

Summer
Holiday

ASSIGNMENT



CLASS : VIII

SESSION : 2026 - 2027





Dear Students(VI to VIII),

As you step into the summer break, it is time to unwind, explore new hobbies, and create wonderful memories with your loved ones. While this vacation is all about relaxing and recharging, keeping your curiosity alive is equally important.

To ensure a smooth transition when you return, we have put together a series of engaging summer assignments.

These tasks are designed to reinforce your reading, writing, and analytical skills. Dedicating just a little time to Mathematics each day will boost your problem-solving speed and keep your concepts fresh. Balancing fun with a bit of daily learning will give you a tremendous head start for the upcoming term.

Key Guidelines for Your Assignments

Pace Yourself: Complete the tasks daily rather than leaving them for the end.

Work Space: Do all assignments neatly in your classwork notebooks unless stated otherwise in the specific subject instructions.

Keep it Balanced: Dedicate a small amount of time each day to your studies so you can enjoy the rest of your day to the fullest.

“Success is the sum of small efforts, repeated day in and day out.”

Enjoy your well-deserved break, stay safe, and come back with renewed energy and enthusiasm!

Warm regards,
Sadhana Singh
Sr. Mistress
O.P. Jindal School, Raigarh (C.G.)



SECTION A : READING COMPREHENSION

1. Transcript is given in Page no.46 and the questions are given in Page no.12 of your textbook Poorvi. Write the questions and answers in the notebook.
2. Transcript is given in Page no.47 and the questions are given in Page no.23 of your textbook Poorvi. Write the questions and answers in the notebook.



SECTION B: GRAMMAR

A. Fill in the blanks with the correct tense :

1. By the time the teacher entered the class, the students _____ (complete) the test.
2. If she _____ (study) harder, she would have passed the exam.
3. When I reached the station, the train _____ already _____ (leave).
4. He _____ (work) on the project for three hours before he took a break.
5. This time next week, we _____ (travel) to Delhi.
6. If you _____ (not hurry), you will miss the bus.
7. She _____ (live) in this city for ten years before she moved abroad.
8. While they _____ (discuss) the issue, the manager suddenly walked in. 9. By next month, they _____ (finish) building the bridge.

Don't limit
your challenges
CHALLENGE
YOUR
LIMIT



10. If I _____ (be) you, I would accept the offer.
11. He _____ (not complete) his assignment yet, so he cannot go out.
12. Hardly _____ he _____ (reach) home when it started to rain.
13. If they _____ (inform) me earlier, I could have helped them.
14. The children _____ (play) in the garden when it began to storm.
15. She usually _____ (wake) up early, but today she _____ (sleep) late.
16. We _____ (wait) for over an hour before the bus finally arrived.
17. By the time you come back, I _____ (prepare) dinner.
18. He _____ (read) the book before he watched the movie adaptation.
19. If she _____ (continue) to work like this, she will achieve great success.
20. No sooner _____ they _____ (start) the meeting than the power went out.



B. Identify the error and replace it with the correct verb:

1. Each of the students have completed the assignment.
2. Neither the teacher nor the students is ready for the test.
3. The list of items are on the table.
4. A number of students is absent today.
5. The team are playing well this season.
6. One of my friends like reading novels.



7. Everyone in the class know the answer.
8. The news are very shocking.
9. Mathematics are my favourite subject.
10. There is many reasons to celebrate.
11. Either the boys or the girl have broken the window.
12. The bouquet of flowers smell sweet.
13. Ten kilometres are a long distance to walk.
14. The quality of the apples were not good.
15. Someone have left their bag here.
16. The jury has divided in their opinions.
17. A lot of information are missing from the report.
18. Bread and butter are my usual breakfast.
19. Neither of the answers are correct.
20. The teacher, along with the students, are going on a trip.

C. Fill in the blanks with the correct form of the verb in the if-conditional clause:

1. If you _____ (heat) water to 100°C, it _____ (boil).
2. If she _____ (study) harder, she will score better marks.
3. If I _____ (know) about the meeting, I would have attended it.
4. If they _____ (leave) earlier, they would have caught the train.
5. If I _____ (be) you, I would not take that risk.
6. If he _____ (not hurry), he will miss the bus.
7. If she _____ (practice) regularly, she would play better.
8. If we _____ (save) more money, we could buy a car.
9. If you _____ (mix) red and blue, you get purple.



10. If I _____ (see) him yesterday, I would have spoken to him.
11. If they _____ (invite) me, I would come to the party.
12. If the sun _____ (rise), the birds start chirping.
13. If she _____ (take) my advice, she wouldn't be in trouble now.
14. If we _____ (start) earlier, we would reach on time.
15. If he _____ (work) harder, he would have succeeded.
16. If you _____ (not water) plants, they die.
17. If I _____ (have) enough money, I would travel the world.
18. If she _____ (complete) the work on time, she will get a reward.
19. If they _____ (not waste) so much time, they would have finished earlier.
20. If I _____ (wake) up early tomorrow, I will go for a walk.



SECTION C: VOCABULARY/ SPELL BEE WORDS

Q.1 Choose the correct word from the help box to complete each statement.

Labyrinthine	Laconic	Laudable	Loquacious	Languid
Kaleidoscopic	Ken	Kinship	Kernel	Kowtow

1. The detective followed a _____ trail of clues that was difficult to understand.
2. The speaker was so _____ that others hardly got a chance to talk.
3. His answer was short and to the point; he is known for being _____.
4. The exhausted players felt _____ after the long match.
5. The story contains a _____ of truth that makes it meaningful.
6. The child's knowledge was beyond the _____ of his classmates.
7. She refused to _____ to unfair demands.



8. The festival had a _____ display of colours and patterns.

9. Helping the needy is a _____ act.

10. The two strangers felt an instant sense of _____.

Q.2 Write the correct word based on the meaning given.

1. Deep understanding → _____

2. Feeling anger due to unfair treatment → _____

3. Impossible to overcome → _____

4. Native to a particular place → _____

5. Study or theory of law → _____

6. Gradually harmful and unnoticed → _____

7. Closely or deeply involved → _____

8. Twisted or linked closely together → _____

9. Playfulness or humor → _____

10. Quick notes → _____



Q.3 Fill in the blanks with the correct spelling of the words.

1. Lum_n_us (bright or shining)

2. J_x_t_p_s_t_o_n (placing things side by side for comparison)

3. I_n_t_r_c_t_l_y (in a detailed manner)

4. K_l_p_t_m_n_a (urge to steal)

5. L_g_t_m_c_y (lawfulness or validity)

6. I_l_l_s_t_r_o_u_s (famous and respected)

7. I_n_s_g_h_t (deep understanding)



8. J e t t _ s _ n (to discard)
9. L a b y r _ n t h _ n e (maze-like)
10. L a c o n _ c (using few words)

SECTION D: WRITING

A. Narrative Essay

1. Write a narrative essay describing a situation where you had to make a difficult moral choice. Narrate the events leading up to the decision, the internal conflict you experienced, and the consequences of your choice.
2. Write a narrative essay about an incident where a misunderstanding led to unexpected consequences. Narrate the situation with a clear sequence of events, emotional depth, and a meaningful resolution.

B. Notice Writing

1. You are the Cultural Secretary of your school. Write a notice informing students about a fundraising campaign for a social cause. Include necessary details such as purpose, date, venue, and guidelines for participation.
2. Draft a notice announcing an inter-school literary event being hosted by your institution. Include details about registration, eligibility, and schedule.
3. You are the Secretary of the Student's Council of your school. Write a notice asking the students of your school to donate old clothes, books, and bags for the underprivileged students.



C. Leave Application

1. Write an application to the Principal requesting leave for three days due to medical reasons. Mention how you plan to cover missed academic work.

Language Development Program Activities

Choose **ANY ONE** activity from the following:

Learning Outcomes:

Activity 1: Podcast / Director's Cut (Speaking Activity)

Students will be able to communicate ideas clearly through structured speaking, while developing listening, questioning, and confidence-building skills.

Activity 2: Story Creation & Video Production (Creative Project)

Students will be able to enhance storytelling, creativity, collaboration, and technical editing skills while expressing ideas through visual and verbal media.






Phase 1: Preparation & Planning

 **1. Work Individually:**
Complete the project on your own.

 **2. Choose Your Topic:**
Select one topic from the given list.

 **3. Invite a Guest:**
Parent / relative / friend.

 **4. Prepare Questions:**
5-6 meaningful questions.

 **5. Plan Your Podcast:**
Introduction, discussion, conclusion.

 **6. Record Your Podcast:**
Clear voice and confident interaction.

Learning Outcomes

Develops communication, listening, questioning, and critical thinking skills while building student confidence.

Phase 2: Recording & Production

 **7. Create Video Format:**
5-minute podcast video.

 **8. Edit Your Video:**
Trim and organise content.

Phase 3: Final Review & Submission

 **9. Enhance Audio:**
Optional background music.

 **10. Submit Your Work:**
Share with teacher.

Essential Requirements

- Individual project
- 5-minute video format
- Clear and expressive English

Recommended Topics

- Social media effects
- Hygiene habits
- Time management
- Technology's impact
- Role of parents and hobbies

OR



OPJS DIRECTOR'S CUT

Lights, Camera, Imagination!

1



CHOOSE YOUR STORY

Select a classic fairytale like "Cinderella" or "Little Red Hood," or create your own enchanting original story or parody.

2



WRITE YOUR SCRIPT

Adapt the tale into a concise, engaging script focused on key plot points and character development.

3



STORYBOARD YOUR SCENES

Sketch out each scene to plan the visual sequence, including camera angles and transitions.

4



GATHER YOUR RESOURCES

Collect the props, costumes, or digital assets you'll need; you can even choose to create an animation video.

5



LIGHTS, CAMERA, ACTION

Set up your filming area and record your scenes, paying close attention to lighting and framing.

6



EDIT YOUR FOOTAGE

Use video editing software to compile your clips and add smooth transitions for professional storytelling.

7



RECORD YOUR VOICEOVER

Add your own expressive narration by reading the script with feeling.

8



ENHANCE THE AUDIO

Edit your recordings and layer in background music or sound effects to heighten the movie's mood.

9



FINAL TOUCHES

Review and refine your work by adding titles, credits, and necessary text elements.

10



SHARE YOUR CREATION

Submit the final video to your English teacher to be shared with the class group.

GROUP REQUIREMENTS



TEAMWORK

Work in a group of minimum 5 students.



DURATION

Your final video should be 5 minutes long.

LEARNING OUTCOMES

Creating these captivating fairytale videos will help you develop:



COLLABORATION & TEAMWORK



STORYTELLING SKILLS



TECHNICAL & EDITING SKILLS



CREATIVITY & CONFIDENCE

PRESENTED BY
ENGLISH DEPARTMENT - OPJS

Class notes

Chapter 3: Wisdom Paves The Way

Answer the following questions.

1. What does the dusty road leading to Ujjain tell us about the challenges of the young men's journey?

Ans. Dusty roads are not easy to travel. It takes a lot of courage to travel on a dusty road. The four men must have a lot of difficulties to travel on a dusty road like the shortage of water.

2. Why did the merchant become suspicious of the four men? What does this tell us about him?

Ans. The merchant became suspicious of the four men because they described his camel accurately without seeing it. It tells us that the merchant was unable to judge the four men rightly.

3. How do the four young men's observations about the camel serve as a turning point in the play?

Ans. The four young men's observations about the camel help them prove their intelligence and gain the King's trust.

4. Why did the king believe the four young men and not the merchant?

Ans. The King believed the four young men because their logic was clear and truthful.

5. How does the capability of the four young men make them suitable to become advisors?

Ans. The four young men's reasoning, attention to details and honesty make them good advisors.

6. Why does the merchant feel ashamed for accusing the four young men of stealing his camel? Explain in your own words.



Ans. The merchant feels ashamed because he falsely accused the innocent, wise men.

Competency-Based Questions:

1. What life lessons can be learnt from how the young men responded to being accused?

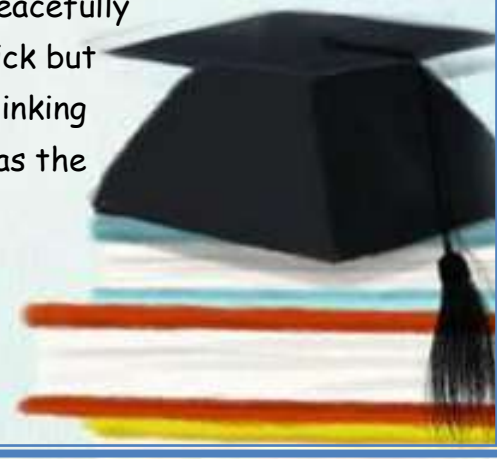
Ans. The four young men of 'Wisdom Paves the Way' teach us the importance of staying calm and respectful even in unjust circumstances. Instead of reacting emotionally, they used logic and precise explanations to defend themselves. Their confidence in truth and their dignity earned them the King's respect. The story shows that wisdom and patience can help overcome prejudice and misunderstandings. It inspires us to act with honour and let actions speak louder than accusations.

2. "Wisdom is the greatest strength." Justify this statement with reference to the chapter.

Ans. The chapter clearly proves that wisdom is more powerful than physical strength. The main character faces a dangerous situation but does not react with fear or force. Instead, he uses intelligence and presence of mind to find a safe solution. His thoughtful planning saves everyone from harm. This shows that wisdom helps in taking the right decision at the right time. The story teaches that strength without intelligence can fail, but wisdom always paves the way to success.

3. How does the story promote the value of intelligence over impulsive behaviour?

Ans. The story contrasts wisdom with impulsive behaviour. While an impulsive reaction could have led to danger, the wise character chooses a thoughtful approach. His intelligence helps him solve the problem peacefully and effectively. The chapter promotes the idea that quick but careless decisions can create trouble, whereas smart thinking ensures safety and success. Thus, intelligence is shown as the key to overcoming challenges.



Unit 2: A tale of Valour

Answer the following questions:

1.'Major Somnath's legacy of courage and devotion to the nation remains forever alive, forever alive...' What is the significance of the repetition in this line?

Ans. The repetition of the phrase 'forever alive' emphasizes the lasting impact of Major Somnath's bravery and devotion. It conveys that his sacrifice is remembered not just as a moment in history, but as an eternal source of inspiration for future generations.

2.Why do you think Major Somnath's leadership was critical during the Battle of Badgam?

Ans. Major Somnath's leadership was critical during the Battle of Badgam because he remained calm under pressure, inspired his men to fight bravely despite overwhelming odds, and made strategic decisions such as requesting air strikes. His presence and courage motivated his troops to hold their ground, buying valuable time for reinforcement to arrive and save Srinagar.

3.What were Major Somnath's last words? What do they reflect about his sense of duty?

Ans. Major Somnath's last words were, 'The enemy is only 50 yards from us. We are heavily outnumbered. We are under devastating fire. I shall not withdraw an inch but will fight to the last man and the last round.'

These words reflect his unshakable commitment to his mission and his willingness to sacrifice everything for the defense of his country. They show his deep sense of duty, bravery and leadership.



