cleaned?***

A. (Sample Answer) The cleaning staff of our school does the cleaning. They clean all the rooms, galleries, benches, grounds, toilets, bathrooms, etc. of the school.

(16) Are the work done by boys and girls, men and women the same?***

A. No, boys and girls have different jobs. But nowadays everyone does all kinds of work. There is no discrimination.

(17) Do you want to make a change in the division of labour? Of what kind.* (Sample Answer)**

A. Yes, I want everyone to get a job according to their ability and skills in the division of labour, there should be no gender difference.

(18) What should we do to help the janitor?

A. To help the janitors we should collect our household waste in a bin instead of throwing it anywhere on the road. We should give the garbage when they come to clean or when the garbage truck comes.

(19) Name the various works and the people who do them.

A. (1) Working in garden	-	Gardener
(2) Teaching	-	Teacher
(3) Treating Patients	-	Doctor
(4) Milking a cow	-	Milkmen
(5) Construction	-	Mason

(20) Discuss what kind of job do people like to do Why? * (Students will answer on their own.)** _____

(21) Discuss what happens if the garbage outside your school or home is not cleaned for a week? * (Students will answer on their own.)**

A. _____

(22) Why did so many people leave Gandhiji's ashram?

A. The rule of Gandhiji's ashram was that everyone had to carry their basket from the toilet to the cesspool and empty it. Usually this work was done by people of specific caste at that time. Other people did not like doing this work as many people considered this work as dirty work. So many people were leaving Gandhiji's ashram for fear of this work.

(23) What did the villagers think about cleanliness?

A. The villagers thought that the task of maintaining cleanliness and cleaning the toilets belonged to Gandhiji and his associates.

(24) Discuss: Why did Gandhiji and his team continue the cleaning work? What do you think about this? **(Students will answer on their own.)**

(25) Discuss: Every guest who came to Gandhiji's ashram had to learn cleaning. If you were a guest, what would you do? *** **(Students will answer on their own.)**

(26) Discuss: Who cleans the toilet in your house? **(Students will answer on their own.)**

(27) What do we have to learn from Jagubhai?

A. We have a lot to learn from Jagubhai, for example, everything should be done with precision and diligence, we should prevent food wastage, educate people against throwing rubbish around and maintain cleanliness and hygiene.

(28) Discuss : What time do you clean up at school? **(Students will answer on their own.)**

(29) How do you help cleaners at school?

A. We throw our pencil waste in the trash. Even if the page is torn from the notebook, we throw it in the trash. If there is any spillage during the recess, we collect it and throw it in the trash. This way we help the people doing the cleaning.

(30) Discuss : What all work do you do at your home? *** **(Students will answer on their own.)**

2. Choose the correct option.

- (1) Whose duty is it to maintain cleanliness? **A. (D)**
 (A) Only of government (B) Only of sweeper
 (C) Only of elders (D) All of us
- (2) _____ was a friend of Gandhiji. **A. (B)**
 (A) Narayanbhai (B) Mahadevbhai
 (C) Gijubhai (D) Navinbhai
- (3) Who lived with Gandhiji since childhood? **A. (C)**
 (A) Mahadevbhai (B) Nanubhai
 (C) Narayanbhai (D) Kasturba
- (4) In which ashram did Narayanbhai live at the age of 11 ? **A. (D)**
 (A) Kocharab Ashram (B) Harijan Ashram
 (C) Jain Ashram (D) Sabarmati Ashram
- (5) Wardha city is located in which state? **A. (B)**
 (A) Gujarat (B) Maharashtra
 (C) Madhya Pradesh (D) Rajasthan
- (6) According to Gandhiji, this is a very serious matter. **A. (A)**
 (A) Untouchability (B) Poverty
 (C) Uncleanliness (D) Defecation
- (7) Jagubhai is a _____ by profession. **A. (C)**
 (A) Teacher (B) Cleaner
 (C) Farmer (D) Tailor

3. Fill in the blanks.

- (1) Gandhiji was insistent on cleanliness.
 (2) According to Gandhiji learning to do work is an Art.

4. Mark the following sentences as '✓' or 'X'.

- (1) Shankarbhai has been doing cleaning work for 30 years. (✓)
 (2) Shankarbhai's children are willing to do cleaning work. (X)
 (3) Narayanbhai was the son of Gandhiji. (X)
 (4) Everyone living in Gandhiji's Ashram had to do all types of work. (✓)
 (5) Maintaining cleanliness is everyone's responsibility. (✓)

5. Match the following.

A	B	Answer
(1) Vegetable seller	(A) Takes care of a child	(1) → C
(2) Pathologist	(B) Takes care of patients	(2) → D
(3) Chemist	(C) Sells Vegetable	(3) → E
(4) Nanny	(D) Creates various reports in laboratory	(4) → A
(5) Nurse	(E) Medicine seller	(5) → B

17. Across the Wall

1. Answer the following questions.

- ✦(1) What is the dream of girls playing for Nagpada team?
- ✦(2) If you are made the leader of your team, how will you prepare your team?
(Sample Answer)
- (3) Who helped Afreen's father to become a good player and how?**
 - A. ✦ Bacchu Khan helped Afreen's father to become a good player.
 - ✦ He gave his father the right shoes and clothes.
 - ✦ He also gave proper training for the game.
- (4) Which wall did Afsana cross?**
 - A. Afsana crossed the gender wall between her hut and the local basketball court, the gender wall created by the society for girls.
- (5) The report of Afsana crossing the wall was published in which newspaper?**
 - A. The report of Afsana crossing the wall was published in the Indian Express newspaper in 2007.
- (6) Afsana has become a strong base of which team today?**
 - A. Afsana has become a strong base for the Nagpada Basketball Association (NBA) of Mumbai.
- (7) Which girls are NBA players?**
 - A. Afsana, Zarin, Afreen, Khushnoor, etc. are players of NBA team.
- (8) Is there a field near your home? Who plays there?*** (Students will answer on their own.)**
 - A. _____
 - _____
- (9) Why did Afreen's father have to leave the game?**
 - A. Afreen's father had taken up the job and left the game due to his responsibilities at home.
- (10) What would the girls do if someone was injured during the game?**
 - A. During the game, if someone was little injured, they would support each other and say: "Come on, get up, you'll be fine!"
- (11) Do you like to play in a team or alone? Why?*****
 - A. I like to play in a team. There is no fun or happiness when we play alone.
- (12) Name four games played at home.**
 - A. Chess, Carrom, Cards, Ludo.

(13) What did Zarin's brother say to his mother?

- A. Zarin's brother used to say to his mother, 'why does she let Didi (Zarin) to go to play? She (the girl) doesn't look nice playing on the field like that'.

(14) Name the areas other than sports where women are accepted.

(Sample Answer)

- A. Apart from sports, women are also accepted in the fields of teaching, politics, military, aviation, astronaut, writing, acting, music, trade, etc.

(15) What made Zarin want to play?

- A. Zarin used to stand in the balcony of her house and watch the boys play. Whenever the boys played a match, many people came to watch and praised the winning team by screaming and encouraging all the players. Seeing all this, Zarin wanted to play.

(16) Discuss: Has anyone ever stopped you from playing sports? Which sports?* (Students will answer on their own.)**

- A. _____

★(17) Did anyone encourage you to play? Who? * (Students will answer on their own.)**

- A. _____

(18) What was the curiosity of the people about?

- A. People's curiosity was about girls playing basketball.

(19) How did girls' team became capable to play the match elsewhere?

- A. The girls' team was able to play the match elsewhere due to their hard work and coach's training.

(20) How did the coach advise them to play during the match?

- A. The coach said, "While playing, don't think that you are a girl, play like a player. Keep playing even if you have a slight injury." These were the inputs.

(21) Discuss : Whether boys and girls games should be different or not? * (Students will answer on their own.)**

- A. _____

(22) Discuss : What happens if girls are not allowed to study, play sports or do other things of their choice?* (Students will answer on their own.)**

A. _____

(23) Discuss : Is there a difference between men and women who are famous in different fields? How? * (Students will answer on their own.)**

A. _____

(24) Nagpada team girls were trained in the game in which ground?

A. Nagpada team girls were trained in a small ground.

2. Give reason.

✦(1) Afsana's mother got angry when she heard about her plan to play basketball.

