RRB ALP 2026 CBT-1

Assistant Loco Pilot · CEN 01/2026 · CBT-1 · General Science — Topic-wise

English

3 Chapters · 73 Questions · Official Answer Key

About this Compilation

Every **General Science** question asked across all 9 shifts of the **RRB ALP 2026 CBT-1** examination (CEN 01/2026), regrouped by **chapter** instead of by shift, so you can revise one topic end to end. The correct option is marked as per the official answer key.

Sections. The RRB ALP 2026 CBT-1 paper is a single section in which Mathematics, Mental Ability and General Science questions are mixed. In this book the questions of every shift are grouped by subject (Mathematics, General Intelligence and Reasoning, General Science, General Awareness) from our topic tags. Answers are as per the official answer key.

How to use

- Use the **Index** to jump to any chapter (clickable).
- Within a chapter, questions on the same idea are placed together.
- The correct answer is highlighted in green with a tick.
- The same paper is also available complete and section-wise.



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Index — All Chapters (click to open)

1 **Physics**
General Science · 28 Qs

2 **Chemistry**
General Science · 18 Qs

3 **Biology**
General Science · 27 Qs

General Science 28 Questions • Answer Key

Q1 Electricity

Which of the following statements about resistivity is correct?

A. Resistivity depends on the frequency of current
B. Resistivity changes with applied voltage
C. Resistivity remains constant for a material at a given temperature ✓
D. Resistivity varies with the current

Q2 Light: Reflection & Refraction

What best describes the role of the principal axis in the formation of images by a concave mirror?

A. It acts as a reference line passing through the center of curvature and the pole ✓
B. It is a line perpendicular to the mirror surface at the pole only
C. It passes through the focus and pole but not the center of curvature
D. It is the tangent to the mirror at the center of curvature

Q3 Light: Reflection & Refraction

Which one of the following statements is correct?

A. Absolute refractive index does not relate to optical density.
B. A medium with lower absolute refractive index is optically denser.
C. A medium with higher absolute refractive index is optically rarer.
D. A medium with higher absolute refractive index is optically denser. ✓

Q4 Light: Reflection & Refraction

A pencil appears bent when partially immersed in a glass of water. Which phenomenon best explains this observation, and where does it occur?

A. Reflection at the water surface
B. Scattering of light by water molecules
C. Dispersion of light in water
D. Refraction at the water-air interface ✓

Q5 Magnetism

The relative strength of the magnetic field is indicated by the degree of _____.

A. Length of the field lines
B. Colour of the filings
C. Number of poles involved
D. Closeness of the field lines ✓

Q6 Magnetism

Which of the following best explains why two magnetic field lines cannot intersect at any point in the space surrounding a magnet?

A. Because it weakens the magnetic field
B. Because a compass needle would be required to point in two directions at the same time ✓
C. Because it creates a new magnetic pole
D. Because it means field lines are open curves

Q7 Motion

In uniform circular motion, the acceleration is:

A. Along the radius outward
B. Tangential to the path
C. Along the radius inward ✓
D. Zero

Q8 Motion

The displacement of an object between two instants can be determined from a velocity–time graph by calculating the:

A. intercept on the velocity axis.
B. slope of the graph.
C. area enclosed between the graph and the time axis. ✓
D. length of the graph.

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Q9 Motion

A car accelerates from rest at a constant rate. After 5 seconds, its velocity is 20 m/s. Using the graphical representation of motion, which equation would you use to find the distance covered in those 5 seconds, and what is the result?

- **A.** Use $s = ut + 1/2\ at^2$, so distance = 50 m ✓
- **B.** Use p = mv, so distance = 25 m
- **C.** Use v = u + at, so distance = 20 m
- **D.** Use F = ma, so distance = 100 m

Q10 Motion

A cat runs in a garden covering two different stretches. In the first stretch, it takes 70 steps, each of 0.4 meters. In the second stretch, it increases its speed and covers 56 steps, each of 0.5 meters. If the cat takes the same time (14 seconds) for each stretch, what is its average speed for the entire run?

- **A.** 4 m/s
- **B.** 2 m/s ✓
- **C.** 1 m/s
- **D.** 5 m/s

Q11 Simple Machines

Which type of lever has the load positioned between the fulcrum and the effort?

- **A.** First class lever
- **B.** Second class lever ✓
- **C.** Fourth class lever
- **D.** Third class lever

Q12 Simple Machines

During an experiment, a student mistakenly identifies the lever's load arm as the part where force is always applied. Which concept best corrects this misunderstanding?

- **A.** The fulcrum is the force application point
- **B.** The base is the force direction
- **C.** The load arm supports the fulcrum
- **D.** The effort arm is where force is applied ✓

Q13 Simple Machines

A ramp is used to load boxes onto a truck. If the ramp is made longer but the height remains the same, what will happen to the mechanical advantage and why?

- **A.** The mechanical advantage decreases because the ramp is shorter
- **B.** The mechanical advantage decreases because the ramp becomes steeper
- **C.** The mechanical advantage increases because the input force is spread over a greater distance ✓
- **D.** The mechanical advantage increases because the ramp is higher

Q14 Simple Machines

A worker uses a pulley system to lift a load vertically upwards with a constant speed. If the effort applied is 100 N and the load is 200 N, which statement best describes the system?

- **A.** The system has a mechanical advantage of one
- **B.** The system is an ideal machine
- **C.** The effort is greater than the load
- **D.** The system has a mechanical advantage of two ✓

Q15 Sound

Which of the following statements about the speed of sound is correct?

- **A.** Temperature has no effect on the speed of sound in any medium.
- **B.** The speed of sound increases when a substance changes from solid to gas.
- **C.** The speed of sound in a medium increases as its temperature rises. ✓
- **D.** The speed of sound is the same in solids, liquids, and gases.

Q16 Sound

Why might a classroom with bare walls and a tiled floor have more reverberation compared to one with carpets and curtains?

- **A.** Student noise is amplified by the room
- **B.** Hard surfaces reflect more sound, increasing reverberation ✓
- **C.** Larger rooms always cause more reverberation
- **D.** Thicker walls trap more sound, causing echoes

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Q17 Sound

A sound wave has a frequency of 500 Hz and travels at a speed of 340 meters per second. What would the wavelength be if the frequency is reduced to 250 Hz, assuming the speed remains unchanged?

- **A.** It is doubled ✓
- **B.** It becomes zero
- **C.** It remains the same
- **D.** It is halved

Q18 Sound

A sound wave has frequency f and wavelength λ in air. Without changing the source, the wavelength becomes 2λ in another medium. What happens to the speed of sound?

- **A.** Speed becomes four times
- **B.** Speed becomes half
- **C.** Speed becomes double ✓
- **D.** Speed remains same

Q19 Sound

A student in a laboratory finds that sound travels faster in steel than in air. Which characteristic of the medium best explains this observation?

- **A.** Thickness and color of the medium
- **B.** Shape and size of the medium
- **C.** Temperature and humidity of the medium
- **D.** Density and elasticity of the medium ✓

Q20 Sound

If a bell is rung under water and in open air, which of the following best describes what happens to the speed of sound between the two situations?

- **A.** Sound travels faster in water than in air. ✓
- **B.** Sound travels slower in water than in air.
- **C.** Sound does not travel through water.
- **D.** Sound travels at the same speed in both media.

Q21 Sound

Which experiment would best demonstrate that sound waves are longitudinal in nature?

- **A.** Reflecting light off a mirror and measuring the angle of incidence.
- **B.** Observing the motion of particles in a slinky when compressions and rarefactions are created. ✓
- **C.** Using water waves in a tank to observe crests and troughs.
- **D.** Measuring pitch and loudness of a sound with different instruments.

Q22 Sound

In big halls, sound lingers because it repeatedly reflects off walls. This lasting effect is reduced using sound-absorbing materials. What is this phenomenon called?

- **A.** Echo
- **B.** Resonance
- **C.** Noise
- **D.** Reverberation ✓

Q23 Sound

During an experiment, a physicist observes that a certain material vibrates at 18 Hz when struck. Which type of sound does this vibration generate, and how would it be perceived by the human ear?

- **A.** Audible; it would be felt not heard
- **B.** Infrasonic; it would not be heard by humans ✓
- **C.** Ultrasonic; it would be heard faintly
- **D.** Audible; it would be clearly heard

Q24 Sound

Two sounds have the same pitch and loudness, but one is more pleasant. Which characteristic helps us distinguish between them?

- **A.** Frequency
- **B.** Amplitude
- **C.** Quality or timber ✓
- **D.** Wavelength

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Q25 Sound

Which of the following statements correctly differentiates audible, infrasonic, and ultrasonic sounds?

- A. Audible sounds lie between 20 Hz and 20,000 Hz, infrasonic above 20,000 Hz, and ultrasonic below 20 Hz.
- B. Audible, infrasonic, and ultrasonic sounds all have the same frequency range but differ in loudness.
- C. Audible sounds have frequencies below 20 Hz, infrasonic between 20 Hz and 20,000 Hz, and ultrasonic above 20,000 Hz.
- D. Audible sounds lie between 20 Hz and 20,000 Hz, infrasonic below 20 Hz, and ultrasonic above 20,000 Hz. ✓

Q26 Work, Energy & Power

A student lifts a 20 kg box to a shelf 2 meters high in 5 seconds. What is the power developed by the student? (Take g = 10 m/s^2)

- A. 80 watts ✓
- B. 40 watts
- C. 200 watts
- D. 100 watts

Q27 Work, Energy & Power

Which situation best illustrates the scientific definition of work done by a force?

- A. A person lifts a box vertically upward against gravity ✓
- B. Carrying a bag at constant speed across a level floor
- C. Placing a book gently onto a table without sliding it
- D. Pushing against a stationary wall with maximum effort

Q28 Work, Energy & Power

A box of mass 5 kg is pushed along a horizontal surface with a constant force of 20 N for 4 meters. If the box starts from rest and experiences a frictional force of 5 N, what is the final kinetic energy of the box according to the work energy theorem?

- A. 80 J
- B. 60 J ✓
- C. 15 J
- D. 20 J

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Q1 Acids, Bases & Salts

Which gas is released when dilute hydrochloric acid reacts with sodium carbonate?

- A. Carbon dioxide is released ✓
- B. Hydrogen gas is released
- C. Chlorine gas is released
- D. Sulfur dioxide is released

Q2 Acids, Bases & Salts

What happens to the pH of the pure water when hydrochloric acid is added to it?

- A. pH of the solution stays unchanged
- B. pH of the solution decreases ✓
- C. pH of the solution increases
- D. pH of the solution becomes neutral

Q3 Acids, Bases & Salts

Which compound is treated with water to obtain washing soda in its preparation process?

- A. Sodium bicarbonate is treated with water to obtain washing soda
- B. Sodium chloride is treated with water to obtain washing soda
- C. Sodium carbonate is treated with water to obtain washing soda ✓
- D. Sodium hydroxide is treated with water to obtain washing soda

Q4 Atomic Structure

Which statement best describes the valency of an element?

- A. It is the total number of protons in the nucleus of an atom
- B. It is the combining capacity based on electrons lost, gained, or shared ✓
- C. It is the total number of nucleons in the nucleus
- D. It is the difference between the number of neutrons and protons in an atom

Q5 Atomic Structure

Which observation from Rutherford's experiment led to the conclusion that the atom is mostly empty space?

- A. Alpha particles were absorbed completely by the gold foil
- B. A few alpha particles bounced back from the foil
- C. Electrons emitted light while rotating
- D. Most alpha particles passed straight through the foil ✓

Q6 Atomic Structure

When a sodium atom loses one electron, what does it become?

- A. A sodium molecule
- B. A positively charged sodium ion ✓
- C. A neutral sodium atom
- D. A negatively charged sodium ion

Q7 Carbon & Its Compounds

Ethanol oxidises in the presence of hot alkaline $KMnO_4$ to form _____.

- A. Ethyl acetate
- B. Ethanal
- C. Acetone
- D. Ethanoic acid ✓

Q8 Carbon & Its Compounds

Which gas is always produced when a carbon compound undergoes complete combustion in the presence of sufficient oxygen?

- A. Carbon dioxide ✓
- B. Methane
- C. Oxygen
- D. Carbon monoxide

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Q9 Carbon & Its Compounds

The ability of carbon to form chains gives rise to a homologous series of compounds in which the same functional group is attached to carbon chains of different lengths, is known as:

A. substitution

B. catenation ✓

C. elimination

D. addition

Q10 Carbon & Its Compounds

In chain isomerism, isomers differ in:

A. The number of carbon atoms

B. The arrangement of the carbon skeleton ✓

C. The position of the functional group

D. The type of functional group

Q11 Carbon & Its Compounds

Which of the following belongs to an aldehyde group?

A. CH_3CH_2OH

B. CH_3COOH

C. CH_3CHO ✓

D. HCOOH

Q12 Chemical Reactions & Equations

When a more reactive metal reacts with a salt solution of a less reactive metal, what type of reaction will occur?

A. Substitution

B. Rearrangement

C. Displacement ✓

D. Addition

Q13 Chemical Reactions & Equations

Why is electrolysis of water classified as a decomposition reaction?

A. Hydrogen replaces oxygen

B. Electricity heats the water

C. Oxygen combines with electrodes

D. Water splits into hydrogen and oxygen ✓

Q14 Matter & Its States

Given below are two statements. Read the statements carefully and select the correct option.

Statement I: Mixtures that contain physically distinct parts and have non-uniform compositions are called heterogeneous mixtures.
Statement II: Mixtures of sodium chloride and iron filings, salt and sulphur, and oil and water are examples of heterogeneous mixtures.

A. Both Statements I and II are false.

B. Statement I is true but Statement II is false.

C. Both Statements I and II are true. ✓

D. Statement I is false but Statement II is true.

Q15 Matter & Its States

Which statement best describes a homogeneous mixture?

A. It has the same appearance and composition throughout ✓

B. It contains substances visible to the naked eye

C. It forms layers that can be seen easily

D. It shows different properties and appearance in different areas

Q16 Metals & Non-metals

Why are the impurities removed from ores, before extraction?

A. To improve ore taste

B. To make ore colorful

C. To obtain pure metal from it ✓

D. To increase ore weight

Q17 Metals & Non-metals

A student has four strips: magnesium, copper, aluminum, and zinc. If each is placed in a solution of iron sulfate, which will show no reaction based on the reactivity series?

A. Magnesium

B. Zinc

C. Aluminum

D. Copper ✓

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Q18 Metals & Non-metals

Identify the non-metal oxide from the following which when dissolved in water does NOT formed acid.

A. CO_2

B. SO_2

C. NO ✓

D. NO_2

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Q1 Cell Biology

Where in the cell does the breakdown of glucose occur during anaerobic respiration?

A. In the mitochondria, known as the powerhouse of the cell

B. Within the cytoplasm, where cellular reactions occur ✓

C. In the chloroplasts responsible for making food through photosynthesis

D. Inside the nucleus that controls all cell activities

Q2 Cell Biology

Which of the following structural features helps the plant remain firm and upright?

A. Flexible membranes

B. Presence of a cell wall ✓

C. Parenchyma tissue

D. Transparent cytoplasm

Q3 Diseases & Immunity

Imagine a city where smokeless tobacco use is very common. Which public health problem is likely to be most prevalent?

A. Rise in skin allergies

B. High rates of oral cancer ✓

C. Decrease in viral infections

D. Increase in bone fractures

Q4 Diversity & Classification

The species name in binomial nomenclature indicates a group of organisms capable of _____ and producing offspring.

A. interbreeding ✓

B. competing

C. hibernating

D. migrating

Q5 Diversity & Classification

Match the following examples with their respective groups.

Organism	Group
1. Marchantia	A. Thallophyta
2. Ferns	B. Bryophyta
3. Spirogyra	C. Pteridophya

A. 1-C, 2-B, 3-A

B. 1-B, 2-C, 3-A ✓

C. 1-B, 2-A, 3-C

D. 1-A, 2-B, 3-C

Q6 Diversity & Classification

Which of the following sequences CORRECTLY shows the hierarchical order in biological classification from broadest to most specific?

A. Kingdom, Phylum, Class, Order, Family, Genus, Species ✓

B. Species, Genus, Family, Order, Class, Phylum, Kingdom

C. Kingdom, Phylum, Class, Family, Order, Genus, Species

D. Kingdom, Class, Phylum, Order, Family, Genus, Species

Q7 Diversity & Classification

Match the following criteria with the correct description.

Classification Criteria	Description
I). Mode of nutrition	A) Presence or absence of cell wall
II). Ecological role	B) Autotrophic or heterotrophic
III). Cell structure	C) Producer, consumer, or decomposer

A. I-B, II-C, III-A ✓

B. I-C, II-B, III-A

C. I -A, II-B, III-C

D. I-A, II-C, III-B

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Q8 Ecology & Environment

Which of the following categories includes organisms that break down dead and waste matter?

- A. Consumers
- B. Herbivores
- C. Producers
- D. Decomposers ✓

Q9 Ecology & Environment

Why do food chains generally consist of only three or four steps?

