

RRB Technician Grade I Signal 2025

Technician Grade I Signal · CEN 02/2025 · Question Paper Compilation

Kannada

Single Shift (Set) · Official Answer Key

About this Compilation

This booklet compiles all **1 shift papers** of the **RRB Technician Grade I Signal 2025** examination (CEN 02/2025) in **Kannada**, with the correct option marked as per the official answer key.

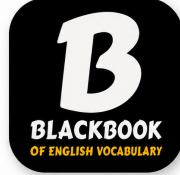
✓ Correct option (highlighted green)

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear in shift order, numbered 1 onward within each set.
- Diagram and wide-table questions appear at full width at the end of their set.
- The correct answer is highlighted in green with a tick.

More from QMaths

Check your marks, normalized score and zone-wise rank free at rank.qmaths.in. Master English vocabulary with the **Blackbook** app.



Blackbook:
English Vocabulary



Toppers' Choice, Blackbook of English Vocabulary, Now available in App format : DOWNLOAD NOW

Index — All Sets (click to open)

Set 1

13 Mar 2026

9:00 AM - 10:30 AM

Mathematics

20 Questions • Answer Key

Q1 Mathematics

Given that $112^{0.17} = x$, $112^{0.94} = y$ and $x^z = y^6$, then the value of z is close to:

A. 33.18



B. 32.2

C. 34.73

D. 34.19

Q2 Mathematics

A kite is flying in the sky. A person is holding the kite with 40 m long tightly stretched string. Find the height of the kite (in meters) if the angle made by the string with the horizontal is 30 degrees.

A. 20



B. 10

C. 15

D. 30

Q3 Mathematics

Find the product of all the possible values of 'a' for $a^2x^2 + a^{3/2}x + 3 = 0$ to be a quadratic equation with discriminant 28a.

A. -28



B. 14

C. 0

D. -12

Q4 Mathematics

The number of elements in the Power set $P(S)$ of the set $S = \{1, 2, 3, 4, 5, 6, 7, 8\}$ is:

A. 247

B. 256



C. 258

D. 250

Q5 Mathematics

Simplify $(2.5 \times 0.48 \div 0.6) + (3.5 + 1.6 \div 0.8) - (4.8 \times 0.25 \div 0.8)$.

A. 6



B. 7

C. 8

D. 5

Q6 Mathematics

If the sum of the 8th and the 12th terms of an AP is 100, and the 20th term is 95, then what is the 7th term?

A. 38.5

B. 37.5

C. 36.5



D. 39.5

Q7 Mathematics

If X and Y are two sets such that $X \cup Y$ has 56 elements, X has 45 elements and Y has 33 elements, how many elements does $X \cap Y$ have?

A. 22



B. 19

C. 13

D. 25

Q8 Mathematics

The HCF of two numbers, each having three digits, is 19 and their LCM is 760. The number of such pairs is:

A. 1

B. 3

C. 2

D. 0



Q9 Mathematics

If $a = 18$ and $d = 30$, then sum of first 6 terms of the A.P. is?

A. 555

B. 558 

C. 561

D. 559

Q10 Mathematics

A. 4 cm

B. 8 cm 

C. 6 cm

D. 2 cm

Q11 Mathematics

If the roots of the equation $x^2 - 5x + 6 = 0$ are α and β , find the value of $\alpha^2 + \beta^2$:

A. 6

B. 12

C. 5

D. 13 

Q12 Mathematics

In a test, Chris has to answer two questions. The probability that he will answer the first question correctly is $\frac{1}{5}$. If he answers the first question correctly, the probability that he will answer the second question correctly is $\frac{5}{6}$. If Chris does not answer the first question correctly, the probability that he will answer the second question correctly is $\frac{1}{4}$. Find the probability that Chris will answer the second question INCORRECTLY.

[Note: Assume that each question will be answered— either correctly or incorrectly.]

A. 

B.  

C. 

D. 



