रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS

सी ई एन आर आर बी - ०२/२०२४ - CEN RRB - 02/2024

सत्यमेव जयते

Test Date	19/12/2024
Test Time	4:30 PM - 6:00 PM
Subject	RRB Technicians Grade I

*** 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 : **RRB Technicians Grade I**

Q.1	**Which of the following statements are true about GPU?** **i. The full form of GPU is Graphical User Interface.** **ii. GPUs are made for the acceleration and enhancement of computer graphics and processed images.** **iii. The GPU exists as an electronic circuit that can be found on graphics card.** **iv. The GPU exists as a special electronic circuit that can be used in PCs and game consoles.**
Ans	✗ 1. Only i, ii, and iv
	✗ 2. i, ii, iii and iv
	✓ 3. Only ii and iii
	✗ 4. Only i, ii, and iii

Q.2	**If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', then what will come in place of the question mark (?) in the following equation?** **15 D 12 A 6 C 3 B 7 = ?**
Ans	✓ 1. 34
	✗ 2. 31
	✗ 3. 32
	✗ 4. 33

Q.3	In an isosceles ΔABC, $AC = BC$, if each of the two equal angles of ΔABC is 9 degrees less than two − fifth of the third angle. Find the value of $\left(\frac{2\angle C - 3\angle A + \angle B}{2}\right)$.
Ans	✗ 1. 60^{o}
	✓ 2. 75^{o}
	✗ 3. 35^{o}
	✗ 4. 45^{o}

Q.4	**What is the name of the new generation ballistic missile with a range of 1,000-2,000 km that was successfully flight tested at APJ Abdul Kalam Island in April 2024?**
Ans	✓ 1. Agni Prime
	✗ 2. Surya
	✗ 3. Prahaar
	✗ 4. Akash

Q.5	In MS Word, what does the term 'font weight' refer to?
Ans	✗ 1. The style of the font
	✗ 2. The colour of the font
	✗ 3. The spacing between characters
	✓ 4. The thickness of the font

Q.6	$Evaluate: \quad \frac{1}{\left(\frac{5}{6}\right)+\left(\frac{7}{9}\right)} \div \frac{5}{23}$
Ans	✓ 1. $2\frac{59}{69}$
	✗ 2. $4\frac{1}{27}$
	✗ 3. $2\frac{5}{6}$
	✗ 4. $2\frac{53}{61}$

Q.7	Which of the given options can replace the question mark (?) in the following series to make it logically complete? FHI 21 IKL 18 LNO 15 OQR 12 ?
Ans	✓ 1. RTU 9
	✗ 2. RTV 10
	✗ 3. RST 9
	✗ 4. RTU 10

Q.8	How can a computer virus affect a system's functionality?
Ans	✗ 1. By accelerating system boot time
	✗ 2. By optimizing system updates
	✓ 3. By causing software to malfunction or crash
	✗ 4. By improving hardware performance

Q.9	What are the major branches of Buddhism?
Ans	✗ 1. Anga and Upanga
	✗ 2. Pathachari and Paribrajaka
	✓ 3. Hinayana and Mahayana
	✗ 4. Swetambara and Digambara

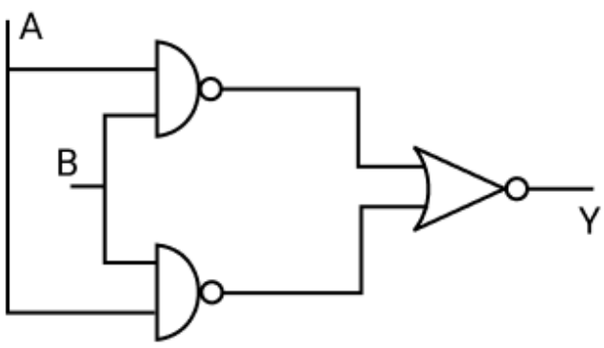
Q.10	Select the correct option for the band gap energies of Ge, Si and GaAs. Where E(Ge) = band gap energy of Ge, E(Si) = band gap energy of Si and E(GaAs) = band gap energy of GaAs
Ans	✓ 1. E(GaAs) > E (Si) > E (Ge)
	✗ 2. E(Ge) > E (GaAs) > E (Si)
	✗ 3. E(GaAs) > E (Ge) > E (Si)
	✗ 4. E(Ge) > E (Si) > E (GaAs)