3. Choose the correct option.

(1) What wall did Afsana's mother build for her? **A. (C)**

(A) poverty (B) wealth (C) gender (D) religion

(2) Afsana's team has reached the district level tournament due to which of its qualities? **A. (D)**

(A) guts (B) courage
(C) wealth (D) Both (A) and (B)

(3) Which of the following was not a player of NBA team? **A. (D)**

(A) Afsana (B) Zarin (C) Afreen (D) Nooren

(4) Whose mother goes to other's house for work? **A. (D)**

(A) Afreen (B) Khushnoor (C) Zarin (D) Afsana

(5) Afreen's _____ got very angry at everyone. **A. (A)**

(A) Grandma (B) Grandfather (C) Father (D) Uncle

(6) Whose father was a good player? **A. (C)**

(A) Khushnoor (B) Afsana (C) Afreen (D) Zarin

(7) When the team first started playing, Afsana was ____ years old. **A. (B)**

(A) 10 (B) 11 (C) 12 (D) 13

(8) Players are known for their _____. **A. (C)**

(A) caste (B) religion (C) ability to play (D) country

- (9) Which of the following games can be played without a ball? **A. (C)**
 (A) Cricket (B) Hockey
 (C) Kabaddi (D) Football
- (10) Who encouraged Khushnoor to play? **A. (B)**
 (A) Father (B) Mother
 (C) Brother (D) Grandfather
- (11) Which of the following has become famous for archery? **A. (B)**
 (A) Himadas (B) Deepika Kumari
 (C) Geeta Fogat (D) Akanksha sinh
- (12) Akanksha Singh is known for which sport? **A. (C)**
 (A) Football (B) Badminton (C) Basketball (D) Cricket
- (13) _____ is known for wrestling. **A. (B)**
 (A) Karnam Malleshwari (B) Geeta Phogat
 (C) PV Sindhu (D) Sania Nehwal
- (14) Which of the following awards is given for the game? **A. (A)**
 (A) Arjuna Award (B) Rabindranath Tagore Award
 (C) Oscar Award (D) Dadasaheb Phalke Award

4. Fill in the blanks.

- (1) Afsana **crossed** the wall.
- (2) At the beginning of the visit all the girls were **quiet**.
- (3) **Zarina's** house was right in front of the ground.
- (4) The girls of NBA team played **basketball** game.
- (5) Khushnoor's parents agreed to let her play because she **insisted**.
- (6) **Bacchu Khan** was Afsana's father's coach.
- (7) **Unity** is good in NBA team.
- (8) Some of the girls from the NBA team got a chance to play in the **Mumbai** team.
- (9) Mumbai team lost **Solapur** match.
- (10) NBA team coach is **Noor Khan**, while Noor Khan's coach was Bacchu Khan.

5. Mark the following sentences as '✓' or 'X'.

- (1) Zarin was very talkative. Only she spoke throughout the interview. **(X)**
- (2) The coach was a very good friend of Zarin's brother. **(X)**
- (3) In the game of cricket, hockey or football, the rules of the game for boys and girls are different. **(X)**

- (4) Everyone should get equal opportunities while playing the game. (✓)
- (5) Afreen's team was not the first as a girl team to play in the field. (✗)
- (6) Girls also beat a team of boys. (✓)
- (7) Boys and girls games should be different. (✗)
- (8) Cooperation between the players of the team is the strength of the team. (✓)
- (9) Zarin's brother was happy to see her play. (✗)
- (10) Even today in some societies there is a distinction between boys and girls. (✓)

6. Match the following.

A	B	Answer
(1) Saina Nehwal	(A) Running	(1) → C
(2) Sania Mirza	(B) Boxing	(2) → D
(3) P. T. Usha	(C) Badminton	(3) → A
(4) Mithali Raj	(D) Tennis	(4) → E
(5) Mary Kom	(E) Cricket	(5) → B

18. Where do we go now ?

1. Answer the following questions.

- ✦(1) What activities were the people of Khedi village doing?
- ✦(2) Anuj learnt so many things in Khedi. How many of those would be useful for him in Mumbai?***
- ✦(3) Many people in Anuj's village did not agree to leave their land and forest? Why?***
- ✦(4) Why did Anuj's villagers have to leave the village against their will?
- ✦(5) What difficulties will people face where the dam is being built?***
- ✦(6) What difference did Anuj find between Sinduri and his dream village?***
- ✦(7) Have you ever read or heard of a city slum being moved ? How did you feel about this?***
- ✦(8) What difficulties do people face when they have to move from one place to another while changing jobs?***
- ✦(9) "The people of the city do not produce waste. Cities are dirty because of slums." Is this statement true or false?***
- (10) What noise is there in the city?**
 - A. The city is buzzing with the noise of vehicles, factory machines, vehicle horns, mill horn, advertising loudspeakers, etc.
- (11) What did the children of the village learn from the elders?*****
 - A. While working with the elders, the children learned to dance from them, play flute and drum, make clay and bamboo heads, recognize birds and imitate their voices.
- (12) What are the sounds you hear every day that the people of Khedi do not hear? *** (Students will answer on their own.)**
 - A. _____
 - _____
- (13) What is done to build a dam?**
 - A. To build a dam, a big wall is made to stop the flow of the river.
- (14) What did the people of Khedi village have to leave behind?**
 - A. The people of Khedi village had to leave behind their own land and other things.
- (15) What space did government employees measure?**
 - A. Government employees measured the length and width of rivers, farms, forests and houses.

(16) How did Anuj prepare to go to Mumbai?

A. Anuj sold his land and cattle to go to Mumbai.

(17) What was the only dream of Anuj's life?

A. The only dream in Anuj's life was to send his children to school, to give them a better future and a better life.

(18) What kind of school would Anujbhai's children go to in Mumbai?***

A. Anujbhai's children will be going to a government school run by the Municipal Corporation in Mumbai.

(19) Why do people leave village and go to city?

A. People leave village and go to city in search of work and better quality of life.

(20) For what did Anujbhai have to pay from his earnings?

A. Anujbhai had to pay for medicine, food, school fees, house rent and water from his earnings.

(21) Why did Anuj feel lonely even in a crowd of people?

A. During the day Anuj was busy doing his work but at night he would remember his old village, people of his village and life of his village. He had none of them to talk to him, so he felt lonely even in the crowd.

(22) Why do people like Anuj's family have to come to the big city?

A. People like Anuj's family have to come to the city to get employment and get proper schooling for their children.

(23) What did the people of Khedi village buy with money?

A. The people of Khedi village used to buy salt, oil, rice and sometimes some clothes with money.

2. Give reason.

✦(1) Many people have to leave their village and move to another place permanently.

3. Choose the correct option.

(1) What work did Anujbhai start in Mumbai? **A. (D)**

- | | |
|------------------------|---------------------------|
| (A) Selling vegetables | (B) Catching fish |
| (C) Selling fish | (D) Repairing fishing net |

(2) Which work did the elders teach the children? **A. (A)**

- | | |
|-------------------|-------------------|
| (A) to play flute | (B) to make drums |
| (C) to hunt | (D) all of these |

(3) The people of Khedi village did not buy which of the following items with money? **A. (C)**

- | | | | |
|----------|-------------|------------|-------------|
| (A) Salt | (B) Cereals | (C) Fruits | (D) Clothes |
|----------|-------------|------------|-------------|

- (4) Why did the people of Khedi village have to leave their village? **A. (C)**
 (A) due to floods (B) due to wildfires
 (C) due to construction of dam (D) due to earthquakes
- (5) Who were deployed with the police in Khedi village ? **A. (B)**
 (A) Politicians (B) Government employees
 (B) Engineers (D) Doctors
- (6) Anuj decided to leave Sinduri village and go to _____. **A. (B)**
 (A) Ahmedabad (B) Mumbai (C) Madras (D) Delhi
- (7) What was going to be built in Khedi village? **A. (A)**
 (A) Dam (B) Big lake
 (C) Railway station (D) Both (A) and (B)
- (8) Why did Anuj start saving money? **A. (D)**
 (A) for daughter's marriage (B) for son's education
 (C) for taking a new house (D) for repairing the hut

4. Fill in the blanks.

- (1) Anujbhai came to Mumbai from **Sinduri** village.
 (2) Anuj was born in **Khedi** village.
 (3) Anuj's family moved to live in **Sinduri** village.

5. Mark the following sentences as '✓' or 'X'.

- (1) People from the village are easily getting jobs in the city. **(X)**
 (2) The money Anujbhai got from his work was enough to make a living. **(X)**
 (3) The people of Khedi village lived in harmony. **(X)**
 (4) Government employees called a meeting of village leaders and elders. **(✓)**
 (5) Sinduri village was similar to Khedi. **(X)**
 (6) Anuj was not happy in Sinduri village. **(✓)**
 (7) Mumbai was exactly as Anuj thought. **(X)**

6. Discuss.

- (1) Have you ever felt lonely like Anuj ? Where ?
 (2) Do you know people who don't like to leave their old place?
 (3) Do you know people who have never been to school? Who?
 (4) Who comes to your mind when you think about your family?

7. Activity.

Do you know of any family that has come to your town after having moved out of their place? Talk to them and find out what are their experiences and how do they feel about it. Discuss it in the class.

19. A Seed Tells Farmer's Story

1. Answer the following questions.

- ✦(1) What is the difference between the method of farming done by Damjibhai and Hasmukh?***
- ✦(2) Which type of crop is grown in modern farming? Why?
- ✦(3) What kind of progress would you like to see in your village or area?***
(Sample Answer)
- ✦(4) Why Paresh did not want to become a farmer like Hasmukhbhai?***
- ✦(5) Write down the advantages and disadvantages of farming with the use of chemical fertilizers and pesticides.***
- ✦(6) Write the benefits of organic farming.***
- ✦(7) How is natural manure ('compost') prepared free of cost?
- ✦(8) How can you say that there have been many changes in our food?***
- ✦(9) What would happen if all the farmers sow only one kind of seed and grow only one kind of crop?***

(10) How are earthworms useful for farming?