Q13 Mathematics

Triangle ABC is similar to triangle PQR. AM and PS are altitudes and AN and PT are medians. If $\frac{AM}{PS} = \frac{3}{5}$, the area of triangle PQR is 150 cm^2 and $BC = 6 \text{ cm}$, then the sum of the lengths of AM and QR is:

A. 36 cm

B. 28 cm 

C. 24 cm

D. 38 cm

Q14 Mathematics

If E and F are two mutually exclusive events such that $P(E) = \frac{1}{6}$ and $P(F) = \frac{1}{2}$, then find the $P(\text{not E and not F})$.

A. B. C.  D. **Q15** Mathematics

The coordinates of the centroid of the triangle ABC whose vertices are A(-16, 13), B(-2, -9) and C(2, 13), is

A.  B. C. D. **Q16** Mathematics

A cylindrical pillar is 28 cm in diameter and 25 m in height. Find the cost of painting the curved surface of the pillar at the rate of ₹50 per m^2 .

(Use $\pi = \frac{22}{7}$)

A. ₹1138

B. ₹1100 

C. ₹1080

D. ₹1072



Q17 Mathematics

The following table represents the marks obtained by six students in an aptitude test. Study the data carefully and answer the questions given below by matching the following types.

Student	A	B	C	D	E	F
Marks	48	50	52	55	60	65

Match the following (standard deviation values are rounded off to two decimal places):

A. Standard deviation of entire dataset	I. 5.88
B. Standard deviation of only the middle four values (B, C, D, E)	II. 3.77
C. Standard deviation of only first three values (A, B, C)	III. 4.08
D. Standard deviation of only last three values (D, E, F)	IV. 1.63

A. a – ii, b – iv, c – iii, d – i

B. a – i, b – ii, c – iv, d – iii

C. a – i, b – ii, c – iii, d – iv

D. a – ii, b – iv, c – i, d – iii

Q18 Mathematics

Find the coordinates of a point P on the x-axis which is equidistant from the points A(2,3) and B(-4,5).

A. 

B. 

C. 

D. 

Q19 Mathematics

Simplify: $\left[\{\sin^3\theta - \cos^3\theta\} \frac{1}{\sin^4\theta + \cos^4\theta} \right] + 2\cos^2\theta$

A. 1

B. -1

C. 0

D. 2

Q20 Mathematics

A. 24

B. 40

C. 32

D. 48



Q21 General Intelligence & Reasoning

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 which follows the same logic.

MAKE – MEKA – AEMK

LOAD – LDAO – ODLA

A. rent – rten – enrt

B. wind – wdni – idwn

C. view – wvie – ewiv

D. grow – rowg – orgw

Q22 General Intelligence & Reasoning

In a certain code language,

A + B means 'A is the son of B',

A – B means 'A is the brother of B',

A x B means 'A is the wife of B', and

A ÷ B means 'A is the father of B'.

Based on the above, how is L related to P if 'L + M ÷ N x O – P'?

A. ಹೆಂಡತಿಯ ಸಹೋದರ

B. ಸಹೋದರನ ಹೆಂಡತಿಯ ತಂದೆ

C. ಸಹೋದರನ ಹೆಂಡತಿಯ ಸಹೋದರ

D. ಹೆಂಡತಿಯ ತಂದೆ

Q23 General Intelligence & Reasoning

LF 58 is related to ID 49 in a certain way. In the same way, YK 36 is related to VI 27. To which of the following is RO 61 related, following the same logic?

A. oh 59

B. om 52

C. og 55

D. ov 53

Q24 General Intelligence & Reasoning

Seven people, C, D, E, F, W, X and Y, are sitting around a circular table facing the centre of the table. Only two people sit between C and D when counted from the left of D. X sits to the immediate right of D. Only three people sit between D and E. F sits to the immediate right of W. How many people sit between Y and F when counted from the right of F?

