

Ananya Panday's  
Maldives vacay looks  
exotic and calming



Bollywood actress Ananya Panday is living the best phase of her life.

The actress recently had a gala time in the Maldives and has been sharing an umpteen number of photos straight from her exotic holiday. She recently shared a few pictures of herself posing against the dawn sky, with hues of shades of blue. In another picture, Ananya was seen posing cutely with a bicycle.

Recently, Panday shared a video of herself indulging in her favourite delicacy while on the trip. She was seen shooting the video of a variety of croissants and puffs at a fine bakery in Maldives. She also gave a glimpse of her lavish villa at the exotic location. Ananya seems to have gone to the Maldives to unwind herself and gear up for her upcoming professional commitments. Talking about her professional career, Ananya is all set for her upcoming films "Chand Mera Dil" starring Lakshya Lalwani and 'Tu Meri Main Teri, Main Tera Tu Meri' opposite Kartik Aaryan. Recently, Ananya Panday's OTT show "Call Me Bae" clocked 1 year, and the actress shared a compilation video from the show on a social media account to celebrate its one year. She penned a note expressing her excitement for her forthcoming season of the show. "1 year to CALL ME BAE, and I'm ever grateful for all the love we still get and all the questions on when we're doing season 2, which is going to be super soon. Can't wait to get back with the best team and step into Bae's heels again. She's honestly the best girl," she wrote. Expressing gratitude, Ananya wrote, "I am beyond grateful!!! #CallMeBae is trending globally at #6 and in the top 10 in so many nations. I'm truly touched by all the love directed towards Bae and the entire cast. The way fans are emulating Bae's style and recreating her looks and lines is heartwarming."

The origins of World Environment Day (WED), a significant global event aimed at raising awareness and promoting action towards environmental protection. Established by the United Nations Environment Program (UNEP) in 1972, this day serves as a platform to highlight pressing ecological issues faced by our planet and foster sustainable practices. This year, the theme for World Environment Day was 'Land restoration, desertification, and drought resilience' under the slogan 'Our land. Our future. We are #GenerationRestoration.' The Kingdom of Saudi Arabia was host the 2024 World Environment Day global celebrations, marking a pivotal moment as the world commemorates the 30th anniversary of the UN Convention to Combat Desertification. **Significance and History:** World Environment Day holds immense importance as it raises awareness, catalyzes action, and promotes environmental sustainability. Through campaigns, events, and initiatives, this day mobilizes individuals, communities, and organizations to make positive changes and address environmental challenges for a sustainable future.

# Overview of Laminar Flow

You know that an ant releases an invisible, fragrant chemical called Pheromone. The successive ants smell this chemical and march like an army. So, don't you think this is a laminar flow? Yes, that's true.

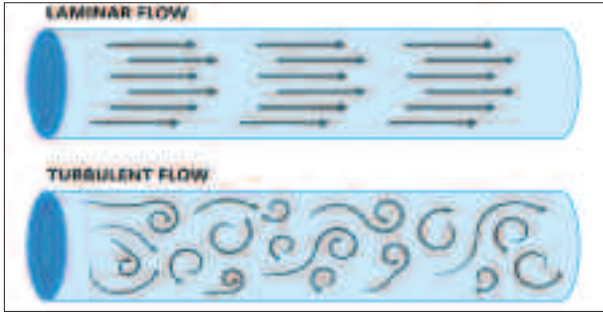
A laminar flow in fluid mechanics is the straight or linear flow of all the particles of the fluid that is similar to the marching of an ant. If in this case ants deviate from their path and make two directions, then it is the non-laminar flow.

**Laminar Fluid:** In a fluid, for laminar flow, all the particles carry constant attributes like velocity, pressure, and speed. These particles have a smooth movement as we walk on a smooth road.

You can think of the laminar flow of liquid as the straight road (free of turns). While driving when you encounter a turn on the left or right of the road, the laminar flow becomes a non laminar flow.

**Laminar Flow in Fluid Mechanics:** In fluid dynamics, laminar flow is a smooth or regular movement of particles of the fluid. In Laminar flow, the fluid flows in parallel layers with lesser lateral mixing and no disruption between the layers. We call the laminar flow a streamline or viscous flow.

The terminology 'streamlined flow' is descriptive of the



laminar fluid flow because, in laminar flow, layers of water flow over one another at varying speeds with virtually no mixing between layers, fluid particles move in definite and observable paths or streamlines just like the marching of Indian Army.