Q.11	According to a National Crime Records Bureau (NCRB) report, which was the most corrupted state in India in December 2023?
Ans	✔ 1. Maharashtra
	✘ 2. Rajasthan
	✘ 3. Bihar
	✘ 4. Uttar Pradesh

Q.12	The ratio of the lengths of two corresponding sides of two similar triangles is 6 : 2. The ratio of the areas of these two triangles, in the order mentioned, is:
Ans	✘ 1. 6 : 2
	✘ 2. $6\sqrt{6} : 2$
	✔ 3. 36 : 4
	✘ 4. 37 : 5

Q.13	Which part of the Linux OS controls a computer's boot up process?
Ans	✘ 1. Kernel
	✘ 2. Daemons
	✘ 3. Init system
	✔ 4. Bootloader

Q.14	A statement is given followed by two arguments. Decide which of the arguments is/are strong with respect to the statement. Statement: For the fifth consecutive day, the government announced an increase in the price of petrol by ₹2. Arguments: I. The international market has reduced fuel production. II.Taxes on petrol imports have increased.
Ans	✘ 1. II weakens while I strengthens the statement.
	✘ 2. Both I and II weaken the statement.
	✘ 3. I weakens while II strengthens the statement.
	✔ 4. Both I and II strengthen the statement.

Q.15	Find the Boolean expression for the given logic gate circuit diagram where inputs are A and B. 
Ans	✘ 1. $\overline{AB}$
	✔ 2. AB
	✘ 3. $\overline{A+B}$
	✘ 4. $A+B$

Q.16	An infinitely long straight wire carries a current of I. At what distance r from the wire is the magnetic field 5×10^{-6} T if I = 15 A?
Ans	✔ 1. 0.6 m
	✘ 2. 0.3 m
	✘ 3. 7.5 m
	✘ 4. 3 m

Q.17	When you first open a spreadsheet software, what is usually displayed?
Ans	✔ 1. A blank spreadsheet with grids and cells
	✘ 2. A presentation slide
	✘ 3. A blank document
	✘ 4. A blank page without any grids

Q.18	The direction of the magnetic field around an infinitely long straight current-carrying wire is:
Ans	✔ 1. tangential to the wire and depends on the direction of the current
	✘ 2. radial outward from the wire
	✘ 3. perpendicular to the plane containing the wire and the point
	✘ 4. radial inward toward the wire

Q.19	If the angle of elevation of the sun changes from 30° to 45°, the length of the shadow of a pillar decreases by 80 m. The height of the pillar is:
Ans	✔ 1. $40\left(\sqrt{3}+1\right)$ cm
	✘ 2. $30\left(\sqrt{3}+1\right)$ cm
	✘ 3. $10\left(\sqrt{6}+1\right)$ cm
	✘ 4. $20\left(\sqrt{3}+1\right)$ cm

Q.20	The value of the discriminant of the quadratic equation $7x^2 - 18x - 11 = 0$ is:
Ans	✘ 1. 619
	✘ 2. 638
	✔ 3. 632
	✘ 4. 616

Q.21	Select the most appropriate option to fill in the blank. _____ error occurs as the value of flux density is different for the same value of current when increasing and decreasing.
Ans	✔ 1. Hysteresis
	✘ 2. Frequency
	✘ 3. Friction
	✘ 4. Temperature

Q.22	Which power-saving mode is most suitable for short breaks when you want to resume work quickly?
Ans	✘ 1. Restart
	✘ 2. Hibernate
	✘ 3. Shutdown
	✔ 4. Sleep

Q.23	Select the most appropriate option to fill in the blanks. Repeatability is defined as the ability of an instrument to give the ____ output (with limited variations) for repeated applications of ____ input value under same environmental conditions.
Ans	✔ 1. same; same
	✘ 2. different; same
	✘ 3. different; different
	✘ 4. same; different