A. ಎರಡು

B. ಒಂದು

C. ಮೂರು

D. ಶೂನ್ಯ

Q25 General Intelligence & Reasoning

Each of M, N, O, P, Q, R and S plays a game on a different day of a week starting from Monday and ending on Sunday of the same week. M plays the game on Wednesday. Only two persons play the games between M and Q. O plays the game on the day immediately before R but not on Thursday. Only two persons play the games between N and S. N does not play the game on the last day. On which day does P play the game?

A. thursday

B. monday

C. friday

D. tuesday

Q26 General Intelligence & Reasoning

19 is related to 64 following a certain logic. Following the same logic, 28 is related to 91. To which of the following is 44 related, following the same logic?

(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 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.)

A. 131

B. 113

C. 193

D. 139



Q27 General Intelligence & Reasoning

Refer to the given letter, number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) F 5 @ £ T 7 Y € V D © 3 € 6 % X 1 Z £ € G *
(Right)

If all the numbers are dropped from the series, which of the following will be sixth from the left?

A. £

B. €

C. t

D. y

Q28 General Intelligence & Reasoning

Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only. All numbers are single-digit numbers.

(Left) 9 1 @ \$ 5 1 # 5 9 \$ 1 & 4 + 7 = ! 5 & 4 ? (Right)

How many such symbols are there each of which is immediately preceded by a number and also immediately followed by another number?

A. ಆರು

B. ಐದು

C. ಮೂರು

D. ನಾಲ್ಕು

Q29 General Intelligence & Reasoning

10 is related to 22 following a certain logic. Following the same logic, 24 is related to 50. To which of the given options is 6 related, following the same logic? (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 to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

A. 12

B. 18

C. 14

D. 16

Q30 General Intelligence & Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$297 \times 11 - 17 \div 18 + 91 = ?$$

A. 248

B. 242

C. 245

D. 240

Q31 General Intelligence & Reasoning

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster 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.)

A. mhj

B. rmo

C. toq

D. keh

Q32 General Intelligence & Reasoning

Vijay starts from point A and drives 10 km towards North. He then takes a left turn, drives 4 km, turns left and drives 12 km. He then takes a left turn and drives 9 km. He takes a final left turn, drives 2 km and stops at point P. How far (shortest distance) and towards which direction should he drive in order to reach point A again? (All turns are 90 degrees turns only unless specified)

A. 5 km ಪಶ್ಚಿಮಕ್ಕೆ

B. 4 km ಪಶ್ಚಿಮಕ್ಕೆ

C. 5 km ಪೂರ್ವಕ್ಕೆ

D. 4 km ಪೂರ್ವಕ್ಕೆ



Q33 General Intelligence & Reasoning

Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

HN-JF-MO

MS-OK-RT

A. pv-rn-uw



B. pv-sn-uy

C. ou-sm-wy

D. pu-sn-wy

Q34 General Intelligence & Reasoning

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 select the most appropriate answer.

Six people, A, B, C, D, E and F, are sitting in a straight line, facing north. Who sits to the immediate left of E?
I. B sits fourth to the right of C. Only one person sits between C and F. D sits third to the right of F.
II. C sits at the extreme left end of the line. Only two people sit between C and E. A sits fourth to the left of D.

ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಹೇಳಿಕೆ ii ರಲ್ಲಿರುವ ಮಾಹಿತಿಯೊಂದೇ ಸಾಕಾಗುತ್ತದೆ. ಅದೇವೇಳೆ ಹೇಳಿಕೆ i ರಲ್ಲಿರುವ ಮಾಹಿತಿಯೊಂದೇ ಸಾಕಾಗುವುದಿಲ್ಲ

ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಹೇಳಿಕೆ i ರಲ್ಲಿರುವ ಮಾಹಿತಿಯೊಂದೇ ಸಾಕಾಗುತ್ತದೆ, ಅದೇವೇಳೆ ಹೇಳಿಕೆ ii ರಲ್ಲಿರುವ ಮಾಹಿತಿಯೊಂದೇ ಸಾಕಾಗುವುದಿಲ್ಲ

