



रेलवे भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS
सीईएन - 05/25 - जेई, डीएमएस, सीएमए - CEN - 05/25 - JE, DMS, CMA



Test Date	02/07/2026
Test Time	9:00 AM - 11:00 AM
Subject / Exam Group	RRB JE Stage 2 Civil and Allied Engineering

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : General Abilities

Q.1	If cell A1 = 10 and B1 = 20, what will `=A1+B1` return?
Ans	✗ 1. Error ✗ 2. 1020 ✓ 3. 30 ✗ 4. 200
Q.2	A construction worker needs to lift a heavy metal beam using a lever but has a limited length of plank. Which adjustment would allow the worker to lift the beam with the least effort if the position of the fulcrum can be changed but the plank length remains constant?
Ans	✗ 1. Keep the fulcrum fixed at any point ✗ 2. Move the fulcrum closer to the worker ✓ 3. Move the fulcrum closer to the beam ✗ 4. Place the fulcrum at the center of the plank
Q.3	Which new warship was commissioned by the Indian Navy in November, 2025, to strengthen anti-submarine and coastal defence capabilities?
Ans	✓ 1. INS Mahe ✗ 2. INS Vikrant ✗ 3. INS Arnala ✗ 4. INS Ikshak
Q.4	Which condition is required for a displacement reaction between a metal and salt solution?
Ans	✗ 1. Metal must be same as salt constituent ✗ 2. Salt must be insoluble in water ✓ 3. Metal must be higher in reactivity series ✗ 4. Reaction must be endothermic
Q.5	Which of the following statements is true about the Outbox?
Ans	✗ 1. It is used to receive incoming emails. ✗ 2. It holds emails that have been successfully sent. ✓ 3. It temporarily stores emails that are queued for sending. ✗ 4. It contains emails that are currently being drafted.

Q.6	The primary method of managing biodegradable domestic waste after collection is _____.
Ans	☐ 1. burnt in open air ☒ 2. conversion into compost ☐ 3. sending for recycling ☐ 4. throwing into sewers
Q.7	A field exposed to excessive pesticide use shows a sharp decline in earthworm population. The resulting effect on soil is:
Ans	☐ 1. Increased water retention ☐ 2. Enhanced decomposition ☐ 3. Improved aeration ☒ 4. Reduced soil fertility
Q.8	Who won the maximum number of medals at the 38th National Games of India?
Ans	☐ 1. Neeraj Chopra ☐ 2. Manu Bhaker ☒ 3. Dhinidhi Desinghu ☐ 4. Bajrang Punia
Q.9	According to the Article 75 of the Indian Constitution, the total number of ministers (including the Prime Minister) in the Council of Ministers shall NOT exceed what percentage of the total members of the House of the People, i.e., Lok Sabha?
Ans	☒ 1. 15% ☐ 2. 25% ☐ 3. 20% ☐ 4. 10%
Q.10	Which of the following is/are the primary reasons to fall in the trap of Email fraud or phishing? A) Paying attention to lucrative offers. B) Not checking on links or attachments from unknown senders C) Providing official information via email D) Paying attention to the company logo sent in the email
Ans	☐ 1. A only ☐ 2. A, B, D Only ☐ 3. A, B Only ☒ 4. A, B, C Only
Q.11	The atmospheric component that remains largely unreactive is _____.
Ans	☐ 1. Methane ☒ 2. Argon ☐ 3. Carbon dioxide ☐ 4. Oxygen
Q.12	What is the main reason sulfur dioxide irritates the upper respiratory mucous membrane?
Ans	☐ 1. It combines with other pollutants and polymerizes in the lungs ☐ 2. It oxidizes to sulphur trioxide and inhaled deep into lung ☒ 3. It dissolves in moisture in upper respiratory tract and forms irritant ☐ 4. It combines with haemoglobin and effect the oxygen transport

Q.13	In a real-life scenario, a chemist discovers a compound with the formula $\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{OH}$. What is the correct IUPAC name for this compound?
Ans	☐ 1. 2-methylhexanol ☒ 2. 3-methylpentan-1-ol ☐ 3. 3-methylhexanol ☐ 4. 4-methylpentanol
Q.14	On which date is National Handloom Day observed in India?
Ans	☐ 1. 2 October ☐ 2. 5 September ☐ 3. 18 August ☒ 4. 7 August
Q.15	What is the general formula of alkenes?
Ans	☐ 1. $\text{C}_n\text{H}_{2n-2}$ ☐ 2. $\text{C}_n\text{H}_{2n+2}$ ☐ 3. C_nH_n ☒ 4. C_nH_{2n}
Q.16	Biomedical waste handlers in a hospital are at risk of occupational hazards. The most effective way to protect them from exposure to infectious materials is:
Ans	☐ 1. Regular medical check-ups ☐ 2. Segregation of waste into color-coded bins ☒ 3. Use of protective equipment and safe handling ☐ 4. Vaccination against common infections
Q.17	Which type of computer virus attaches itself to executable files and gets activated when the file is run?
Ans	☐ 1. Macro Virus ☐ 2. Boot Sector Virus ☒ 3. File Infector Virus ☐ 4. Worm
Q.18	The primary goal of the Pradhan Mantri Gram Sadak Yojana (PMGSY) is to:
Ans	☐ 1. Develop urban infrastructure ☒ 2. Provide rural connectivity through road construction ☐ 3. Enhance telecommunication services in cities ☐ 4. Promote renewable energy usage
Q.19	Which function returns the smallest value?
Ans	☐ 1. COUNT() ☐ 2. MAX() ☐ 3. AVERAGE ☒ 4. MIN()
Q.20	Which of the following Articles states about the right of individual to form associations or unions or co-operative societies?
Ans	☐ 1. Article 19 (1) (a) ☐ 2. Article 19 (1) (b) ☐ 3. Article 19 (1) (d) ☒ 4. Article 19 (1) (c)

Q.21 A student accidentally spills some hydrochloric acid on a table. Which substance should be used to neutralise the acid safely?

- Ans
- ☐ 1. Vinegar
 - ☐ 2. Lemon juice
 - ☒ 3. Baking soda solution
 - ☐ 4. Sugar solution

Q.22 Which pair of sectors is commonly addressed together in State Action Plan on Climate Change (SAPCC) adaptation planning?

- Ans
- ☐ 1. Textile design and fashion marketing
 - ☒ 2. Water resources and health systems
 - ☐ 3. Heavy industry and entertainment
 - ☐ 4. Information technology and space research

Q.23 The term 'smog' is a combination of _____.

- Ans
- ☐ 1. Smog and mist
 - ☒ 2. Smoke and fog
 - ☐ 3. Smoke and haze
 - ☐ 4. Fog and clouds

Q.24 Match the following columns.

Pardoning power	Function
1. Commutation	a. Removes both sentence and the conviction.
2. Reprieve	b. Lesser sentence than originally given, in special cases.
3. Respite	c. Reducing the period of sentence without changing the nature of the sentence.
4. Remission	d. Temporary stay on the execution of a sentence.
5. Pardon	e. Substitution of one form of punishment to a lighter one.

- Ans
- ☒ 1. 1-e, 2-d, 3-b, 4-c, 5-a
 - ☐ 2. 1-c, 2-e, 3-b, 4-a, 5-d
 - ☐ 3. 1-a, 2-c, 3-d, 4-e, 5-b
 - ☐ 4. 1-d, 2-b, 3-e, 4-c, 5-a

Q.25 Which British colonial building in Mumbai, completed in 1888, showcases a blend of Victorian Gothic and Indian architectural elements?

- Ans
- ☐ 1. Bombay Town Hall
 - ☐ 2. Gateway of India
 - ☐ 3. Rajabai Clock Tower
 - ☒ 4. Chhatrapati Shivaji Maharaj Terminus

Q.26 Which of the following options must be DISABLED before manually setting the date and time in Windows?

- Ans
- ☐ 1. Set time zone globally
 - ☒ 2. Set time automatically
 - ☐ 3. Night Light
 - ☐ 4. Enable multiple clocks

Q.27	The Atal Bhujal Yojana 2020 focused on improving water resources management of how many states?
Ans	✖ 1. five ✔ 2. seven ✖ 3. eight ✖ 4. ten
Q.28	A student pushes a heavy box that is already moving across a rough floor. If the force applied by the student is exactly equal to the frictional force opposing the motion, what will happen to the box?
Ans	✖ 1. The box will gradually come to rest ✔ 2. The box will move at a constant speed ✖ 3. The box will accelerate forward ✖ 4. The box will move at increasing speed
Q.29	How can we locate a file with a known extension but an unknown name in a large directory?
Ans	✖ 1. Through File Explorer ✔ 2. Using the Search box in File Explorer with *.ext ✖ 3. Checking the Recycle Bin ✖ 4. Using the dir command
Q.30	Which of the following statements best describes how the power of accommodation enables the human eye to focus on both near and distant objects?
Ans	✖ 1. The cornea provides all the focusing power required for clear vision ✖ 2. The retina moves forward and backward to adjust the focus ✔ 3. The eye lens changes its focal length by altering its shape through ciliary muscle action ✖ 4. The iris controls the amount of light entering and helps to focus
Q.31	According to Thomson's model, how are electrons arranged in an atom?
Ans	✖ 1. Moving in fixed orbits around the nucleus ✖ 2. Randomly placed inside the nucleus ✔ 3. Embedded in a positively charged sphere like seeds in a watermelon ✖ 4. Orbiting around neutrons in elliptical paths
Q.32	Consider the following statements regarding chemical reactions and choose the correct option. Statement I: Every reaction in which two or more reactants combine to form a single product is classified as a combination reaction regardless of heat change. Statement II: The reaction $\text{CaO(s)} + \text{H}_2\text{O(l)} \rightarrow \text{Ca(OH)}_2\text{(aq)} + \text{heat}$ is both a combination reaction and an exothermic reaction.
Ans	✔ 1. Both statements are correct ✖ 2. Both statements are incorrect ✖ 3. Only Statement I is correct ✖ 4. Only Statement II is correct
Q.33	Which of the following best describes the velocity-time graph for an object moving with uniform velocity?
Ans	✔ 1. A straight horizontal line parallel to the time axis ✖ 2. A curved line above the time axis ✖ 3. A straight line sloping upwards from the time axis ✖ 4. A line starting from the origin and sloping upwards

Q.34 Which of the following indicators is NOT typically used to measure sustainable development?

- Ans**
- ☐ 1. Biocapacity
 - ☐ 2. Human Development Index (HDI)
 - ☒ 3. Gross Domestic Product (GDP) growth rate
 - ☐ 4. Ecological Footprint

Q.35 You want to automatically advance slides with narration and animations during a presentation. Which MS PowerPoint feature should you use to achieve this?

- Ans**
- ☐ 1. Slide Sorter
 - ☐ 2. Action Buttons
 - ☒ 3. Rehearse Timings
 - ☐ 4. Presenter View

Q.36 The pollutant group commonly associated with oil spills in oceans is _____.

- Ans**
- ☐ 1. agricultural pesticides
 - ☐ 2. chemical fertilizers
 - ☒ 3. petroleum products
 - ☐ 4. synthetic detergents

Q.37 A farmer applies large amounts of chemical fertilizers over several years. Which consequence most likely results from this practice leading to soil pollution?

- Ans**
- ☐ 1. Faster plant growth every season
 - ☐ 2. Increase in earthworm population
 - ☒ 3. Accumulation of toxic substances in soil
 - ☐ 4. Erosion of surface soil layers

Q.38 When was the 11th National Handloom Day celebrated across India under the coordination of the Ministry of Textiles?

- Ans**
- ☐ 1. October 7, 2025
 - ☐ 2. September 7, 2025
 - ☒ 3. August 7, 2025
 - ☐ 4. November 7, 2025

Q.39 Which Quick Style type is applied only to selected words or individual characters within a paragraph in MS Word 2010?

- Ans**
- ☒ 1. Character styles
 - ☐ 2. Linked styles
 - ☐ 3. Paragraph styles
 - ☐ 4. Page styles

Q.40 The Mappila Uprisings of the 19th century occurred mainly in which region of India?

- Ans**
- ☐ 1. Coromandel Coast of Tamil Nadu
 - ☐ 2. Sunderbans region of West Bengal
 - ☐ 3. Konkan region of Maharashtra
 - ☒ 4. Malabar region of Kerala

Q.41 Which of the following best describes how sound travels through air?

- Ans**
- ☐ 1. The air particles move in circular paths as the wave passes
 - ☐ 2. The air particles remain stationary while the wave moves through
 - ☐ 3. The air particles vibrate up and down perpendicular to the direction of the wave
 - ☒ 4. The air particles vibrate back and forth parallel to the direction of the wave

Q.42 The Kol Rebellion (1831–32) mainly affected which plateau region?

- Ans
- ✓ 1. Chotanagpur Plateau
 - ✗ 2. Malwa Plateau
 - ✗ 3. Deccan Plateau
 - ✗ 4. Meghalaya Plateau

Q.43 If 10 grams of salt are dissolved in 100 mL of water, which component is the solute?

- Ans
- ✗ 1. Neither
 - ✗ 2. Water only
 - ✗ 3. Both salt and water
 - ✓ 4. Salt only

Q.44 A factory plans to install a powerful electromagnet for lifting metal scraps. To maximize the magnetic field strength around the coil, which of the following combinations would be most effective?

- Ans
- ✓ 1. Using a soft iron core, increasing coil turns, and increasing current through the coil
 - ✗ 2. Using an air core, decreasing coil turns, and keeping current constant
 - ✗ 3. Using a copper core, increasing coil turns, and lowering current
 - ✗ 4. Using a steel core, decreasing coil turns, and lowering current

Q.45 Which of the following satellites was launched on November 2, 2025, to enhance the Indian Navy's secure communication network and maritime surveillance capabilities?

- Ans
- ✗ 1. Cartosat-3
 - ✗ 2. RISAT-2B
 - ✓ 3. CMS-03 (GSAT-7R)
 - ✗ 4. GSAT-6A

Q.46 What file extension is used to save an MS PowerPoint 2021 presentation?

- Ans
- ✗ 1. .docx
 - ✗ 2. .pdf
 - ✓ 3. .pptx
 - ✗ 4. .xlsx

Q.47 Which of the following rivers forms a delta along the eastern coastal plains?

- Ans
- ✗ 1. Ganga
 - ✗ 2. Narmada
 - ✗ 3. Tapi
 - ✓ 4. Godavari

Q.48 Which experimental discovery contradicted Thomson's model of the atom and led to its rejection?

- Ans
- ✓ 1. Alpha particle scattering showing deflection at large angles
 - ✗ 2. Discovery of the neutron by James Chadwick
 - ✗ 3. Measurement of atomic radius using X-ray diffraction
 - ✗ 4. Observation of line spectra of hydrogen by Bohr

Q.49 Which of the following is a primary mission under India's National Action Plan on Climate Change (NAPCC)?

- Ans
- ✗ 1. National Nutrition Mission
 - ✗ 2. National Highway Development Project
 - ✓ 3. National Solar Mission
 - ✗ 4. National Rural Livelihood Mission

- Q.50

Which of the following statements best describes the behavior of magnetic field lines around a straight current-carrying conductor?
- Ans

✔

1. They form concentric circles centered on the conductor.

✖

2. They radiate straight outward from the wire.

✖

3. They are parallel straight lines along the wire.

✖

4. They change direction randomly along the wire.

Section : Technical Abilities

- Q.1

What is the importance of the narrower bottom in oval-shaped sewers during low-flow conditions?
- Ans

✖

1. Easier maintenance access

✖

2. Enhanced structural strength

✔

3. Maintained higher flow velocity

✖

4. Reduced construction cost

- Q.2

A summit curve is provided on a road profile where:
- Ans

✖

1. Two ascending gradients intersect smoothly

✔

2. An ascending gradient meets a falling one

✖

3. Two descending gradients come together

✖

4. A descending gradient meets a level section

- Q.3

The primary function of the switch rails in a turnout is to:
- Ans

✔

1. Guide wheels from main line to turnout line

✖

2. Provide structural stability

✖

3. Provide a smooth passage through the crossing

✖

4. Maintain proper gauge

- Q.4

Which material is preferred for railway track ballast?
- Ans

✖

1. Sand

✖

2. Gravel

✔

3. Crushed stone

✖

4. Lime

- Q.5

How does a barrage differ from a dam?
- Ans

✔

1. A barrage regulates river flow using gates, while a dam stores water in a reservoir.

✖

2. A dam controls only floods, while a barrage is used for irrigation.

✖

3. A barrage is used for hydroelectric power generation, whereas a dam is not.

✖

4. A dam is always smaller in height compared to a barrage.

- Q.6

For compression members, the I-section is preferred because it ____.
- Ans

✖

1. requires more material to provide equivalent strength

✖

2. has better resistance to lateral-torsional buckling

✔

3. has a lower weight for the same strength

✖

4. is more flexible compared to other sections

- Q.7

The primary purpose of a seal coat in bituminous pavement construction is to:
- Ans

✖

1. replace the bituminous binder layer

✖

2. strengthen the granular base

✖

3. improve the compaction of subgrade soil

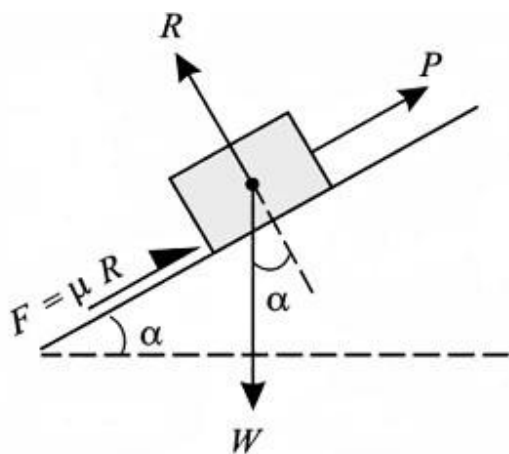
✔

4. provide skid resistance and waterproofing

Q.8	The property of timber which enables it to absorb sudden shocks or impact loads is called _____.
Ans	☐ 1. Tenacity ☐ 2. Elasticity ☐ 3. Hardness ☒ 4. Toughness

Q.15	As per IRC:SP:90-2010, the minimum vertical clearance requirement for road underpasses is:
Ans	☐ 1. 3.5 m for minor roads only ☐ 2. 6.25 m above railway track level ☐ 3. 4.5 m in all cases ☒ 4. 5.0 m in general and 5.5 m in urban areas

Q.20 A block of weight (W) rests on a rough inclined plane with an angle of inclination α shown in the figure. The coefficient of friction between the block surface and the plane is μ , R is the normal reaction perpendicular to the inclined plane. A force (P) is applied parallel to the plane to prevent the block from sliding down. Which of the following represents the minimum value of (P) required to maintain equilibrium?



- Ans
- ☒ 1. $P = W (\cos \alpha - \mu \sin \alpha)$
 - ☒ 2. $P = W (\sin \alpha - \mu \cos \alpha)$
 - ☒ 3. $P = W (\cos \alpha - \tan \alpha)$
 - ☒ 4. $P = W (\sin \alpha + \mu \cos \alpha)$

Q.21 Which statement best describes the primary structural function of pile caps in foundation systems?

- Ans
- ☒ 1. Connecting foundation piles directly to floor beams
 - ☒ 2. Protecting exposed pile surfaces from environmental damage
 - ☒ 3. Providing waterproof protection around foundation piles
 - ☒ 4. Distributing structural loads among supporting piles

Q.22 Which layer of soil is compacted to increase its bearing strength and reduce settlement in construction work?

- Ans
- ☒ 1. Base layer
 - ☒ 2. Surface layer
 - ☒ 3. Subgrade layer
 - ☒ 4. Topsoil layer

Q.23 In the context of brick masonry, what distinguishes modular bricks from traditional bricks?

- Ans
- ☒ 1. Traditional bricks are produced in larger standard sizes
 - ☒ 2. Modular bricks are produced with standardized dimensions
 - ☒ 3. Modular bricks are manufactured mainly by manual methods
 - ☒ 4. Traditional bricks are manufactured using lightweight materials

Q.24 The minimum slope for an accessible ramp as per most building codes is _____.

- Ans
- ☒ 1. 1 : 12
 - ☒ 2. 1 : 25
 - ☒ 3. 1 : 15
 - ☒ 4. 1 : 20

Q.25	Under which of the following types of the dampness-checking materials categories, does cement concrete fall?
Ans	☐ 1. flexible ☒ 2. rigid ☐ 3. grout ☐ 4. temporary
Q.26	Which type of glass is commonly used in doors and windows?
Ans	☐ 1. Flint glass ☐ 2. Lead glass ☐ 3. Borosilicate glass ☒ 4. Soda-lime glass
Q.27	Which layer prevents leachate migration in landfills?
Ans	☐ 1. Soil Cover ☐ 2. Gas Vent ☒ 3. Impermeable Liner ☐ 4. Waste Layer
Q.28	Which of the following types of flooring is preferably used in dancing halls and in auditoriums?
Ans	☐ 1. Brick Flooring ☐ 2. Porcelain Tile flooring ☒ 3. Timber Flooring ☐ 4. Ceramic Tile flooring
Q.29	Which method is primarily used to fill cracks, voids, and fissures in loose gravels and rocky strata?
Ans	☒ 1. Grouting ☐ 2. Cavity wall construction ☐ 3. Surface treatment ☐ 4. Guniting
Q.30	A louvered door is ideal for which type of location within a building?
Ans	☐ 1. Main entrance ☒ 2. Laundry room ☐ 3. Garage door ☐ 4. Emergency exit
Q.31	In a micro-optic theodolite, the optical path used for reading angles is typically:
Ans	☒ 1. Optical and magnified via micrometer eyepiece ☐ 2. Manual and scale-based ☐ 3. Satellite via micrometer eyepiece ☐ 4. Interferometric
Q.32	Which of the following is the function of a head regulator in a barrage?
Ans	☐ 1. To prevent erosion of riverbanks ☐ 2. To prevent the river from outflanking the barrage ☒ 3. To admit water into the off taking canal ☐ 4. To serve as one side wall of fish ladder

Q.33	The quantity estimation of structural timber work (wooden beams) is generally calculated based on:
Ans	☒ 1. Volume of timber used ☐ 2. Number of rooms ☐ 3. Weight of timber used ☐ 4. Floor area of building
Q.34	A door designed with inclined slats to permit ventilation while restricting direct visibility is classified as which type?
Ans	☐ 1. Panel door ☐ 2. Flush door ☒ 3. Louvered door ☐ 4. Collapsible door
Q.35	The assumption in pure bending that plane sections remain plane after bending leads to which stress distribution?
Ans	☐ 1. Parabolic stress variation ☐ 2. Uniform stress throughout the depth ☐ 3. Exponential stress variation ☒ 4. Linear stress variation
Q.36	In soil mechanics, the seepage velocity is related to the discharge velocity and porosity of the soil. Which of the following statements is correct?
Ans	☐ 1. Seepage velocity is independent of soil porosity. ☒ 2. Seepage velocity is equal to discharge velocity divided by porosity. ☐ 3. Seepage velocity is equal to discharge velocity multiplied by porosity. ☐ 4. Seepage velocity is always less than discharge velocity.
Q.37	Which of the following types of welds is primarily designed to transmit shear forces in a connection?
Ans	☐ 1. Butt weld ☐ 2. Groove weld ☒ 3. Fillet weld ☐ 4. Slot weld
Q.38	What is the recommended sequence for setting CAD software on a computer without operating system (OS)?
Ans	☐ 1. Download drawing - Start drawing - Install CAD ☒ 2. Install OS - Install CAD software - Configure settings ☐ 3. Launch Software - Install key drivers - Install OS ☐ 4. Create layers - Save file - Install OS
Q.39	Which modelling method in CAD is used for creating and manipulating the external, visible surfaces of a 3D object, focusing on the shape, aesthetics, and form rather than its internal structure?
Ans	☐ 1. Solid modelling ☒ 2. Surface modelling ☐ 3. Isometric projection ☐ 4. Parametric modelling

Q.40	In fluid mechanics, zero absolute pressure corresponds to which condition?
Ans	☒ 1. Perfect vacuum ☐ 2. Atmospheric pressure ☐ 3. Gauge pressure ☐ 4. Superheated steam
Q.41	_____ formwork is used for continuous vertical structures like chimneys, silos, and towers.
Ans	☒ 1. Slip ☐ 2. Steel ☐ 3. Plastic ☐ 4. Timber
Q.42	Which of the following is a necessary condition for plane table surveying?
Ans	☒ 1. The plane table must be levelled and properly oriented at each station ☐ 2. Only a single station is required for the entire survey ☐ 3. Contours must be measured and plotted before starting the survey ☐ 4. All the stations must be established on a slope of the terrain
Q.43	Which of the following correctly represents the concrete contribution to shear strength V_c in Limit State Method (LSM) design?
Ans	☐ 1. V_c is neglected entirely in shear design ☐ 2. V_c is always taken equal to the total applied shear force ☒ 3. V_c is calculated based on concrete grade (f_{ck}) ☐ 4. V_c depends only on the tensile strength of concrete
Q.44	The amber signal in traffic control is meant to:
Ans	☐ 1. Function as a flashing warning light during off-peak hours ☐ 2. Indicate that crossing traffic has the right of way ☐ 3. Indicate that vehicles must continue moving without interruption for same movement ☒ 4. Indicate transition between stop and go, warning drivers to clear or prepare to stop
Q.45	Which equipment is most suitable for tunnel excavation in medium-strength rock where precise profiling is required?
Ans	☐ 1. Dragline excavator ☐ 2. Hydraulic hammer ☒ 3. Tunnel Boring Machine (TBM) ☐ 4. Explosives
Q.46	In considering thermosetting plastics versus thermoplastics for a high-heat application, which type should be chosen and why?
Ans	☐ 1. Thermosetting plastics, because they get remoulded upon heating ☐ 2. Thermoplastics, because they do not soften on heating ☒ 3. Thermosetting plastics, because they do not soften on heating ☐ 4. Thermoplastics, because they are heat resistant
Q.47	In a reinforced concrete beam, the development length is provided to prevent _____.
Ans	☐ 1. crushing of concrete ☐ 2. torsional failure ☐ 3. excessive deflection ☒ 4. slipping of reinforcement

Q.48 Which of the following is a direct health effect of prolonged exposure to high levels of noise pollution?

Ans ☐ 1. Improved memory

☐ 2. Increased appetite

☐ 3. Skin irritation

☒ 4. High blood pressure

Q.49 The friction factor used in geometric design of highways is provided by the:

Ans ☒ 1. Indian Road Congress (IRC)

☐ 2. Bureau of Indian Standards (BIS)

☐ 3. Ministry of Railways

☐ 4. National Highways Authority

Q.50 Which material in section is represented by the hatch shared below as per IS 982 (1989)?



Ans ☒ 1. Concrete

☐ 2. Earth

☐ 3. Brick

☐ 4. Wood

Q.51 Which type of soil requires deeper excavation to avoid structural damage due to swelling and shrinkage?

Ans ☐ 1. Sandy soil

☒ 2. Black cotton soil

☐ 3. Gravelly soil

☐ 4. Loamy soil

Q.52 With respect to shear strength of soils, refer to the following Assertion and Reason and select the correct statement from the options given.

Assertion (A): For cohesionless soils, the failure does not occur on the plane of maximum shear stress.

Reason (R): Failure in soil takes place due to shear failure when compressive load is applied.

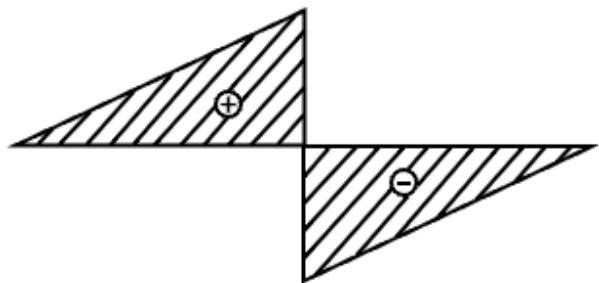
Ans ☐ 1. Both A and R are true and R is the correct explanation of A.

☐ 2. A is false and R is true.

☒ 3. Both A and R are true and R is not the correct explanation of A.

☐ 4. A is true and R is false.

Q.53 The following bending moment diagram corresponds to a simply supported beam. The diagram shows a sudden jump (discontinuity) in bending moment at a point between the supports. Which of the following loading conditions produces this type of bending moment diagram?



B.M. Diagram

- Ans**
- ☒ 1. A concentrated load acting at the midpoint of the beam
 - ☒ 2. A uniformly distributed load acting over the entire span
 - ☒ 3. A couple acting at a point between the supports
 - ☒ 4. Equal and opposite vertical forces acting at the supports

Q.54 What is a common shape of steel fibers used in fiber-reinforced concrete?

- Ans**
- ☒ 1. Cylindrical
 - ☒ 2. Cubic
 - ☒ 3. Round
 - ☒ 4. Hooked-end

Q.55 The cut section in the method of sections must satisfy which of the following conditions? (Consider that not more than two members are meeting at a joint.)

- Ans**
- ☒ 1. It should be made parallel to the support reactions.
 - ☒ 2. It should pass through at most three members of a truss.
 - ☒ 3. It should be taken only at the midpoint of the truss.
 - ☒ 4. It should pass through at least four members.

Q.56 Removal of topsoil, grading to formation level, and forming cuttings or embankments during earthworks is most effectively carried out using which of the following equipment?

- Ans**
- ☒ 1. Concrete mixer
 - ☒ 2. Pile driver
 - ☒ 3. Tower crane
 - ☒ 4. Tractor shovel with a 4-in-1 bucket

Q.57 Which of the following is an essential component commonly included in a construction tender document?

- Ans**
- ☒ 1. Project drawings prepared without technical specifications
 - ☒ 2. Technical specifications describing project requirements
 - ☒ 3. Promotional brochures issued for project advertisement
 - ☒ 4. Financial records of all participating contractors

Q.58 What is the primary risk of placing concrete in cold weather?

- Ans**
- ☒ 1. Higher heat of hydration
 - ☒ 2. Increased setting time
 - ☒ 3. Increased air content
 - ☒ 4. Increased hydration rate

Q.59	Which of the following is the non-recording type of rain gauge prescribed by the India Meteorological Department?
Ans	☐ 1. Weighted bucket rain gauge ☒ 2. Symon's rain gauge ☐ 3. Tipping bucket rain gauge ☐ 4. Float type rain gauge
Q.60	Soda-lime glass is predominantly utilised in architectural construction for:
Ans	☐ 1. thermal insulation boards ☐ 2. fire-resistant partitions ☒ 3. transparent window panes and glazing ☐ 4. structural load-bearing components
Q.61	According to IS 1892:2021, for a compact building site of about 0.4 hectare area, what is the recommended minimum number and location of boreholes or test pits for soil investigation?
Ans	☐ 1. Boreholes spaced uniformly every 50 meters over the site ☐ 2. One borehole or test pit at the center of the site only ☐ 3. At least ten boreholes evenly spaced regardless of site size ☒ 4. One borehole or test pit at each corner and one at the center
Q.62	Which type of shoring is used when a building needs to be temporarily supported due to excavation nearby?
Ans	☐ 1. Flying shoring ☐ 2. Dead shoring ☒ 3. Raking shoring ☐ 4. Underpinning
Q.63	Which is the most appropriate definition of the origin point in an AutoCAD 2D co-ordinate system?
Ans	☐ 1. Measured distance from the cursor to previous location ☐ 2. Measured distance from a fixed reference point ☒ 3. 0,0 location ☐ 4. Effective diameter of the cursor on screen
Q.64	During a rapid field test for identifying fine-grained soil, a wetted sample is shaken vigorously in the palm of the hand. If the surface quickly becomes glossy or wet (exhibits 'quicker' behavior), and the gloss disappears immediately upon squeezing the sample, which soil type is the sample most likely to be?
Ans	☐ 1. Highly plastic clay (CH) ☐ 2. Organic clay (OH) ☐ 3. Lean clay (CL) ☒ 4. Inorganic silt (ML)
Q.65	What is an effective way to limit settlement due to subsoil moisture movement?
Ans	☐ 1. Increasing the height of the masonry wall structure ☒ 2. Providing plinth protection and proper compaction ☐ 3. Adding additional reinforcement within the foundation system ☐ 4. Reducing the thickness of the foundation wall structure

Q.66	Which of the following sets of details is typically shown in a building section drawing?
Ans	☒ 1. Plinth height, storey heights, thickness of walls, and sizes of structural members ☐ 2. Site boundaries, north direction, plot dimensions, and road access information ☐ 3. Location of furniture, electrical switch positions, drainage lines, and door numbers ☐ 4. Carpet area, number of rooms, exterior color, and type of flooring used
Q.67	When reactions are found graphically for a simply supported beam with vertical point loads, the length of the reaction vector is proportional to:
Ans	☐ 1. The span length of the beam only ☐ 2. The distance between loads ☐ 3. The beam's deflection at mid span ☒ 4. The magnitude of reaction force at the support
Q.68	For a symmetrical channel section with a moment of inertia $I_{xx} = 9.45 \times 10^7 \text{ mm}^4$ and an area $A = 4500 \text{ mm}^2$, what is its radius of gyration k_{xx} ?
Ans	☐ 1. 175.48 mm ☐ 2. 159.56 mm ☒ 3. 144.92 mm ☐ 4. 116.34 mm
Q.69	Identify the correct statement(s) about a change point in a levelling operation. Statement I : It is also known as turning point. Statement II : The plus sight is taken on the change point on one set of instrument to ascertain the elevation of the point. Statement III : The minus sight is taken on the change point to establish the new height of the instrument.
Ans	☒ 1. Statement I and III only ☐ 2. Statement I and II only ☐ 3. Statement I only ☐ 4. Statement III only
Q.70	Which of the following is a limitation of the Direct Shear Test?
Ans	☐ 1. The test cannot measure shear strength parameters like cohesion and angle of internal friction. ☒ 2. The failure plane is predetermined and may not be the weakest plane in the soil specimen. ☐ 3. It can only be used for clayey soils and not for sandy soils. ☐ 4. It requires a very long time to conduct, making it unsuitable for quick analysis.
Q.71	Which of the following automatic rain gauges gives a continuous graph of rainfall vs. time?
Ans	☐ 1. Symons gauge ☐ 2. Non-recording gauge ☒ 3. Float type recording gauge ☐ 4. Tipping bucket gauge
Q.72	In a homogenous and prismatic continuous beam under uniformly distributed load, the bending moment at an intermediate support is: (Consider that the length of each intermediate span measures the same.)
Ans	☐ 1. sagging ☐ 2. equal to the midspan moment ☐ 3. zero ☒ 4. hogging

Q.73	During maintenance, a valve in a water supply system needs to be shut. To avoid water hammer, the valve should be:
Ans	☐ 1. Left open ☐ 2. Closed halfway ☒ 3. Closed gradually ☐ 4. Closed immediately
Q.74	The fineness of cement is generally expressed in terms of specific surface, which is measured in:
Ans	☐ 1. kg/cm² ☐ 2. cm²-g ☒ 3. m²/kg ☐ 4. m²-g
Q.75	In energy recovery systems, which of the following pollutants is/are carefully monitored due to health hazards during incineration?
Ans	☐ 1. Methane ☐ 2. Oxygen ☒ 3. Dioxins ☐ 4. Nitrogen
Q.76	In a building drawing, a sectional elevation is prepared by imagining a vertical cut through the structure from top to bottom. Which additional information is mainly obtained from a sectional elevation compared to a front elevation?
Ans	☐ 1. Plot boundaries, setback distances, and site alignment details ☐ 2. Location of rooms, circulation passages, and furniture arrangement details ☐ 3. External appearance of walls, front architectural style, and side view details ☒ 4. Cut portions of structural elements, plinth levels, and foundation details
Q.77	Which type of engineering contract involves payment for actual quantities of work done at agreed rates?
Ans	☐ 1. Lump sum contract ☐ 2. Turnkey contract ☐ 3. Cost-plus contract ☒ 4. Item rate contract
Q.78	The maximum stress induced in a member is always:
Ans	☐ 1. equal to the minimum stress ☐ 2. less than the average stress ☐ 3. zero in tension ☒ 4. greater than or equal to the average stress
Q.79	Which of the following is NOT a type of clay tile for roofing?
Ans	☐ 1. Spanish tile ☐ 2. Mangalore pattern tile ☒ 3. Terracotta Jali ☐ 4. Allahabad tile

Q.80	If the calculated nominal shear stress τ_v in a reinforced concrete beam exceeds the maximum permissible shear stress in concrete $\tau_{c,max}$ as per IS 456:2000, what is the appropriate course of action?
Ans	☐ 1. Use a lower grade of concrete to reduce stress ☐ 2. Increase the beam width only ☐ 3. Provide additional shear reinforcement only ☒ 4. Increase the effective depth of the beam or redesign the section
Q.81	Which roof type is most suitable for covering spans greater than 9 m?
Ans	☐ 1. Aisle Roof ☐ 2. King post truss ☒ 3. Queen post truss ☐ 4. Couple Roof
Q.82	A body is resting on a rough inclined plane. If the frictional force is equal to the component of weight along the plane, the body is in:
Ans	☐ 1. free fall ☐ 2. acceleration ☐ 3. uniform motion ☒ 4. equilibrium
Q.83	Which type of stone is laid with its length perpendicular to the face of the wall so that it extends into the thickness of the wall in stone masonry?
Ans	☐ 1. Tail ☐ 2. Stretcher ☒ 3. Header ☐ 4. Bed
Q.84	A simply supported beam has a span of 6 m with an overhang of 4 m. A uniformly distributed load (UDL) of 6 kN/m acts over the overhang length of 4 m. What is the reaction at the nearest support?
Ans	☒ 1. 32 kN ☐ 2. 24 kN ☐ 3. 6 kN ☐ 4. 10 kN
Q.85	What is the primary purpose of pressure grouting in building foundation treatment work?
Ans	☒ 1. Improving soil strength and reducing water penetration below foundation structures ☐ 2. Supporting internal wall finishes against mechanical damage during building service ☐ 3. Applying protective surface coating for improving appearance of foundation surfaces ☐ 4. Increasing thermal insulation performance within external foundation wall assemblies
Q.86	As per IS 17953 : 2023 (uPVC Profiles for Windows and Doors — Specification), for the determination of resistance to weathering, the range of the radiant exposure wavelength used is _____.
Ans	☐ 1. 150 nm to 300 nm ☒ 2. 300 nm to 800 nm ☐ 3. 200 nm to 500 nm ☐ 4. 50 nm to 150 nm

Q.87 Which of the following RCC elements transfers the Floor finish load to supporting beams?

- Ans**
- ☐ 1. Parapet wall
 - ☐ 2. Lintel
 - ☐ 3. Column
 - ☒ 4. Slab

Q.88 According to Euler's theory, the design load for a column depends on:

- Ans**
- ☒ 1. The column's length and radius of gyration
 - ☐ 2. The bending moment applied at the column's base
 - ☐ 3. The material's ultimate tensile strength
 - ☐ 4. The moment of inertia and shear stress

Q.89 The short piece that connects the ledger to the structure itself in single-frame scaffolding is called ____.

- Ans**
- ☐ 1. Toe board
 - ☐ 2. Guardrail
 - ☒ 3. Putlog
 - ☐ 4. Brace

Q.90 Which statement correctly distinguishes administrative approval from technical sanction in civil engineering estimation?

- Ans**
- ☐ 1. Administrative approval checks material quality, while technical sanction determines project duration
 - ☐ 2. Administrative approval authorizes procurement, while technical sanction approves staffing requirements
 - ☐ 3. Administrative approval controls work execution, while technical sanction manages contractor payments
 - ☒ 4. Administrative approval accepts project necessity, while technical sanction verifies design and estimates

Q.91 The bending moment diagram (BMD) for a simply supported beam carrying a uniformly distributed load over its entire span is:

- Ans**
- ☐ 1. linear in shape
 - ☐ 2. triangular in shape
 - ☒ 3. parabolic in shape
 - ☐ 4. rectangular in shape

Q.92 A water pipe has a smooth interior. Over the time, scaling increases the roughness. What happens to the frictional head loss for the same flow rate?

- Ans**
- ☐ 1. Decreases
 - ☐ 2. Becomes zero
 - ☒ 3. Increases
 - ☐ 4. Remains same

Q.93 In disaster management, GIS plays an important role mainly because it:

- Ans**
- ☐ 1. measures permeability of soil samples for hazard mapping
 - ☐ 2. calculates settlement in shallow foundations for hazard mapping
 - ☐ 3. determines tensile strength of steel reinforcement for hazard mapping
 - ☒ 4. integrates spatial and attributes data for hazard mapping

Q.94 For a column with both ends hinged (pinned–pinned), the effective length L_{eff} is _____ times the actual length of the column.

- Ans**
- ☒ 1. equal to 1
 - ☐ 2. equal to 1.5
 - ☐ 3. equal to 0.5
 - ☐ 4. equal to 2

Q.95 Which types of piles are typically used in areas with expansive soils?

- Ans
- ☐ 1. Friction piles
 - ☒ 2. Under-reamed piles
 - ☐ 3. Screw piles
 - ☐ 4. Sheet piles

Q.96 In a multi-story portal frame, how does increasing the number of stories affect the moment distribution in the frame?

- Ans
- ☐ 1. The moment at the base of the frame decreases as more stories are added
 - ☐ 2. The number of stories does not affect the moment distribution
 - ☒ 3. The moments in the lower stories increase, while the upper stories experience lesser moments
 - ☐ 4. The moments are uniformly distributed across all stories

Q.97 Which of the following flooring is most suitable for a luxurious appearance in a high-end hotel lobby?

- Ans
- ☒ 1. Marble flooring
 - ☐ 2. Linoleum flooring
 - ☐ 3. Cement concrete flooring
 - ☐ 4. PVC flooring

Q.98 The layout for substructure work must consider nearby underground based utilities because:

- Ans
- ☐ 1. They reduce need for detailed site survey work during excavation
 - ☒ 2. Existing underground services may get damaged during excavation
 - ☐ 3. They make excavation operations easier on site
 - ☐ 4. They improve overall appearance of building layout during excavation

Q.99 In geometric design of highways, while on rolling terrain, design speeds are generally:

- Ans
- ☒ 1. Lower than plain terrain
 - ☐ 2. Same as mountainous terrain
 - ☐ 3. Higher than plain terrain
 - ☐ 4. Unrelated to terrain type

Q.100 Pipes of different diameters and lengths connected end to end to form a pipe line are called _____.

- Ans
- ☐ 1. Equivalent pipes
 - ☐ 2. Branched pipes
 - ☒ 3. Compound pipes
 - ☐ 4. Pipes in parallel