- A. Producers cannot make enough food
- B. Significant energy loss occurs at each trophic level ✓
- C. Herbivores outnumber carnivores
- D. Only a few species exist in ecosystems

Q10 Human Physiology

Which type of joint is present in the knee, enabling it to bend and straighten?

- A. Hinge joint ✓
- B. Pivot joint
- C. Ball and socket joint
- D. Fixed joint

Q11 Human Physiology

If the selective re-absorption in nephron stopped functioning, which of the following would likely happen?

- A. Filtration would stop completely
- B. Essential nutrients would be lost in urine ✓
- C. More waste would be conserved in the body
- D. Urine would become solid

Q12 Human Physiology

Which value represents the pressure exerted by the blood on artery walls when the heart contracts?

- A. Mean arterial pressure
- B. Diastolic pressure
- C. Air pressure
- D. Systolic pressure ✓

Q13 Human Physiology

How does bile juice help in the digestion process in the small intestine?

- A. It emulsifies fats into smaller globules ✓
- B. It digests proteins into amino acids
- C. It secretes digestive enzymes
- D. It absorbs nutrients into blood vessels

Q14 Human Physiology

Which part of the brain is mainly responsible for thinking and decision making?

- A. Spinal cord
- B. Fore-brain ✓
- C. Mid-brain
- D. Hind-brain

Q15 Plant Physiology

Which of the following is the reason for transporting sugars from roots to buds in spring?

- A. Buds require energy to grow after dormancy ✓
- B. Leaves need minerals for photosynthesis
- C. Roots need sugars to absorb water
- D. Stems store excess minerals

Q16 Plant Physiology

Which condition will favour maximum photosynthesis?

- A. Low light intensity, high CO_2, low temperature
- B. High light intensity, adequate CO_2, optimum temperature ✓
- C. Low CO_2, high light intensity, optimum temperature
- D. High oxygen, low light intensity, high temperature

Q17 Plant Physiology

Which of the following regions of the electromagnetic spectrum is/are primarily responsible for photosynthesis on Earth?

- A. Visible light ✓
- B. Microwaves
- C. Ultraviolet radiation
- D. Radio waves

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Q18 Plant Physiology

Which of the folowing creates the initial movement of water into the root from the soil?

- A. Passive absorption of minerals
- B. Active uptake of ions by root cells ✓
- C. Gravity pulling water downward
- D. Translocation from the leaves

Q19 Plant Physiology

How do companion cells contribute to the function of sieve tubes?

- A. They provide structural support to the phloem.
- B. They monitor the loading and unloading of sugars. ✓
- C. They store food materials and resins.
- D. They regulate latex storage in sieve tubes.

Q20 Reproduction

Where does gametogenesis occur in the human male and female reproductive organs, respectively?

- A. In the urethra and the ovaries
- B. In the testes and the fallopian tube
- C. In the urethra and the cervix
- D. In the testes and the ovaries ✓

Q21 Reproduction

Which of the following pairs of glands secrete fluids that nourish sperm and help them remain active?

- A. Vas deferens and urethra
- B. Testes and scrotum
- C. Seminal vesicles and prostate ✓
- D. Scrotum and urethra

Q22 Reproduction

What is the small outgrowth formed on the body of a hydra due to repeated cell division called?

- A. Spore
- B. Offshoot
- C. Bud ✓
- D. Node

Q23 Reproduction

Which of the following parts of the female reproductive system is responsible for both producing eggs and releasing hormones?

- A. Ovary ✓
- B. Uterus
- C. Oviduct
- D. Cervix

Q24 Reproduction

What does the ovary of a flower transform into after fertilisation is complete?

- A. Seedcoat
- B. Zygote
- C. Fruit ✓
- D. Seed

Q25 Tissues

If an epithelial tissue is damaged and the underlying tissues become exposed, what is a likely immediate consequence?

- A. Increased risk of germ entry and infection ✓
- B. Increased secretion of hormones
- C. Immediate healing of damaged tissue
- D. Enhanced absorption of substances

Q26 Tissues

Which of the following plant tissues are made up of long, living cells arranged end-to-end by perforated walls?

- A. Vessels
- B. Tracheids
- C. Phloem fibres
- D. Sieve tubes ✓

Q27 Tissues

Which of the following properties of simple permanent tissue helps aquatic plants to float?

- A. Hardness from lignified sclerenchyma
- B. Presence of air spaces in parenchyma ✓
- C. Unevenly thickened corners of a cell
- D. Flexibility due to pectin in collenchyma

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