ಹೇಳಿಕೆ i ಮತ್ತು ii ರಲ್ಲಿರುವ ಒಟ್ಟುಗೂಡಿಸಿದ ಮಾಹಿತಿಯು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಸಾಕಾಗುವುದಿಲ್ಲ

ಹೇಳಿಕೆ i ಮತ್ತು ii ರಲ್ಲಿರುವ ಒಟ್ಟುಗೂಡಿಸಿದ ಮಾಹಿತಿಯು (ಮತ್ತು ಒಂದೊಂದೇ ಅಲ್ಲ) ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಸಾಕಾಗುತ್ತದೆ

**Q35 General Intelligence & Reasoning**

Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 1 3 € £ 7 4 6 ¥ 2 8 \$ 6 3 1 ◇ 1 3 9 ○ 2 5 ☆ 7 5 9
(Right)

How many such symbols are there that are immediately preceded by an odd number but not immediately followed by an even number?

A. ನಾಲ್ಕು

B. ಮೂರು



C. ಎರಡು

D. ಒಂದು

General Awareness

10 Questions • Answer Key

Q36 General Awareness

The Kol Uprising, which resisted British law and order intervention, took place in which region?

A. ಅವಧ್

B. ಬಂಗಾಳ

C. ಛೋಟಾನಾಗಪುರ



D. ಮೈಸೂರು

Q37 General Awareness

Which folk music tradition from West Bengal, associated with spiritual themes, is performed by wandering minstrels?

A. ಭೌಲ್



B. ಆಲ್ತಾ

C. ಪಾಂಡವಾಣಿ

D. ಭವಾಯಿ



Blackbook Vocabulary — Now in the App!

Download Now on Google Play

Q38 General Awareness

As per Article 280(1) of the Constitution, the Finance Commission is to be constituted:

- A. ಪ್ರತಿ ಮೂರು ವರ್ಷಗಳಿಗೊಮ್ಮೆ
- B. ಪ್ರತಿ ಏಳು ವರ್ಷಗಳಿಗೊಮ್ಮೆ ಅಥವಾ ಅದಕ್ಕೂ ಮೊದಲು
- C. ಪ್ರತಿ ನಾಲ್ಕು ವರ್ಷಗಳಿಗೊಮ್ಮೆ ಅಥವಾ ಅದಕ್ಕೂ ಮೊದಲು
- D. ಪ್ರತಿ ಐದು ವರ್ಷಗಳಿಗೊಮ್ಮೆ ಅಥವಾ ಅದಕ್ಕೂ ಮೊದಲು ✓

Q39 General Awareness

The Constitution of India prohibits which of the following types of citizenship?

- A. ಭಾರತೀಯ ಪೌರತ್ವದ ಜೊತೆಗೆ ಬೇರೆ ದೇಶದ ದ್ವಿಪೌರತ್ವ ✓
- B. ಶಾಸನಬದ್ಧ ನಿಬಂಧನೆಗಳ ಅಡಿಯಲ್ಲಿ ನೋಂದಣಿಯ ಮೂಲಕ ಪೌರತ್ವ
- C. ನಿಗದಿತ ಷರತ್ತುಗಳನ್ನು ಪೂರೈಸಿದ ನಂತರ ಸ್ವಾಭಾವಿಕತೆಯ ಮೂಲಕ ಪೌರತ್ವ
- D. ಭಾರತದ ಭೂಪ್ರದೇಶದೊಳಗೆ ಹುಟ್ಟಿನಿಂದ ಪೌರತ್ವ

Q40 General Awareness

Shri C. P. Radhakrishnan was sworn in as ____ Vice President of India.

- A. 14ನೇ
- B. 13ನೇ
- C. 12ನೇ
- D. 15ನೇ ✓

Q41 General Awareness

In 2025, which Indian cricketer became the first Indian pacer to play 50 Test matches for the country?