- A. ✦ Earthworms dug the soil from inside.
- ✦ They move from one place to another place in the soil.
 - ✦ Due to this, the soil becomes soft.
 - ✦ Their feces make the soil fertile and air and water can easily enter the soil.

(11) Where did the farmers store good seeds?

- A. ✦ Good seeds were stored in dried bottle gourd which was covered with mud.
- ✦ Some farmers used strong wooden box with small compartments to store them.

(12) Which vegetables are used to prepare Undhiyu?

- A. Potatoes, sweet potatoes, brinjals, yam, beans, tuver, chillies, tomatoes, lemon, coriander leaves, fenugreek leaves, etc. vegetables are used to prepare Undhiyu.

(13) Have there been any changes around you, which may be difficult to call progress. Is this statement true or false?*** (Students will answer on their own.)

- A. _____
- _____

- (14) What did Damjibhai do to protect the seeds from insects?**
A. Damjibhai placed dried neem leaves in different compartments of the wooden box along with different seeds.
- (15) Who lived in joint families?**
A. Parents, children, grandparents, uncle, aunt and cousin brothers and sisters lived in joint families.
- (16) What was eaten with Umbadiyu?**
A. Bajra rotis cooked on the chulha, home-made butter, curd and buttermilk are eaten with Umabadiyu.
- (17) What did the farmers do with the crop of cotton?**
A. Cotton wool was spun on a charkha (spinning wheel). The cloth was made from the thread spun out of it.
- (18) Which crops are grown in summer?**
A. Bajra, mango, cucumber, yam, brinjal, pumpkin, etc. are grown in summer.
- (19) Which crops are grown in winter season?**
A. Wheat, barley, pulses, mustard, sesame seeds, tomatoes, cabbage, cauliflower, beetroot, carrot, etc. are grown in winter season.
- (20) How are food grains preserved?**
A. Dried neem stems or leaves or tablets of boric powder are kept in food grains. Castor oil is also applied to preserve food grains.
- (21) When is Uttarayan celebrated?**
A. Uttarayan is celebrated on 14th and 15th January.
- (22) In Gujarat, which special dishes are prepared during the festival of Uttarayan?**
A. In Gujarat, til laddoos, Til and peanut chikki, Undhiyu, Jalebi, puffed rice laddoos, etc. are made during the festival of Uttarayan.
- (23) When is Onam celebrated?**
A. Onam is celebrated from 1st to 11th September. (Dates may vary according to the regional calendar)
- (24) Which crops did the farmer grow more with changing times?**
A. With changing times, farmers started growing more crops that gave good price like wheat and cotton.

(25) What is progress according to Hasmukhbhai?

- A.** According to Hasmukhbhai, progress means to earn more money, improved standard of living, buying vehicles for transportation, eating good food.

(26) With what was the land of the farm covered?

- A.** The whole land was covered with dried leaves, wild plants and grass.

(27) How were seeds separated from the cob in earlier days?

- A.** In earlier days, the cobs were crushed with a pestle in a mortar to separate seeds from the cob.

(28) How did the seed go from one generation to the next generation?

- A.** Every year farmers kept aside some seeds from a good crop. This way the seed went from one generation to next generation.

(29) Write two - three lines about *Umbadiyu*.

- A.** For making *Umbadiyu*, fresh vegetables stuffed with spices were put in clay pot. The pot was sealed tightly. Then the pot was kept upside down in hot coals for baking. With this special method the vegetables prepared in the pot is called '*Umbadiyu*'.

2. Give reason.**1. Farmers nowadays buy the seeds from the market.**

- A.** ♦ The production was more from the seeds available in the market.
 ♦ They had resistance against disease.
 ♦ So, to increase production farmers nowadays buy seeds from the market.

3. Classify the following.**1. Vegetables according to the given seasons.**

(pumpkin, carrot, bitter gourd, beetroot, yam, spine gourd, cabbage, cucumber, bottle gourd, cauliflower, lady's finger, ridge gourd)

Summer : pumpkin, yam, cucumber, lady's finger

Winter : cabbage, cauliflower, carrot, beetroot

Monsoon : bitter gourd, spine gourd, bottle gourd, ridge gourd

4. Choose the correct option.

- (1) In which state is Vangam located? **A. (D)**
 (A) Maharashtra (B) Gujarat
 (C) Madhya Pradesh (D) Delhi
- (2) What was made from fresh winter vegetables? **A. (A)**
 (A) Umbadiyu (B) spices (C) manchurian (D) all of them

- (3) What is eaten with desi Undhiyu? **A. (D)**
 (A) Puri (B) Bhakhri (C) Jalebi (D) Bajra rotla
- (4) Which among the following crop is taken in both summer and rainy season? **A. (A)**
 (A) paddy (B) wheat (C) carrot (D) mustard
- (5) Wheat is grown in which season? **A. (A)**
 (A) Winter (B) Summer (C) Monsoon (D) Both (A) and (B)
- (6) Which festival is celebrated for 10 days? **A. (B)**
 (A) Pongal (B) Onam (C) Baisakhi (D) Sankranti
- (7) Which festival is celebrated on 13th April/ 14th April? **A. (C)**
 (A) Lohri (B) Bihu (C) Baisakhi (D) Onam
- (8) Which crop earned more money for the farmer? **A. (D)**
 (A) Bajra (B) Maize (C) Jowar (D) Cotton
- (9) In earlier days, which animal was used more in farming? **A. (C)**
 (A) Horse (B) Mule (C) Bullock (D) Donkey
- (10) Which of the following appliance is used for traditional farming? **A. (B)**
 (A) Tractor (B) Plough (C) Thresher (D) All of these
- (11) There has been changes in farming since last _____ years. **A. (D)**
 (A) 5 (B) 7 (C) 10 (D) 20
- (12) _____ has a very bad smell. **A. (B)**
 (A) Seeds (B) Pesticides (C) Raw fruits (D) All of them
- (13) What did Hasmukhbhai do to cover his expenses? **A. (D)**
 (A) started another business (B) sold cattle
 (C) sold a small piece of land (D) took a loan from bank
- (14) Which trees did the children see in Bhaskarbhai's farm? **A. (C)**
 (A) Croton (B) Chickoo (C) Coconut (D) Banana
- (15) _____ is used to harvest the bajra crop. **A. (A)**
 (A) Sickle (B) Axe (C) Scissors (D) Mortar
- (16) What is the name of the plant with colourful leaves in Bhaskarbhai's farm? **A. (A)**
 (A) Croton (B) Proton (C) Crypton (D) Kanji

5. Fill in the blanks.

- (1) Long ago, there were more **joint** families.
- (2) Umbadiyu is made in a **pot**.
- (3) Tea crop is taken in **monsoon** season.

- (4) In Gujarat **Uttarayan** is celebrated as a festival related to crop.
- (5) A **plough** is used to turn over the soil for sowing seeds.
- (6) Farmers have made **borewell** in their fields for irrigation.
- (7) The profit earned by farming got used up to **repay the loan**.
- (8) Bhaskarbhai's farm is located in **Dehri** village.
- (9) Bhaskarbhai used to do **organic** farming.
- (10) **Mortar** was used in earlier days to separate bajra seeds from the cob.
- (11) Today **threshers** are used to separate seeds from the cob.

6. Mark the following sentences as '✓' or 'X'.

- (1) Long ago, most of the farmers did not bring seeds from the market. (✓)
- (2) Long ago people of the village worked together. (✓)
- (3) Farmers used to grow different grains and vegetables according to season. (✓)
- (4) The other name for Uttarayan is 'Makarsankranti'. (✓)
- (5) Hasmukhbhai bought seeds from the market. (✓)
- (6) Nowadays the use of tractors has increased for farming in place of bullocks. (✓)
- (7) Use of modern appliances leads to unemployment of many people. (✓)
- (8) The new kinds of seeds were such that the crops were easily affected by the harmful insects. (✓)
- (9) Bhaskarbhai grew more crop with the help of chemical fertilizers. (✓)
- (10) Grinder is used to crush the seeds. (✓)
- (11) The seed reaches our plates after a complex process. (✓)

7. Match the following.

A	B	Answer
(1) Tamil Nadu	(A) Bihu	(1) → D
(2) Punjab	(B) Onam	(2) → C
(3) Assam	(C) Baisakhi	(3) → A
(4) Kerala	(D) Pongal	(4) → B