When a fluid flows via a closed channel such as a pipe or between two flat plates, the laminar flow may occur depending on the velocity, viscosity of the fluid, and the size of the pipe. Laminar flow occurs at lower velocities and high viscosity.

**Laminar Flow in Liquid:** A laminar flow in a liquid depends on the two following factors: Velocity & Viscosity.

Whenever a fluid flows in a pipe, the velocity of the laminar fluid flow remains to change that's what we can observe in the above figure. So, when there is a pressure difference in the below and the above layer of the laminar fluid, the velocity difference also occurs.

**Real-life Application of Laminar Flow:** In aerodynamics, the same concept applies to dynamic lift. We see an airfoil, which carries a pressure difference; however, the flow remains laminar, and this pressure difference allows the wings of an aeroplane to lift up. So, here, laminar flow is one of the applications in the mechanics of air.

However, when the viscosity of the liquid is higher like honey, peanut butter, milk butter; they all have a higher viscosity and when they flow after melting, their layers remain intact, and therefore, all the particles to remain in close vicinity with each other, without leaving their exact lattice point (imaginary) while making movement in the forward direction.

This smooth forward movement is the result of the laminar flow. So, the more is the viscosity, the more is the laminar flow, and the more is the laminar flux. So, do you know how laminar flux varies and

turns to turbulence? If you don't know, let's understand this in detail:

**Laminar Flow to Non-Laminar Flow:** Do you know why a laminar flow turns to a non-laminar flow? In the above example, we discussed an application of aerodynamics for the laminar flow.

In another example, we discussed honey, ghee, peanut butter, milk butter, and so on. These all eating items have high viscosity. Let's suppose that you kept an opened ghee packet under the Sun. Now, on melting, it starts flowing very quickly in varying directions. So, when this variation in its laminar fluid flow occurs, this is the turbulent flow or turbulence nature. Turbulence occurs when the velocity of the fluid increases with the decrease in its velocity. We consider the turbulence flow as a non-laminar flow.

Let's consider another example to understand the same:

When you are hurrying to your office, and you encounter heavy traffic after making a turn, you adjust the flow of your driving to whatever direction you can take to cross the traffic, here, your driving has a turbulent or a non-laminar flow because at each adjustment to drive ahead of all the vehicles, the property of your vehicle in motion like velocity, acceleration is changing.

1. Recently, who has been elected as the new president of the International Court of Justice (ICJ)?  
[A] Nawaf Salam  
[B] Dalveer Bhandari  
[C] Joan Donoghue  
[D] Ronny Abraham

2. Who has been bestowed with the prestigious 'Chevalier de la Légion d'Honneur', France's highest civilian honour?  
[A] Rajnath Singh  
[B] Shashi Tharoor  
[C] Neeraj Chopra  
[D] LK Advani

3. Ameen Sayani, who passed away recently, was associated with which profession?  
[A] Scientist  
[B] Politician  
[C] Radio Presenter  
[D] Cricketer

4. Recently, who has become the first world leader to reach two crore subscribers on his official YouTube channel?  
[A] Jair Bolsonaro, Brazil  
[B] Narendra Modi, India  
[C] Joe Biden, USA  
[D] Leo Varadkar, Ireland

5. What was the primary field of Ved Prakash Nanda, who passed away recently?  
[A] Agriculture  
[B] Environment Protection  
[C] International Law  
[D] Human Rights



[C] International Law  
[D] Human Rights

6. Who is the author of recently released the book titled "Why Bharat Matters"?  
[A] Amit Shah  
[B] Nirmala Sitharaman  
[C] S. Jaishankar  
[D] Rajnath Singh

7. Who is the author of "Chip War: The Fight for the World's Most Critical Technology"?  
[A] Yuval Noah Harari  
[B] Malcolm Gladwell  
[C] Chris Miller  
[D] Walter Isaacson

8. Who has been appointed as the first woman Director-General of Police in Maharashtra?  
[A] B. Sandhya  
[B] Archana Sondawale  
[C] Sushma Singh  
[D] Rashmi Shuklla

9. Who has been appointed as the first woman

ed as India's ambassador to the World Trade Organisation (WTO) in Geneva?

[A] Brajendra Navnit  
[B] Senthil Pandian C  
[C] Pankaj Kumar Bansal  
[D] M Selvendran

10. Which two BSF personnel were awarded the President's Medal for Gallantry posthumously on the eve of the 75th Republic Day?