- A. ಭುವನೇಶ್ವರ್ ಕುಮಾರ್
- B. ಜಸ್ಪೀತ್ ಬೂಮ್ರಾ ✓
- C. ಮೊಹಮ್ಮದ್ ಶಮಿ
- D. ಇಶಾಂತ್ ಶರ್ಮಾ

Q42 General Awareness

Which of the following was NOT a key component of the 1991 industrial reforms in India?

- A. ಏಕಸ್ವಾಮ್ಯ ಮತ್ತು ನಿರ್ಬಂಧಿತ ವ್ಯಾಪಾರ ಪದ್ಧತಿಗಳು (mrtp) ಕಾಯ್ದೆಯ ರದ್ದತಿ
- B. ಕೈಗಾರಿಕೆಗಳ ಪರವಾನಗಿ ರದ್ದತಿ
- C. ವಿದೇಶಿ ನೇರ ಹೂಡಿಕೆಯನ್ನು (fdi) ಪ್ರೋತ್ಸಾಹಿಸುವುದು
- D. ಪ್ರಮುಖ ಕೈಗಾರಿಕೆಗಳಲ್ಲಿ ಸಾರ್ವಜನಿಕ ವಲಯದ ವಿಸ್ತರಣೆ ✓

Q43 General Awareness

Pandit Chhannulal Mishra, who passed away at the age of 89, was associated with which of the following Hindustani classical music gharanas?

- A. ಗ್ವಾಲಿಯರ್ ಘರಾಣಾ
- B. ಆಗ್ರಾ ಘರಾಣಾ
- C. ಜೈಪುರ-ಅತ್ರೇಲಿ ಘರಾಣಾ
- D. ಬನಾರಸ್ ಘರಾಣಾ ✓

Q44 General Awareness

Which of the following pairs of peaks and their approximate heights is matched INCORRECTLY?

- A. ದೊಡ್ಡಬೆಟ್ಟ - 2637 m
- B. ನಂಗಾ ಪರ್ಬತ್ - 7026 m ✓
- C. ಕಾಂಚನಜಂಘಾ - 8598 m
- D. ಆನೈಮಡಿ - 2695 m

Q45 General Awareness

When and where did the first session of the Indian National Congress take place?

- A. ಡಿಸೆಂಬರ್ 28, 1885, ಪೂನಾ
- B. ಡಿಸೆಂಬರ್ 28, 1885, ಬಾಂಬೆ ✓
- C. ಡಿಸೆಂಬರ್ 28, 1852, ಪೂನಾ
- D. ಜನವರಿ 12, 1885, ಕೋಲ್ಕತ್ತಾ



Blackbook Vocabulary — Now in the App!

Download Now on Google Play

Q46 BasicSci

When several resistors are connected in series, which physical quantity has an identical value across each resistor?

- A. resistance
- B. current ✓
- C. power
- D. voltage

Q47 BasicSci

The resistivity of a semiconductor decreases with the increase in temperature because:

- A. lattice vibrations stop
- B. electrons lose energy
- C. more charge carriers are generated ✓
- D. band gap increases

Q48 BasicSci

If the mobility of the holes is reduced to half its original value, keeping other parameters constant, then the conductivity of a p-type semiconductor is _____.

- A. doubled
- B. reduced to half ✓
- C. constant
- D. tripled

Q49 BasicSci

One coulomb of charge is approximately equal to the charge of _____.

- A. 6×10^6 electrons
- B. 6×10^{10} electrons
- C. 6×10^{18} electrons ✓
- D. 6×10^{12} electrons

Q50 BasicSci

An ideal half-wave rectifier supplies a purely resistive load from a sinusoidal source. Let $v_L(t)$ be the load voltage and $v_D(t)$ be the diode voltage, measured with reference to the anode. Which of the following statements is always true over one complete cycle?