Q.24	Which of the following methods can be used to delete multiple columns simultaneously in Excel?
Ans	✘ 1. Use the "Find and Replace" feature
	✔ 2. Select the columns, then right-click and press "Delete"
	✘ 3. Select the columns, then press the Delete key
	✘ 4. Use the "Clear" option from the Home tab

Q.25	In the following triad, each group of letters is related to the subsequent one following a certain logic. Select from the given options, the one that follows the same logic. SALT - LSAT - TLAS MAID - IMAD - DIAM
Ans	✘ 1. BEAR - ABER - EARB
	✘ 2. LIFT - LFIT - TFIL
	✔ 3. KITE - TKIE - ETIK
	✘ 4. MAIN - AMIN - NAIM

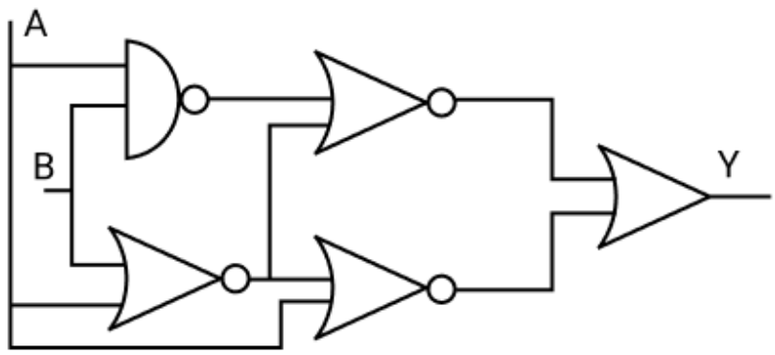
Q.26	What should come in place of the question mark (?) in the given series? 1230 1232 1236 1242 1250 ?
Ans	✘ 1. 1264
	✘ 2. 1263
	✘ 3. 1262
	✔ 4. 1260

Q.27	Which of the following is the correct shortcut key to bring up the task manager directly using keyboard only?
Ans	✘ 1. Ctrl + Windows + Enter
	✘ 2. Windows + R
	✔ 3. Ctrl + Shift + Escape
	✘ 4. Ctrl + Alt + Delete

Q.28	Intel 8051 provides _____ interrupt structures and 8052 provides _____ interrupt structures.
Ans	✔ 1. 6; 7
	✘ 2. 4; 5
	✘ 3. 7; 8
	✘ 4. 5; 6

Q.29	If the period T of a simple pendulum depends on its length L, mass m and acceleration due to gravity g, then using dimensional analysis, the period T is proportional to _____.
Ans	✗ 1. $\frac{L}{\sqrt{g}}$
	✗ 2. $\frac{L}{g}$
	✓ 3. $\sqrt{\frac{L}{g}}$
	✗ 4. $\frac{mL}{g}$

Q.30	Reproducibility is defined as the ability of an instrument to reproduce (the) _____ output(s) for repeated applications of (the) _____ input value(s) under (the) _____ environment condition(s).
Ans	✗ 1. same; same; different
	✓ 2. same; same; same
	✗ 3. different; same; different
	✗ 4. same; different; same

Q.31	Find the Boolean expression for the output Y if inputs are A and B. 
Ans	✓ 1. B
	✗ 2. A+B
	✗ 3. AB
	✗ 4. A

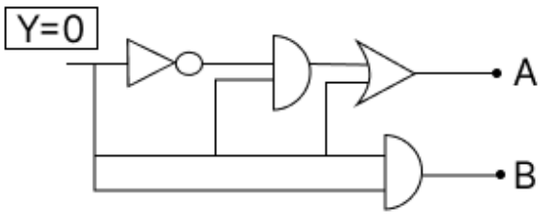
Q.32	A copper wire has resistance R. If its radius is reduced to half while keeping the length constant, what will be the new resistance?
Ans	✗ 1. 2R
	✓ 2. 4R
	✗ 3. R
	✗ 4. 16R

Q.33	In a certain code language, 'CARE' is coded as '6975' and 'RISK' is coded as '4386'. What is the code for 'R' in that language?
Ans	✓ 1. 6
	✗ 2. 7
	✗ 3. 5
	✗ 4. 4

Q.34	Devendra Jhajharia is associated to which of the following games?
Ans	✗ 1. Wrestling
	✗ 2. Boxing
	✓ 3. Javelin throw
	✗ 4. Badminton

Q.35	The distance between the points (0, 3) and (–3, 0) is :
Ans	✗ 1. 3 units
	✓ 2. $3\sqrt{2}$ units
	✗ 3. 6 units
	✗ 4. $2\sqrt{3}$ units

Q.36	The first and last terms of an A.P. are 36 and 46. If the sum of its terms is 574, then the number of terms will be?
Ans	✗ 1. 17
	✓ 2. 14
	✗ 3. 15
	✗ 4. 16

Q.37	In the given logic circuit, if the initial input is 0, then what will be the output of A and B, respectively? 
Ans	✓ 1. 0, 0
	✗ 2. 1, 1
	✗ 3. 1, 0
	✗ 4. 0, 1

Q.38	What is the estimated worth of the National Monetization Pipeline unveiled by the Government of India in September 2021?
Ans	✗ 1. ₹3 lakh crore
	✗ 2. ₹10 lakh crore
	✓ 3. ₹6 lakh crore
	✗ 4. ₹15 lakh crore

Q.39	Refer to the following letter, number and symbol series and answer the question that follows. (Left) Q C 9 U @ 8 D & A D V 9 2 2 @ ^ L Y A / + K (Right) How many such letters are there that are immediately preceded by a number and immediately followed by a symbol?
Ans	✓ 1. Two
	✗ 2. Four
	✗ 3. One
	✗ 4. Three

Q.40	A particle is subjected to a variable force F(x)=6x N, where x is in metres. What is the work done in moving the particle from x=0 m to x=3 m?
Ans	✗ 1. 54 J
	✗ 2. 9 J
	✗ 3. 18 J
	✓ 4. 27 J

Q.41	Match the following geographical features with their respective region:

A. Karewas	I. Eastern Ghats
B. Barchans	II. Kashmir region
C. Mahendragiri	III. Coastal plain along Bay of Bengal
D. Northern Circar	IV. Thar desert

Ans	✗ 1. A-III, B-I, C-IV, D-II
	✗ 2. A-I, B-III, C-II, D-IV
	✗ 3. A-IV, B-II, C-III, D-I
	✓ 4. A-II, B-IV, C-I, D-III

Q.42	Select the most appropriate option to fill in the blank. When the strain gauge-elastic member combination is used for weighing, it is called a _____.
Ans	✗ 1. Linear Variable Differential Transformer (L.V.D.T.)
	✗ 2. Piezoelectric transducer
	✗ 3. Capacitive transducer
	✓ 4. Load cell

Q.43	What is the purpose of setting a print area in a spreadsheet?
Ans	✗ 1. To highlight the area with colours
	✓ 2. To define the range of cells to be printed
	✗ 3. To freeze rows and columns
	✗ 4. To adjust the font size

Q.44	Parallax error is an example of which type of error?
Ans	✗ 1. Random error
	✗ 2. Gross error
	✓ 3. Systematic error
	✗ 4. Instrumental error

Q.45	A coin is thrown eight times. The probability of getting exactly five tails is:
Ans	✓ 1. 0.22
	✗ 2. 0.11
	✗ 3. 0.78
	✗ 4. 0.28

Q.46	According to Environment Performance Index (EPI) 2024, what was India's rank in greenhouse gas production in May 2024?
Ans	✗ 1. 7^{th}
	✗ 2. 2^{nd}
	✓ 3. 3^{rd}
	✗ 4. 11^{th}

Q.47	The radius of a right circular cone is 2.1 cm and its height is 2.8 cm. The total surface area of the cone is: (Take π = 22/7)
Ans	✗ 1. 23.1 cm^2
	✗ 2. 46.2 cm^2
	✗ 3. 18.48 cm^2
	✓ 4. 36.96 cm^2

Q.48	Two resistors, $R_1 = 10\ \Omega$ and $R_2 = 20\ \Omega$, are connected in series to a 12-V battery. What is the voltage across R_2?
Ans	✗ 1. 4 V
	✗ 2. 16 V
	✓ 3. 8 V
	✗ 4. 12 V