20. Whose Forests ?

1. Answer the following questions.

- ✦(1) What do the children do in the forest?***
- ✦(2) Suryamani said "If forests are not there, we too cannot survive." Why? Explain.***
- ✦(3) How can you say that Suryamani loved forest since childhood?
- ✦(4) Who is called a 'contractor'?
- ✦(5) Which things are our collective wealth?
- ✦(6) Some cannot understand lives of forest people, so people even avoid them. Why is it not fair?***
- ✦(7) What do you know about how Adivasis' live? Write about it.***
- ✦(8) What could be done to save forests?***
- ✦(9) Did you find something interesting in zoom farming? What is it?***
- ✦(10) What are the similarities and differences between zoom farming and Bhaskarbhai's way of farming?***
- ✦(11) Why are the people living in forests important? Explain in your own words.***
- (12) Why does Sikhya write a letter to the Chief Minister?**
 - A. ✦ Sikhya is an adivasi girl. The forests around her are being cut down for metals like aluminum.
 - ✦ She feels very sad on seeing all this. So, to save forests, she writes a letter to the Chief Minister.
- (13) What do you think is a forest?*****
 - A. Forest means a spread of vast land with many kinds of trees, plants, shrubs, herbs and creepers. Many kinds of animals, birds and insects also live in forest.
- (14) What else is there in forest, other than trees ?**
 - A. In a forest, other than trees, there are small plants, animals, birds, insects, etc.
- (15) What did Suryamani's mother do?**
 - A. Suryamani's mother would weave baskets from bamboo and make leaf plates out of the fallen leaves.
- (16) Is there any place around your area which you feel should be open to everyone, but where all people are not allowed to go?*** (Student will answer on their own.)**
 - A. _____
- (17) Which movement did Suryamani join?**
 - A. Suryamani joined the " Jharkhand Jungle Bachao Andolan".

(18) What was Suryamani's dream?

- A. Suryamani had a dream for her Kuduk community that all her people should feel proud of being Adivasis.

(19) Which types of books are kept at 'Torang' centre?

- A. Special books related to kuduk community and other adivasi community are kept at "Torang" centre.

(20) Why was Suryamani invited to other countries?

- A. Suryamani was invited to other countries to share her experience about her efforts for the development of Adivasi people.

(21) What would you like to do for your community?* (Student will answer on their own.)**

A. _____

(22) Which are the states of India which have sea on one side?

- A. West Bengal, Orissa, Andhra Pradesh, Tamil Nadu, Kerala, Goa, Maharashtra, Gujarat, etc. are the states of India which have sea on one side.

(23) Name the states having dense forests.

- A. Arunachal Pradesh, Uttarakhand, Jharkhand, Chattisgarh, Sikkim, etc. states have dense forests.

(24) What is one tin of land?

- A. The land on which we grow one tin of seeds is called one tin of land.

(25) Which states are located around Mizoram?***

- A. Tripura, Assam and Manipur are located around Mizoram.

(26) Chamui said that they measure land using the unit 'tin'. What are the other units of measuring land?***

- A. Yard, square metre, guntha and vigha, square feet are the other units of measuring land.

(27) Who must have made bamboo cups and kept them in forest? Why?***

- A. People living in forests must have made bamboo cups and kept them in forest for the people travelling through the forest for drinking water.

(28) In which areas of India, farming is done through zoom farming method?

- A. Zoom farming method is done in north-eastern mountainous regions and in the state of Mizoram.

(29) Which crops can be grown through zoom farming?

- A. Maize, rice, vegetables can be grown through zoom farming.

(30) What is 'star girl' ?

- A. Star girl is a project which tells extraordinary tales of ordinary girls, who have changed their lives by going to school.

(31) Why Suryamani was not ready to go to school in Bishanpur?

- A.** Suryamani did not want to leave her village and forest so she was not ready to go to school in Bishanpur.

(32) According to you, to whom do forests belong? (Sample Answer)

- A.** According to us, forests belong to everyone.

(33) Which activities were undertaken at 'Torang' ?

- A.** At 'Torang' centre, the people of Kuduk community and other forest people sang their own songs, enjoyed wearing traditional clothes, played their traditional music, learned about herbs, medicine and the art of making things from bamboo.

(34) Which problems did Sikhya mention, will arise due to cutting down of forests?

- A.** In her letter, Sikhya mentioned that there will be problems of living and earning livelihood for the Adivasis. The others problems like relocation of people, air pollution, land will become barren, water pollution will arise due to cutting down of forests.

(35) Why there would be a special meeting of village council (Panchayat)?

- A.** There would be a special meeting of Panchayat to decide which family will get how much land for farming.

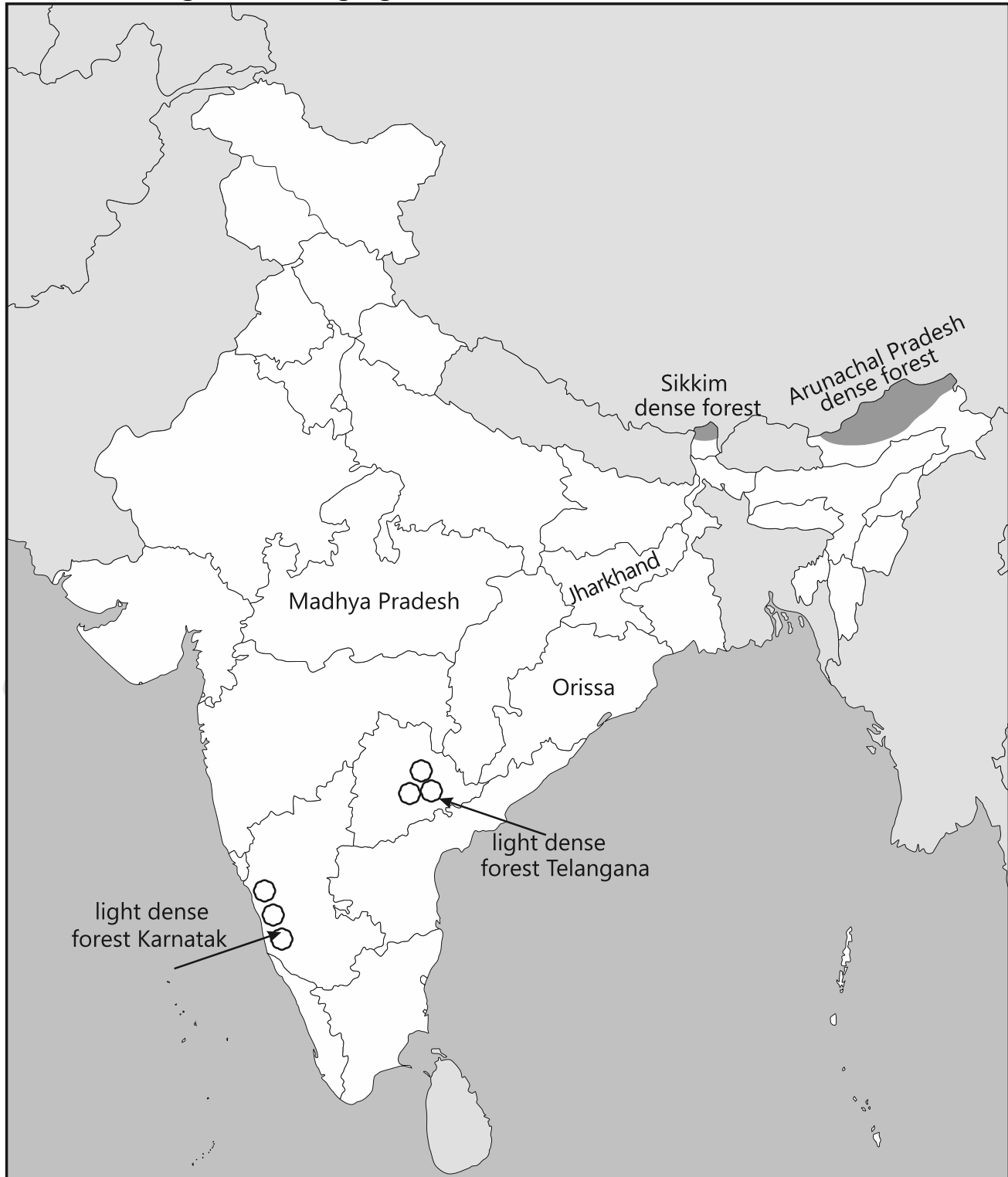
2. Choose the correct option.