4. What might have been the outcome of the Battle of Badgam if Major Somnath and his company had not held their ground?

Ans. If Major Somnath Sharma and his company had not held their ground, the infiltrators might have captured the Srinagar airport and the surrounding areas. This could have led to the loss of Kashmir to Pakistan in 1947, changing the course of Indian history significantly.

5. Why do you think Major Somnath's story continues to inspire soldiers and civilians today?

Ans. Major Somnath's story inspires people because it embodies courage, patriotism and selfless sacrifice. He led from the front despite personal injury and chose to fight against overwhelming odds rather than retreat. Such dedication to the nation sets a powerful example for both soldiers defending the country and civilians striving to uphold values in their daily lives.

6. How can the values demonstrated by Major Somnath Sharma—courage, duty, and self-sacrifice—be applied in our daily lives?

Ans. These values can guide us to face challenges bravely, take responsibility for our actions, and put the well-being of others above our own interests. Whether it is helping someone in need, standing up for what's right, or staying committed to our goals, we can honour his legacy by living with integrity, sharing responsibility and being compassionate.

Value Based Questions:

1. What lessons do we learn from Major Somnath Sharma's life?

Ans. We learn the importance of courage, resilience, and a sense of duty from Major Somnath Sharma's life. His sacrifice teaches that true leadership involves leading by example and placing collective good above



personal safety. His legacy inspires individuals to face difficulties bravely, remain committed to responsibilities, and serve the nation and society with honesty.

2. Why was the Battle of Badgam significant for India?

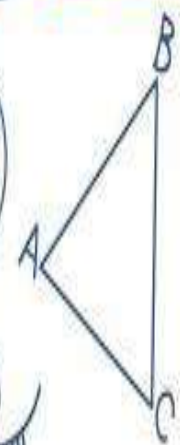
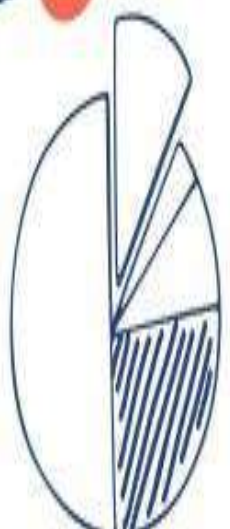
Ans. The Battle of Badgam was significant because it prevented Srinagar and Kashmir from falling into enemy hands. The invaders wanted to capture strategic areas, including the airport. The resistance led by Major Somnath Sharma delayed their advance, allowing reinforcements to arrive. His sacrifice ensured Srinagar remained secure and a part of India.

3. How did Somnath Sharma's early upbringing influence his character?

Ans. Somnath Sharma's upbringing in a military family instilled discipline and a strong sense of duty. Inspired by the Mahabharata stories narrated by his grandfather and the service of his father, he developed values of honour, patriotism, and courage. These qualities shaped his determination and leadership as a soldier.

what feels like
the End
is often
the Beginning ↗





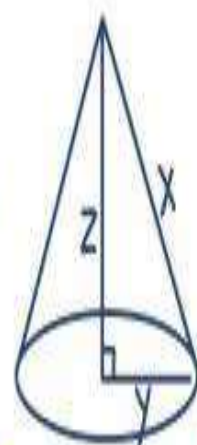
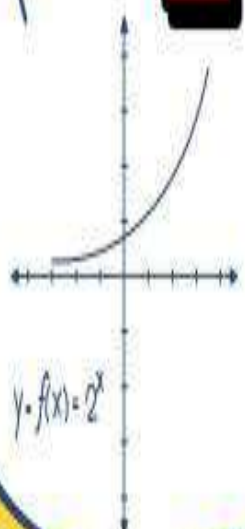
$A = a_1 b_1 h$
 πr^2
 $A = ab$
 $\pi = 3.14285$
 $A = bh$



MATH

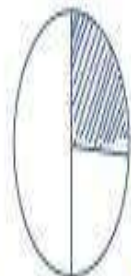


$$F = Kx$$



$$y = f(x) = 2^x$$

π 3.141592
 65358
 97932...



6



3

9

3

Solve from R S Aggarwal Book in Homework copy

WEEK	HOMEWORK
Week -1	<ul style="list-style-type: none">• Example 1 to 5 (Page No. - 1,2)• Exercise 1A (Page No. - 4,5)
Week -2	<ul style="list-style-type: none">• Example 1 to 13 (Page No. - 6,7,8)• Exercise 1B (Page No. - 8)
Week -3	<ul style="list-style-type: none">• Exercise 1C (Page No. - 10,11)• Exercise 1D (Page No. - 11,12)• Test paper 1(Page No. - 13)
Week -4	<ul style="list-style-type: none">• Example 1 to 8 (Page No. - 16,17,18)• Exercise 2A (Page No. - 18)
Week -5	<ul style="list-style-type: none">• Example 1 to 7 (Page No. - 19,20)• Exercise 2B (Page No. - 21)• Exercise 2C (Page No. - 22)• Exercise 2D (Page No. - 23)• Test paper 2 (Page No. - 24)
Week -6	<ul style="list-style-type: none">• All examples (Page No. - 51 to 78) of the chapter "The Story Of Numbers" (Subject Enrichment Activity) <p>"Number System Around the World" Activity (in home work copy)</p> <p>Students have to write on different number systems like:</p> <ul style="list-style-type: none">I) Roman NumeralsII) Hindu-Arabic Numeral SystemIII) Mayan Numeral SystemIV) Egyptian Numerals





What to include:

- 1) Symbols and landmark number used.
- 2) Base (10, 20, 60, etc.)
- 3) Five examples (write numbers like 25, 100 in each system)





+Note- Make one activity copy of 150 pages and do vacation assignment (MA/ SEA/ worksheet) in activity copy.

S.NO.	CHAPTER	ACTIVITIES	LEARNING OUTCOME
1.	Ch- 6- Pressure, winds, storms and cyclones	<ul style="list-style-type: none"> • Read the chapter thoroughly and frame short questions on the basic concepts and write in the book itself. • ANNEXURE#1 Write the given notes and draw diagrams in your class note book. 	<p>Students will be able to -</p> <ul style="list-style-type: none"> • Understand and Know about- <ul style="list-style-type: none"> ➤ Air exerts pressure. ➤ Uneven heating of earth creates wind. ➤ Driving weather patterns like thunderstorms and cyclones.
2.	Ch- 6- Pressure, winds, storms and cyclones	<p>ANNEXURE#2 Write and learn NCERT exercises of the chapter. (Solve Q1 and 2 in book. Write Q3-9 in class work copy.)</p>	<p>The learners will be able to develop</p> <ul style="list-style-type: none"> • Problem solving skill • Scientific temperament • Application of knowledge & understanding • Draw conclusions from the learned concepts.
3.	Worksheet # 1	<p>Worksheet # 1</p> <p>ANNEXURE#3 Competency Based worksheet. (Based on chapter-2 - The Invisible world: Beyond our Naked eye)</p>	<p>The learners will be able to develop</p> <ul style="list-style-type: none"> • Problem solving skill • Scientific temperament

Instruction- to be solved in print out.Paste it in the Activity Copy.



	Worksheet # 2	Worksheet # 2 ANNEXURE#4 (Based on chapter-6:- Pressure, winds, storms and cyclones)	<ul style="list-style-type: none"> • Application of knowledge & understanding • Draw conclusions from the learned concepts
4.	POSTER /COLLAGE MAKING	<p>MA activity- COLLAGE MAKING</p> <p>Prepare collage on chart paper/ A-3/A-4 size paper on <u>any one</u> of the topics.</p> <p>MA-2</p> <p>POSTER/COLLAGE MAKING</p> <p>Topics:</p> <ul style="list-style-type: none"> ▪ Fit India Movement ▪ Diet Mantra- 'Healthy Plate, Healthy Fate' ▪ Connected Online: Alone Offline. ▪ "Healthy heart, happy soul". ▪ Pollution- Slow Poison 	<p>Learners will be able to-</p> <ul style="list-style-type: none"> • articulate creativity in their work. • Develop respect for nature. • Identify problems prevailing in the society and giving a strong message through their posters/collage.
5.	STEM ACTIVITY	<p>MA-4</p> <p>STEM ACTIVITY</p> <p>(SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS)</p> <p>Models will be prepared by students and will be displayed and demonstrated by the concerned student.</p>	<ul style="list-style-type: none"> • Students will develop visualization and perception in designing. • Students will develop experimental skills and will also develop confidence in public speaking.





7.

Chapter 3 - Health: The Ultimate Treasure

Read - chapter 3 - Health: The Ultimate Treasure and do the following SEA in activity copy.

SEA-1

Topic : RESEARCH AND REPORT WRITING ON DIFFERENT DISEASES- under following heads- causes, symptoms and prevention.

(Choose any one disease)

- Cardio Vascular
- Diabetes
- Respiratory diseases
- Mental Disorders
- Obesity

The learners will be able to-

- Comprehend the meaning of given topics.
- Relate daily life experiences with learned topics.
- Understand causes, symptoms, and prevention of common diseases.
- Develop basic research and information-gathering skills.
- Improve report writing and organization skills.
- Enhance awareness about health and lifestyle diseases.



<p>8.</p>	<p>Preparation for science quiz- round- 1 Instructions- Students are instructed to find at least 1 page content (basic and higher) and write it in a separate copy (100 pages- Activity copy)</p>	<p>Topics- General science-</p> <ul style="list-style-type: none"> ➤ Light ➤ Electricity ➤ Force ➤ Pressure ➤ Acids, bases and salts ➤ Life processes- Nutrition, circulatory system, digestive system <p>Reproduction in plants.</p> <ul style="list-style-type: none"> ➤ Human Diseases- Deficiency, communicable and non communicable. <p>Current affairs -in science and technology- AI in medicine, space exploration, biotechnology. Work of following scientists given in NCERT text book. Dr. Ananda Mohan Chakrabarty Dr. Kamal Ranadive Alexnder Fleming Meghnad saha Vikram A. sarabhai</p>	<p>The learners will be able to-</p> <ul style="list-style-type: none"> • Gain information about Indian scientists and their contribution • Recapitulate the topics of general science they have learned and learn the advance topics. • Aware about latest development in the field of science.
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Annexure #1

PRESSURE WIND STORMS CYCLONE

Instruction- Write the given notes under proper headings and points.
Highlighted portion is for understanding. Not necessary for writing.



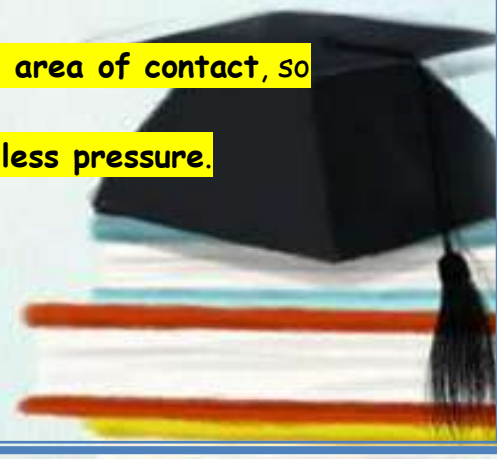
What is Pressure?

- Pressure is defined as the force applied per unit area.
- The formula for pressure is:

$$\text{Pressure} = \frac{\text{Force}}{\text{Area}}$$

Everyday Examples of Pressure

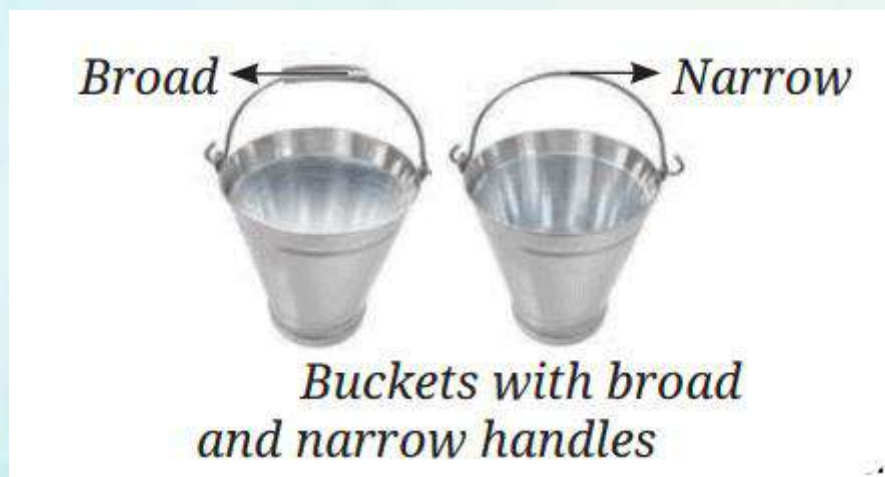
- School bags - shoulder straps.- Narrow straps have less area of contact, so they apply more pressure on the shoulder.
Broad straps have more area of contact, so they apply less pressure.



- That is why a bag with **narrow straps** feels heavier and more painful, while a bag with **broad straps** feels more comfortable, even if the weight is the same.



Example 2: When lifting a heavy water bucket, a **broad handle** is easier on your hand than a narrow one for the same reason.



Example 3: When people carry loads on their heads, they often place a **round piece of cloth** under the load. This increases the area, reducing pressure and making it more comfortable.



Porter carrying load

Example 6: **Overhead water tanks** are placed high to increase water pressure in pipes, as the height (gravity) adds force to push water through taps. In your house, water flows faster from a tap connected to a rooftop tank compared to a ground-level tank because the height increases pressure.





Overhead tank

Units of Pressure

- SI unit of force = **newton (N)**
- SI unit of area = **metre² (m²)**
- Therefore, SI unit of pressure = **newton/metre² (N/m²)**
This is also known as a **pascal (Pa)**.

Example 1: Calculate pressure exerted if 100 N force is applied on 2 m² area:

Ans: If a force of 100 N is applied on a cardboard of area 2 m², then the pressure applied on the cardboard will be:

$$\text{Pressure} = \frac{100 \text{ N}}{2 \text{ m}^2} = 50 \text{ N/m}^2$$

Example 2: An elephant stands on four feet. If the area covered by one foot is 0.25 m², calculate the pressure exerted by the elephant on the ground if its weight is 20000 N.

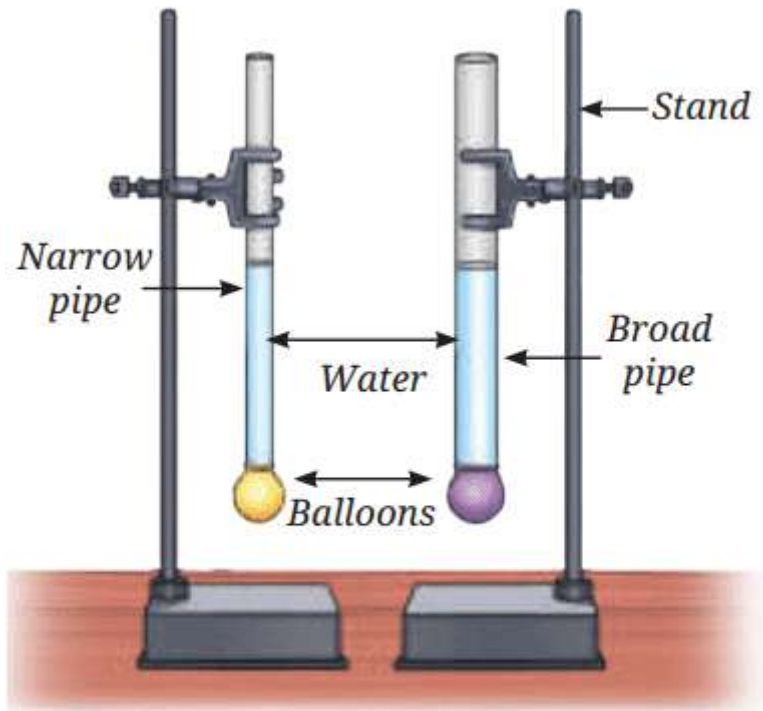
Ans:

Total area for four feet: $4 \times 0.25 \text{ m}^2 = 1 \text{ m}^2$.

