

Part – A**English**

1. (d) People who speak the language do not claim their language
2. (a) is correct because sustained contact is essential for studying and documenting a new language accurately.
3. (c) All the languages are either complete languages or dialects of other major languages
4. (a) People are recognised as different ethnic groups but not necessarily their language
5. (a) transpire
6. (a) The correct choice is Option 1.

Reasoning:

"said to" becomes "told"

"want" shifts to past tense "wanted" after "told"

"tomorrow" changes to "the next day"

So we get:

Charu told her friend that she wanted her to be there at 6.00 p.m. the next day for the meeting.

7. (b) The original sentence is an exclamatory statement that expresses admiration for the painting, despite the unconventional use of a question mark. The key to converting exclamatory sentences to indirect speech involves several steps:

Change the Reporting Verb: The verb 'said to' should be replaced with verbs like 'exclaimed', 'remarked', or 'wondered', which reflect the emotion expressed.

Convert to Declarative Form: The exclamatory sentence is transformed into a declarative statement. For expressions like "What a + adjective + noun + it is/was", it converts to "it was a very + adjective + noun" or "it was a + adjective + noun".

Backshift in Tense: The present tense 'is' changes to the past tense 'was'.

Use of 'that': The conjunction 'that' is typically used to introduce the reported speech.

Analysis of Options:

Option 1: Nitin wondered to his brother that what a beautiful painting it was.

This has redundant phrasing with "that what a" and "wondered to his brother" is awkward.

Option 2: Nitin wondered before his brother that it was a beautiful painting.

Although "wondered before his brother" sounds slightly awkward, it correctly translates "What a beautiful painting it is" to "it was a beautiful painting", and backshifts the tense from 'is' to 'was'.

Option 3: Nitin exclaimed that it is a beautiful painting.

Incorrect because the tense 'is' should be back shifted to 'was'.

Option 4: Nitin asked his brother whether it was beautiful painting.

Incorrect because the original sentence is not a question, making 'asked' and 'whether' inappropriate.

Correct Conversion:

The sentence correctly converted to indirect speech is: Nitin wondered before his brother that it was a beautiful painting.

8. (b) The teacher said to her students, "Why were you quiet in the previous class?"

9. (a) He is considered as the brightest intellectual in the country

10. (a) is grammatically correct. The comparative form "taller" and "than" are used appropriately, and "then" in (d) is incorrect usage.

11. (a) "Confident" refers to being self-assured or certain. A "confidant" is a person with whom one shares a secret or private matter, hence a close friend.

12. (b) Broke means bankrupt and brook means a stream

13. (c) Accept means consent and except means apart from

14. (d) Accord means agreement and accrued means accumulated

15. (c) Guarantee is a promise and warranty is a service contract. A guarantee is a promise that a product or service will meet certain quality standards or perform as expected. It's essentially a commitment from the seller.

A warranty is a formal, written agreement that outlines the terms under which a product or service will be repaired, replaced, or refunded if it's found to be defective. It is a service contract with specific conditions.

16. (a) balanced

17. (b) disappointment

18. (d) inevitable

19. (a) permanent

20. (a) immediate

21. (c) S1. Although all sources of energy ultimately come from natural processes, non-renewable resources cannot be replaced naturally at the rate they are being used.

S. Mineral resources can be said to be finite and non-renewable.

Q. Hence, we must remember that though our country is rich in mineral deposits these resources are short-lived.

R. Extraction of these ores through the process of mining will soon become difficult and very expensive because these minerals have to be mined from greater depths over time.

P. This will increase the time and cost of mining and once these resources are used up they cannot be replaced.

S6. The sustainable use of natural resources in a manner that provides the maximum benefit of these resources to humans over a period of time can be termed as conservation.

22. (d) PRSQ

Here's the full passage in the correct sequence (Option D):

S1. India, at present, has one of the largest road networks in the world.

P. The importance of roads has been recognised in India since the ancient times.

R. Kings such as Ashoka and Chandragupta built roads for easy transportation of goods and people.

S. Construction of roads continued as an important activity in the late medieval period.

Q. The Grand Trunk Road was built by Sher Shah Suri across the Indo-Gangetic plain, from Chittagong (Bangladesh) to Peshawar (Pakistan).

S6. It passes through Howrah, Delhi and Amritsar and terminates in Kabul (Afghanistan).

23. (a) PRSQ

24. (d) (PQRS)

25. (b) SPQR

26. (a) As far as:

"As far as your transfer request is concerned, we'll be discussing it at the next meeting."

27. (b) By the way

"By the way" is used to introduce a new or incidental piece of information—perfect for casually mentioning Ravi's new job. The other choices don't fit as natural conversational transitions here.

28. (d) Speaking of

29. (b) Excuse me

30. (c) In some cases

31. (d) In other words

"In other words" signals that you're rephrasing or clarifying what's already been said. Here, it smoothly introduces the restatement that the real issue is simply a wrong assumption about processes.

32. (a) understandably

33. (b) Generally speaking

"Generally speaking" is used to introduce a broad, overarching observation—in this case, the overall trend in the nineteenth century toward reflection and questioning. It appropriately frames the statement as a generalization, whereas the other options either don't fit the formal tone or imply contrast or specificity that isn't called for here.

34. (c) Thus

"Thus" introduces a conclusion or result—here signaling that, as a consequence of earlier developments, the situation has entirely transformed. The other adverbs don't convey this causal/resultative link.

35. (a) Hence

"Hence" introduces a logical conclusion or inference—here showing that, as a result of earlier considerations, the committee believes all academic matters will go before the Executive Body Meeting. The other choices (But, Later, Although) either signal contrast or time sequence, which don't fit this causal sense.

36. (b) Person or thing that attracts a lot of attention

The word “cynosure” originally referred to the North Star, which guided travelers and drew their gaze. Over time, it came to mean anything that serves as a focal point or center of attention. Thus, describing someone or something as a cynosure implies it stands out and commands notice.

37. (c) Person employed to drive a private car

38. (c) Return to earlier state

“Retrogression” refers to the process of moving backward or returning to a previous, less advanced condition. It implies a reversal of development rather than a sudden event or drop in price

39. (b) Money used to manage small expenses

An “imprest” is a small fund of money advanced to cover minor or incidental expenses (e.g., office petty cash). It’s periodically replenished to maintain a fixed balance.

40. (c) Swollen or distended

“Turgid” describes something that is swollen, inflated, or distended—often used for tissues (e.g., turgid leaves) or figuratively for language that is overblown.

41. (c) QPSR

Let’s break down the sentence meaningfully:

Q: “many of the people who had come to”

P: “participate in the function”

Together: “many of the people who had come to participate in the function”

S: “could not find a seat because”

R: “the auditorium was over-crowded”

Together: “could not find a seat because the auditorium was over-crowded”

Full sentence:

“Many of the people who had come to participate in the function could not find a seat because the auditorium was over-crowded.”

42. (d) RQSP:

R: “somewhere in the back of her mind”

Q: “she knew that the answer”

S: “to her questions about life”

P: “lay outside her existing life”

Putting them together:

“Somewhere in the back of her mind, she knew that the answer to her questions about life lay outside her existing life.”

The sentence flows logically and meaningfully.

43. (b) QPRS

44. (c) RPSQ:

R: “for every stride of progress any nation”

P: “takes on account of its economic successes”

S: “it takes two back if it is unable”

Q: “to address continuing social inequality”

Putting it all together:

“For every stride of progress any nation takes on account of its economic successes, it takes two back if it is unable to address continuing social inequality.”

The sentence is grammatically correct, meaningful, and logically coherent.

45. (a) SRPQ:

S: “amortisation is an accounting technique”

R: “used to periodically lower”

P: “the book-value of a loan or”

Q: “an intangible asset over a set period of time”

Put together:

“Amortisation is an accounting technique used to periodically lower the book-value of a loan or an intangible asset over a set period of time.”

The sentence is grammatically correct, logical, and clearly defines amortisation.

46. (a) Correct idiomatic expression: “*There is more than one way to get the job done.*” This means there are multiple methods to accomplish a task.
47. (b) “organise a picnic” is a natural and grammatically correct phrase.
48. (d) idiomatic expression meaning *faced a legal trial in court*
49. (c) Correct tense and grammar. Matches with “have been carried out” (present perfect). The sentence now reads smoothly:
50. (d) “Shall” is used to express a strong intention, determination, or promise, particularly in formal contexts. In this sentence, it emphasizes the speaker's commitment to considering all stakeholders' opinions before making a final decision. It conveys a sense of duty and resolve.

PART - B

51. (c) The Second Industrial Revolution (approximately 1850 to early 20th century) saw major developments in:
52. (d) Harappan seals, typically rectangular and inscribed with scripts and animal motifs, were most commonly made from steatite, a soft stone that could be easily carved and then fired to harden. This material allowed for detailed engravings, which is a characteristic feature of Indus Valley seals.
53. (a) Vajji was a confederacy of several clans (including the Licchavis) and had a republican or oligarchic form of government, where power was shared among a group of leaders.
54. (d) Wheel
55. (b) The Rowlatt Act (officially known as the Anarchical and Revolutionary Crimes Act of 1919) was passed by the British government to curb revolutionary activities in India. It permitted detention without trial for up to two years, and allowed the government to try political cases without juries. This Act led to widespread anger and protests across India, including the Jallianwala Bagh massacre.
56. (a) The target was to get one-sixth of cultivable land in India as donation
57. (b) an elaborate system of establishing panchayats as units of self government
The 73rd Constitutional Amendment Act, 1992, came into effect on 24th April 1993.
It provided constitutional status to Panchayati Raj institutions (rural local self-government).
It added Part IX to the Constitution titled “The Panchayats” and also added the Eleventh Schedule, which lists 29 subjects under the purview of Panchayats.
It mandates Gram Sabhas, three-tier system (village, intermediate, and district level), regular elections, reservations, State Finance Commission, etc.
58. (b) The Central Bureau of Investigation (CBI)
BHARATPOL is an advanced crime-monitoring and international coordination portal developed by the Central Bureau of Investigation (CBI), which serves as India's National Central Bureau (NCB) for Interpol
The portal was officially launched on January 7, 2025 by Union Home Minister Amit Shah to enable seamless, real-time exchange of information and assistance requests between Indian law enforcement agencies and Interpol
59. (a) A majority of members of Rajya Sabha are elected by a system of proportional representation by means of single transferable vote
60. (d) Nuclear non-proliferation
61. (a) Portugal
62. (b)
63. (b)
64. (b) In 1611, the British East India Company established its first factory on the east coast of India at Masulipatam (now in Andhra Pradesh).
This was done with permission from the local Qutb Shahi ruler of Golconda.
65. (a) 3, 1, 2, 4
Lucknow Pact – 1916
Formation of Swaraj Party – 1923
Communal Award – 1932
Simla Conference – 1945
66. (a) The Regulating Act of 1773
67. (c) Lord Ripon

68. (d) Murid

69. (c) 1, 2 and 3

70. (b) 2, 3, 4, 1

71. (d) In micelles the ionic-end of the molecules is towards oil droplet while the other end faces outside

72. (b) The mass of an electron is about $1/2000$ times that of a proton

73. (d) Neutron

James Chadwick discovered the neutron in 1932. The neutron is a neutral subatomic particle found in the nucleus of an atom, alongside protons.

74. (a) There is a neutral center in an atom called nucleus

75. (c) The compound formed is XCl_2 , meaning the element X has a valency of +2.

The compound is a solid with a high melting point, indicating ionic bonding — typical of metallic elements from the s-block of the periodic table.

Therefore, X is most likely an alkaline earth metal, i.e., from Group 2.

76. (a)

77. (b) CO_2

78. (b) The higher the hydrogen ion concentration in a solution, higher is its pH

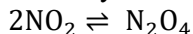
79. (d) 4 gram of hydrogen gas contains 6.022×10^{23} molecules

80. (c) A compound is an impure substance

81. (d)

82. (b) Nitrogen dioxide (NO_2) is a paramagnetic molecule with an odd number of electrons, making it highly reactive.

It readily dimerizes to form dinitrogen tetroxide (N_2O_4) :



This dimerization is favored at low temperatures and high pressures and involves pairing of unpaired electrons.

83. (a) If a substance loses hydrogen during reaction, it is reduced

84. (c) 1 4 2 3

85. (c) $5 \cdot 6$

86. (c) 1 and 3 only

87. (c)

88. (d)

89. (a)

90. (d) Summer Solstice in the Northern Hemisphere occurs around June 21st.

On this day, the Sun is directly overhead at the Tropic of Cancer (23.5°N).

The angle of the Sun's rays decreases as you move away from this latitude.

91. (a) Coriolis Force: This force acts perpendicular to the pressure gradient force, contributing to the balance of forces on air masses in the atmosphere.

The Coriolis force derives from Earth's rotation and influences wind direction.

While it's true that at the equator, the Coriolis force is zero, the assertion that the wind blows perpendicular to the isobars in this region is incorrect.

The Coriolis force is strongest at the poles and diminishes as one moves towards the equator.

Thus, Option 1 is correct because the Coriolis force indeed acts perpendicular to the pressure gradient force, whereas Option 2 is incorrect regarding wind direction at the equator.

Additional Information

Coriolis Force: This is an apparent force due to Earth's rotation, which deflects moving objects like air and water currents to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

Pressure Gradient Force: This force pushes air from regions of high pressure to low pressure, impacting wind speed and direction.

Isobars: Lines on a weather map that link points of equal atmospheric pressure, important for studying wind patterns.

Geostrophic Wind: This term describes wind that arises from the equilibrium between the Coriolis force and the pressure gradient force, flowing parallel to the isobars.

Impact at the Equator: The absence of Coriolis force leads to unique atmospheric conditions at the equator, such as the absence of cyclonic activity directly over it.

92. (a) Statement 1 is true. Sleet (ice pellets) forms when snowflakes or supercooled raindrops refreeze into tiny ice pellets before reaching the ground.

Statement 2 is backwards. The typical temperature profile for sleet is:

A sub-freezing layer aloft (where snow forms),

A warm layer (above 0°C) in mid-levels (melts snow to rain),

A sub-freezing layer just above the surface (refreezes the raindrops into ice pellets).

So you need a warm layer over a cold layer near the ground-not a cold layer over a warm near-surface layer.

93. (d) **South Argentina** generally experiences a cold steppe or temperate oceanic climate, rather than a humid subtropical climate.

A humid subtropical climate features hot, humid summers and mild winters, commonly found in areas such as South Japan, the East Coast of Australia, and Coastal South Africa.

South Argentina, especially Patagonia, is affected by the cold Humboldt Current and strong westerly winds, resulting in arid or semi-arid conditions.

Regions with humid subtropical climates are typically located between 25° and 40° latitude on the eastern sides of continents.

South Argentina, situated at higher latitudes, does not fit the temperature or precipitation criteria necessary for a humid subtropical climate.

Additional Information

Humid Subtropical Climate:

Characterized by hot summers, mild winters, and year-round rainfall.

Found in regions such as the southeastern USA, parts of China, South Japan, and parts of Australia.

Influenced by warm ocean currents and subtropical high-pressure systems.

94. (b) Mahendragiri, the highest peak of the Eastern Ghats, lies in the Gajapati district of Odisha.

95. (d) Shola forests are the high-altitude evergreen patches interspersed with grasslands in the southern Western Ghats. They occur in all three of these hill ranges:

Anaimalai Hills

Nilgiri Hills

Palani Hills

96. (b) The two leading copper-producing states in India are Rajasthan (Zawar mines) and Madhya Pradesh (Malanjkhand mines)

97. (d) Moran is located in Assam, not Gujarat, which makes it the correct answer when identifying oil fields not in Gujarat. Notable oil fields in Gujarat include Ankaleshwar, Kosamba, and Mehsana, known for their significant contributions to India's petroleum production. Gujarat is a leading state in India for crude oil production, with oil fields like Ankaleshwar among the largest in the country. While Moran is a vital oil field contributing to crude oil production in Assam, it is geographically located outside Gujarat. Oil fields in Gujarat are mainly managed by the Oil and Natural Gas Corporation (ONGC), which plays a crucial role in India's energy sector.

98. (b) 3 years

99. (b) Under the National Food Security Mission – Commercial Crops (NFSM-CC), the targeted crops are:

Cotton, Jute, Sugarcane

100. (a) Bhilai Steel Plant

101. (a) Kandla Port

102. (a) Among the Himalayan states listed, Arunachal Pradesh tops the chart in ISFR 2021 with the largest share of its area under forest. Here are the figures from the report:

Arunachal Pradesh - about 82.30% of its geographic area

Uttarakhand - about 65.39%

Sikkim - about 47.16%

Himachal Pradesh - about 38.76%

Answer: Option 1 - Arunachal Pradesh.

103. (a) Statement 1 is correct and Statement 2 is not.

L-waves (surface waves) travel along the Earth's surface (i.e. its circumference) but are dispersive, so their speed varies with frequency.

104. (d) The correct choice is Option 4: Tuff.

Volcanic ash (particles <2 mm) when carried by water and then deposited, eventually compacts and cements into a rock called tuff.