- (1) In which language do the children sing songs in the forest? **A. (C)**
(A) Malayalam (B) Hindi (C) Kuduk (D) Gujarati
- (2) Suryamani takes children to the forest on _____. **A. (B)**
(A) Monday (B) Sunday (C) Thursday (D) Saturday
- (3) What is important for learning according to Suryamani? **A. (D)**
(A) Books (B) Forest (C) Birds (D) Both (A) and (B)
- (4) Who was not afraid of the contractor? **A. (B)**
(A) Suryamani (B) Budhiyamai
(C) Suryamani's father (D) Maniya Kaka
- (5) With whose efforts did Suryamani get admission in school of Bishanpur? **A. (A)**
(A) Maniya Kaka (B) Her father (C) Contractor (D) Budhiyabhai
- (6) Who supported Suryamani in her work? **A. (B)**
(A) Maniakaka (B) Bijoy (C) Her mother (D) All of them
- (7) With whom did Suryamani share all her thoughts? **A. (C)**
(A) Father (B) Bijoy (C) Mirchi (D) Mother
- (8) Suryamani opened a centre with the help of _____. **A. (C)**
(A) Bijoy (B) Mirchi (C) Vasavi didi (D) Maniyakaka
- (9) What was Suryamani's age when she started "Torang"? **A. (B)**
(A) 20 (B) 21 (C) 22 (D) 23

- (10) Which instruments are kept at 'Torang'? **A. (B)**
 (A) flute, manjira (B) flute, drums
 (C) tabla, manjira (D) only flute
- (11) When did the law of forest come into force? **A. (B)**
 (A) 2005 (B) 2007 (C) 2009 (D) 2011
- (12) Sikhya writes a letter to the Chief Minister of which state? **A. (A)**
 (A) Orissa (B) Jharkhand (C) Chattisgarh (D) West Bengal
- (13) Why were the forests near Sikhya being cut down? **A. (D)**
 (A) to make factories (B) to dig aluminum mines
 (C) to construct dams (D) all of them
- (14) Which sea is located near Orissa ? **A. (C)**
 (A) Arabian Sea (B) Pacific ocean
 (C) Bay of Bengal (D) Indian ocean
- (15) _____ is the main crop of zoom farming in Mizoram. **A. (B)**
 (A) Maize (B) Rice (C) Vegetables (D) Wheat
- (16) How many people of Mizoram are associated with forests? **A. (C)**
 (A) 1/2 (B) 2/3 (C) 3/4 (D) 1/4
- 3. Fill in the blanks.**
- (1) Children used to go in forest with Suryamani.
 (2) Suryamani is a 'star girl'.
 (3) We should preserve forests.
 (4) The people of forest were afraid of the contractor.
 (5) Suryamani received scholarship for her studies.
 (6) Vasavi didi was a journalist.
 (7) "Torang" means forest.
 (8) Children drank water from cups made of bamboo.
- 4. Mark the following sentences as '✓' or 'X'.**
- (1) If someone grows many trees near to each other it can be called a forest. **(X)**
 (2) Same types of trees are not there in all the forests. **(✓)**
 (3) If someone uses the collective wealth more, everyone would suffer. **(✓)**
 (4) Suryamani was the first girl in her village to pass B.A. **(✓)**
 (5) According to Suryamani, children should learn the language of school. but must link it with their own language. **(✓)**
 (6) For zoom farming the land is ploughed. **(X)**
 (7) Mostly all the children living in the forest of Mizoram go to school. **(✓)**

5. Activity.**1. Locate the following places in the map of India.**

- (1) Orissa (2) Jharkhand (3) Madhya Pradesh
- (4) Two regions having dense forest.
- (5) Two regions having light dense forest.



21. Like Father, Like Daughter

1. Answer the following questions.

- ✦(1) Make a list of all the family members from Nilam's nani to little Samir. How are they all related to Nilam? Write.***
- ✦(2) What is similar between Meena and Mamta? What is different?***
- ✦(3) Write about the Pulse Polio Campaign.***
- (4) **Which habit or trait of yours is similar to that of your family member?*** (Student will answer on their own.)**

A. _____

- (5) **Does your face or anything else look similar to that of someone in your family? What is it?*** (Student will answer on their own.)**

A. _____

- (6) **How do you feel when people compare you with someone else in your family? Why do you feel so ?*** (Student will answer on their own.)**

A. _____

- (7) **In your family are there any such examples, of uncle - nephews or brother-sister where there is a big difference in the age?*** (Student will answer on their own.)**

A. _____

- (8) **Write about polio.*****

A. Polio is a disease spread by virus. Small children are affected by polio. Due to this, the child becomes handicapped.

- (9) **Do you know of anyone who has polio? What problems do they have?*** (Student will answer on their own.)**

A. _____

- (10) **Are there people in your house who talk loudly? Is it their habit , or they cannot also hear very well?*****

A. My grandfather speaks loudly. He has a habit of speaking loudly. My grandmother cannot hear, so he speaks loudly.

(11) Are there times when you do not talk loudly in front of some people? When? With whom? Why? When can you speak loudly?* (Student will answer on their own.)**

A. _____

(12) Do you know someone who wears a machine in their ear? Who?***

A. Yes, my maternal grandfather wears a machine in his ear. He cannot listen properly because of hearing loss due to ageing.

(13) Does any of your family members use spectacles? Who? When did they start facing the difficulty? Why? (Student will answer on their own.)

A. _____

(14) How is Nilam's hair?

A. Nilam's hair is thick, curly and black.

(15) How is Nilam's mother's hair?

A. Nilam's mother's hair is straight, brown and silky.

★(16) Do you know any twins? What is similar in them? How are they different? (Student will answer on their own.)

A. _____

(17) What was Sheetal worried about after her marriage?

A. Sheetal was affected by polio when she was small so after her marriage she was worried that her child may also be affected by polio. She thought what if her child will also inherit polio.

(18) What did Mendel discover from the pea plants?

A. Mendel discovered that the pea plant has some traits which come in pairs.

- If the seeds of the plant are either rough or smooth, then the next generation seeds will also be either rough or smooth.
- If the seeds are either yellow or green, then the new seeds will also be either yellow or green. The seeds of the next generation will not have a mixed new colour from both green and yellow.

(19) What difficulties do the people who have difficulty in hearing, face?

A. Those who have difficulty in hearing, face trouble in talking on phone and cannot hear when someone talks in normal voice. They also speak loudly because of hearing trouble.

2. Do as directed.

- (1) Look for some special trait in your brother or sister. From whom he/she must have got? Write in the given table as per the given example.

Special trait	Whom does it resemble?	From whose side?	
		Mother	Father
Nilam's curly hair	Her Nani	✓	

- (2) Do the following activities yourself. If you can do it, find out who else in your family can do it and write it.*** (Student will answer on their own.)

Activity		Whether you could do it? Yes or No?	Who else can do it at home?
(1)	Without touching your teeth, twist your tongue towards the back of your mouth.		
(2)	Roll your tongue by lifting it from the sides.		
(3)	Open all the fingers of your hands and feet. Now without moving other fingers, move the little finger.		
(4)	Touch the thumb to your wrist.		
(5)	Make a 'V' by separating two fingers of your hand to each side.		
(6)	Move your ears, without touching them.		

3. Choose the correct option.

- (1) Aayushi sneezes like her _____. **A. (B)**
(A) mother (B) father
(C) grandfather (D) maternal grandfather
- (2) Which of the following about the hereditary traits is wrong ? **A. (B)**
(A) similarities among brother- sister
(B) similarities among friends
(C) son can inherit mother's traits.
(D) grandmother's and grand daughter's habits can be same.
- (3) Who is Kiran's aunt? **A. (B)**
(A) Nilam (B) Nilam's mother
(C) Nilam's nani (D) None of the above
- (4) Nilam is whose aunt? **A. (C)**
(A) Kiran's (B) Manju's (C) Samir's (D) Both (A) and (B)
- (5) Nilam's hair is like _____. **A. (A)**
(A) Kiran (B) Samir
(C) Maternal grandfather (D) Grandfather
- (6) Where does Meena's Kaka (father's brother) stay ? **A. (C)**
(A) Mumbai (B) Chennai
(C) Pune (D) Coimbatore
- (7) Which language does Meena know? **A. (D)**
(A) Marathi (B) Malyalam (C) Tamil (D) Both (A) and (C)
- (8) Mayank is tall. So, which of the following statements can be true? **A. (D)**
(1) Mayank's mother is tall.
(2) Mayank's father is tall.
(3) Either Mayank's grandfather or grandmother may be tall.
(4) Either Mayank's maternal grandfather or maternal grandmother may be tall.
(A) Only (1) and (2) must be true.
(B) Only (2) and (3) must be true.
(C) Only (1) and (4) must be true.
(D) Any one or more can be true.
- (9) At _____ house, the mornings start with music. **A. (C)**
(A) Meena's mother's (B) Meena's father's
(C) Meena's kaki's (D) All of them

- (10) Where does Mamta stay with her father? **A. (B)**
 (A) Mumbai (B) Chennai
 (C) Pune (D) Hyderabad
- (11) Mamta's father is a _____. **A. (C)**
 (A) Cricket coach (B) Football coach
 (C) Karate coach (D) Kabbadi coach
- (12) At what age did Mamta start learning karate? **A. (B)**
 (A) 2 (B) 3 (C) 4 (D) 5
- (13) Which among the following statements is true? **A. (D)**
 (1) We inherit the colour of eyes.
 (2) The knowledge of music is based on surrounding.
 (3) The style of speaking can be hereditary.
 (A) Only (1) is true.
 (B) Only (1) and (2) are true.
 (C) All the three statements are false.
 (D) All the three statements are true.
- (14) Sheetal was very small when she was affected by _____. **A. (C)**
 (A) malaria (B) diabetes (C) polio (D) typhoid
- (15) On how many pea plants did Gregor Mendel experiment in the garden of a monastery. **A. (D)**
 (A) 25,000 (B) 26,000 (C) 27,000 (D) 28,000

4. Fill in the blanks.

- (1) The traits/habits we inherit from our mother-father or family members are **hereditary** traits.
- (2) Polio is caused by a **virus**.
- (3) **Gregor Mendel** experimented with peas.
- (4) According to Mendel's discovery, the next generation seeds of the green pea plant will also be **green**.
- (5) Meena has been adopted by her **Kaki (wife of father's brother)**.
- (6) Everyone at Meena's house speaks in **Tamil**.

5. Mark the following sentences as '✓' or 'X'.

- (1) Hereditary habits also includes habits of neighbours. **(X)**
- (2) Nilam and Kiran are cousins. **(X)**
- (3) Samir and Nilam are brother - sister. **(X)**
- (4) Nilam's hair is like her nani. **(✓)**

- (5) Some of the habits of our distant relatives are like that of ours. (✓)
- (6) Rutva's hair is curly. So there is a possibility of someone having curly hair in her family. (✓)
- (7) Meena and Mamta are twin sisters. (✓)
- (8) Meena and Mamta do not look alike. (✗)
- (9) All twins look same. (✗)
- (10) The knowledge of language is hereditary. (✗)
- (11) Polio can be eradicated by vaccination. (✓)
- (12) The new seeds, of a plant with rough seeds will be smooth. (✗)
- (13) Diseases like poor eyesight, deafness etc. are inborn. (✗)
- (14) Scientists of that time easily understood Gregor Mendel's discovery. (✗)

22. On the Move Again

1. Answer the following questions.

- ✦(1) If people in Dhanu's village did not leave the village in search of work, what difficulties would they face in their own village?***
- ✦(2) In Dhanu's village, there can be no farming, when there is no rain. Do you think farming can be done without rainwater? How?***
- ✦(3) When Dhanu and other children leave the village for six months, what happens in the village school?***
- ✦(4) Why does Mami wish that Dhanu goes to school for the whole year and study?***
- ✦(5) Do you know of any jobs/work for which people have to stay away from their families for many months? Give example.***
- ✦(6) What are the similarities and differences in the lives of different kinds of farmers?***
- ✦(7) For what reason do people migrate?***
- (8) Why will some people of Dhanu's village stay back in the village?*****
 - A.** The elders in the village will stay back at home to take care of small children, ill people and cattle. The ill people also stay back as they are not able to work.
- (9) Why are all festivals celebrated at Dhanu's place?**
 - A.** All festivals are celebrated at Dhanu's house because his father is the eldest in the family.
- (10) What does the mukadam explain to the villagers?**
 - A.** The *mukadam* explains to the villagers in which area they would go for the next six months.
- (11) What do the people of Dhanu's village do from monsoon to Dussehra?**
 - A.** The people of Dhanu's village work on the lands of big farmers from monsoon to Dussehra.
- (12) During what time of the year does Dhanu's family get work in the village?*****
 - A.** From monsoon to Dussehra, Dhanu's family gets work in the village.
- (13) During what time of the year does Dhanu's family not get work in the village?*****
 - A.** From Dussehra till the arrival of monsoon, Dhanu's family does not get work in the village.

(14) Who used to give work to villagers in the sugarcane factory?

A. The *mukadam* who was an agent of sugarcane factories gave work to villagers in the sugarcane factories.

(15) Who stays back in the villages for six months after Dussehra?

A. The elders, women having small children and ill people will stay back in the village, for six months after Dussehra.

(16) What arrangements are made at your home for old and sick family members when everyone goes for work?** (Student will answer on their own.)** _____

(17) Where will the villagers make their houses, for the six months after the Dussehra?

A. The villagers will make their houses near sugarcane fields and factories where they can easily get work.

(18) Where will the caravan of families of Dhanu's village stay for six months?

A. For six months, families of Dhanu's village will stay in their huts made of dry sugarcane and its leaves.

(19) What did Dhanu do the whole day?

A. Dhanu used to go to the factory with his father in the bullock cart. There he used to play with the bullock and wander around.

(20) What happens if you are not able to go to school for a long time?***

A. If we are not able to go to school for a long time, we miss learning many new things.

(21) Dhanu has to go with his village people to other places. Can there be some arrangements during that time so that Dhanu continues his studies? Of what kind?***

A. Dhanu can continue his studies by taking admission in the school of the village where he moves or he can attend night school.

2. Choose the correct option.

(1) Relatives have come to Dhanu's place to celebrate which festival ? **A. (B)**

(A) Diwali (B) Dussehra (C) Uttarayan (D) Navratri

(2) The Mukadam gives the detail about each family's _____. **A. (C)**

(A) farming (B) income (C) loan (D) saving

- (3) What do the men do for six months when they settle near the sugarcane field? **A. (D)**
- (A) cut sugarcane (B) tie sugarcane bundles
(C) carry bundles to the factory (D) Both (A) and (C)

3. Fill in the blanks.

- (1) Dhanu's father is the **eldest** in the family.
(2) The **mukadam** gives loan to the villagers for their expenses.
(3) Mukadam was an agent for **sugarcane** factories.
(4) Dhanu remembers his **grandmother** very much.
(5) The **women** will tie the bundles of sugarcane.

4. Mark the following sentences as '✓' or '✗'.

- (1) If we take a loan, we have to return only the amount taken. **(✗)**
(2) Many times the person giving the loan takes back only the principal amount. **(✓)**
(3) All the farmers in Dhanu's village have their own land. **(✗)**
(4) Many times Dhanu and his father spent their night on the bullock cart. **(✓)**

23. We are Gujarati...

1. Answer the following questions.

- ✦(1) What is special about the poem 'Jai Jai Garvi gujarat'?
- ✦(2) Mention the rivers of Gujarat.***
- ✦(3) Name the historical places of Gujarat.
- ✦(4) Name the religious places of Gujarat.
- (5) **When was the state of Gujarat established?**
 - A. The state of Gujarat was established on May 1, 1960.
- (6) **Name the neighbouring states of Gujarat.**
 - A. Rajasthan, Madhya Pradesh, Maharashtra.
- (7) **Name the two gulfs of Gujarat.**
 - A. Gulf of Kutch and Gulf of Khambhat
- (8) **The Tropic of Cancer passes through which districts of Gujarat?*****
 - A. The Tropic of Cancer passes through the district of Kutch, Patan, Mehsana, Sabarkantha and Aravalli.
- (9) **Which rivers are called inland rivers?*****
 - A. Rivers that meet the desert instead of meeting ocean are called inland rivers.
- (10) **List the inland rivers of Gujarat and where do they merge into?*****
 - A. Banas, Saraswati and Rupen are the inland rivers of Gujarat. They merge into Rann of Kutch.
- (11) **Which is the highest hill of Gujarat? What is its height?**
 - A. The highest hill of Gujarat is Girnar. Its height is 1890 metre.
- (12) **Which hills are located in Kutch ?**
 - A. Dhinodhar, Lilio, black hill are the hills located in kutch.
- (13) **Write the names of hills of Gujarat.**
 - A. Aarasur, Jesor, Taranga, Khedbhrama, Pavagadh, Vindhyachal, Sahyadri, Rajpipla, Parnera, Girnar, Chotila, Bardo, Dhinodhar, Lilio, Kado, etc are the hills of Gujarat.
- (14) **What is Kharif crop?**
 - A. Crops taken during monsoon season from June-July to September are called Kharif crops.
- (15) **What is Rabi crop?**
 - A. Crops taken in winter from November to April are called rabi crops.
- (16) **Name the Rabi crops grown in Gujarat.**
 - A. Maize, cumin, wheat, chana, mustard, isabgol, fennel seeds, onion, potato, oats, etc. are the rabi crops grown in Gujarat.