Pressure = Force / Area = $20000 \text{ N} / 1 \text{ m}^2 = 20000 \text{ Pa}$.



Pressure Exerted by Liquids: Water Column Activity

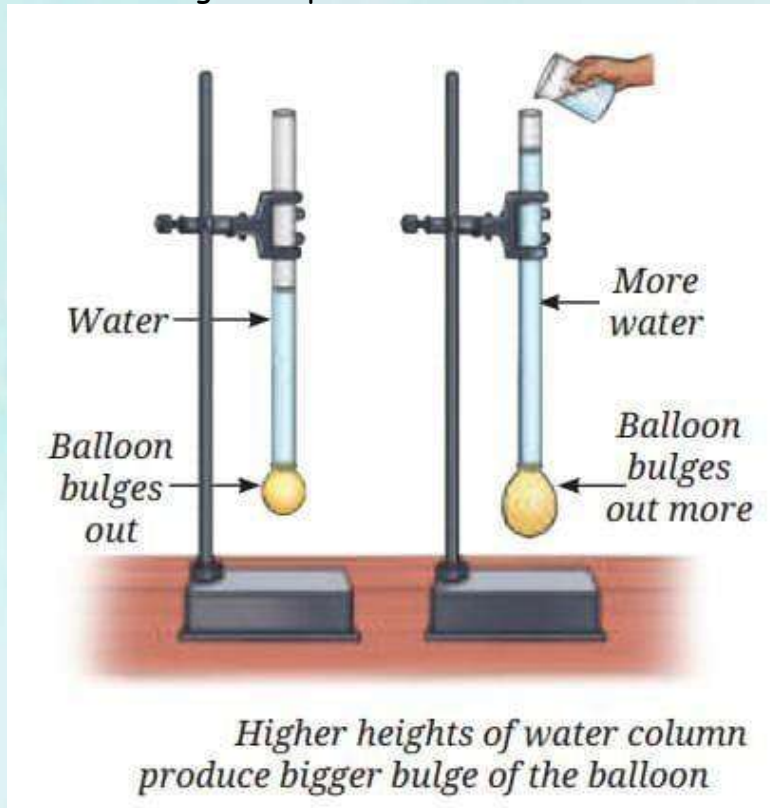


Equal heights of water columns produce same bulge in balloons

- The important thing isn't the weight or diameter, but the height of the water column.
- Liquid pressure at any point depends only on how high the liquid stands above that point.

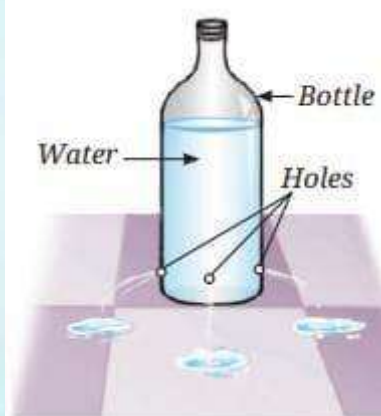


- If you pour in even more water, making the column taller, the balloon bulges more-meaning more pressure at the bottom.



- That's why overhead tanks are placed high up: the greater the height, the more pressure water has as it flows out the tap.

Pressure Exerted by Liquids: On Walls of Container



Liquid exerts pressure on walls of container

- This shows that liquids exert pressure not just at the bottom but also on the sides of containers.



- The pressure acts in all directions (downwards, sideways) and is equal at the same depth.
- **Examples in life:** Water spurts from holes or cracks in pipes, and the design of dams (broadest at the base) helps them withstand the very strong sideways (horizontal) water pressure at depth.

Why Are Dams Broad at the Base?

- Water at the bottom of a dam is under higher pressure due to the height of the water column.
- Dam bases are built broad and strong to withstand the large horizontal water pressure near the bottom.
- The deeper the water, the more pressure pushes sideways on the dam walls.

Pressure Exerted by Air

What Is Atmospheric Pressure?

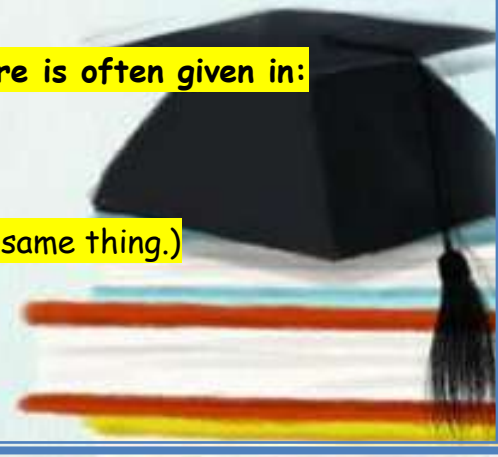
- The envelope of air that surrounds Earth is called the **atmosphere**.
- The atmosphere contains various gases (mainly nitrogen, oxygen, argon, carbon dioxide) and extends several kilometres above the Earth.
- **Atmospheric pressure** is the pressure exerted by air molecules on all objects, in all directions.

How Strong Is Atmospheric Pressure?

- The force exerted by the air column on an area of $15\text{ cm} \times 15\text{ cm}$ is about **2,250 N**-the same as the weight of a 225 kg object!
- **Why aren't we crushed?** The reason we are not crushed under this weight is that the pressure inside our bodies is also equal to the atmospheric pressure.
- This balances the pressure exerted from outside. The pressure inside our body is caused by the movement of fluids and gases in tissues and organs of the body.

In weather reports and practical measurements, air pressure is often given in:

- **Millibar (mb):** $1\text{ mb} = 100\text{ Pa}$
- **Hectopascal (hPa):** $1\text{ hPa} = 100\text{ Pa}$
(So, $1\text{ mb} = 1\text{ hPa}$; both are commonly used and mean the same thing.)



- Example: A typical atmospheric pressure at sea level is about **1,013 mb** or **1,013 hPa**.
- **Pascal (Pa)** is the SI unit, but **millibar (mb)** and **hectopascal (hPa)** are often used when talking about air pressure.

Formation of Wind

Wind blows strongly some days and is calm on others. Sometimes, strong winds can even cause damage. The movement of air (wind) is linked to **differences in air pressure**. Air moves from a region of higher pressure to a region of lower pressure.

Movement of Air

Everyday examples:

- If you release the mouth of an inflated balloon, air rushes out until the balloon pressure equals outside pressure.
- When a cycle tube is punctured, air escapes from inside (high pressure) to outside (lower pressure).

Key Concept:

- Air always flows from high pressure to low pressure.
- The flow stops when pressures are equal.

How Pressure Differences Create Winds

Sea Breeze (Daytime):

- Land heats up faster than water.
- Warm air above the land rises (creating low pressure).
- Cooler, high-pressure air from the sea moves in to replace it-this moving air is the **sea breeze**.

Land Breeze (Nighttime):

- Water is warmer than land at night.
- Warm air above the sea rises (creating low pressure over the sea).



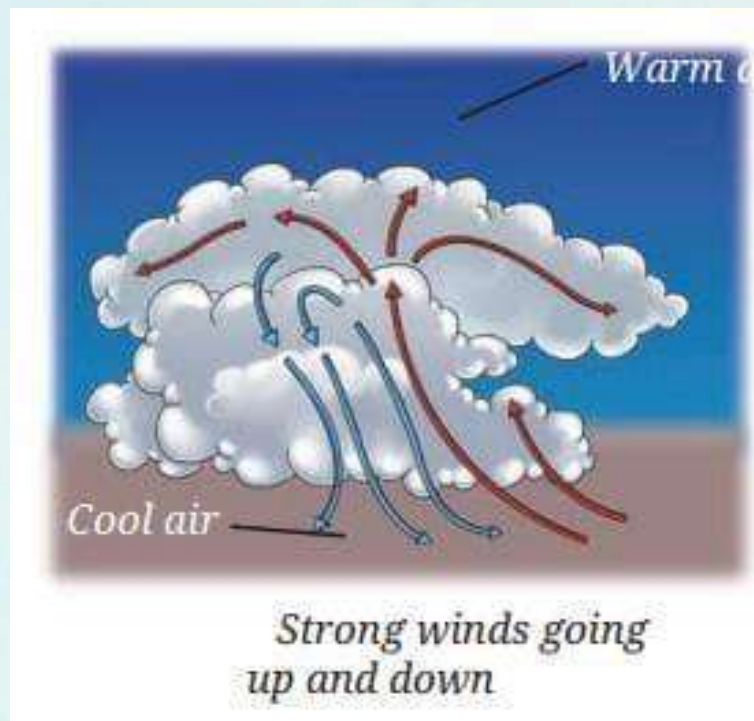
- Cooler, higher-pressure air from the land moves toward the sea-this is the **land breeze**.

Conclusion:

- Winds are created because of **pressure differences** in the atmosphere.
- The **greater the difference in pressure, the stronger the wind speed**.

High-Speed Winds Result in Lowering of Air Pressure

High-speed winds create areas of low air pressure. Surrounding higher-pressure air then pushes toward these low-pressure zones.



Real-Life Application: Wind and Roofs

During a storm, when **strong winds blow over the roof** of a house, a zone of **low pressure** forms above the roof.



(a) Roof of a house blown away



(b) Roof of a house intact

- The air inside the house still has higher pressure.
- The greater pressure from inside can **push the roof upwards** (sometimes blowing it off) if the difference is strong enough and the roof is weak.
- **Safety Tip:** Keeping doors and windows open during storms allows air to flow freely, helping equalize the pressure inside and outside, which can prevent roofs from being blown away.

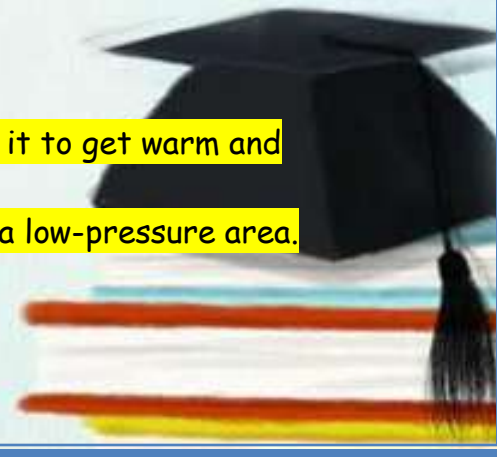


Storms, Thunderstorms, and Lightning Formation of Storms



Storm

- **Land heating:** Sun heats the land, causing the air above it to get warm and moist.
- **Air rises:** Warm, moist air being lighter rises, creating a low-pressure area.



- **Air circulation:** Cooler air from high-pressure areas moves in to replace it; this air gets heated and rises too.
- **Cloud formation:** Rising air cools and moisture condenses to form water droplets.
- **Rain:** Water droplets join, get heavier, and fall as rain, hail, or snow.
- **Strong winds + rain = Storm:** Strong moving air, often with heavy rain, is called a storm.
- **Storms are frequent in:** Hot, humid, tropical regions (like India).

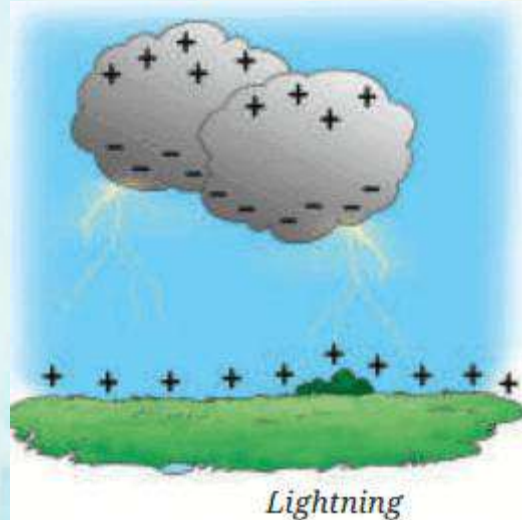
How Thunderstorms and Lightning Happen

1. Updrafts and Downdrafts:

- In some storms, air rises to such great heights that the low temperature turns water droplets into **ice particles**.
- **Strong winds** push water droplets and ice particles up and down inside the clouds.

2. Charging of Clouds:

- As water droplets and ice particles **rub against each other**, they get **electrically charged** (just like when you rub two objects together).
- **Lighter, positively charged ice particles** move to the top of the cloud.
- **Heavier, negatively charged water droplets** gather at the bottom.



3. Separation of Charge:

- The cloud ends up with **opposite charges at top and bottom**.



- When the negatively charged bottom of the cloud comes close to the ground, it induces a **positive charge on the ground and nearby objects** like trees and buildings.

4. Lightning Formation:

- Normally, air acts as an **insulator** and prevents charges from meeting.
- If charge buildup is very high, air's resistance breaks down, causing a **sudden flow of charges**-this is seen as a **bright flash of light called lightning**.
- Lightning can happen:
 - Within a cloud
 - Between clouds
 - Between clouds and the ground

5. **Thunder:** Lightning heats the air rapidly, causing it to expand and produce a **loud sound called thunder**.

6. **Thunderstorm:** A storm that has **thunder and lightning** is called a **thunderstorm**.

Regional Names and Importance of thunderstorms:

Local thunderstorms in India have different names:

- **Kalboishakhi:** West Bengal, Bihar, Jharkhand
- **Bordoisila:** Assam
- **Mango showers:** Kerala, Karnataka, Tamil Nadu
- They often help in **crop growth** or fruit ripening (like mangoes and coffee).

Protect yourself during lightning:

Lightning is dangerous-it can start fires, damage buildings, and injure or kill people and animals.

- Stay away from tall objects (trees, poles).
- Find a low, open area and crouch; do NOT lie flat on the ground.
- Don't use umbrellas with a **metallic rod**.
- If in water, **get out immediately**.
- If inside a car or bus, stay inside-you are comparatively safer.

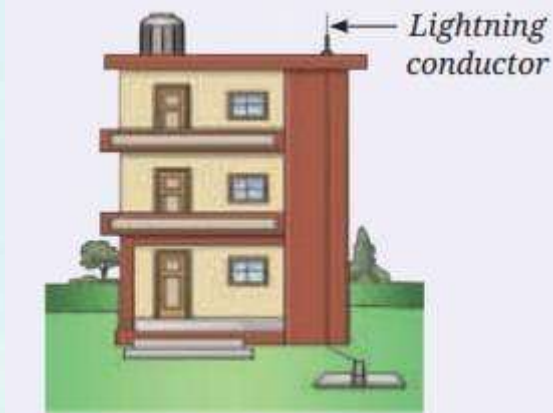




Safe position during lightning

Lightning Conductor: How Buildings Are Protected

- **Lightning conductor:** A pointed, metallic rod installed along the wall of a building.
- The pointed end is higher than the roof.
- The lower end is buried deep in the ground.
- **Purpose:** Provides a safe path for **electric charges from lightning to flow directly into the ground**, preventing damage to the building.