- A. ಡಯೋಡ್ ಅರ್ಧ ಚಕ್ರದವರೆಗೆ ವಾಹಕವಾಗಿರುವುದರಿಂದ $v_D(t)$ ನ ಸರಾಸರಿ ಮೌಲ್ಯವು ಶೂನ್ಯವಾಗಿರುತ್ತದೆ
- B. ಒಂದು ವೇಳೆ ಡಯೋಡ್ ಓರಿಯಂಟೇಶನ್ ಹಿಮ್ಮುಖವಾಗಿದ್ದರೆ $v_D(t)$ ನ ಸರಾಸರಿ ಮೌಲ್ಯವು ಶೂನ್ಯವಾಗುತ್ತದೆ
- C. $v_D(t)$ ನ rms ಮೌಲ್ಯವು ಮೂಲ ಪೋಲ್ಟೇಜ್‌ನ rms ಮೌಲ್ಯಕ್ಕೆ ಸಮನಾಗಿರುತ್ತದೆ
- D. $v_L(t)$ ಮತ್ತು $v_D(t)$ ಗಳ ಸರಾಸರಿ ಮೌಲ್ಯಗಳು ಪರಿಮಾಣದಲ್ಲಿ ಸಮನಾಗಿವೆ ಮತ್ತು ಚಿಹ್ನೆಯಲ್ಲಿ ವಿರುದ್ಧವಾಗಿವೆ ✓

Q51 BasicSci

Which of the following statements correctly describes weight?

- A. weight only shows how heavy something is
- B. weight is measured in kilograms
- C. weight has both magnitude and direction ✓
- D. weight has no direction

Q52 BasicSci

The force on a current-carrying conductor in a magnetic field is maximum when _____.

- A. the magnetic field is zero
- B. the current is parallel to the magnetic field
- C. the current is opposite to the magnetic field
- D. the current is perpendicular to the magnetic field ✓

Q53 BasicSci

Two conductors of the same material have lengths L and $2L$ and equal resistance. The ratio of their cross-sectional areas ($A_1:A_2$) is _____.

- A. 1:4
- B. 2:1
- C. 4:1
- D. 1:2 ✓



Q54 BasicSci

In a parallel connection, if one resistor breaks (open circuit) then ____.

- A. the entire circuit stops working
- B. other branches keep working** ✓
- C. battery gets damaged
- D. voltage becomes zero

Q55 BasicSci

A straight conductor of length 1 m carrying a current of 5 A is placed perpendicular to a magnetic field of 0.2 T. The force acting on the conductor is ____.

- A. 0.2 n
- B. 1.0 n** ✓
- C. 0.04 n
- D. 5.0 n

Q56 BasicSci

A logic function is given by $F = ABC + DE$. You are allowed to use only two input AND gates and NOT gates. How many minimum number of two input AND gates and how many minimum number of NOT gates are required to implement this function?

- A. 2 and ಗೇಟ್‌ಗಳು ಮತ್ತು 1 not ಗೇಟ್
- B. 3 and ಗೇಟ್‌ಗಳು ಮತ್ತು 2 not ಗೇಟ್‌ಗಳು
- C. 3 and ಗೇಟ್‌ಗಳು ಮತ್ತು 3 not ಗೇಟ್‌ಗಳು
- D. 4 and ಗೇಟ್‌ಗಳು ಮತ್ತು 3 not ಗೇಟ್‌ಗಳು** ✓

Q57 BasicSci

Two resistors $6\ \Omega$ and $3\ \Omega$ are connected in parallel. The total resistance is:

- A. $4\ \omega$
- B. $2\ \omega$** ✓
- C. $9\ \omega$
- D. $1\ \omega$

Q58 BasicSci

The SI unit of specific resistance (resistivity) is ____.

- A. ohm per metre
- B. ohm
- C. ohm-metre** ✓
- D. ohm per square metre

Q59 BasicSci

Which of the following is a fundamental (base) quantity in the SI system?

- A. mass** ✓
- B. work
- C. pressure
- D. force

Q60 BasicSci

Two transistor biasing circuits have stability factors $S_1 = 101$ and $S_2 = 15$. Which circuit offers better thermal stability?

- A. circuit 2** ✓
- B. both have equal stability
- C. cannot be compared
- D. circuit 1

Q61 BasicSci

If a uniform magnetic field is parallel to the plane of a surface, the magnetic flux through the surface is ____.