[A] Sanwala Ram Vishnoi and Shishupil Singh  
[B] Naik Jasbir Singh and Vikas Choudhary  
[C] Sunil Kumar and Satendra Singh  
[D] Harminder Singh and Daljeet Singh

11. Manohar Joshi, who passed away recently, was former Chief Minister of which state?

[A] Gujarat  
[B] Maharashtra  
[C] Karnataka  
[D] Tamil Nadu

12. Shafiqur Rahman Barq, recently passed away, was associated with which field?

[A] Sports  
[B] Politics  
[C] Social work  
[D] Aerospace

Answer  
1. A, 2. B, 3. C, 4. B, 5. C, 6. C, 7. C, 8. D, 9. B, 10. A, 11. B, 12. B.

## World Environment Day

On June 5th of each year, the world observes World Environment Day (WED), a significant global event aimed at raising awareness and promoting action towards environmental protection. Established by the United Nations Environment Program (UNEP) in 1972, this day serves as a platform to highlight pressing ecological issues faced by our planet and foster sustainable practices.

This year, the theme for World Environment Day was 'Land restoration, desertification, and drought resilience' under the slogan 'Our land. Our future. We are #GenerationRestoration.' The Kingdom of Saudi Arabia was host the 2024 World Environment Day global celebrations, marking a pivotal moment as the world commemorates the 30th anniversary of the UN Convention to Combat Desertification.

**Significance and History:** World Environment Day holds immense importance as it raises awareness, catalyzes action, and promotes environmental sustainability. Through campaigns, events, and initiatives, this day mobilizes individuals, communities, and organizations to make positive changes and address environmental challenges for a sustainable future.

The origins of World



Environment Day can be traced back to 1972, when the United Nations General Assembly established it as a platform to address pressing environmental issues and encourage global action. The first meeting was held in Stockholm, Sweden, in the same year, where the concept was debated and discussed. Since 1973, the tradition has continued annually on the same date.

In alignment with the theme, the sixteenth session of the Conference of the Parties (COP 16) to the United Nations Convention to Combat Desertification (UNCCD) will be held in the Saudi capital, Riyadh, from December 2nd to 13th, 2024. This significant event will bring together global leaders, policymakers, and stakeholders to discuss and formulate strategies to address the pressing issues of land restoration, desertification, and drought resilience.

Land restoration, desertification, and drought resilience are crucial issues that demand immediate action. Healthy land, fertile soil, and clean water are essential for a thriving planet and sustainable development. By addressing these challenges, we can mitigate the impacts of climate change, protect biodiversity, and ensure food security for present and future generations.

As we celebrate World Environment Day 2024, let us unite as the #GenerationRestoration and take collective action towards restoring degraded lands, combating desertification, and building resilience against drought. Together, we can create a sustainable future for our planet, one where healthy ecosystems thrive, and communities are empowered to adapt to the challenges posed by climate change.

## GK Quiz on Art and Culture

1. Salar Jung Museum, which was seen in the news, is located in which city?  
[A] Bhopal  
[B] Lucknow  
[C] Kolkata  
[D] Hyderabad

2. Rusoma Orange Festival, recently seen in the news, is celebrated in which state?  
[A] Assam  
[B] Nagaland  
[C] Sikkim  
[D] Manipur

3. Shumang Leela, recently seen in the news, is a traditional form of theatre performed in which state?  
[A] Mizoram  
[B] Sikkim  
[C] Assam  
[D] Manipur

4. Which Indian state was the theme state of World's Largest International Crafts Fair, Surajkund Mela 2024?  
[A] Gujarat  
[B] Rajasthan  
[C] Madhya Pradesh  
[D] Maharashtra

5. Mesolithic era rock paintings have recently been discovered in which state?  
[A] Telangana  
[B] Madhya Pradesh  
[C] Gujarat  
[D] Uttar Pradesh



6. Subika paintings, which were seen in the news, are linked to which community's cultural history?  
[A] Bhils  
[B] Gond  
[C] Meitei  
[D] Chiru

7. Recently, 390-year-old Deepastambham (lamp post) was found on the edge of which river?  
[A] Krishna River  
[B] Kaveri River  
[C] Godavari River  
[D] Pranrita River

8. Ajanta and Ellora caves, recently seen in the news, are located in which state?  
[A] Maharashtra  
[B] Gujarat  
[C] Madhya Pradesh  
[D] Rajasthan

9. Kokborok language, recently seen in the news, is recognized as one of the official state languages of which state?  
[A] Mizoram

[B] Manipur  
[C] Assam  
[D] Tripura  
10. Dhokra Shipkala, recently seen in the news, is associated with which one of the following?  
[A] Ancient painting  
[B] Metal casting  
[C] Wood carving  
[D] Embroidery

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12. Hastsal Minar, which was seen in the news, is located in which state/UT?  
[A] Jammu & Kashmir  
[B] Rajasthan  
[C] Andhra Pradesh  
[D] Delhi

13. Sominsai festival, recently seen in the news, is associated with which country?  
[A] Egypt  
[B] Vietnam  
[C] Japan  
[D] China

14. Nagi Bird Festival, recently seen in the news, is associated with which state?  
[A] Gujarat  
[B] Uttar Pradesh  
[C] Bihar  
[D] Odisha

15. Archaeologists recently discovered a Harappan-era fortified settlement named Morodharo in which state?  
[A] Haryana  
[B] Rajasthan  
[C] Gujarat  
[D] Uttar Pradesh

16. Recently, Prime Minister Narendra Modi laid the foundation stone of Shri Kalki Dham Temple in which district of Uttar Pradesh?  
[A] Ayodhya  
[B] Saharanpur  
[C] Sambhal  
[D] Sitapur

17. 'Maru Mahotsav', also known as Desert Festival, is celebrated in which region of India?  
[A] Jaipur  
[B] Jaisalmer  
[C] Kutch  
[D] Bikaner

18. Who is the main architect of the Ram Mandir, Ayodhya?  
[A] Pramukh Swami Mahara  
[B] Arun Yogiraj  
[C] Subhash Bhoite  
[D] Chandrakant Sompura

Answer  
1. D, 2. B, 3. D, 4. A, 5. A, 6. C, 7. A, 8. A, 9. D, 10. B, 11. B, 12. D, 13. A, 14. C, 15. C, 16. C, 17. B, 18. D.

## Latent Heat of Water: Definition & example

Have you ever thought about what happens when any matter changes its state? Changing of phase undergoes a heat transfer, but the temperature of the substances remains constant. So, the heat necessary for phase changes of water from solid to liquid or gas, or liquid to solid or gas, without any temperature alteration is known as latent heat of water.

**Definition of Latent Heat:** The energy radiated or absorbed by a thermodynamic system or a body during its change of state and without any change in its temperature is termed as latent heat (also called latent energy). Moreover, latent heat is generally represented in calories or joules per unit mass or mole of the body experiencing phase change.

Latent heat is a type of heat energy, described in energy per unit of mass, that must be achieved for a phase change to occur in a substance. The most familiar changes are seen in water, such as freezing liquid water to create ice or boiling water to create gas. During this process, you are continuing to add heat energy to water, but the water temperature does not increase. Where is the energy going? The answer lies in latent heat.

For instance, consider melting ice blocks. Ice melts as it absorbs heat and undergoes a rise in its temperature. Furthermore, during the melting process, ice absorbs latent energy which helps in the change of its state from solid to liquid. However, the



temperature of ice does not change when it intakes latent heat.

Furthermore, three primary forms of latent heat are as follows:

**Latent Heat of Fusion-** It refers to the energy related to freezing of liquid and melting of solid.

**Latent Heat of Vaporization-** Whereas, latent heat of vaporization refers to the energy related with changing of solid or liquid to gas and condensation of vapour.

Take an example of a bucket of water which is boiling. Moreover, when water in the bucket is boiling, its temperature stays at 100 degree Celsius or 212 degrees Fahrenheit till it completely evaporates. This happens because water absorbs the heat applied as latent heat of vaporization. Further, it is taken by the evaporating molecules.

Additionally, in this same way, the temperature of ice when it melts is 0 degree Celsius or 32 degrees Fahrenheit. Also, the water

which is formed with the effect of latent heat of fusion is 0 degree.

**Sensible Heat:** Although sensible heat is often called latent heat, it isn't a constant-temperature situation, nor is a phase change involved. Sensible heat reflects heat transfer between matter and its surroundings. It is the heat that can be "sensed" as a change in an object's temperature.