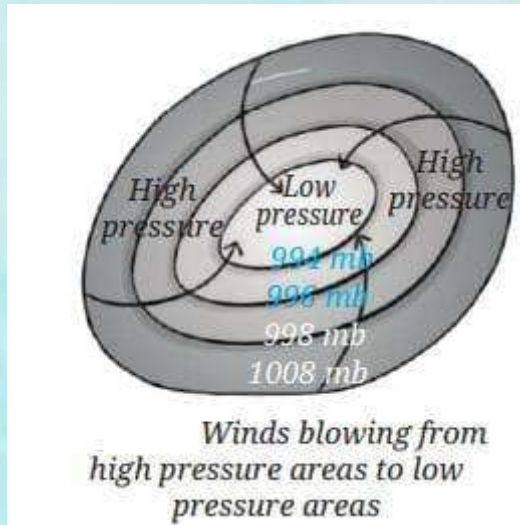


A lightning conductor

Cyclone

A **cyclone** is a large, spinning storm system that forms over **warm ocean waters**. It involves **high-speed winds, heavy precipitation, and very low pressure at its center**.





How Do Cyclones Form?

1. Heating and Rising Air:

- Warm ocean water heats the air above it, making the air moist and light.
- This warm, moist air **rises up**, leaving a low-pressure area below.

2. Condensation and Further Warming:

- As the air rises, water vapour in it **condenses to form raindrops**.
- Condensation releases heat, which **warms the air even more**, causing it to rise further and pressure to drop more.

3. Intensification and Spinning:

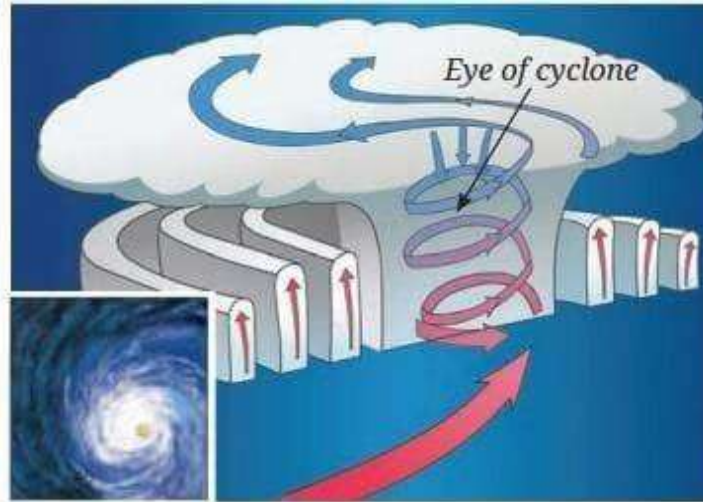
- More surrounding air rushes in to fill the low-pressure area and also rises.
- The rotation of the Earth **causes the moving air to spin**.
- This cycle continues, making the low-pressure center even stronger.

4. Cyclonic Structure:

- The result is a rapidly-spinning system of clouds, winds, and rain-this is a **cyclone**.



- At the center is the **eye of the cyclone**-a calm zone of lowest pressure.



- Around the eye are **high-speed winds and heavy rain**.

5. On Landfall:

- When the cyclone reaches land, it loses its source of warm, moist air and **weakens**.
- Even after weakening, cyclones can leave behind **massive destruction**.



Why Are Cyclones Dangerous?

Cyclones can uproot trees, blow off roofs, break power lines, and destroy buildings.



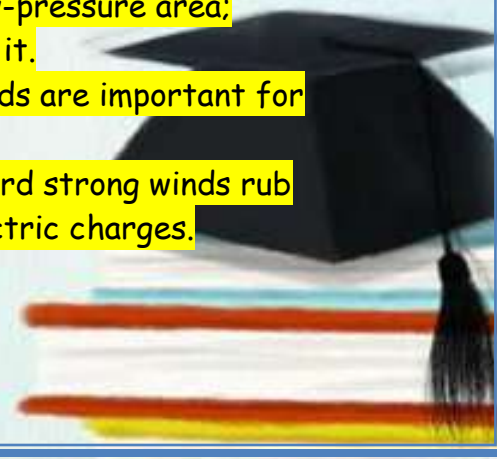
- **Storm Surge:** Strong winds push ocean water toward land, creating a high wall of water (3-12 meters tall). This surge can **flood coastal and even distant inland areas**.
- **Heavy Rainfall:** Causes rivers to overflow, leading to **floods and landslides**.
- **Seawater Damage:** Saltwater can contaminate **drinking water**. Seawater can flood and make fields **less fertile**, damaging crops.
- **Blocked Roads & Power Outages:** Fallen trees and debris can block help from reaching affected areas. Long-lasting **power outages** disrupt emergency response and daily life.

Staying Safe During a Cyclone

- **Stay informed:** Regularly listen to radio/TV for weather warnings (India Meteorological Department, IMD).
- **Be prepared:** Keep an **emergency kit** ready (Food, water, medicines, flashlight, batteries).
- **Shelter:** Move quickly to a nearby **cyclone shelter** or safe building if advised.
- **Weather monitoring:** Satellites now help track and predict cyclones, reducing loss to life and property.
- **Authorities:** Many organizations work together to respond to cyclone disasters nationally and internationally.

Key Terms to Remember

1. **Pressure:** Pressure is defined as the force exerted per unit area.
2. **SI Unit of Pressure:** The SI unit of pressure is the newton per square metre (N/m^2), also called the pascal (Pa).
3. **Pressure by Liquids and Gases:** Liquids and gases exert pressure on the walls of their container.
4. **Atmospheric Pressure:** The pressure exerted by the air around us is known as atmospheric pressure.
5. **Cause of Winds:** Differences in air pressure cause winds to blow.
6. **Low and High Pressure:** Warm air rises to create a low-pressure area; cooler air from high-pressure areas moves in to replace it.
7. **Formation of Thunderstorms:** Moisture and strong winds are important for the formation of thunderstorms.
8. **Development of Electric Charges:** Upward and downward strong winds rub ice particles with water droplets in clouds, creating electric charges.



9. **Lightning Formation:** Lightning is caused by the collision of electric charges within a cloud, between different clouds, or between a cloud and the ground.
10. **Effects of Lightning:** Lightning strikes can cause destruction to life and property.
11. **Lightning Conductors:** Lightning conductors are devices that protect buildings from the damaging effects of lightning.
12. **IMD (India Meteorological Department):** The IMD constantly monitors cyclones and thunderstorms in India.



Annexure # 2

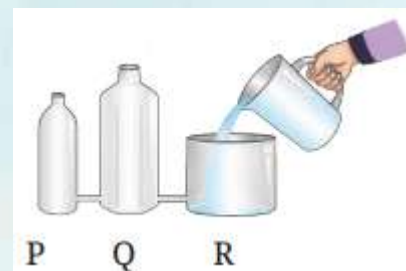
[Note: Question no. 1 and 2 to be solved in book itself.]

Question 1.

Choose the correct statement:

(i) Look at the Figure carefully. Vessel R is filled with water. When pouring of water is stopped, the level of water will be _____

- (a) the highest in vessel P
- (b) the highest in vessel Q
- (c) the highest in vessel R
- (d) equal in all three vessels



Answer:

(d) equal in all three vessels

(ii) A rubber sucker (M) is pressed on a flat smooth surface, and an identical sucker (N) is pressed on a rough surface.

- a) Both M and N will stick to their surfaces
- b) Neither M nor N will stick to their surfaces
- c) M will stick, but N will not stick
- d) M will not stick, but N will stick

Answer:

(c) M will stick, but N will not stick

(iii) A water tank is placed on the roof of a building at a height 'H'. To get water with more pressure on the ground floor, one has to

(a) Increase the height 'H' at which the tank is placed.

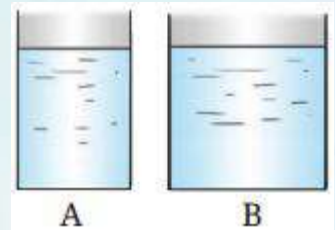


- (b) Decrease the height 'H' at which the tank is placed.
- (c) Replace the tank with another tank of the same height that can hold more water.
- (d) Replace the tank with another tank of the same height that can hold less water.

Answer:

- (a) increase the height 'H' at which the tank is placed.

(iv) Two vessels, A and B, contain water up to the same level as shown in the Figure. P_A and P_B are the pressures at the bottom of the vessels. F_A and F_B are the forces exerted by the water at the bottom of the vessels A and B.



a) $P_A = P_B, F_A = F_B$

b) $P_A = P_B, F_A < F_B$

c) $P_A < P_B, F_A = F_B$

d) $P_A > P_B, F_A > F_B$

Answer:

(b) $P_A = P_B, F_A < F_B$

Question 2.

State whether the following statements are True (T) or False (F).

- (i) Air flows from a region of higher pressure to a region of lower pressure.
- (ii) Liquids exert pressure only at the bottom of a container.
- (iii) The weather is stormy at the eye of a cyclone.
- (iv) During a thunderstorm, it is safer to be in a car.



Answer:

(i) True

(ii) False (liquids exert pressure in all directions, including on the walls of the container.)

(iii) False (it is calm at the eye of a cyclone.)

(iv) True.

Question 3.

Figure (a) shows a boy lying horizontally, and Figure (b) shows the boy standing vertically on a loose sand bed. In which figure does the boy sink more into the sand? Give reasons.

Answer:

The boy in Figure (b) will sink more. The weight of the boy is the same, but in Fig. (a), the force (of the weight) is acting on a large area. The pressure in this case is less. In Fig. (b), the same force (of the weight) is acting on a small area. The pressure, therefore, is more. The boy will sink more into the sand in this case.



(a)



(b)

Question 4.

An elephant stands on four feet. If the area covered by one foot is 0.25 m^2 , calculate the pressure exerted by the elephant on the ground if its weight is 20000 N.



Answer:

Force (the weight) of the elephant acting on the ground = 20000 N

Area on the ground covered by the four feet of the elephant = $4 \times 0.25 \text{ m}^2 = 1 \text{ m}^2$

Pressure exerted by the elephant on the ground = Force/Area

= $200000 \text{ N}/1 \text{ m}^2$

= 20000 Pa

Question 5.

There are two boats, A and B. Boat A has a base area of 7 m^2 , and 5 persons are seated in it. Boat B has a base area of 3.5 m^2 , and 3 persons are seating in it. If each person weighs 700 N, find out which boat will experience more pressure on its base and by how much?

Answer:

Force of the weight of 5 persons acting on the base of boat A = $5 \times 700 \text{ N} = 3500 \text{ N}$

Base area of boat A = 7 m^2

Pressure exerted on the base of boat A = Force/Area

= $3500 \text{ N}/7 \text{ m}^2$

= 500 Pa

Force of the weight of 3 persons acting on the base of boat B = $3 \times 700 \text{ N} = 2100 \text{ N}$

Base area of boat B = 3.5 m^2

Pressure exerted on the base of boat B = Force/Area

= $2100 \text{ N}/3.5 \text{ m}^2$

= 600 Pa

Therefore, boat B will experience more pressure on its base by 100 Pa.

Question 7.



What will happen to the two identical balloons A and B as shown in Figure when water is filled into the bottle up to a certain height? Will both the balloons bulge? If yes, will they bulge equally? Explain your answer.



Answer:

When water is filled into the bottle up to a certain height (sufficiently above the level of the entry points of water from the bottle) both the balloons will bulge. The entry points of water from the bottle to the balloons are at the same height. The balloons, being elastic, exert some force on the water. Assuming that the balloons are equally elastic, both balloons will bulge equally.

Question 8. Explain how a storm becomes a cyclone.

Answer:

Cyclones are large storms that form over warm ocean waters.

1. As the ocean water gets heated, the air above it becomes moist and warm and rises to a height where water vapor condenses to form raindrops.
2. Condensing water vapor releases heat back into the atmosphere.
3. This further warms the ascending air, leading to its further rise, creating an even lower pressure.



4. Air from the surrounding regions rushes in, and it also starts rising.
5. The moving air starts to spin under the influence of the Earth's rotation.
6. This cycle is repeated, resulting in the creation of a very low-pressure area with high-speed winds revolving around it.
7. This spinning system of clouds, winds, and rain is called a Cyclone.

Question 9.

The figure shows trees along the sea coast on a summer afternoon. Identify which side is land - A or B. Explain your answer.



Answer:

During the daytime on a summer afternoon, there is a sea breeze that blows from sea to land. This happens because the land gets heated faster and the air above land rises resulting in low-pressure region over land. Cooler air over sea moves from high- pressure region towards the land. The bending of trees due to wind, as shown in the figure, suggests that wind is blowing in the direction from B to A. This suggests 'A' side is land.



Question 10. Describe an activity to show that air flows from a region of high pressure to a region of low pressure.

Answer:

Activity to show that air flows from a region of high pressure to a region of low pressure.

Materials required: Two similar balloons made of thin rubber, a drinking straw, and some thread.

Procedure:

- Insert one end of the straw into one balloon and secure it with the thread.
- Inflate the second balloon and insert the free end of the straw into the neck of the inflated balloon, and secure it with the thread. (Ensure that the air from the inflated balloon does not leak.)

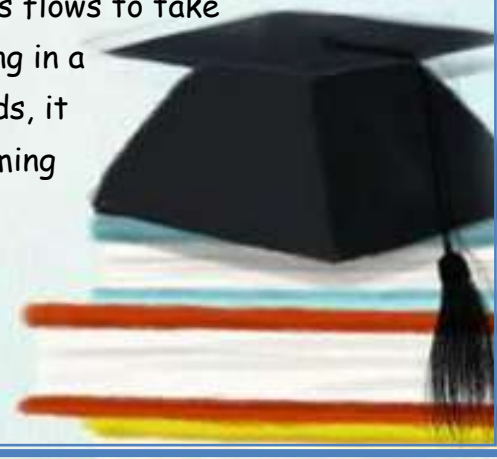
Observations: Some air moves from the inflated balloon to the uninflated balloon, and the sizes of both balloons change. After some time, both the balloons attain almost the same size, and the flow of air stops.

Conclusion: The inflated balloon has higher pressure inside it, and the uninflated balloon has low pressure inside. When the two balloons are connected through a straw, air moves from the high-pressure area (inside the inflated balloon) to the low-pressure area (inside the uninflated balloon).

Question 11. What is a thunderstorm? Explain the process of its formation.

Answer:

(i) During the rainy season, when land gets heated in hot, humid, and tropical regions of India, the warm and moist air being lighter rises, thus creating a low-pressure area. Cooler air from surrounding high-pressure areas flows to take its place. This air again gets heated and rises, thereby resulting in a continuous process of wind circulation. As the rising air expands, it cools and moisture in it condenses to form water droplets forming



clouds. The water droplets merge to form heavier drops, which come down as rain, hail, or snow. The strong winds accompanied by rain are called a storm.

(ii) During a storm formation, under certain conditions, warm air rises to great heights, and the low temperature there changes water droplets into ice particles. Strong winds blowing upwards and downwards result in rubbing between water droplets and ice particles. This generates electric charges within clouds. Ice particles are positively charged, and they move upwards in the upper part of the clouds. Water droplets are negatively charged and occupy the lower part of the clouds.

When negatively charged water droplets in the lower part of the cloud move closer to the ground, trees, buildings, and the ground become positively charged. Normally, air acts as an electrical insulator and does not let opposite charges meet. This insulating property of the air breaks down when the build-up charges becomes very large. A sudden flow of charges takes place, resulting in a bright flash of light called lightning. Lightning can occur as opposite charges collide within a cloud, between clouds, or between clouds and the ground. Lightning rapidly heats the air around it. This results in expansion of air to produce a loud sound called thunder. A storm accompanied by lightning and thunder is called a thunderstorm.

Question 12. Explain the process that causes lightning.

Answer:

During a storm formation, under certain conditions, warm air rises to great heights, and the low temperature there changes water droplets into ice particles. Strong winds blowing upwards and downwards result in rubbing between water droplets and ice particles. This generates electric charges within clouds. Ice



particles are positively charged, and they move upwards in the upper part of the clouds. Water droplets are negatively charged and occupy the lower part of the clouds. When negatively charged water droplets in the lower part of the cloud move closer to the ground, the trees, buildings, and the ground become positively charged. Normally, air acts as an electrical insulator and does not let opposite charges meet. This insulating property of the air breaks down when the build-up charges becomes very large. A sudden flow of charges takes place, resulting in a bright flash of light called lightning. Lightning can occur as opposite charges collide within a cloud, between clouds, or between clouds and the ground. Lightning rapidly heats the air around it. This results in expansion of air to produce a loud sound called thunder.

Question 13. Explain why holes are made in banners and hoardings.

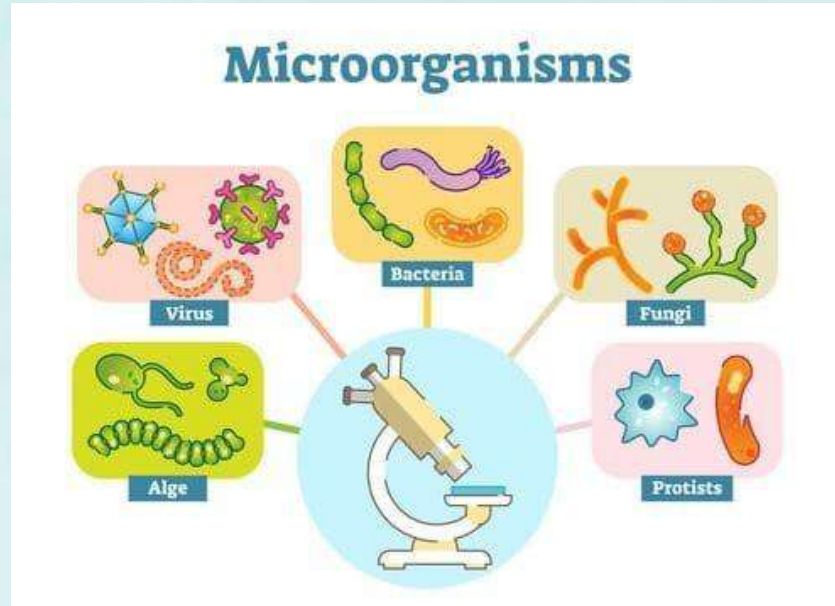
Answer:

Holes made in banners and hoardings save these from blowing off with high-speed winds. High-speed winds are accompanied by a reduced pressure. If there are no holes in the banners or hoardings, they block the wind, but the wind blows on the sides of these banners and hoardings. This forms low-pressure area on sides and opposite side of the banners/hoardings. There remains a high-pressure area on the side of the banner or hoarding that faces the direction from which wind is blowing. When the pressure difference is large the banners or the hoardings are blown away. With the holes in the banners or hoardings, the wind blows through these holes, and the pressure difference is minimised, keeping them intact.



Worksheet # 1

The Invisible Living World: Beyond Our Naked Eye



I. Multiple Choice Questions (MCQs)

1. Who first used the term "cell" after observing thin slices of cork?

- a) Antonie van Leeuwenhoek
- b) Robert Hooke
- c) Louis Pasteur
- d) Ananda Mohan Chakrabarty

2. Which tool allows us to view objects too small to be seen with the naked eye?

- a) Telescope
- b) Periscope
- c) Microscope



d) Binoculars

3. A round-bottom flask filled with water can act as:

a) A lens/magnifier

b) A telescope

c) A prism

d) A mirror

4. Which cell structure is present in plant cells but absent in animal cells?

a) Nucleus

b) Cell membrane

c) Cell wall

d) Cytoplasm

5. Which statement is true about cheek cells?

a) They are rectangular and have a cell wall.

b) They have a large central vacuole.

c) They contain chloroplasts.

d) They are polygon-shaped and lack a cell wall.

6. Who is known as the Father of Microbiology?

a) Robert Hooke

b) Antonie Van Leeuwenhoek



c) Coluthur Gopalan

d) Acharya Kanad

7. Roots of certain legumes, such as beans, peas, and lentils have root nodules that contain Rhizobium bacteria. These bacteria trap nitrogen from the air and make it useful for the plants. What is this process called?

a) Nitrogen fixation

b) Nitrogen cycle

c) Both a and b

d) None of the above

8. The feature that distinguishes bacteria from cells of yeast, protozoa, algae, fungi, plants, and animals is -

a) Presence of well defined nucleus.

b) Presence of nucleoid.

c) Absence of chloroplast..

d) None of the above.

9. Which microorganism is responsible for converting milk into curd at home?

a) Rhizobium

b) Lactobacillus

c) Yeast

d) Amoeba



10. The green pigment present in plant cells is called _____.

- a) Chloroplast
- b) Cytoplasm
- c) Mitochondria
- d) Cell membrane

11. Assertion: Microalgae are regarded as beneficial to both humans and aquatic life.

Reason: They produce oxygen through photosynthesis and serve as food source for aquatic organisms.

- a) Both Assertion and Reason are true, and Reason is the correct explanation for Assertion.
- b) Both Assertion and Reason are true, but Reason is not the correct explanation for Assertion.
- c) Assertion is true, but Reason is false.
- d) Assertion is false, but Reason is true.

12. Assertion: The letters appear larger when seen through the round bottom flask.

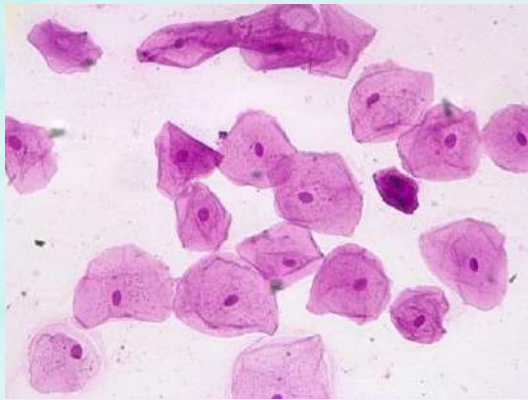
Reason: The flask filled with water acts like a magnifying glass.

- a) Both Assertion and Reason are true, and Reason is the correct explanation for Assertion.
- b) Both Assertion and Reason are true, but Reason is not the correct explanation for Assertion.
- c) Assertion is true, but Reason is false.
- d) Assertion is false, but Reason is true.



II. Fill in the Blanks

1. The jelly-like substance inside a cell where life processes occur is the _____.
2. The thin, flexible boundary of a cell that controls entry and exit is the _____.
3. In onion peel cells, staining with _____ helps make the cells visible.
4. Cheek cells are commonly stained with _____.



Cheek Cells

5. The bacteria that fix nitrogen in legume root nodules are called _____.
6. Yeast is a _____ fungus while mould is a _____ fungus.

III. Unjumble the words and write their meaning/uses:

1. EIYGRENCL
2. RSOMECPICIO
3. MAPTLCOSY
4. AOLHLTPCORS



5. LEUCOVA
6. NIOTRFMAETEN
7. EONRNU
8. UPALINISR
9. ABCALULSTLIOC
10. RSESEAPTIVEVR

IV. True/False Questions

1. The protoplasm controls all cell activities like growth and division.
2. Spirulina is a fungus used in bread making.
3. Streptococcus is the microorganism responsible for converting milk into curd.
4. The process by which yeast releases carbon dioxide to make dough rise is called pasteurization.
5. In bacteria, the genetic material is enclosed in a well-defined nucleus.

V. Answer the following questions in one word-

1. Father of Microbiology -
2. Chloroplasts contain this to enables photosynthesis -
3. The large storage cavity commonly found in plant cells -



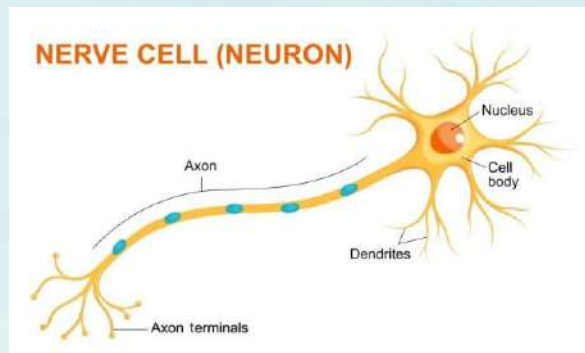
4. Shape of the muscle cells is typically described as -

5. Organisms that decompose waste to form manure -

VI. Short Answer Questions

1. How does high salt or sugar preserve pickles and murabbas?

2. How the structure of nerve cells (neurons) suit their function?



3. Why is warm milk preferred for curd formation?

4. What role do microalgae play in Earth's oxygen supply?

5. Why farmers grow legumes in rotation with other crops?

VII. Match the Following.

Column A	Column B
1) Yeast	a) Photosynthesis in plant cells
2) Robert Hooke	b) Fermentation and rising of dough
3) Rhizobium	c) Nitrogen fixation in legume roots
4) Methane	d) Main component of biogas
5) Chloroplast	e) Coined the term "cell"



Worksheet # 2



Pressure, Winds, Storms, and Cyclones

6



Probe and ponder

MCQs

1. Why do cyclones weaken when they move over land?
 - A. Increase in temperature
 - B. Lack of moisture supply
 - C. Increase in pressure
 - D. Faster wind speed
2. Why does air pressure decrease with altitude?
 - A. Gravity increases
 - B. Density of air decreases
 - C. Temperature increases
 - D. Oxygen increases
3. A glass filled with water is covered with a card and inverted. The card does not fall.
What is the correct explanation?
 - A. Water sticks to the card



B. Atmospheric pressure pushes the card upward

C. Gravity is absent

D. Water pressure is zero

4. A strip of paper is held near the mouth and air is blown over it. The strip rises upward. This is because:

A. Air above has lower pressure

B. Air above has higher pressure

C. Gravity pulls it up

D. Air below disappears

5. Two balloons are hung close together and air is blown between them. They move closer. Reason:

A. Pressure between balloons decreases

B. Pressure between balloons increases

C. Gravity pulls them together

D. Air stops moving

6. Why do mountaineers carry oxygen cylinders?

A. Air pressure increases at high altitude

B. Oxygen percentage decreases at high altitude

C. Air pressure decreases at high altitude

D. Temperature increases

7. Which instrument is used to measure atmospheric pressure?

A. Thermometer

B. Barometer



C. Hygrometer

D. Anemometer

8. During the day, sea breeze occurs because:

A. Land cools faster

B. Sea heats faster

C. Land heats faster than sea

D. Both heat equally

9. The 'eye' of a cyclone has:

A. Strong winds

B. Heavy rainfall

C. Calm conditions

D. High temperature only

10. Two identical balloons are filled with air. One is kept in sunlight, the other in shade. After some time, the balloon in sunlight bursts. The main reason is:

A. Increase in atmospheric pressure

B. Expansion of air increases internal pressure

C. Decrease in air density

D. Reduction in external pressure

Fill up

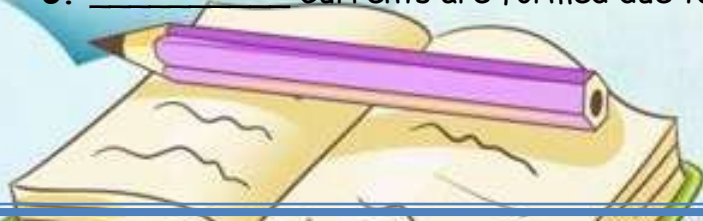
1. Air near the equator becomes hot and rises, creating a _____ zone.

2. Air moves from a region of _____ pressure to _____ pressure.

3. The instrument used to measure atmospheric pressure is called a _____.

4. Winds are generated due to differences in _____ and temperature.

5. _____ Currents are formed due to uneven heating of air.



Assertion - Reasons

Instructions

- A. Both Assertion and Reason are true, and Reason correctly explains Assertion
- B. Both Assertion and Reason are true, but Reason does NOT explain Assertion
- C. Assertion is true, Reason is false
- D. Assertion is false, Reason is true

1. **Assertion:** Air near the equator rises upward.
Reason: The equatorial region receives more direct sunlight.
2. **Assertion:** Faster winds are produced when pressure difference is large.
Reason: Wind speed is independent of pressure difference.
3. **Assertion:** The direction of moving air is not affected by Earth's rotation.
Reason: Rotation of Earth causes deflection of moving air.
4. **Assertion:** A balloon inside a closed bottle does not inflate easily.
Reason: Air trapped inside the bottle exerts pressure opposing expansion.
5. **Assertion:** Water flows out in all directions from holes in a cup.
Reason: Liquid pressure acts in all directions.
6. **Assertion:** A heated can collapses when cooled suddenly.
Reason: External air pressure becomes greater than internal pressure.
7. **Assertion:** Air always moves from colder to hotter regions.
Reason: Air moves due to pressure differences.
8. **Assertion:** People feel breathless at high altitudes.
Reason: Air becomes less dense at higher altitudes.
9. **Assertion:** A suction cup sticks firmly to a smooth wall.
Reason: Air pressure outside the cup is greater than inside.
10. **Assertion:** Houses with sloping roofs are safer in storm-prone areas.
Reason: Sloping roofs reduce the impact of fast-moving air.

Very Short Answer Type Questions

1. How can you demonstrate that air exerts pressure using a simple activity?
2. Explain why wind does not blow if temperature is same everywhere.
3. Compare sea breeze and land breeze in terms of direction and cause.



1. What conditions are necessary for the formation of a thunderstorm?
2. Suggest four safety measures during a cyclone.
3. A force of **1000 N** acts on a surface and produces a pressure of **200 Pa**.
Find the area of contact.

Short Answer Type Questions

1. Explain, Why should we keep doors and windows open when high-speed winds blow over our houses?
2. What necessary precautions should we take to protect ourselves from lightning?
3. A school building in a coastal area installs a metal rod on its roof. The rod is connected to a thick metal plate buried deep in the ground using a conducting wire. During a thunderstorm, lightning strikes the building, but no damage occurs.
 - (a) What is this device called?
 - (b) Explain how it protects the building during lightning.
 - (c) What would happen if the wire connection is broken?
4. In a region, a poorly designed dam had nearly equal thickness from top to bottom. After heavy rainfall, the water level increased significantly, and cracks appeared near the base of the dam wall.
 - (a) Explain why cracks appeared near the base.
 - (b) How does increased water level affect pressure on the dam?
 - (c) Suggest one design improvement to prevent such damage.
5. An elephant stands on four feet. If the area covered by one foot is 0.25 m^2 , calculate the pressure exerted by elephant on the ground if its weight is 20000 N .