- A. maximum
- B. half of maximum
- C. infinite
- D. zero** ✓

Q62 BasicSci

Which of the following quantities remains the same at all locations in the universe?

- A. weight
- B. apparent weight
- C. gravitational force
- D. mass** ✓



Q63 BasicSci

For a R-L-C series circuit connected to the input signal $4V_p$ -p,1KHz periodic sinusoidal ac signal and the voltage drop across the resistor R measured with the help of CRO displays a sine wave occupying 2 units total height and volts /div knob at 1V ,then the RMS current for the circuit is approximately _____ if $R=10\Omega$.

A. 1.414a

B. 0.14 a

C. 0.71 a

D. 0.071a ☒**Q64 BasicSci**

Which symbol is used to represent a resistor in a circuit diagram?

A. arrow mark

B. zig-zag line ☒

C. circle with pointer

D. two parallel plates

Q65 BasicSci

Magnetic flux depends on :

A. only angle

B. only area

C. area, magnitude of b and its orientation ☒

D. only magnetic field

Q66 BasicSci

A 5 kg object experiences a gravitational force of about 49 N on Earth. This implies the value of g used is approximately:

A. 2 m/s^2 B. 9.8 m/s^2 ☒C. 19.6 m/s^2 D. 4.9 m/s^2 **Q67 BasicSci**

Which of the following correctly defines the electric field at a point?

A. energy per unit area

B. energy available per unit charge

C. force acting per unit charge ☒

D. force acting per unit mass

Q68 BasicSci

Ohm's law may NOT hold true when ____.

A. the conductor is metallic

B. the temperature of the conductor remains constant

C. the material obeys linear v-i relation

D. the temperature of the conductor increases ☒**Q69 BasicSci**

Port 0 of the 8051 microcontroller differs architecturally from the other ports primarily because:

A. ಇದು ಬಿಟ್-ಅಡ್ರೆಸೆಬಲ್ ಅಲ್ಲ

B. ಇದು ಆಂತರಿಕ ಪುಲ್-ಅಪ್ ರೆಸಿಸ್ಟರ್‌ಗಳನ್ನು ಹೊಂದಿರುವುದಿಲ್ಲ ☒

C. ಇದು ಮೆಮೊರಿ ವಿಸ್ತರಣೆಗೆ ಮಾತ್ರ ಮೀಸಲಾಗಿದೆ

D. ಇದು ಔಟ್‌ಪುಟ್ ಪೋರ್ಟ್ ಆಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸಲು ಸಾಧ್ಯವಿಲ್ಲ

Q70 BasicSci

If the potential difference across a resistor is doubled while resistance remains constant, the power consumed becomes ____.

A. half

B. four times ☒

C. double

D. one-fourth



Q71 BasicSci

If a charge of 3 C is moved across a potential difference of 15 V in 3 seconds, what is the power developed in the process?

A. 10 w

B. 5 w

C. 15 w ✓

D. 30 w

Q72 BasicSci

When the two inputs of a 2-input NAND gate are tied together to form a single input A, the resulting circuit behaves as which logic gate?

A. not ಗೇಟ್ (ಇನ್ವರ್ಟರ್) ✓

B. and ಗೇಟ್

C. or ಗೇಟ್

D. xor ಗೇಟ್

Q73 BasicSci

In a PNP transistor, an increase in collector-base reverse bias causes a slight increase in collector current even when the emitter current is held constant. This occurs primarily because:

A. ಪರಿಣಾಮಾತ್ಮಕ ಬೇಸ್ ಅಗಲವು ಕಲೆಕ್ಟರ್ - ಬೇಸ್ ವೋಲ್ಟೇಜ್‌ನೊಂದಿಗೆ ಕಡಿಮೆಯಾಗುತ್ತದೆ ✓

B. ಸಂಗ್ರಾಹಕ ಪ್ರದೇಶದಲ್ಲಿ ಹೋಲ್ ಗತಿಶೀಲತೆ ಹೆಚ್ಚಾಗುತ್ತದೆ

C. ಡಿಪ್ಲಿಷನ್ ಪ್ರದೇಶದ ವಿಸ್ತರಣೆಯಿಂದಾಗಿ ಸಂಗ್ರಾಹಕ ರೋಧವು ಕಡಿಮೆಯಾಗುತ್ತದೆ

D. ಎಮಿಟ್ಟರ್ ಇಂಜೆಕ್ಷನ್ ದಕ್ಷತೆಯು ಕಡಿಮೆಯಾಗುತ್ತದೆ

Q74 BasicSci

If the time/div knob of the CRO is on 2 ms/div and the positive half cycle of the periodic triangular signal occupies 2 unit of the X-axis, then the time period of the signal is _____.

A. 8 ms ✓

B. 4 ms

C. 16 ms

D. 2 ms

Q75 BasicSci

In 8051 microcontroller, PSEN is an ____ output signal used as a read strobe for accessing the ____ memory.

A. ಇಂಟರ್‌ನಲ್ ರಾಮ್, ಆಕ್ಷಿವ್ ಹೈ

B. ಎಕ್ಸ್‌ಟರ್ನಲ್ ಪ್ರೋಗ್ರಾಂ, ಆಕ್ಷಿವ್ ಹೈ

C. ಎಕ್ಸ್‌ಟರ್ನಲ್ ಪ್ರೋಗ್ರಾಂ, ಆಕ್ಷಿವ್ ಲೋ ✓

D. ಇಂಟರ್‌ನಲ್ ರಾಮ್, ಆಕ್ಷಿವ್ ಲೋ

Q76 BasicSci

Which device converts mechanical energy into electrical energy through electromagnetic induction?

A. battery

B. electric motor

C. electric generator ✓

D. capacitor

Q77 BasicSci

A resistor of 10 Ω is connected to a constant voltage source. When another resistor is connected in series with it, the current in the circuit becomes half of its initial value. Assuming the supply voltage remains unchanged, the resistance of the second resistor is _____.

A. 20 Ω B. 5 Ω C. 15 Ω D. 10 Ω ✓**Q78 BasicSci**

Which of the following materials acts as a good insulator in electric circuits?

A. mercury

B. graphite

C. iron rod

D. plastic ✓



Q79 BasicSci

A circular loop of radius r is placed in a uniform magnetic field $\vec{B}$. If the plane of the loop is perpendicular to the field, the magnetic flux through the loop is ____.

A. $2\pi r b$ B. $2\pi r 2b$ C. $\pi r 2b$ ✓D. br **Q80 BasicSci**

If a charge of 2 C placed in an electric field experiences a force of 10 N, what is the magnitude of the electric field at that point?

A. B. C.  ✓D. **Computers**

20 Questions • Answer Key

Q81 Computers

Which of the following statements about Power Saving Mode in MS Word is TRUE?

A. enabling power saving mode in word disables printing and spell-checking permanently

B. ms word automatically adjusts performance and reduces background operations when the computer's power-saving mode is enabled ✓

C. ms word has a dedicated "power saving mode" that reduces cpu usage and disables editing features

D. power saving mode in word automatically converts all documents to plain text to save energy.

Q82 Computers

Which of the following is a correct combination of commonly used Internet services and their primary functions?

A. email – ರಿಮೋಟ್ ಆಕ್ಷೆಸ್; www – ಫೈಲ್ ಎಂಕ್ರಿಪ್ಷನ್; ftp – ಹಾರ್ಡ್‌ವೇರ್ ಡೈವರ್‌ಗಳ ನಿರ್ವಹಣೆ

B. ftp – ಫೈಲ್ ವರ್ಗಾವಣೆ; voip – ಧ್ವನಿ ಮೂಲಕದ ಸಂವಹನ; email – ಸಂದೇಶಗಳ ರವಾನೆ ಮತ್ತು ