

1. Who received the First Nobel Prize in Physics for India?

(1) Sir C.V.Raman

(2) Hargobind Khorana

(3) RavidraNath

(4) Amartya Sen

Ans: 1

Note: For Raman scattering.

2. The Gateway of India is situated at

(1) New Delhi

(2) Kochi

(3) Kolkata

(4) Mumbai

Ans: 4

3. India Gate is situated at

(1) New Delhi

(2) Kochi

(3) Kolkata

(4) Mumbai

Ans: 1

4. Who is the author of book "Anand Math"?

(1) Mohammad Iqbal

(2) Bankim Chandra Chatterjee

(3) Tara Shankar bandyopadhyay

(4) Ravindranath Tagore

Ans: 2

Note: Anandamath is a Bengali novel, written by Bankim Chandra Chatterjee and published in the year 1882. Set in the background of the Sannyasi Rebellion in the late 18th century, it is considered one of the most important novels in the history of Bengali and Indian literature. Its importance is heightened by the fact that it became synonymous with the struggle for Indian independence from the British Empire. The novel was banned by the British. The ban was lifted later by the Government of India after independence. The national song of India, Vande Mataram, was first published in this novel.

5. Who was known as "Nightingale of India"?

(1) VijayalaxmiPandit

(2) Sarojini Naidu

(3) M.S.Subbulakshmi

(4) LalaMangeshkar

Ans: 2

6. Who was the founder of the Arya Samaj?

(1) Swami Vivekananda

(2) Swami Dayananda Saraswathy

(3) Sri Shankaracharya

(4) Swami Agnivesh

Ans: 2

**Note: AaryaSamaj**, vigorous reform movement of modern Hinduism, founded in 1875 by Dayananda Sarasvati, whose aim was to reestablish the Vedas(the theme is, Go back to Vedas), the earliest Hindu scriptures, as revealed truth.

The Arya Samaj opposes worship of **murtis** (images), animal sacrifice, **shraddha** (rituals on behalf of ancestors), basing caste upon birth rather than upon merit, untouchability, child marriage, pilgrimages, priestly craft, and temple offerings. It upholds the infallibility of the Vedas, the doctrines of karma (the accumulated effect of past deeds) and samsara (the process of death and rebirth), the sanctity of the cow, the importance of the **samskaras** (individual sacraments), the efficacy of Vedic oblations to the fire, and programs of social reform. It has worked to further female education and intercaste marriage; has built missions, orphanages, and homes for widows; has established a network of schools and colleges; and has undertaken famine relief and medical work. From its beginning it was an important factor in the growth of Indian nationalism.

<https://www.britannica.com/topic/Arya-Samaj>

Swami Dayanand's main message - "Back to the Vedas" - formed the bedrock of all his thoughts and actions. Swami Dayanand founded the Hindu reform organization called Arya Samaj on April 7, 1875 in Mumbai, and also created its 10 principles which are quite distinct from Hinduism, yet based on the Vedas. These principles aimed at advancing the individual and society through physical, spiritual and social betterment of the human race. His aim was not to found a new religion, but to re-establish the teachings of the ancient Vedas. As he said in Satyarth Prakash, he wanted to true development of humankind by the acceptance of the Supreme truth and rejection of falsehood through analytical thinking

<http://www.swamiagnivesh.com/arya-samaj.php>

**The Brahmo Samaj** -The Brahmo Samaj, a prominent socio-religious movement, was founded by Raja Rammohan Roy along with Dwarkanath Tagore and others on August 20, 1828. Raja Ram Mohan Roy is regarded as Father of Modern India who founded the first religious reform organisation i.e. Brahmo Samaj in 1828. The two most prominent leader of the Brahmo Samaj were Debendranath Tagore and Keshab Chandra Sen.