- (17) Name the Kharif crops grown in Gujarat.**
A. Paddy, castor, cotton, sesame, urad, sugarcane, soya bean, groundnut, fennel seeds, bajra, math, maize, jowar, capsicum, etc. are the kharif crops grown in Gujarat.
- (18) Name the Zaid crops grown in Gujarat.**
A. Urad, watermelon, muskmelon, cucumber, mustard, jowar, beet , paddy,
- (19) Which industries have flourished in Gujarat?**
A. Cement, Ceramic, Carnelian, Cotton cloth, Diamond, Chemical fertiliser, Salt, Sugar, Pharma, Fishing, etc industries have flourished in Gujarat.
- (20) Name the centres for cement industries of Gujarat.**
A. Porbandar, Sikka (Jamnagar), Ahmedabad, Dwarka, Sevaliya, Okha, Botad, etc. are the centres for cement industries of Gujarat.
- (21) Which minerals are found in Banaskantha?**
A. Minerals like copper, lead and zinc are found in Banaskantha.
- (22) Name the centres of Carnelian (Akik) industries.**
A. Jamnagar, Mehsana, Anand.
- (23) Where is lion sanctuary?**
A. Lion Sanctuary is at Gir in Junagadh district of Gujarat.
- (24) Which famous beaches in Gujarat are worth visiting?**
A. Mandvi, Dumas, Ubhrat, Tithal are the famous sea coast in Gujarat worth visiting.
- (25) Which places have been developed as tourist places in Gujarat?**
A. Kankaria lake, Gandhi Ashram, Statue of Unity, White desert of Kutch, etc. have been developed as tourist places in Gujarat.
- (26) Name the religious places of Kutch.**
A. Koteswar, Hajipir, Mata's madh.
- 2. Classify the following.**
- 1. Kharif, Rabi and Zaid crops.*****
 (Wheat, chola , castor, isabgol, sugarcane, potato, watermelon, math, bajri, oats, cucumber, soya bean)
Rabi crop : wheat, isabgol, potato, oat
Kharif crop : castor, sugarcane, math, bajri, soyabean
Zaid crop : chola, watermelon, cucumber
- 3. Choose the correct option.**
- (1) Who has composed the song 'Jai Jai Garvi Gujarat'? **A. (C)**
 (A) Jhaverchand Meghani (B) Narsinh Mehta
 (C) Narmad (D) Jyotindra Dave
- (2) Dwarkadhish Mandir is in Devbhumi Dwarka : Somnath Mahadev Mandir is in ____ **A. (D)**
 (A) Veraval (B) Jamnagar (C) Junagadh (D) Gir Somnath

- (3) Gujarat state has the longest coastal area about ____ km. **A. (D)**
(A) 1200 (B) 1300 (C) 1400 (D) 1600
- (4) Gujarat state holds ____ rank in terms of area. **A. (A)**
(A) sixth (B) fourth (C) second (D) first
- (5) Which state does not share the land boundary with Gujarat? **A. (B)**
(A) Maharashtra (B) Jharkhand
(C) Madhya pradesh (D) Rajasthan
- (6) With which district of Gujarat does Pakistan share its land boundary? **A. (C)**
(A) Banaskantha (B) Patan (C) Kutch (D) Sabarkantha
- (7) Which of the following Dam is built on River Tapi? **A. (C)**
(A) Kadana (B) Banas (C) Kakrapar (D) Dantiwada
- (8) On which river is Vanakbori Dam built? **A. (A)**
(A) Mahi (B) Vatrak (C) Meshvo (D) Sabarmati
- (9) In which district are the Aarasar Hills located? **A. (B)**
(A) Sabarkantha (B) Banaskantha
(C) Mehsana (D) Arvalli
- (10) In which district are the hills of Parnera located? **A. (B)**
(A) Navsari (B) Valsad
(C) Surendranagar (D) Dang
- (11) Which hill is located in Surendranagar district? **A. (A)**
(A) Chotilla (B) Wilson (C) Vindhyachal (D) Taranga
- (12) How many crops are taken in Gujarat according to season? **A. (C)**
(A) 1 (B) 2 (C) 3 (D) 4
- (13) Which among the following crop can be grown in both monsoon and summer season? **A. (C)**
(A) maize (B) mustard (C) groundnut (D) paddy
- (14) Which among the following crop can be grown in both winter and summer season? **A. (A)**
(A) mustard (B) fennel seeds (C) bajri (D) groundnut
- (15) Which of the following is taken as Zaid crop? **A. (D)**
(A) jowar (B) urad (C) cucumber (D) all of these
- (16) Dudhsagar dairy is in which district? **A. (A)**
(A) Mehsana (B) Anand (C) Sabarkantha (D) Banaskantha
- (17) Chemical fertiliser industry has not developed in _____ district. **A. (D)**
(A) Kutch (B) Gandhinagar
(C) Bharuch (D) Ahmedabad
- (18) Asbestos is found here.... **A. (B)**
(A) Arvalli, Vadodara (B) Bharuch, Arvalli
(C) Vadodara, Bharuch (D) Narmada, Chota Udaipur

- (19) Saputara is _____ metre above sea- level. **A. (A)**
 (A) 1000 (B) 1200 (C) 1400 (D) 1600
- (20) Ghudkhar Sanctuary is in which district? **A. (B)**
 (A) Jamnagar (B) Kutch (C) Patan (D) Banaskantha
- (21) Dakor is a religious place of which district? **A. (D)**
 (A) Anand (B) Ahmedabad (C) Mahisagar (D) Kheda
- (22) The Statue of Unity is in which district? **A. (A)**
 (A) Baroda (B) Ahmedabad (C) Bharuch (D) Mehsana
- (23) The area of Gujarat is _____ sq.km. **A. (D)**
 (A) 1,90,024 (B) 1,92,024 (C) 1,94,224 (D) 1,96,024

4. Fill in the blanks.

- (1) Ambamata is in the North : Kalimata is in the **East**.
- (2) The famous Ambaji Mata's temple is located in **Banaskatha** district.
- (3) The famous Mahakali Mata's temple is located in **Panchmahal** district.
- (4) In Gabbar there is Ambemata : In Pavagadh there is **Mahakalimata**.
- (5) **15** districts of Gujarat are bound by sea.
- (6) The area of Gujarat is **5.97** % of the total area of India.
- (7) 'Tropic of Cancer' passes through the **northern** part of Gujarat.
- (8) **Gujarat** is the only state in India that has two gulfs.
- (9) There are **33** districts in the state of Gujarat.***
- (10) **Dang** is the smallest district of Gujarat.***
- (11) Usually, the rivers meet the **ocean**.
- (12) Inland rivers are also called **Kunwarikas**.
- (13) The hills of **Rajpipla** are located in Narmada district.
- (14) **Girnar** mountain is located in Junagadh district.
- (15) The hills of Jesor are located in **Mehsana** district.
- (16) Crop taken in summer is called **zaid** crop.
- (17) Dates and groundnuts are grown in **Kutch** district.
- (18) Isabgol is grown in **Mehsana** district.
- (19) **Dr. Verghese Kurien** is the father of 'White revolution'
- (20) Dr. Verghese Kurien established **Amul** dairy.
- (21) Manganese is obtained from **Panchmahal** district.
- (22) The only hill station of Gujarat is **Saputara**.
- (23) Taranga is in **Mehsana** district.
- (24) Famous Bird Sanctuary : **Nalsarovar**

5. Mark the following sentences as '✓' or 'X'.

- (1) It is mentioned in the poem 'Jai Jai Garvi Gujarat' that Kunteshwar Mahadev protects Gujarat in the south. (✓)
- (2) Somnath Mandir is located in western direction of Gujarat. (✓)

- (3) The capital of Gujarat is Gandhinagar. (✓)
 (4) Gujarat state holds 10th rank in terms of population. (x)
 (5) The land boundary of Gujarat is connected with Pakistan. (✓)
 (6) The largest district of Gujarat is not Kutch. (x)
 (7) Crops taken in summer are called Rabi crop. (x)
 (8) Rice is both a Kharif as well as a Rabi crop. (✓)
 (9) Farming of maize is done in both monsoon and winter season. (✓)
 (10) Phosphorus is obtained from Chotta Udaipur and Narmada district. (✓)
 (11) Fishing industry has flourished in Ahmedabad. (x)

6. Match the following :

(1)

Column A	Column B	Answer
(1) Mahi	(A) Sardar Sarovar	(1) → C
(2) Sabarmati	(B) Dantiwada	(2) → D
(3) Narmada	(C) Kadana	(3) → A
(4) Banas	(D) Dharoi	(4) → B

(2)