Q.49	If X= { a, b, c, d } and Y = { f, b, d, g}, find X ∩ Y.
Ans	✗ 1. { a, c}
	✗ 2. { g, f }
	✗ 3. { a, b, c, d, g, f }
	✓ 4. { b, d }

Q.50	Two dice (both numbered 1 to 6) are rolled, simultaneously. What is the probability of observing a sum of 8?
Ans	✓ 1. $\frac{5}{36}$
	✗ 2. $\frac{7}{36}$
	✗ 3. $\frac{5}{6}$
	✗ 4. $\frac{1}{6}$

Q.51	Which of the following correctly expresses the relationship between power, force, time and distance?
Ans	✗ 1. P = F/d × t
	✗ 2. P = F × t/d
	✗ 3. P = F × d × t
	✓ 4. P = F × d/t

Q.52	The SI unit of current, the Ampere, is defined based on _____.
Ans	✓ 1. the force between two current-carrying conductors
	✗ 2. the magnetic flux through a loop
	✗ 3. the electric potential difference
	✗ 4. the force between two charges

Q.53	If a conductor moves through a uniform magnetic field, the induced potential difference is maximised when _____.
Ans	✗ 1. the magnetic field is non-uniform
	✗ 2. the magnetic field is zero
	✗ 3. the conductor is parallel to the magnetic field lines
	✓ 4. the conductor is perpendicular to the magnetic field lines

Q.54	Which of the following platforms is primarily used for professional networking?
Ans	✗ 1. Facebook
	✗ 2. Twitter
	✗ 3. Instagram
	✓ 4. LinkedIn

Q.55	The point (9, 0), (9, 6), (-9, 6) and (-9, 0) are the vertices of a _____.
Ans	✗ 1. square
	✓ 2. rectangle
	✗ 3. trepezium
	✗ 4. rhombus

Q.56	The basic principle behind the working of an electric motor is the interaction between the _____.
Ans	✓ 1. magnetic field and current-carrying conductors
	✗ 2. magnetic field and heat energy
	✗ 3. electric field and gravitational field
	✗ 4. electric potential and light energy

Q.57	Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s). Statements: All roofs are sheds. No shed is a window. No shed is an door. Conclusions: (I) No roof is a window. (II) Some doors are windows.
Ans	✗ 1. Neither conclusion (I) nor (II) follows.
	✓ 2. Only conclusion (I) follows.
	✗ 3. Only conclusion (II) follows.
	✗ 4. Both conclusions (I) and (II) follow.

Q.58	Select the most appropriate options to fill in the blanks. The output voltage of L.V.D.T. transducer is practically _____ for displacements up to ____.
Ans	✗ 1. exponential; 5 mm
	✗ 2. linear; 50 mm
	✗ 3. exponential; 50 mm
	✓ 4. linear; 5 mm

Q.59	What is the equivalent of 1 bar in the SI unit of pressure?
Ans	✔ 1. 10^5 Pa
	✘ 2. 10^6 N/m^2
	✘ 3. 10^{-5} Pa
	✘ 4. 10^4 psi

Q.60	If the velocity v of a body is expressed as $v = at + bt^2$, where a and b are constants, the dimensions of b are _____.
Ans	✘ 1. $[LT^{-1}]$
	✘ 2. $[L]$
	✔ 3. $[LT^{-3}]$
	✘ 4. $[LT^{-2}]$

Q.61	A wire loop is placed in a magnetic field that is increasing in magnitude but remains stationary. Using Fleming's Right-Hand Rule, what can be said about the induced current in the loop?
Ans	✘ 1. The direction of the current depends on the material of the loop
	✔ 2. There is no induced current since the loop is stationary
	✘ 3. The current is induced counterclockwise
	✘ 4. The current is induced clockwise

Q.62	If a machine does 3000 J of work in 15 seconds, what is the power output of the machine?
Ans	✘ 1. 450 W
	✘ 2. 5 W
	✔ 3. 200 W
	✘ 4. 5 mW

Q.63	In a class of 37 students, 25 like to play cricket and 16 like to play football. Also, each student likes to play at least one of the two games. How many students like to play both cricket and football ?
Ans	✘ 1. 5
	✘ 2. 6
	✘ 3. 3
	✔ 4. 4

Q.64	A 60-W lightbulb operates on a 120-V source. What is the current flowing through the bulb?
Ans	✔ 1. 0.5 A
	✘ 2. 1 A
	✘ 3. 2 A
	✘ 4. 1.5 A

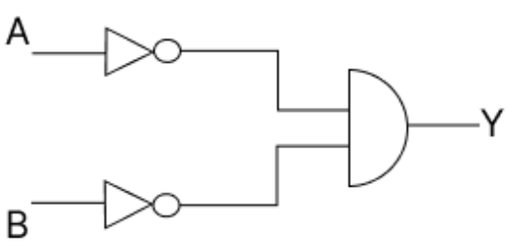
Q.65	Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster pair.)
Ans	✘ 1. EX-OK
	✘ 2. ZS-JF
	✔ 3. IB-PO
	✘ 4. MF-WS

Q.66	In a purely capacitive AC circuit, the power consumed over a complete cycle is _____.
Ans	✗ 1. minimum but not zero
	✗ 2. maximum
	✓ 3. zero
	✗ 4. equal to the apparent power

Q.67	The magnetic field at a point near a long, straight current-carrying conductor is directly proportional to _____.
Ans	✗ 1. the inverse of the distance from the conductor
	✗ 2. the square of the distance from the conductor
	✗ 3. the square of the current
	✓ 4. the current through the conductor

Q.68	In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::? (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.) X : 32 :: 18 : Y
Ans	✗ 1. X=15, Y=37
	✓ 2. X=13, Y=37
	✗ 3. X=14, Y=35
	✗ 4. X=13, Y=30

Q.69	In this question, a question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and decide the appropriate answer. Question: Six people sit in two parallel rows. In Row 1- A, B and C sit facing towards north and in Row 2 - P, Q and R sit facing the south. Each person in a row faces a person in the other row. Who sits at the right extreme end of Row 1? Statement (I): R sits to the immediate left of Q. Q faces A. B sits to the immediate left of A. Statement (II): Only one person sits between B and C. B faces an immediate neighbour of Q.
Ans	✗ 1. Data in statements I and II together are NOT sufficient to answer the question.
	✓ 2. Data in Statement I alone is sufficient to answer the question while data in statement II is not.
	✗ 3. Data in Statement II alone is sufficient to answer the question while data in statement I is not.
	✗ 4. Data in statements I and II together are sufficient to answer the question.

Q.70	The given logic gate diagram is equivalent to _____. 
Ans	✗ 1. NAND GATE
	✗ 2. OR GATE
	✓ 3. NOR GATE
	✗ 4. AND GATE

Q.71	If the resistance R is constant and the voltage V across a resistor is tripled, how does the power P change?
Ans	✔ 1. It increases by nine times.
	✘ 2. It increases by one-third of its original.
	✘ 3. It increases by three times.
	✘ 4. It decreases by three times.

Q.72	Which view allows you to organise the sequence of slides in your presentation in MS PowerPoint?
Ans	✘ 1. Normal View
	✔ 2. Slide Sorter View
	✘ 3. Slide Show
	✘ 4. Reading View

Q.73	To select multiple slides, press and hold the _____ key, and then click each slide.
Ans	✔ 1. Ctrl
	✘ 2. Home
	✘ 3. Shift
	✘ 4. Alt

Q.74	If the temperature of the surrounding medium increases, it will result in a/an _____ in the resistance of the thermistor and a/an _____ in the current.
Ans	✘ 1. increase; increase
	✔ 2. decrease; increase
	✘ 3. decrease; decrease
	✘ 4. increase; decrease