7. The First Battle of Panipat was fought between

(1) Sher Shah Suri & Akbar

(2) Humayun & Ibrahim Lodhi

(3) Babur and Ibrahim Lodhi

(4) Babur and Ranasanga

Ans: 3

8. The boundary line between India & China is called as

(1) McMahon line

(2) Durand line

(3) Plimsol line

(4) Radcliffe line

Ans: 1

Note: The **McMahon Line** is a demarcation line between Tibet and the North-east region of India proposed by British colonial administrator Sir Henry McMahon at the 1914 Simla Convention signed between British and Tibetan representatives.

The **Durand Line** is the international 2,670 km (1,660 mi) land border between Afghanistan and Pakistan. It was originally established in 1893 as the international border between British India and Emirate of Afghanistan by Mortimer Durand, a British diplomat of the Indian Civil Service, and Abdur Rahman Khan, the Afghan Emir, to fix the limit of their respective spheres of influence and improve diplomatic relations and trade

The **Radcliffe Line** was the boundary demarcation line between the Indian and Pakistani portions of the Punjab and Bengal provinces of British India. It was named after its architect, Sir Cyril Radcliffe, who, as the joint chairman of the two boundary commissions for the two provinces. The demarcation line was published on 17 August 1947 upon the Partition of India.

What is plimsoll line?

The Plimsoll line is a reference mark located on a ship's hull that indicates the maximum depth to which the vessel may be safely immersed when loaded with cargo. This depth varies with a ship's dimensions, type of cargo, time of year, and the water densities encountered in port and at sea. Once these factors have been accounted for, a ship's captain can determine the appropriate Plimsoll line needed for the voyage.

9. At which place did Gautam Buddha deliver his first sermon?

(1) Sarnath

(2) Lumbini

(3) Bodi Gaya

(4) Kushinagu

Ans: 1

Note: (UP. About 15 km from Varanasi).

10. India's anti-tank missile is

(1) Akash

(2) Nag

(3) Agni

(4) Prithvi

Ans: 2

Note: The Nag missile, also called "Prospina" for the land-attack version, is an Indian third-generation, all-weather, fire-and-forget, lock-on after launch, anti-tank guided missile (ATGM) with an operational range of 500 m to 20 km.

The Arjun is a third generation main battle tank developed by India's Defence Research and Development Organisation (DRDO), for the Indian Army. The tank is named after Arjun, the archer prince who is the main protagonist of the Indian epic Mahabharata.

The T-90M Bhishma— named after a great legend named Bhishma, from the Indian epic Mahabharata— has been specially designed to operate in the cold and harsh conditions of Ladakh, Sikkim and Arunachal Pradesh regions of the country.

11. Who was the founder of the Gupta dynasty?

(1) Chandragupta-I

(2) Maharaja Sri Gupta

(3) Samudragupta

(4) Kumargupta

Ans. 2

The Gupta Empire, founded by **Maharaja Sri Gupta**, was an ancient Indian realm that covered much of the Indian Subcontinent from approximately 320-550 CE

12. Fa-hien came to India during the reign of

(1) Ashoka

(2) Chandragupta-II

(3) Harsha

(4) Kanishka

Ans:2.

**Note: Faxian's visit to India occurred during the reign of Chandragupta II.**

13. The first Satyagraha campaign of Mahatma Gandhi was started in

(1) Dandi march

(2) Bardoli

(3) Ahmedabad mill strike

(4) Champaran for indigo farmers

Ans: 4. The place is in Bihar.

14. The ex-officio Chairman of the Rajya Sabha is

(1) President

(2) Vice President

(3) Prime Minister

(4) Minister of Parliamentary affairs

Ans: 2

15. Gana Bird Sanctuary is located at

(1) Assam

(2) Gujarat

(3) Rajasthan

(4) Tamilnadu

ANS: 3.

NOTE:

Keoladeo National Park or Keoladeo Ghana National Park formerly known as the Bharatpur Bird Sanctuary in Bharatpur, Rajasthan, India is a famous avifauna sanctuary that hosts thousands of birds, especially during the winter season.