**Specific Latent Heat:** Specific latent heat refers to the quantity of energy in heat form needed for the complete change of phase for one unit of mass of a particular matter. This is an intensive property. The specific latent heat expression is:

$L = Q / m$   
Material or substance features are intensive properties which do not depend on the extent or shape of any matter. So, accordingly, to evaluate specific latent heat of water value for fusion and vaporization use the following expression:  
 $Q = m \times L$   
Where, Q is quantity of

absorbing or radiating heat or during change of state of any matter (joules or calories) m is mass of matter (kilograms)

**Note:** The latent heat of water at 0 degree Celsius for fusion is nearest to 334 joules per gram or 79.7 calories per gram. On the other hand, the latent heat of water at 100C for vaporization is approximately 2230 joules per gram or 533 calories per gram.

**Sensible Heat and Meteorology:** While latent heat of fusion and vaporization are used in physics and chemistry, meteorologists also consider sensible heat. When latent heat is absorbed or released, it produces instability in the atmosphere, potentially producing severe weather. The change in latent heat alters the temperature of objects as they come into contact with warmer or cooler air. Both latent and sensible heat cause air to move, producing wind and vertical motion of air masses.

**Examples of Latent and Sensible Heat:** Boiling water on a stove occurs when thermal energy from the heating element is transferred to the pot and in turn to the water. When enough energy is supplied, liquid water expands to form water vapor and the water boils. An enormous amount of energy is released when water boils. Because water has such a high heat of vaporization, it's easy to get burned by steam.

1. Church of Epiphany, that has recently secured prestigious UNESCO Asia-Pacific Award for Cultural Heritage Conservation, is located in which state?  
[A] Maharashtra  
[B] Haryana  
[C] Goa  
[D] Kerala

2. Which strait, that was recently in news, is also known as Gate of Tears in Arabic?  
[A] Bab al-Mandeb  
[B] Strait of Hormuz  
[C] Bass strait  
[D] Strait of Johor

3. The Strait of Gibraltar, that was recently making news, separates which two countries?  
[A] Italy and Greece  
[B] Spain and Morocco  
[C] France and England  
[D] Portugal and Algeria

4. Which airport has been named after Maharishi Valmiki as per the recent news?  
[A] Lucknow  
[B] Ayodhya  
[C] Jodhpur  
[D] Ujjain

5. China claims which region/country as its "sacred territory"?  
[A] Tibet  
[B] Hong Kong  
[C] Taiwan  
[D] Macau

6. Which state will feature India's first Personal Rapid Transit or PRT corridor as part of its metro rail infrastructure?

[A] Uttar Pradesh  
[B] Uttarakhand  
[C] Madhya Pradesh  
[D] Maharashtra

7. Which city in Maharashtra has been selected by the Union Ministry of Youth Affairs and Sports as the venue to host the National Youth Festival 2024?  
[A] Nagpur  
[B] Mumbai  
[C] Nasik  
[D] Pune

8. China claims which region/country as its "sacred territory"?  
[A] Tibet  
[B] Hong Kong  
[C] Taiwan  
[D] Macau

9. India's longest sea bridge, recently making headlines, connects which two locations?  
[A] Bandra and Worli  
[B] Sewri and Chirle  
[C] Thane and Virar  
[D] Vallarpadam and Kochi

10. Smruti Mandir and Deekshabhoomi, which were recently in news, are located in which city?  
[A] Mumbai  
[B] Pune  
[C] Nagpur  
[D] Delhi

11. Smruti Mandir and Deekshabhoomi, which were recently in news, are located in which city?

12. Which city has been

named the cleanest in India for the seventh consecutive year?

[A] Mumbai  
[B] Gandhinagar  
[C] Indore  
[D] Nagpur

13. Which city hosted the World Tamil Diaspora Day celebrations 2024?  
[A] Chennai  
[B] Madurai  
[C] Tiruchirappalli  
[D] Coimbatore

14. Saqqara, recently seen in the news, is located in which country?

[A] Egypt  
[B] Vietnam  
[C] Iran  
[D] Iraq

15. Recently, where were the iron ore deposits uncovered in Rajasthan?  
[A] Jodhpur  
[B] Ajmer  
[C] Karauli  
[D] Bikaner

16. What is the name of the Sikkim's first railway station, recently inaugurated by Prime Minister of India?

[A] Gangtok railway station  
[B] Namchi railway station  
[C] Rangpo railway station  
[D] Pelling railway station

Answer  
1. B, 2. A, 3. B, 4. B, 5. C, 6. B, 7. C, 8. C, 9. B, 10. C, 11. C, 12. C, 13. A, 14. A, 15. C, 16. C.