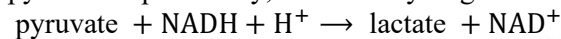
By contrast:

- Basalt is an igneous rock formed by solidified lava flows (not ash).
- Lapilli are loose pyroclastic fragments (2–64 mm) rather than a lithified layer.
- Slate is a metamorphic rock derived from shale, unrelated to fresh volcanic ash.

105. (d) Condensation occurs when the partial pressure of water vapour reaches its saturation value.

That process can be driven by changing the air volume (hence its pressure), the existing humidity (vapour content), and the temperature (which sets the saturation vapour pressure). Hence all three factors are involved.

106. (b) The lactic acid formed in muscle under anaerobic (low- O_2) conditions comes from pyruvate. Specifically, lactate dehydrogenase catalyzes:



So the correct choice is Option 2: Pyruvate.

107. (a) The primary structure of a protein refers to the linear sequence of amino acids in a polypeptide chain, connected by peptide bonds.

This sequence determines the protein's overall structure and function.

108. (a) Lateral meristem

Cambium is a type of meristematic tissue found in plants that helps in secondary growth (increase in thickness/girth).

It is located between the xylem and phloem in vascular bundles.

Since it is responsible for the growth in diameter, it is classified as a lateral meristem.

109. (a) Fats and oils in the food get oxidized

When fat- and oil-containing food is left exposed to air for a long time, the fats and oils undergo oxidation.

This process is called rancidification, and it leads to the development of an unpleasant smell and taste.

It is a chemical reaction with oxygen in the air, causing the food to spoil.

110. (a) In a normal DNA molecule, base pairing follows the complementary base pairing rule:

Adenine (A) always pairs with Thymine (T)

→ via 2 hydrogen bonds

Guanine (G) always pairs with Cytosine (C)

→ via 3 hydrogen bonds

This pairing ensures the double-stranded helical structure of DNA is stable and consistent.

111. (b) Fibrinogen

Fibrinogen is a clotting protein present in the blood plasma.

During blood clotting, fibrinogen is converted into fibrin by the enzyme thrombin.

Fibrin forms a mesh-like network that traps blood cells, forming a clot to stop bleeding.

112. (d) Penicillin, the first true antibiotic, was discovered in 1928 by Sir Alexander Fleming.

He observed that the mold *Penicillium notatum* killed *Staphylococcus* bacteria in a petri dish.

This discovery revolutionized medicine by enabling the treatment of bacterial infections.

113. (c) Female *Anopheles* mosquito

114. (d) Neither 1 nor 2

115. (b) Thiamin

116. (a) New Delhi

117. (b) Garba

• In December 2023, Garba, the traditional dance form from Gujarat, was inscribed into UNESCO's Representative List of the Intangible Cultural Heritage of Humanity.

- It is performed during Navratri, symbolizing the worship of the Divine Feminine (Devi).
- The dance involves rhythmic clapping, circular movements, and vibrant costumes.

118. (a) The “Dhara” initiative for Indian Knowledge Systems (IKS) has been launched by the Ministry of Education.

119. (c) The PRASHAD (Pilgrimage Rejuvenation And Spiritual Heritage Augmentation Drive) scheme was launched in 2014–15 by the Ministry of Tourism, Government of India. It provides financial assistance to State and UT governments for the development of tourism infrastructure at pre-identified pilgrimage destinations and heritage cities.

120. (a) NPCIL and NTPC.

NPCIL (Nuclear Power Corporation of India Ltd) and NTPC (National Thermal Power Corporation Ltd) have formed the joint venture “ASHVINI” to develop nuclear power facilities in India.

121. (d) The correct statement is Option 4:

REJUPAVE is an indigenously developed road-construction and maintenance technology designed for high-altitude regions.

Brief details:

Developed by DRDO's High Altitude Test Station in collaboration with BRO.

Uses polymer-modified bitumen slurry for fast, durable road repairs above 3,000 m.

Ideal for rapid patching on strategic mountain passes.

122. (a) C-Bot is an autonomous underwater vehicle equipped with cameras and sensors to monitor the health of coral reefs.

It was developed by CSIR’s National Institute of Oceanography (NIO), not as a joint project between two separate bodies “CSIR” and “NIO.”

123. (d) The Kaveri engine (designation GTX-35VS) is an indigenous afterburning turbofan aero-engine developed by GTRE, a laboratory under DRDO, specifically aimed at powering aircraft like HAL Tejas and future platforms such as Ghatak and AMCA. It represents India’s most significant effort to achieve self-reliance in aero-engine technology, reducing dependence on foreign suppliers.

124. (a) Jimmy Carter

125. (b)

126. (a)

127. (c) 12 V

128. (b)

129. (b) A long straight solenoid carrying an electric current produces a magnetic field inside it.

This magnetic field is:

Strong

Straight

Parallel to the axis

And most importantly, uniform throughout its interior

130. (c) $v^2 = u^2 + 2as$

Substitute the known values:

$$0 = (12)^2 + 2 \cdot a \cdot 45$$

$$0 = 144 + 90a$$

$$90a = -144$$

$$a = \frac{-144}{90} = -1.6 \text{ m/s}^2$$

131. (d)

132. (b) When two bodies of unequal masses are dropped freely from a height, they fall under the influence of gravity alone, assuming no air resistance.

The acceleration due to gravity (g) is constant and acts equally on all objects, regardless of mass.

133. (d) $v = \lambda f$

134. (c) Let:

$$\text{Initial time period } T_1 = 2\pi \sqrt{\frac{L_1}{g}}$$

New time period $T_2 = 2\pi \sqrt{\frac{4L_1}{g}} = 2\pi \cdot \sqrt{4} \cdot \sqrt{\frac{L_1}{g}} = 2 \cdot T_1$

So,

$$\frac{T_2}{T_1} = \frac{2T_1}{T_1} = 2:1$$

135. (d) Charges can be created and destroyed in an isolated system

136. (a) The blue colour is scattered more compared to the red colour

As sunlight passes through the Earth's atmosphere, it interacts with molecules and tiny particles in the air. This causes Rayleigh scattering, which is inversely proportional to the fourth power of wavelength:

$$\text{Scattering} \propto \frac{1}{\lambda^4}$$

Blue light has a shorter wavelength than red light $\downarrow$ so it is scattered much more.

137. (b) 2 only

138. (c) Same

139. (b) Strain is defined as:

$$\text{Strain} = \frac{\text{Change in length}}{\text{Original length}}$$

Since it is a ratio of two lengths, the units cancel out, making strain a dimensionless quantity.

It has no units and no dimensions.

140. (a) Adiabatic system

141. (a)

142. (a) Clockwise in a plane perpendicular to the wire

To determine the direction of the magnetic field around a current-carrying wire, we use the Right-Hand Thumb Rule:

Right-Hand Thumb Rule:

If you point the thumb of your right hand in the direction of current, then the curl of your fingers gives the direction of the magnetic field lines around the wire.

143. (a) Copper

144. (a) When a light ray passes from air (a rarer medium) into water (a denser medium) at an angle (i.e., not perpendicular to the surface), it undergoes refraction.

According to Snell's Law:

$$n_1 \sin \theta_1 = n_2 \sin \theta_2$$

where:

$n_1 < n_2$ (since air has a lower refractive index than water),

$\theta_2 < \theta_1$

145. (c) $u^2 - v^2 = 2as$

Correct form of the equation is:

$$v^2 - u^2 = 2as$$

Rewriting:

$$u^2 - v^2 = -2as$$

So, option (c) is mathematically incorrect due to the wrong sign.

146. (d) A voltmeter has a low resistance and an ammeter has a high resistance — NOT correct

147. (c) Tidal energy

Non-conventional (or renewable) sources of energy are those that:

Are naturally replenished

Are environmentally friendly

Include solar, wind, tidal, geothermal, and biomass energy

Tidal energy:

Is generated by the movement of ocean tides.

It is a renewable and non-conventional source.

Still under development and not widely used compared to conventional sources.

148. (b) $\frac{1}{3}$ Ohm

149. (b) Reflection of sound waves

An echo is the repetition of sound that is heard after the original sound is reflected back from a hard surface like a wall, mountain, or building.

This occurs when:

The sound travels to the surface and reflects back, and

There is a minimum distance (~17 meters in air at room temperature) between the source and reflecting surface, so that the reflected sound is heard distinctly after the original sound.

150. (c) Acceleration is defined as the rate of change of velocity.

When an object moves at uniform speed, its velocity remains constant in magnitude and direction (in case of straight-line motion).

$$\text{Acceleration} = \frac{\text{Change in velocity}}{\text{Time}} = 0$$