16. Bokaro Steel Plant is situated in which State?

(1) Orissa

(2) Madhya Pradesh

(3) Jharkand

(4) Bihar

Ans:3

**Note: Bokaro Steel Plant (BSP)** is located in the Bokaro district of Jharkhand. It is the fourth integrated public sector steel plant in India built with Soviet help. Major steel plants in India...

17. Which state leads in the production of tobacco ?

(1) Andhra Pradesh

(2) Madhya Pradesh

(3) Punjab

(4) Uttar Pradesh

Ans: 1

18. Through which Indian State does river Chenab pass ?

(1) Uttar Pradesh

(2) Punjab

(3) Jammu & Kashmir

(4) Rajasthan

**Note: The Chenab River** is a major river that flows in India and Pakistan, and is one of the 5 major rivers of the Punjab region. It rises in the upper Himalayas in the Lahaul and Spiti district of Himachal Pradesh state and flows through the Jammu region of Jammu and Kashmir into the plains of Punjab, Pakistan, before flowing into the Indus River. The waters of the Chenab were allocated to Pakistan under the terms of the Indus Waters Treaty. The river is formed by the confluence of two rivers, Chandra and Bhag.

19. Specific gravity of milk is measured by

(1) Barometer

(2) Hydrometer

(3) Hygrometer

(4) Lactometer

Ans: 4.

**Note: A lactometer** is used to check purity of cow's milk. If the milk sample is pure, the **lactometer** floats; if it is adulterated or impure, the **lactometer** sinks. The **lactometer** test

is used to determine if the milk has been adulterated with added water or solids. This test is based on the fact that milk has a heavier weight or density (1.026–1.032 g/ml) compared to water (1.000 g/ml)

20. Richter scale is used for measuring

(1) Density of liquid

(2) Intensity of earthquakes

(3) Velocity of wind

(4) Humidity of air

Ans: 2

Note: A numerical scale for expressing the magnitude of an earthquake on the basis of seismograph oscillations. The more destructive earthquakes typically have magnitudes between about 5.5 and 8.9; it is a logarithmic scale and a difference of one represents an approximate thirtyfold difference in magnitude

The Richter magnitude scale, also known as the local magnitude (M) scale, assigns a number to quantify the amount of seismic energy released by an earthquake. It is a base-10 logarithmic scale.

21. Light year is related to - Distance travelled by light in a year

Note: A light-year is the distance light travels in one Earth year. Light travels at a speed of 300,000 km per second. This seems really fast, but objects in space are so far away that it takes a lot of time for their light to reach us. The farther an object is, the farther in the past we see it.

Our **Sun** is the closest star to us. It is about 93 million miles away. So, the Sun's light takes about 8.3 minutes to reach us. This means that we always see the Sun as it was about 8.3 minutes ago.

Stars are found in large groups called **galaxies**. A galaxy can have millions or billions of stars. The nearest large galaxy to us, Andromeda, is 2.5 million light-years away. So, we see Andromeda as it was 2.5 million years in the past. The universe is filled with billions of galaxies, all farther away than this. Some of these galaxies are much farther away.

The closest star to Earth, other than the sun, is Alpha Centauri at some 4.4 light-years away. Scaling the Earth-sun distance at one inch places this star at 4.4 miles (7 km) distant.

A light-year about 0.3066 parsecs.

The parsec is a unit of length used to measure the large distances to astronomical objects outside the Solar System. One parsec is approximately equal to 31 trillion kilometres, or 210,000 astronomical units, and equates to about 3.3 light-years. Wikipedia

**Unit system:** astronomical units

A parsec, or “parallax second,” is defined as 3.26 light-years because of how it is measured.

PARSEC

Distances to the closest **stars** can be determined through measurement of their **trigonometric parallax**. The **parsec** was defined to be the **distance** at which 1 AU (perpendicular to the line of sight) subtends an **angle** of 1 **arcsecond**:

**1 parsec (pc) = distance d when angle is 1 arcsecond =  $3.086 \times 10^{13}$  km = 3.26 ly**

<https://astronomy.swin.edu.au/cosmos/P/Parsec>

22. Who among the following invented the small pox vaccine?

(1) Edward Jenner

(2) Robert Koch

(3) Robert Hook

(4) Louis Pasteur

Ans:1

23. A plant with green leaves placed in red light will appear

(1) Black

(2) Green

(3) Red

(4) Violet

Ans:1

Note: When you see an object all colours except the one of the object is absorbed so in **red light green leaf will** absorb **red** and you **will** practically see nothing

24. When water boils, its temperature

(1) begins to increase

(2) begins to decrease

(3) remains constant

(4) fluctuates

Ans: 3

Note: change of phase - freezing, boiling, melting and condensation takes place at constant temperature.

25. Bronze is an alloy of

(1) Copper & Zinc

(2) Copper & tin

(3) Iron & Copper

(4) Zinc & Tin

Ans: 2

26. A gas does not have a definite shape or fixed volume because the molecules are

(1) At rest

(2) in linear motion

(3) In oscillatory motion

(4) in random motion

Ans: 4

27. Which of the following diseases is caused by virus?

(1) Small Pox

(2) Tuberculosis

(3) Malaria

(4) Cholera

Ans: 1

28. Red blood corpuscles are formed in the

(1) Liver

(2) Bone Marrow

(3) Kidneys

(4) Heart

Ans: 2

Note: Red blood cells, most white blood cells, and platelets are produced in the bone marrow,

the soft fatty tissue inside bone cavities. Two types of white blood cells, T and B cells (lymphocytes), are also produced in the lymph nodes and spleen, and T cells are produced and mature in the thymus gland.

<https://www.msmanuals.com/en-in/home/blood-disorders/biology-of-blood/formation-of-blood-cells>

Red blood cells are formed in the red bone marrow of bones. Stem cells in the red bone marrow are called hemocytoblasts. They give rise to all of the formed elements in blood. Red blood cells are an important element of blood. Their function is to transport oxygen to the body's tissues in exchange for carbon dioxide, which they carry to the lungs to be expelled.

The body makes about two million red blood cells every second. Blood is made up of both cellular and liquid components. If a sample of blood is spun in a centrifuge, the formed



elements and fluid matrix of blood can be separated from each other. Blood consists of 45% red blood cells, less than 1% white blood cells and platelets, and 55% plasma.

Note: RBCs are destroyed in Liver

<https://medlineplus.gov/ency/anatomyvideos/000104.htm#:~:text=Stem%20cells%20in%20the%20red,cell%20takes%20about%202%20days.>

29. Lalbagh and Cubbon park are located in which city?

- (1) **Bangalore**                      (2) Mysore                      (3) Gulbarga                      (4) Hubli

Ans: 1

30. A small spherical ball made of steel when dropped in mercury in a container will

- (1) Sink  
(2) Will float on the surface of mercury  
(3) **Will be partly immersed in mercury**  
(4) None of the three are correct

Ans: 3 (  $\rho_{\text{Hg}} = 13.6 \text{ gm/cc}$  and  $\rho_{\text{Steel}} = 7.6 \text{ gm/cc}$  )

31. Dialysis is used for curing the ailment of

- (1) **Kidney**    (2) Liver  
(3) Brain    (4) Heart

Ans: 1

**Note:** Some of the important functions of kidneys are:

1. Filter blood
2. Balance your body's fluids
3. Regulate hormones
4. Help keep blood pressure under control
5. Keep bones healthy
6. Help make red blood cells

<https://www.kidney.org/patients/peers/stage4>

## DIALYSIS

Dialysis does some of the work of your kidneys when your kidneys can't do it themselves. This includes removing extra fluids and waste products from your blood, restoring electrolyte levels, and helping control your blood pressure. Dialysis options include peritoneal dialysis and hemodialysis.

32. The piano is a

(1) String instrument

(2) Wind instrument

(3) Percussion instrument

(4) Reed instrument

Ans:1

**Note:** The most common percussion instruments in the orchestra include the timpani, xylophone, cymbals, triangle, snare drum, bass drum,

A **percussion instrument** is a musical instrument that is sounded by being struck or scraped by a beater or rattles struck, scraped or rubbed by hand or struck against another similar instrument, e.g., instruments such as the timpani, snare drum, bass drum, cymbals, triangle and tambourine.

A **reed** is a piece of dry bamboo that is used in some musical instruments such as saxophones, clarinets and oboes.

A **reed** is a thin strip of material that vibrates to produce a sound on a musical **instrument**.

**Reed instrument**, in music, any of several wind instruments that sound when the player's breath or air from a wind chamber causes a reed (a thin blade of cane or metal) to vibrate, thereby setting up a sound wave in an enclosed air column (in reed pipes) or in the open air (usually free reeds).

DOUBLE REED – KUZHAL, MUKHAVINA, NADASWARAM, SHEHNAI

**Wind instrument**, any musical instrument that uses air as the primary vibrating medium for the production of sound. **trumpets**, trombones, euphoniums, **flutes**, **oboes**, **clarinets**, saxophones, and bassoons etc

33. Short sight can be corrected using a

(1) convex lens

(2) concave lens

(3) bifocal lens

(4) cylindrical lens

Ans: 2

Note: **Shortsightedness** is **corrected using** a concave (curved inwards) lens which is placed in front of a myopic eye, moving the image back to the retina and making it clearer. Longsightedness is **corrected using** a convex (outward facing) lens.

**Glasses or contact lenses are the most common method of correcting short-sightedness (myopia). Laser surgery is also becoming increasingly popular.**

34. Which is the capital of the Indian State Nagaland?

- (1) Itanagar                      (2) Aizwal                      (3) **Kohima**                      (4) Imphal

Ans: 3

35. X-rays carry

- (1) Positive charge                      (2) Negative charge  
(3) **No charge**                      (4) Positive and negative charge

Ans: 3. (X-rays and  $\gamma$ -rays do not have charges)

**Note:** X-rays are very high frequency waves, and **carry** a lot of energy. X-Rays are also used in **airport security** checks, to see inside the luggage.

### **Dangers**

X-Rays can cause **cell damage** and **cancers**.

This is why Radiographers in hospitals stand behind a shield when they X-ray their patients. Although the dose is not enough to put the patient at risk, they take many images each day and could quickly build up a dangerous dose themselves.

### **WHAT IS THE DIFFERENCE BETWEEN GAMMA RAYS AND X-RAYS?**

The key difference between gamma rays and X-rays is how they are produced. Gamma rays originate from the settling process of an excited nucleus of a radionuclide after it undergoes radioactive decay whereas X-rays are produced when electrons strike a target or when electrons rearrange within an atom.

### **WHAT ARE SOME COMMON SOURCES OF X-RAYS?**

X-rays are commonly produced in X-ray tubes by accelerating electrons through a potential difference (a voltage drop) and directing them onto a target material (i.e. tungsten).

<https://www.arpana.gov.au/understanding-radiation/what-is-radiation/ionising-radiation/x-ray>

### What is ionizing radiation?

Ionizing radiation is a type of energy released by atoms that travels in the form of electromagnetic waves (gamma or X-rays) or particles (neutrons, beta or alpha). The spontaneous disintegration of atoms is called radioactivity, and the excess energy emitted is a form of ionizing radiation. Unstable elements which disintegrate and emit ionizing radiation are called radionuclides.

All radionuclides are uniquely identified by the type of radiation they emit, the energy of the radiation, and their half-life.

The activity — used as a measure of the amount of a radionuclide present — is expressed in a unit called the becquerel (Bq): one becquerel is one disintegration per second. The half-life is the time required for the activity of a radionuclide to decrease by decay to half of its initial value. The half-life of a radioactive element is the time that it takes for one half of its atoms to disintegrate. This can range from a mere fraction of a second to millions of years (e.g. iodine-131 has a half-life of 8 days while carbon-14 has a half-life of 5730 years).

<https://www.who.int/news-room/fact-sheets/detail/ionizing-radiation-health-effects-and-protective-measures#:~:text=is%20ionizing%20radiation%3F-Ionizing%20radiation%20is%20a%20type%20of%20energy%20released%20by%20atoms,a%20form%20of%20ionizing%20radiation>

36. The largest producer of coffee in India is

- (1) Kerala      (2) Tamilnadu      (3) Karnataka      (4) Assom

Ans: 3

37. The hill station of Yercaud is located close to which city?

- (1) Coimbatore      (2) Erode      (3) Salem      (4) Chennai

Ans: 3

38. In which Indian State is Idukki Wild Life Sanctuary located?

- (1) Kerala      (2) Karnataka      (3) Tamilnadu      (4) Goa

Ans: 1

39. Which part of the body is affected by Typhoid?

- (1) Liver      (2) Eyes      (3) Intestine      (4) Lungs

Ans: 3

Note: The gastrointestinal tract is more severely **affected** including liver, spleen, and muscles. Through bloodstream, bacteria can also reach gallbladder, lungs, and kidneys.

Typhoid fever is a life-threatening infection caused by the bacterium **Salmonella** Typhi. It is usually spread through contaminated food or water. Once **Salmonella** Typhi bacteria are eaten or drunk, they multiply and spread into the bloodstream.

40. What does “ISP” stand for?

- |                               |                               |
|-------------------------------|-------------------------------|
| (1) Internet Service Provider | (2) Internet Service protocol |
| (3) Indian Satellite Provider | (4) Internet Service Provider |

Ans: 2

Note: Internet service provider (ISP), company that provides Internet connections and services to individuals and organizations. In addition to providing access to the Internet, ISPs may also provide software packages (such as browsers), e-mail accounts, and a personal Web site or home page. **Internet service provider (ISP)**, company that provides Internet connections and services to individuals and organizations. In addition to providing access to the Internet, ISPs may also provide software packages (such as browsers), e-mail accounts, and a personal Web site or home page. ISPs can host Web sites for businesses and can also build the Web sites themselves. ISPs are all connected to each other through network access points, public network facilities on the Internet backbone.

<https://www.britannica.com/technology/Internet-service-provider>

41. In whose reign was the third Buddhist Council held at Pataliputhra?

- |                           |               |
|---------------------------|---------------|
| (1) Chandra GupthaMouriya | (2) Bindusara |
| (3) Ashoka                | (4) Kanishka  |

Ans: 3

42. Who was the first Governor General of Independent India?

- |                      |                       |
|----------------------|-----------------------|
| (1) Lord Mountbatten | (2) C.Rajagopalachari |
| (3) Jawaharlal Nehru | (4) Mahatma Gandhi    |

Ans: 1

43. What does “ROM” with respect to computers stand for?

- |                        |                        |
|------------------------|------------------------|
| (1) Random only memory | (2) Repeat only memory |
| (3) Rate of memory     | (4) Read only memory   |

Ans: 4

Note: ROM is an acronym for Read-Only Memory. It refers to computer memory chips containing permanent or semi-permanent data. Unlike RAM, ROM is non-volatile; even after

you turn off your computer, the contents of ROM will remain. Data stored in **ROM** cannot be electronically modified after the manufacture of the memory device.

Data stored in ROM cannot be electronically modified after the manufacture of the memory device. Read-only memory is useful for storing software that is rarely changed during the life of the system, also known as firmware.

ROM is memory containing hardwired instructions that the computer uses when it boots up, before the system software loads. In PCs, the instructions are read from a small program in the ROM, called the BIOS (Basic Input/output System).

44. which two island groups in India are separated by 10 channel?