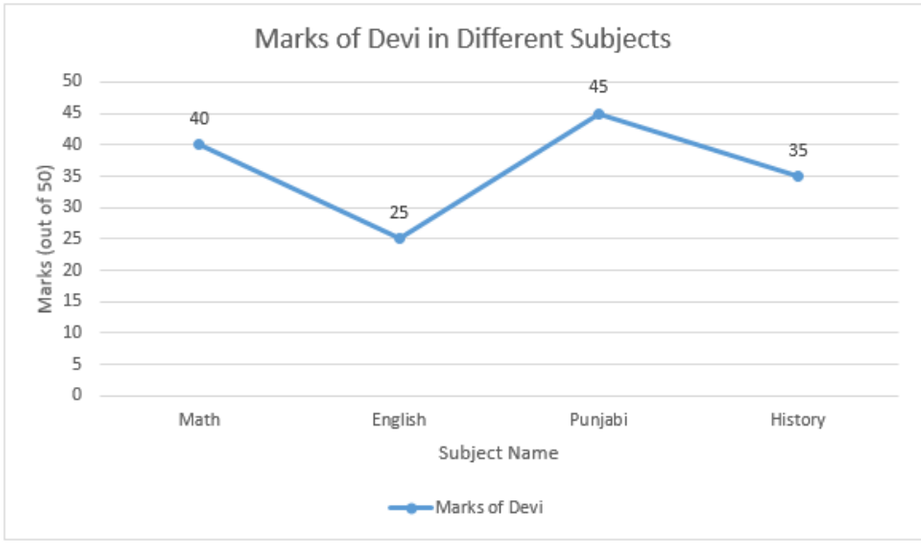
Q.75	What action should be taken if an antivirus software detects a virus?
Ans	✔ 1. Follow the software's instructions to quarantine or remove the virus.
	✘ 2. Ignore the warning and continue using the computer.
	✘ 3. Delete the infected files immediately.
	✘ 4. Perform a system backup before taking any action.

Q.76	Six people A, B, C, D, E and F live on six different floors of the same building. The bottom-most floor of the building is numbered as 1; the floor above it is numbered as 2 and so on. The topmost floor is numbered as 6. A lives on an even-numbered floor. Only three people live between A and B. F lives immediately above E. B does not live on floor number 2. Only two people live between F and D. F lives on an even-numbered floor. Who lives on floor number 3?
Ans	✔ 1. E
	✘ 2. C
	✘ 3. B
	✘ 4. D

Q.77	If 8th and 12th terms of an A.P. be 82 and 478 respectively, then its 50th term is:
Ans	✘ 1. 4241
	✘ 2. 4242
	✘ 3. 4238
	✔ 4. 4240

Q.78	Rearrange the following search engines according to the popularity of people using it. I. Yahoo II. Google III. Bing IV. Yandex
Ans	✗ 1. I, II, III, IV
	✗ 2. II, I, IV, III
	✓ 3. II, III, I, IV .
	✗ 4. IV, III, II, I

Q.79	When was the second war between the British army and Burma started?
Ans	✓ 1. 1852
	✗ 2. 1824
	✗ 3. 1826
	✗ 4. 1885

Q.80	Study the given graph and answer the question that follows.  The graph above depicts the marks of Devi in different subjects. What is her percentage of marks in Punjabi?
Ans	✗ 1. 95%
	✗ 2. 80%
	✗ 3. 85%
	✓ 4. 90%

Q.81	What is the range supported in MS-Word to change the size of the selected text?
Ans	✗ 1. Between 1 and 1500, in multiples of 1 (such as 10 or 105)
	✓ 2. Between 1 and 1638, in multiples of .5 (such as 10.5 or 105.5)
	✗ 3. Between 0.5 and 1000, in multiples of .5 (such as 10.5 or 105.5)
	✗ 4. Between 0.5 and 2000, in multiples of .5 (such as 10.5 or 105.5)

Q.82	Which of the following behaviours aligns with netiquette guidelines?
Ans	✗ 1. Ignoring others' opinions in online discussions
	✗ 2. Sending respectful and constructive emails
	✗ 3. Sharing properly cited information
	✓ 4. Responding promptly to messages

Q.83	Which of the following is NOT an input device?
Ans	✗ 1. Mouse
	✓ 2. Speaker
	✗ 3. Optical Character Reader (OCR)
	✗ 4. Digitizer

Q.84	In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::? (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.) X : 49 :: 17 : Y
Ans	✓ 1. X = 23, Y = 37
	✗ 2. X = 25, Y = 39
	✗ 3. X = 21, Y = 37
	✗ 4. X = 31, Y = 34