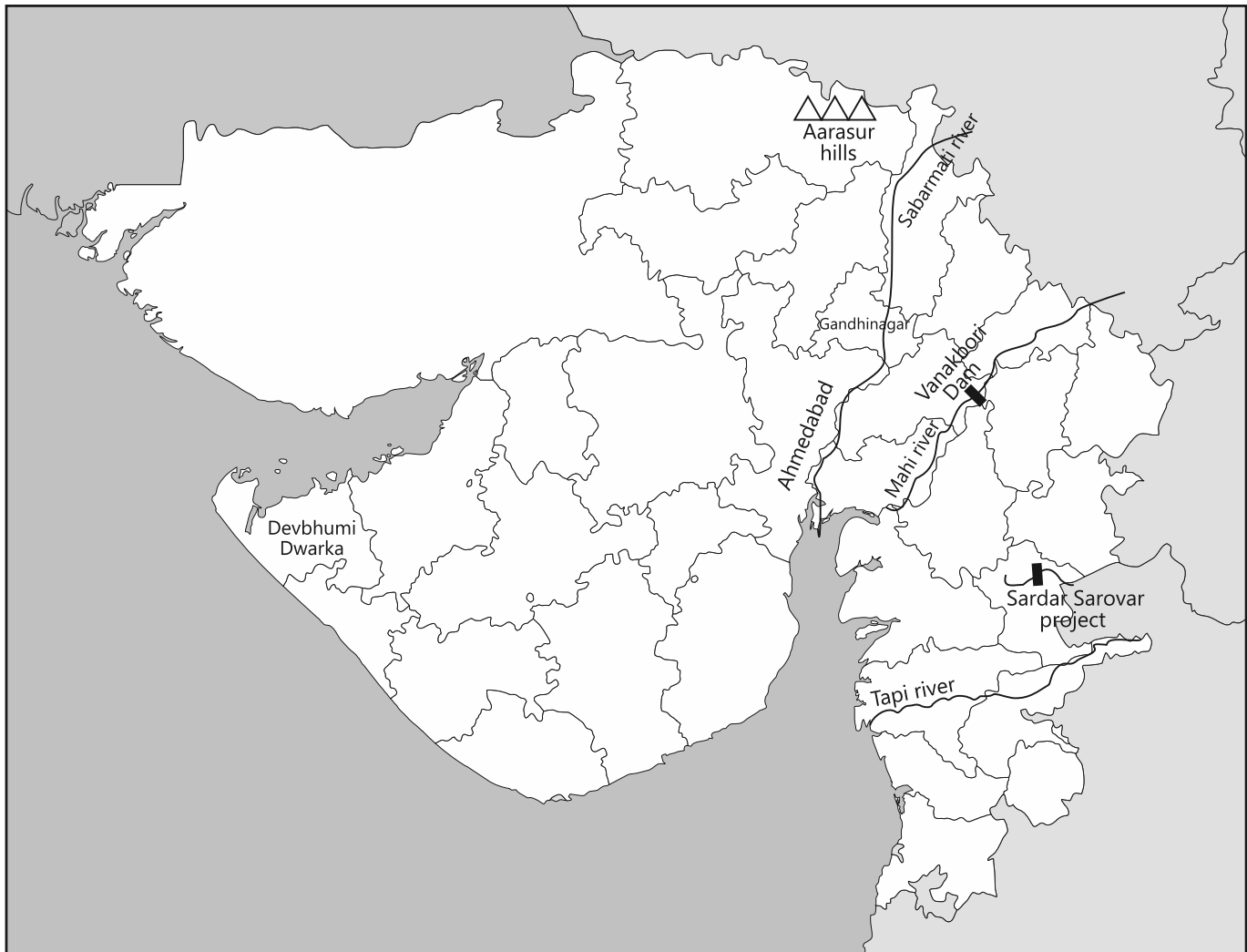
Column A	Column B	Answer
(1) Panchmahal	(A) Bardoli	(1) → C
(2) Dwarka	(B) Vindhyachal	(2) → A
(3) Chota Udaipur	(C) Pavagadh	(3) → B
(4) Dang	(D) Sahyadri	(4) → D

(3)

Column A	Column B	Answer
(1) Anand	(A) Mother Dairy	(1) → C
(2) Gandhinagar	(B) Sursagar Dairy	(2) → A
(3) Surat	(C) Amul Dairy	(3) → D
(4) Surendranagar	(D) Sumul Dairy	(4) → B

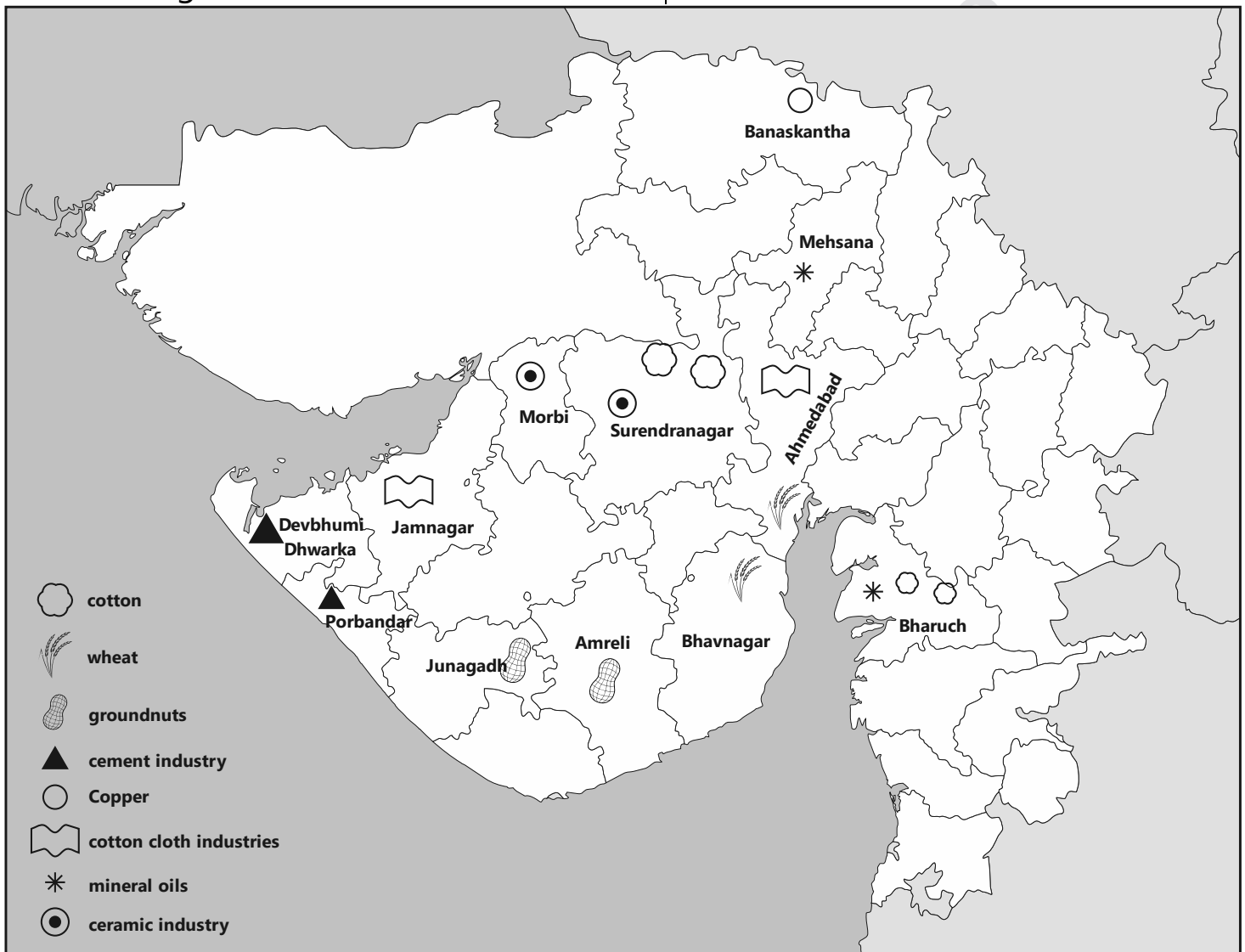
7. Activity :**[1] Locate the following places in the map of Gujarat.**

- | | | |
|------------------------|----------------------------|---------------------|
| (1) Ahmedabad district | (2) Sardar Sarovar project | (3) Sabarmati river |
| (4) Gandhinagar | (5) Tapi river | (6) Vanakbori Dam |
| (7) Aarasar hills | (8) Devbhumi Dwarka | (9) Mahi river |



[2] Locate the following places in the map of Gujarat.

- | | |
|--------------------------------------|--|
| (1) Two districts growing cotton | (2) Two centres of cement industry |
| (3) Copper producing region | (4) Two centres of cotton cloth industries |
| (5) Two centres of ceramic industry | (6) Two regions producing wheat |
| (7) Two regions producing groundnuts | (8) Two regions producing mineral oils |



[3] Write the name of any two districts where these crops are taken.

- (1) Wheat : Ahmedabad, Bhavnagar
- (2) Jowar : Tapi, Narmada, Surat
- (3) Paddy : Ahmedabad, Kheda
- (4) Bajri : Banaskantha, Sabarkantha
- (5) Groundnut : Junagadh, Amreli
- (6) Cotton : Surendranagar, Bharuch
- (7) Sugarcane : Surat, Navsari
- (8) Mango : Junagadh, Valsad
- (9) Maize : Dahod, Panchmahal
- (10) Tobacco : Kheda, Anand
- (11) Onion : Bhavnagar, Botad
- (12) Potato : Banaskantha, Kheda
- (13) Cumin seeds : Mehsana, Patan
- (14) Fennel seeds : Mehsana, Banaskantha

[4] Give two names of :

- (1) Centres for Cotton fabric Industry – Ahmedabad, Jamnagar
- (2) Centres for Pharma Industry – Vadodara, Ahmedabad, Jamnagar
- (3) Centres for Diamond Industry – Surat, Bhavnagar
- (4) Centres for Ceramic Industry – Morbi, Surendranagar, Sabarkantha
- (5) Regions producing lignite – Panchmahal, Dahod, Kutch
- (6) Regions producing dolomite – Gir, Somnath, Surat, Chhota Udaipur
- (7) Regions producing mineral oils – Mehsana, Bharuch

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