- (1) Gao and Lakshadweep (2) Andaman and Nicobar  
(3) Dadar and Nagarhaveli (4) Kanyakumari and Srilanka

Ans. 2

Note: **The two** sets of **islands** together form the **Indian** Union Territory (UT) of Andaman and Nicobar **Islands**. This **channel** is 150 kilometres (93 mi) wide from north to south, and approximately **10** kilometres (6.2 mi) long from east to west.

45. Part III of the Indian Constitution deals with

- (1) Fundamental Rights  
(2) Election Commission  
(3) Directive Principles of State Policy  
(4) none of these

Ans:1

Note The Constitution offers all citizens, individually and collectively, some basic freedoms. These are guaranteed in the Constitution in the form of six broad categories of Fundamental Rights, which are justiciable. Article 12 to 35 contained in Part III of the Constitution deal with Fundamental Rights.

46. From which have the words “Satyameva Jayathe” taken?

- (1) Rigveda (2) Bagavadgita  
(3) Ramayana (4) Muntaka Upanishad

Ans: 4

Note: The **MundakaUpanishad** is an ancient Sanskrit Vedic text, embedded inside Atharva Veda. It is a poetic verse style Upanishad, with 64 verses, written in the form of mantras. However, these mantras are not used in rituals, rather they are used for teaching and meditation on spiritual knowledge.

47. Who was the last Governor General of India?

(1) Lord Mountbatten

(2) C.Rajagopalachari

(3) Jawaharlal Nehru

(4) Mahatma Gandhi

Ans:1

48. Who was the first Indian Governor General of Independent India?

(1) Lord Mountbatten

(2) C.Rajagopalachari

(3) Jawaharlal Nehru

(4) Mahatma Gandhi

Ans:2.

**Note:** Chakravarti Rajagopalachari, popularly known as **Rajaji**, was independent India's first Indian Governor General. He was also the last one

49. As the temperature increases, the velocity of sound in air

(1) increases

(2) remain unchanged

(3) decreases

(4) first increases then decreases

Ans: 1.

**Note: Temperature and the speed of sound**

Temperature is also a condition that affects the speed of sound. Heat, like sound, is a form of kinetic energy. Molecules at higher temperatures have more energy, thus they can vibrate faster. Since the molecules vibrate faster, sound waves can travel more quickly. The speed of sound in room temperature air is 346 meters per second. This is faster than 331 meters per second, which is the speed of sound in air at freezing temperatures.

<https://www.nced.org/EducationResources/HighSchool/Sound/tempandspeed.htm#:~:text=Molecules%20at%20higher%20temperatures%20have,is%20346%20meters%20per%20second.>

50. El Nino is a

(1) cold current of water flow along West Coast of South America

(2) warm current of water flow along West Coast of Australia

(3) Movement of ocean current along Indian ocean

(4) a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean

Ans: 4

**Note:** El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean. El Niño is the “warm phase” of a larger phenomenon called the El Niño-Southern Oscillation (ENSO). La Niña, the “cool phase” of ENSO, is a pattern that describes the unusual cooling of the region’s surface waters. El Niño and La Niña are considered the ocean part of ENSO, while the Southern Oscillation is its atmospheric changes.

El Niño has an impact on ocean temperatures, the speed and strength of ocean currents, the health of coastal fisheries, and local weather from Australia to South America and beyond. El Niño events occur irregularly at two- to seven-year intervals. However, El Niño is not a regular cycle, or predictable in the sense that ocean tides are.

El Niño was recognized by fishers off the coast of Peru as the appearance of unusually warm water

[https://www.nationalgeographic.org/encyclopedia/el-nino/#:~:text=1%2F11,%2DSouthern%20Oscillation%20\(ENSO\).](https://www.nationalgeographic.org/encyclopedia/el-nino/#:~:text=1%2F11,%2DSouthern%20Oscillation%20(ENSO).)

Social Service Society for Education,