6. In a 5-floor building, people on the top floor complain about weak water flow, while those on the ground floor get strong flow.

(a) Why is there a difference in water flow?

(b) Explain, what role does height of water play in this situation?

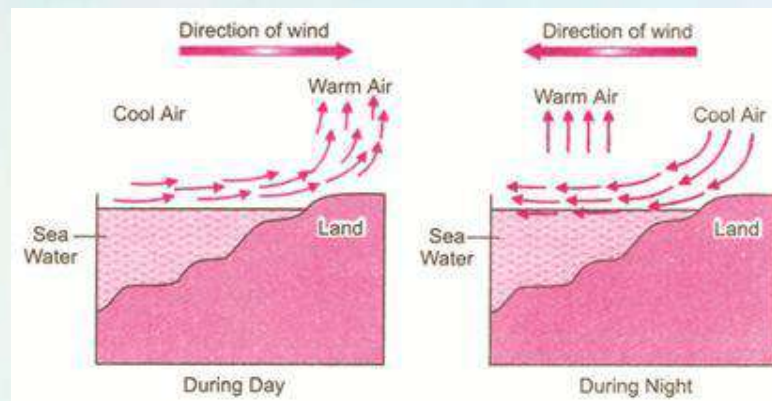
Long answer type questions

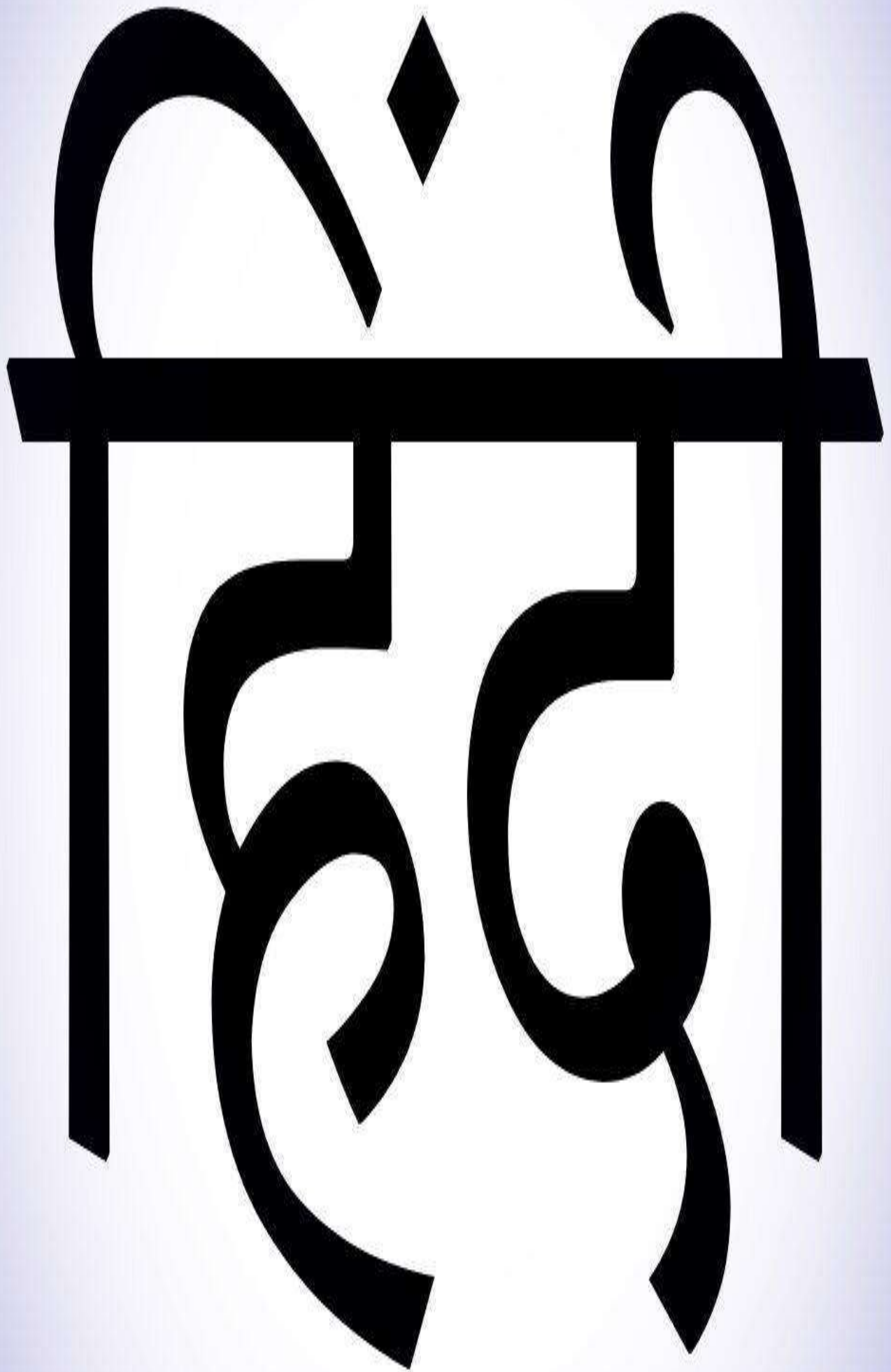
1. Give reasons for the followings :

- A balloon expands when taken to a higher altitude.
- Mountaineers carry oxygen cylinders at high altitudes.
- We not feel crushed by the large pressure of air around us.
- Leakage from the bottom of a tank appears stronger.

2. See the image given below and answer the following:

- Which phenomena are shown in the image?
- Describe the phenomena in short.
- Explain how temperature difference between land and sea creates air movement.





Assignment 1

मौखिक - (1) हिंदी मल्हार - 8 से पाठ -1 'स्वदेश' कविता पढ़ें एवं प्रश्नोत्तर याद करें।

Assignment 2

लिखित- 1. 'स्वदेश' कविता के आधार पर देशप्रेम एवं देशभक्ति से संबंधित किसी एक कविता का संग्रह कर अपनी हिंदी उत्तर पुस्तिका में लिखें।

2. 'स्वदेश' पाठ को पढ़कर निम्नलिखित प्रश्नों के उत्तर अपनी उत्तर-पुस्तिका में लिखकर स्व-मूल्यांकन करें -

क) सन् 1930 से 1947 के बीच 'तिरंगे झंडे के निर्माण की कहानी' पर एक संक्षिप्त लेख तैयार कर लिखिए।

ख) राष्ट्रीय ध्वज (तिरंगा झण्डा) देश का सम्मान है। अपने पूरे दिन के कार्यों को याद कीजिए और विचार कीजिए कि आपके तथा आपके मित्रों के किन कार्यों से **तिरंगा झण्डा उदास** हुआ होगा और किन कार्यों से **तिरंगे झंडे को प्रसन्नता** हुई होगी? अपने उत्तर का चुनाव इन बिंदुओं के आधार पर करें।

1. जब आप या भारतीय नागरिक सड़क नियमों का पालन करते हैं।
2. जब आप या आपके मित्र फरटि से गाड़ी चलाते हैं।
3. जब स्कूल का सभी कार्य समय पर पूरा करते हैं।
4. विद्यार्थी जब विद्यालय के नियमों का पालन नहीं करते हैं।
5. जब आप कागज़ या पेंसिल के टुकड़े कूड़ेदान में न डालकर इधर-उधर फेंकते हैं।
6. जब आप अपने माता-पिता का कहना मानते हैं।
7. जब आपके मित्र स्कूल बस में शोर करते हैं।
8. जब कोई जानवरों के साथ दुर्व्यवहार करता है।
9. जब आप अपने से बड़ों की सहायता करते हैं।
10. जब कोई सड़क पर या आसपास गंदगी करता है।
11. जब आप खाना खाने के बाद हाथ नहीं धोते हैं।



12. जब आप समय पर उठकर अपना सभी कार्य कर लेते हैं।

क्या आप उन कार्यों को पुनः करना चाहेंगे, जिन कार्यों से तिरंगा उदास हुआ होगा?

अगर नहीं तो क्यों? कारण अवश्य लिखिए।

Assignment 3

1. कबीर या तुलसी के किन्हीं 10-10 दोहों को कंठस्थ करें एवं हिंदी उत्तर पुस्तिका में लिखें।

2. निम्नलिखित विषयों पर अनुच्छेद उत्तर पुस्तिका में लिखें-

(क) नैतिक शिक्षा की आवश्यकता (ख) ग्लोबल वार्मिंग

Assignment 4

1. पढ़ने के लिए कुछ नई पुस्तकें मँगवाने हेतु बड़े भाई को पत्र लिखिए।

2. विद्यालय में हिंदी दिवस मनाने की प्रार्थना करते हुए प्रधानाचार्य को पत्र लिखिए।

Assignment 5

प्र.1 निम्नलिखित शब्दों के विलोम शब्द लिखकर स्व-मूल्यांकन करें-

ज्ञात, नित्य, नश्वर, शिष्ट, सभ्य, आधार, उत्साह, जय, उपयुक्त, आवरण, अपराधी,

अंतरंग, बहिरंग, संकल्प, अनुरक्त, सक्रिय, आकर्षण, उत्कृष्ट, इहलोक, सबल, आदान।

प्र.2 निम्नलिखित रेखांकित शब्दों के विलोम रूप लिखकर रिक्त स्थानों को पूर्ण कीजिए।

क) पक्षियों को बंधन में मत रखो, उन्हें ----- करो।

ख) बुराई करके ----- की आस मत रखो।

ग) निम्नस्तर से उठकर ----- स्तर तक पहुँचो।

घ) आज के जमाने में तो रक्षक ही ----- बने हुए हैं।

ड) मेहनत से बंजर धरती को भी ----- बनाया जा सकता है।



प्र.3 . निम्नलिखित शब्दों के पर्यायवाची शब्द लिखकर स्व-मूल्यांकन करें- :

अमृत, अतिथि, असुर, अर्थ, अनुचर, आरंभ, ईर्ष्या, अनमोल, अटल, आँख, आभूषण, अनादर, अवगुण, अनुरोध, उद्यान, उजाला, उन्नति, इन्द्र, उत्साह, उद्देश्य, किनारा, उपाय, कपड़ा, खुशबू ।

प्र.4 समास-विग्रह करके समास का नाम लिखिए।

नीलगगन	.....	.....
यथाक्रम	.....	.....
कमलनयन	.....	.....
जीवन-मरण	.....	.....
चक्रधर	.....	.....

प्र.5 दिए गए विग्रहों से समस्तपद बनाइये तथा समास का नाम भी लिखिए।

	समस्तपद	समास का नाम
क) पाठ के लिए शाला	-----	-----
ख) उद्योग का पति	-----	-----
ग) पाँच आबों का समाहार	-----	-----
घ) भला है जो मानस	-----	-----
ङ) नीला है कंठ जिसका	-----	-----



संस्कृत



1. शब्दरूपाणि

बालक, लता, मुनि, मति, अस्मद्, युष्मद्, तत्, किम्।

(सभी शब्दरूपों को मणिका कॉपी में लिखें व याद करें)

2. धातुरूपाणि-

पठ्, गम्, नम्, अस्, कृ, भू, क्रीड्, दृश् (पाँचो लकार, परस्मैपद)

(सभी धातुरूपों को मणिका कॉपी में लिखें व याद करें)

3. अधोलिखितानि वाक्यानि ध्यानेन पठित्वा क्रियापदानि चित्वा च लिखत-

- (1) आसीत् पुरा दशरथो नाम राजा।
- (2) गच्छ, विजयी भव।
- (3) विद्या राजसु पूज्यते न हि धनम्।
- (4) चन्द्रेण आकाशः शोभते।
- (5) सर्वेषु पुत्रेषु रामः सर्वप्रियः आसीत्।
- (6) सर्वे भवन्तु सुखिनः।
- (7) उद्यमेन हि सिध्यन्ति कार्याणि।
- (8) विद्या ददाति विनयम्।

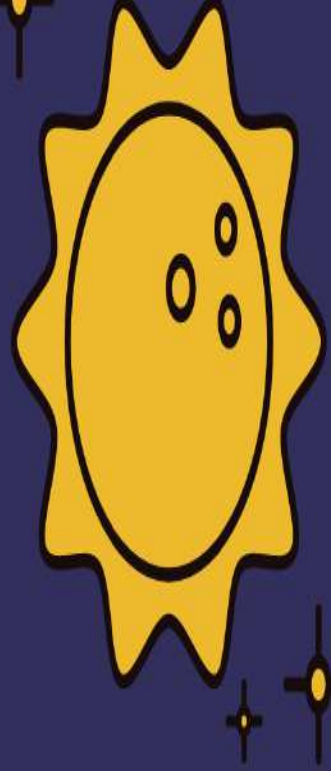
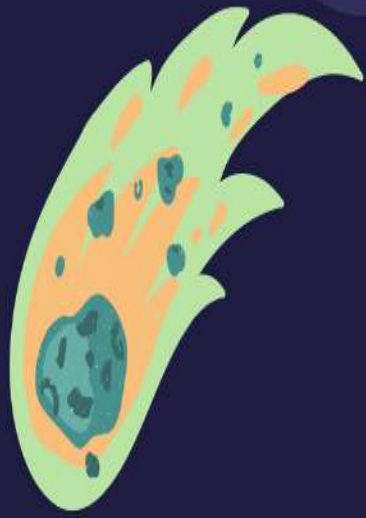
4. संस्कृत भाषायाम् अनुवादं कुरुत-

1. शेर जंगल में गरजता है।
2. हाथी चलते हैं।
3. पेड़ से पत्ते गिरते हैं।
4. बादलों से वर्षा होती है।
5. बच्चे विद्यालय जाते हैं।

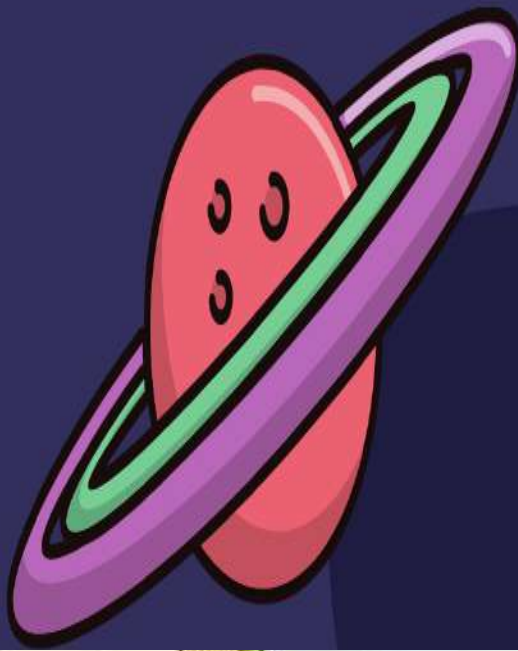


6. हम सब पढते हैं।
7. तुम खेलते हो।
8. गीता गीत गाती है।
9. बच्चे गेंद से खेलते हैं।
10. प्राचार्य छात्रों को पुरस्कार देते हैं।
11. आकाश से वर्षा हो रही है।
12. राम दशरथ के पुत्र थे।
13. पक्षी पेड़ों पर निवास करते हैं।
14. हम सब सायकल से बाज़ार जाते हैं।
15. मेरे घर के सामने एक बगीचा है।





SOCIAL SCIENCE



Assignment 1

NOTE : TO BE DONE IN ACTIVITY COPY

Learning objective/outcome

- To develop an understanding of important international organizations and their role in promoting global cooperation, peace, and economic development.