Q.85	Evaluate: 38 - 9 ÷ 6 × 6
Ans	✓ 1. 29
	✗ 2. 28
	✗ 3. 32
	✗ 4. 27

Q.86	The area of the triangle ABC with the vertices A(-5, 7), B(-4, -5) and C(4, 5) is
Ans	✓ 1. 53 sq. units
	✗ 2. 63 sq. units
	✗ 3. 36 sq. units
	✗ 4. 35 sq. units

Q.87	Which of the following shortcuts is used to Split the document window?
Ans	✗ 1. Ctrl + Y
	✗ 2. Ctrl + Alt + C
	✓ 3. Ctrl + Alt + S
	✗ 4. Alt + Shift + C

Q.88	The long form of DAC and MAC is:
Ans	✗ 1. Direct Access Control and Mandatory Access Control
	✗ 2. Discretionary Access Control and Multiple Access Control
	✓ 3. Discretionary Access Control and Mandatory Access Control
	✗ 4. Direct Access Control and Multiple Access Control

Q.89	A 2 kg object is dropped from a height of 10 m. Assuming no air resistance, what will be the object's speed just before it hits the ground?
Ans	✗ 1. 25 m/s
	✗ 2. 20 m/s
	✓ 3. 14 m/s
	✗ 4. 10 m/s

Q.90	The mode and median of a data is 19.5 and 85, respectively. What is the mean of the data? (Use empirical formula.)
Ans	✗ 1. 119.1
	✗ 2. 118
	✓ 3. 117.8
	✗ 4. 118.6

Q.91	Quantisation error of an 8-bit A/D converter for an analog voltage in the range −1 to +1 volt is approximately equal to ____ mv.
Ans	✗ 1. 0.4
	✗ 2. 0.1
	✓ 3. 2
	✗ 4. 0.3

Q.92	The areas of three adjacent faces of a solid cuboid are 260 cm^2, 104 cm^2 and 10 cm^2. What is the volume (in cm^3) of the cuboid?
Ans	✗ 1. 627
	✓ 2. 520
	✗ 3. 524
	✗ 4. 782

Q.93	When performing the operation $(1.23456 \times 10^3) + (1.234 \times 10^2)$, how many significant figures should be reported in the result, assuming no rounding errors?
Ans	✗ 1. 3
	✗ 2. 4
	✗ 3. 2
	✓ 4. 5

Q.94	Which HTTP method is typically used to download a web page?
Ans	✗ 1. POST
	✗ 2. DELETE
	✗ 3. PUT
	✓ 4. GET

Q.95	In which of the following countries does the industrial sector contribute less towards the GDP?
Ans	✗ 1. India
	✗ 2. Japan
	✗ 3. China
	✓ 4. Pakistan

Q.96	What is the work done when a constant force of 20 N is applied at an angle of 30° to the direction of displacement of 13 m?
Ans	✗ 1. 390 Joules
	✓ 2. 225 Joules
	✗ 3. 260 Joules
	✗ 4. 185 Joules

Q.97	The shadow of an 8 m tall building is of length 6 m on the ground. Which of the following is the distance of the end point of the shadow from the top of the building?
Ans	✗ 1. 9 m
	✗ 2. 12 m
	✗ 3. 6 m
	✓ 4. 10 m

Q.98	Which Article of the Indian Constitution provides for 'Right to work, to education and to public assistance in certain cases'?
Ans	✗ 1. Article 34
	✗ 2. Article 29
	✗ 3. Article 50
	✓ 4. Article 41

Q.99	Anurag starts from Point Y and drives 11 km towards North. He then takes a right turn, drives 25 km, turns right and drives 27 km. He then takes a right turn and drives 11 km. He takes a right turn, drives 41 km. He then turns left, drives 14 km and stops at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)
Ans	✗ 1. 36 km towards North
	✗ 2. 14 km towards North
	✗ 3. 30 km towards South
	✓ 4. 25 km towards South

Q.100	If the sum and product of the roots of a quadratic equation are $\frac{11}{2}$ and $\frac{15}{2}$, respectively, then the equation whose roots are double the roots of the given equation is:
Ans	✗ 1. $x^2 + 11x + 30 = 0$
	✓ 2. $x^2 - 11x + 30 = 0$
	✗ 3. $x^2 + 11x - 30 = 0$
	✗ 4. $x^2 - 11x - 30 = 0$

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