1. Write short notes on the following topics.
2. Draw or paste logos of all these organizations.
3. Write their full form and write in short about its composition, member nations, area of work:
 - BRICS
 - European Union
 - United Nations (Focus must be on UNESCO- a specialised agency of UN)
 - NATO
 - IMF
 - World Bank



Assignment 2

MA ACTIVITY:

TIMELINE OF MEDIEVAL HISTORY

CHAPTER-2. RESHAPING INDIA'S POLITICAL MAP

NOTE : TO BE DONE IN ACTIVITY COPY

Learning objectives/outcomes:

- 1.Reasearch skill
- 2.Organisational skill
- 3.Chronological ordering
- 4.Historical context understanding - relationship between events overtime.

DESCRIPTION :

A list of important events is given below. Carefully study the events and complete the task that follows.

EVENTS:

- I. Establishment of Bahmani Kingdom
- II. Arrival Vasco-De-Gama ,a Portuguese traveller
- III. Battle of Haldighati
- IV. Battle of Terrain
- V. First Battle of Panipat
- VI. Battle of Talikota
- VII. Battle of Saraighat
- VIII. Formation of the Khalsa by Guru Gobind Singh



- IX. Establishment of Vijayanagar Empire under Krishnadevraya
- X. Second Battle of Panipat
- XI. Death of Aurangzeb
- XII. Establishment of Delhi Sultanate(Slave dynasty)

Tasks:

- 1.Find out the year of the events when they happened.
- 2.Arrange the events in chronological order.
- 3.Draw a neat timeline with proper dates.(BCE/BC and CE/AD).USE A4 size paper to draw it.
- 4.Mark each event clearly with the correct year.
- 5.Write at least one information about a particular event and stick some picture related to the events.

NOTE: THE ACTIVITY MUST BE DONE IN YOUR SOCIAL SCIENCE ACTIVITY COPY ONLY.PASTE A4 SIZE IN YOUR COPY.KEEP IT CLEAN AND CLEAR.



Assignment 3

SUBJECT ENRICHMENT ACTIVITY

CLASS-VIII

SOCIAL SCIENCE

NOTE: TO BE DONE IN ACTIVITY COPY

Topic: Universal Adult Franchise and Electoral Systems (India and Other Countries)

Learning objectives/outcomes:

- Understand Universal Adult Franchise
- Learn how elections are conducted in India
- Recognize the importance of voting and compare with other countries

Main Question:

“Explain the concept of Universal Adult Franchise and describe the electoral system of India. Then compare it with the electoral systems of any four countries among China, Switzerland, United Kingdom, Russia, France, and the United States of America. Highlight similarities and differences.”

Guidelines for Students:

- Define Universal Adult Franchise
- Explain the electoral system of India (features, process, institutions)
- Choose any four countries from the given list
- Describe their electoral systems briefly
- Make a comparison table
- Include a conclusion on which system seems most democratic and why



- Add diagrams/charts/pictures

Assessment Rubrics:

Criteria	Marks
Understanding of Universal Adult Franchise	2
Explanation of India's Electoral System	2
Description of Other Countries	2
Comparison (similarities & differences)	2
Presentation & Creativity	1
Conclusion & Analysis	1
Total	10 Marks

***NOTE: SEA PROJECT MUST BE PRESENTED IN A HAND MADE FILE.**

CONTENT MUST BE HAND WRITTEN AND AVOID USE OF PLASTIC FOLDERS.



ASSIGNMENT 4

NOTE : WRITE THE FOLLOWING QUESTIONS AND ANSWERS IN YOUR SSC NOTEBOOK.

Ch.2. Reshaping India's political map

Keywords

- **Sultanate:** A territory ruled by a 'Sultan' — a title that some Muslim rulers adopted.
- **Iconoclasm:** The rejection or destruction of icons or religious images considered idolatrous.
- **Rana:** A title often used for Rajput kings.
- **Guerrilla warfare:** A style of fighting where small groups with knowledge of the terrain carry out surprise attacks and ambushes to defeat bigger armies
- **Hundi :** A hundi was a written instruction to make payment to an individual. It could be carried across political borders and enabled financial transactions without the need to carry currency.

1. **How did foreign invasions and the rise of new dynasties reshape India's political boundaries during this period?**

Ans. Foreign invasions and the rise of new dynasties significantly changed India's political boundaries in following ways:-

a) **Decline of Old Kingdoms**

Invasions by rulers like Mahmud of Ghazni weakened many regional kingdoms, making it easier for new powers to emerge.



b) Establishment of New Rule

Victories of leaders such as Muhammad Ghori led to the formation of the Delhi Sultanate, which expanded political control over northern India.

c) Expansion of Empires

Later, the Mughal Empire unified large parts of the subcontinent, creating new administrative boundaries and a stronger centralized government.

d) Change in Regional Power Balance

As new dynasties rose, many smaller kingdoms either disappeared or became subordinate states, reshaping the political map of India.

e) Cultural and Administrative Influence

These new rulers introduced different systems of administration, military organization, and culture, which influenced governance and territorial divisions.

2. How did India's economy adapt during times of political instability?

a) Agriculture Continued

Despite wars and political changes, agriculture remained the main source of livelihood and food supply.

b) Trade and Markets Survived

Internal and external trade continued through established routes, helping merchants and towns remain economically active.

c) Support from New Rulers

New dynasties such as the Delhi Sultanate introduced administrative and taxation systems that helped maintain economic stability.

d) Growth of Crafts and Industries



Artisans and craftsmen continued producing textiles, metalwork, and other goods, often supported by royal courts and urban markets.

e) Urban Centers Remained Important

Cities continued to function as centers of trade, administration, and craft production, helping the economy remain active.

3. What impact did this period have on the lives of the people?

a) Political Changes

Frequent invasions and the rise of new dynasties such as the Delhi Sultanate changed rulers and administrative systems, affecting governance and law.

b) Economic Adjustments

Farmers, traders, and artisans had to adapt to new taxation systems and changing market conditions.

c) Cultural Exchange

Interaction between different cultures led to new developments in language, art, architecture, food, and clothing.

d) Growth of Cities and Trade

Many towns and cities developed as centers of trade, crafts, and administration.

e) Social Changes

The mixing of traditions and communities gradually influenced social practices and everyday life.

4. Why did Guru Tegh Bahadur endure torture rather than convert, and why did he believe his sacrifice would make a difference?



- a) Guru Tegh Bahadur believed everyone has the right to follow their own religion.
- b) He refused to give up his faith even under severe torture and pressure.
- c) He stood firmly for truth, justice, and religious freedom.
- d) He believed his sacrifice would inspire people to stand against injustice.
- e) He thought his martyrdom would help protect religious freedom for all.

5. What values did the Sikh Gurus and the Khalsa embody?

ANS.

The Sikh Gurus and the Khalsa embodied these values:

- a) **Equality** - treating all people the same, regardless of caste or religion.
- b) **Justice and courage** - standing up against oppression and protecting the weak.
- c) **Faith and devotion** - believing in one God and living truthfully.
- d) **Selfless service (seva)** - helping others and serving society.
- e) **Discipline and bravery** - being ready to defend righteousness and freedom.

6. Compare the political strategies of the Delhi Sultanate and the Mughals. What similarities and differences existed between them?

Similarities

- a) Both expanded their empires through military conquests and wars.
- b) Both collected taxes and used them to maintain large armies and administration.
- c) Both ruled from centralised governments with powerful rulers.



Differences between the political strategies of the Delhi Sultanate and the Mughals

Basis	Delhi Sultanate	Mughals
Method of expansion	Mostly depended on military force and conquests .	Used both warfare and diplomacy , such as alliances and negotiations.
Relations with local rulers	Rarely included local rulers in administration.	Included many local rulers like the Rajputs in government under rulers such as Akbar.
Religious policy	Often imposed taxes like jizya on non-Muslims.	Some rulers, especially Akbar, promoted religious tolerance and removed the jizya for some time.

7. Why did kingdoms like the Vijayanagara Empire and the Ahom Kingdom manage to resist conquest for a longer time compared to others? What geographical, military, and social factors contributed to their success?

Ans: Kingdoms like the Vijayanagara Empire and the Ahom Kingdom resisted conquest for a longer time due to a combination of geographical, military, and social factors:

a) Geographical factors

- i. Vijayanagara Empire was protected by rivers, hills, and rocky terrain.
- ii. Ahom Kingdom used dense forests, hills, and the Brahmaputra River to defend their territory.

b) Military factors

- i. Both kingdoms had strong armies and good war strategies.



ii. The Ahoms used guerrilla warfare and naval battles on rivers to defeat enemies.

c) Social factors

i. The people strongly supported their rulers and armies.

ii. In the Ahom kingdom, the paik system required people to serve the state with labour or military service, helping maintain a strong defence.

For students

1) What might have happened if the Vijayanagara Empire had won the Battle of Talikota? Imagine and describe how it could have changed the political and cultural history of south India.

2) Compare the maps in Figs. 2.3, 2.12 and 2.16. What differences do you notice? What is the 'reshaping' that has occurred?

Topic: Ch-5_ Universal Franchise and India's Electoral System

Word- Meanings:

1. **Constituency**- An area whose voters elect a representative to a legislative body.

2. **System** - A group of interconnected or interdependent elements that work together to achieve a common purpose or function.

3. **Coalition**: A group of two or more parties working together

4. **Dissolution**: Expiry or termination due to the end of its term or other Constitutional reason



5. Bicameral legislatures: A bicameral legislature is a system where the legislative body is divided into two separate chambers or houses.

6. EVMs - India's electronic voting machines.

7. VVPAT-Voter Verifiable Paper Audit Trail systems.

8. MCC - Model Code of Conduct

Answer the following questions:

Q1. What is universal adult franchise?

Ans. Universal Adult Franchise is the right of all adult citizens (above 18 years of age) to vote in an election, regardless of their caste, gender, role, creed, religion, economical, educational or social status.

Q2. What is an Electoral System?

Ans. An Electoral system is the method or set of rules by which elections are conducted and representatives are chosen. It includes the process of voting, counting votes and declaring results.

Q3. How does India's electoral system work?

Ans. i) India's electoral system works through free and fair elections where representatives are chosen by the people using secret ballots, based on the principle of Universal Adult Franchise.

ii) Voters cast their vote using Electronic voting machine with VVPAT slips for verification.

iii) For Lok Sabha and state assembly elections, the First Past the Post System is used- the candidate with the most votes in the constituency wins.

Q4. How can technology assist in making voting more accessible?

Ans. Technology can help through:



- i. Ensuring polling stations are on the ground floor.
- ii. Mobile apps to request wheelchairs or transport to Polling Station
- iii. Issuing voter ID cards and slips in Braille.
- iv. Adding Braille features on voting machines.
- v. Providing wheelchairs, ramps, and free pick-and-drop transport

Q5. Give examples of direct and indirect elections.

Ans. In a Direct Election, citizens vote directly for the candidates they wish to elect. For example, elections to the Lok Sabha, State Legislative Assemblies, Gram Panchayats, and Municipal Corporations are all direct elections. Here, the voters choose their representatives themselves through Universal Adult Franchise.

In contrast, an Indirect Election is when elected representatives vote to choose a leader or representative. Examples of indirect elections in India include the election of the President, Vice President, and Members of the Rajya Sabha. In these cases, Members of Parliament (MPs) or Members of Legislative Assemblies (MLAs) cast votes on behalf of the people.

Q6. How is the election of members to the Lok Sabha different from that to the Rajya Sabha?

Ans. Members of the Lok Sabha are elected through direct elections. All citizens aged 18 and above vote directly for their representatives in their constituencies. The candidate with the most votes becomes a Member of Parliament (MP).

On the other hand, Rajya Sabha members are chosen through indirect elections. They are elected by the MLAs (Members of State Legislative Assemblies), not by the public. Some members are also nominated by the President for their special contributions to society.

Q7. What, in your view, are the advantages of the EVM over ballot papers?



Ans. Advantages of EVM (Electronic Voting Machine) over ballot papers are:

- i. **Faster Counting:** Results can be declared quickly as counting is done electronically.
- ii. **Cost-effective:** Saves paper, printing and transportation costs.
- iii. **Reusable:** EVMs can be used multiple times, they have to be only calibrated as per the requirement
- iv. **Reduces Errors:** Minimises human errors in counting.
- v. **Eco-friendly:** No need of paper, so it helps save trees
- vi. **Prevents Fraud:** Reduces chances of invalid or tampered votes.

Q8. Why do you think a proportion of seats in the Lok Sabha is reserved for Scheduled Castes and Scheduled Tribes? Write a short note.

Ans. A proportion of seats in the Lok Sabha is reserved for Scheduled Castes and Scheduled Tribes to ensure their adequate representation in Parliament. These communities have faced historical discrimination and social disadvantage, which limited their participation in politics. Reservation helps give them a voice in the law-making process, promotes equality and supports their inclusion in the democratic system.

Q4. In 1947, our literacy rate was about 14 per cent, only about 8 per cent among women. Some argued that the right to vote should be given only to literate people. Why the Constitution makers may have decided on Universal Franchise from the time of Independence itself

Q12. Social media is changing the way we experience elections from catchy campaign reels and live speeches to political debates on Instagram and Twitter. But is this strengthening democracy or confusing it? What are the benefits and the challenges? What might be the Future of Elections in Digital Age?

Q.4 AND Q.12 TO BE DONE BY THE STUDENTS



Assignment 5

NOTE : TO BE DONE IN ACTIVITY COPY OR PROJECT FILE OR YOU CAN TAKE A PRINTOUT OF IT AND WRITE THE ANSWERS IN THE PRINTED WORKSHEET ITSELF.

Worksheet 1

Ch.2. Reshaping India's political map

Multiple choice Questions

1. Ala-ud-din Khilji referred to himself as 'Sikander Sani' on his coins. What does this title mean?

- a. Second Alexander
- b. Mighty Ruler
- c. Great Warrior
- d. First Conqueror

2. Why did Muhammad bin Tughlaq shift his capital from Delhi to Daulatabad?

- A) To establish trade routes with the south
- B) To avoid the heat of Delhi summers
- C) He believed its central location offered better control of the empire
- D) Daulatabad had a larger population than Delhi



3. What was the primary reason Muhammad bin Tughlaq's 'token currency' scheme failed?

- a. Copper was too expensive to mint
- b. It encouraged widespread counterfeiting of copper coins
- c. The public refused to use anything but gold
- d. Foreign traders would not accept copper

4. Why did the kings of Vijayanagara treat Portuguese travellers like Domingo Paes very well?

- a. To learn about European philosophy
- b. Because they wanted to buy precious horses for their military
- c. To establish a common religion
- d. They were seeking an alliance against the Mughals

5. Which battle in 1526 led to the establishment of the Mughal Empire by Babur?

- a. Battle of Waterloo
- b. Battle of Agincourt
- c. Battle of Hastings
- d. First Battle of Panipat

6. What was 'jauhar,' as practiced by Rajput women during invasions?

- A. Jauhar was a ceremonial feast held before battles by Rajput warriors.
- b. Jauhar was a form of tribute paid to invaders by Rajput families.
- c. Jumping into mass fires to avoid capture and enslavement



d.Jauhar was a ritual dance performed by Rajput women during celebrations.

7.Akbar promoted the doctrine of 'sulh-i kul.' What does this term literally mean?

- a.War against infidels
- b.Peace with all (tolerance of all faiths)
- c.Strength through unity
- d.Rule by the sword

8.Who was the founder of Sikhism who spread the message of equality and the oneness of God (Ik Onkār)?

- a.Guru Nanak Dev Ji
- b.Guru Gobind Singh Ji
- c.Guru Ram Das Ji
- d.Guru Tegh Bahadur Ji

9.Under the Delhi Sultanate, what was the 'iqta system'?

- a.A religious court system
- b.A method of ship-building
- c.Assigning territories to nobles to collect taxes for the treasury
- d.A system of hereditary succession for ministers

10.What was the name of the Persian translation of the Mahābhārata commissioned by Akbar?

- a.Khosrownama
- b.Razmnama



c. Faridunnameh

d. Shahnama

Fill in the blanks

1. _____ and Bukka founded the Vijaynagar empire.
2. The Bahmani sultanate later broke up into five _____ sultanates.
3. The _____ Mahal is a testament to the flourishing of art and architecture under the Mughal's.
4. The sikh sacred text, Guru Granth Sahib, was compiled by _____.
5. The martyrdom of Guru _____ Bahadur strengthened Sikh resistance against Mughal rule.
6. The _____ system was a grading scale used by the Mughals to determine the rank and salary of government officials.
7. The Mughal Empire was founded by _____ after the First Battle of Panipat in 1526.

Match the column

<u>Column A</u>	<u>Column B</u>
a. <u>Qutub Minar</u>	i. <u>Tax on non- Muslims.</u>
b. <u>Battle of Talikota</u>	ii. <u>Akbar's military system</u>
c. <u>Jiziya</u>	iii. <u>Built from destroyed temples</u>
d. <u>Mansabdari system</u>	iv. <u>Destroyed Vijayanagara</u>
e. <u>Hundi</u>	v. <u>Medieval banking system</u>

Assertion Reason

1. Assertion: The introduction of 'token currency' by Muhammad bin Tughlaq led to an economic decline.

Reason: The lack of proper checks allowed people to easily counterfeit the copper coins, creating confusion in trade



A) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

(B) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(C) Assertion is true, but Reason is false.

(D) Assertion is false, but Reason is true.

2. Assertion: Aurangzeb's reign saw the greatest territorial expansion of the Mughal Empire.

Reason: His 25 years of continuous warfare in the Deccan strengthened the empire's treasury and administrative stability

A) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

B) (B) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(C) Assertion is true, but Reason is false.

(D) Assertion is false, but Reason is true.

3. Assertion: Applying the European term 'medieval' to Indian history is considered not ideal by many historians.

Reason: The history of India and Europe are very different, and the term originally described the period between the fall of the Roman Empire and the Renaissance in Europe.

(A) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

(B) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(C) Assertion is true, but Reason is false.



(D) Assertion is false, but Reason is true.

4. Assertion: The Vijayanagara Empire achieved a "cultural renaissance" during the reign of Krishnadevaraya.

Reason: Krishnadevaraya was a patron of poets and scholars and himself composed an epic poem called *Āmuktamālyada* in Telugu.

A) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

(B) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(C) Assertion is true, but Reason is false.

(D) Assertion is false, but Reason is true.

Define the following terms.

1. Sultanate 2. Iconoclasm 3. Rana 4. Guerrilla 5. warfare 5. Hundi



Assignment 6

NOTE : TO BE DONE IN ACTIVITY COPY OR PROJECT FILE OR YOU CAN TAKE A PRINTOUT OF IT AND WRITE THE ANSWERS IN THE PRINTED WORKSHEET ITSELF.

WORKSHEET 2

Universal Adult Franchise & India's Electoral System

Section A: Multiple Choice Questions (MCQs)

1. A village has 1,200 people, but only 800 names appear on the electoral roll. What does this indicate?

- a) Elections cannot be conducted
- b) Only selected people can vote
- c) Some eligible voters are not registered
- d) The Election Commission is not required

2. Meena is 17 years and 10 months old during elections. She wants to vote. What will happen?

- a) She can vote with permission
- b) She can vote if she has ID
- c) She cannot vote yet
- d) She can vote only in local elections

3. A candidate wins an election by bribing voters. Which principle of elections is violated?

- a) Free and fair elections
- b) Equality before law



- c) Right to freedom
- d) Government cannot change

4. Assertion (A): The Election Commission of India is independent.

Reason (R): It is free from interference of executive or legislature.

- a) Both A and R are true, and R explains A
- b) Both A and R are true, but R does not explain A
- c) A is true, R is false
- d) Both are false

5. A person shifts to another city but does not update their voter registration. What problem may arise?

- a) They cannot vote in the new place
- b) They can vote anywhere
- c) They will be fined
- d) They can vote twice

6. Why is it important that elections are held at regular intervals?

- a) To increase government power
- b) To give citizens a chance to change their representatives
- c) To reduce population
- d) To help political parties earn money

7. A person tries to vote twice using different identities. This is:

- a) Acceptable practice
- b) A smart strategy



c) Electoral malpractice

d) A legal right

8. Why are constituencies created?

a) To divide voters into manageable groups for representation

b) To reduce elections

c) To increase taxes

d) To control population

Section B: Fill in the Blanks

1. Universal Adult Franchise was adopted in India after ____.

2. The right to vote is also called ____.

3. Elections are held at regular ____.

4. The list of eligible voters is called the ____.

5. India is the ____ democracy in the world.

Section C: Match the Following

Column A

1. Franchise

2. Election Commission

3. Universal Adult Franchise

Column B

a. Age 18+ voting right

b. Conducts elections

c. Right to vote



Section D: Source-Based Questions

Read the passage and answer the questions:

"India adopted Universal Adult Franchise after independence. This means that every citizen above 18 years of age has the right to vote, regardless of caste, religion, gender, or economic status. Elections are conducted by an independent body to ensure fairness."

Questions:

1. Name one condition required to vote in India.
2. Why is equality important in voting?
3. Which body ensures fair elections in India?

Section E: Very Short Answer Questions

1. How is the election of the Vice President conducted?
2. What is the role of Model Code of Conduct during elections?
3. Who prepares the electoral roll?
4. What is the role of political parties in elections?
5. Electronic Voting Machines (EVMs) are better than ballot papers, Give a reason.
6. Why were special voting facilities like home voting introduced in 2024?

Section F: Arrange the following in a sequence

List of all the different election related activities are given below, arrange them in a sequence, beginning with the first activity and ending with the last.



The activities are:

1. releasing the manifesto;
2. counting of the votes;
3. making of the voters list;
4. election campaign;
5. declaration of election results;
6. casting of votes;
7. ordering of the re- poll;
8. announcing election schedule;
9. filling nomination.



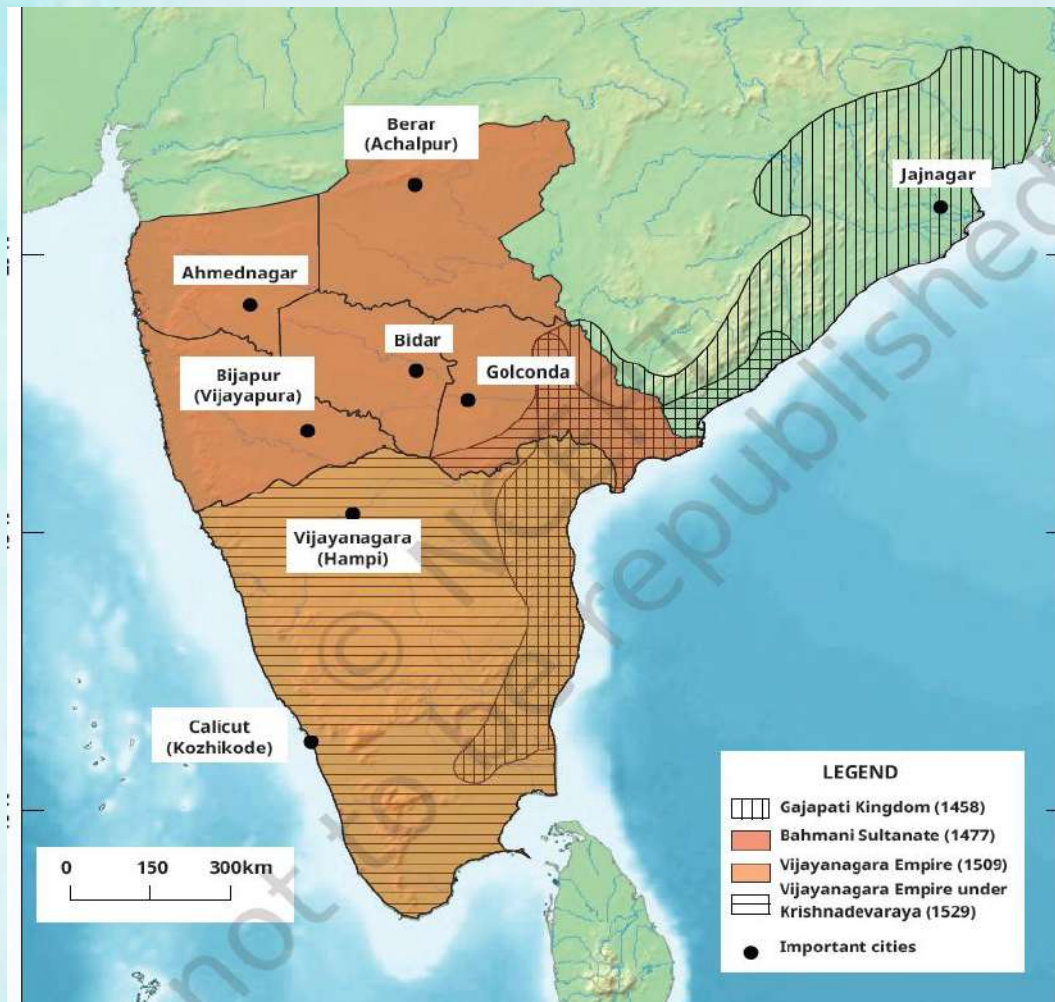
Assignment 7

Map work

NOTE: TO BE DONE IN ACTIVITY COPY

MAP 1

On an outline political map of India locate the following kingdoms and cities and answer the following questions with help of the map.



1. Name the kingdom shown in green shaded/striped region along the eastern coast.

☞ _____

2. Identify the kingdom marked in light orange covering the Deccan region (1477).

☞ _____

3. Which empire expanded further during the reign of Krishnadevaraya (1529) (indicated by grid pattern)?

☞ _____

4. This city was the capital of the Vijayanagara Empire and is located near the Tungabhadra River.

☞ _____

5. This coastal city on the western coast was an important centre of trade with foreign merchants.

☞ _____

6. This region in the north-eastern part of the map belonged to the Gajapati rulers.

☞ _____

7. Name any two cities under the Bahmani Sultanate shown in the map.

☞ _____, _____

(HOTS)

1. Which empire had better access to the western coast trade routes? Why?

☞ _____



2. Identify which kingdom controlled the eastern coastal region and explain its advantage.

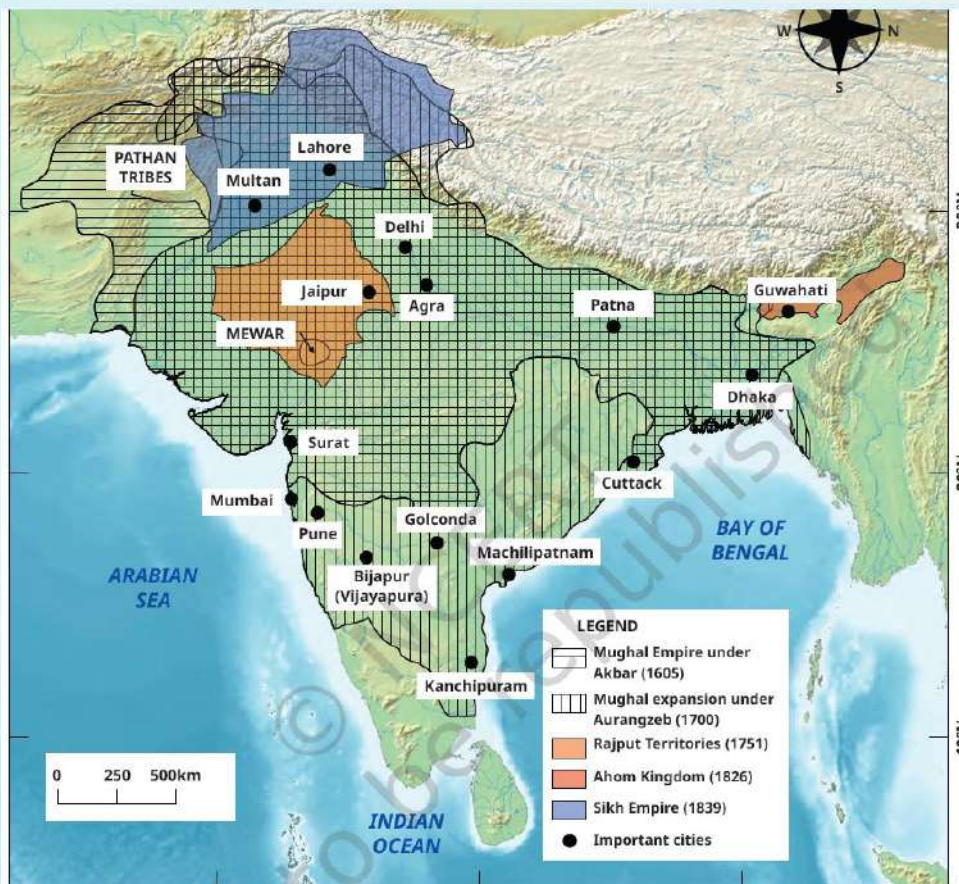
☞ _____

3. Observe the expansion under Krishnadevaraya:

o In which direction did the empire expand the most?

☞ _____

MAP 2



- i. Which city served as a major political center of the Mughal Empire?
- ii. Identify the city located in the Ahom Kingdom region.
- iii. Which two cities are located near the Arabian Sea coast?
- iv. Name one important port city on the Bay of Bengal.
- v. Which region lies between Delhi and Surat?
- vi. Which regional powers emerged after the decline of the Mughal Empire? Identify them on the map.
- vii. Why do you think cities like Surat and Machilipatnam were important?
- viii. Observe the location of Rajput territories. What geographical advantage might they have had?
- ix. Which areas appear to be outside Mughal control even at its greatest extent?

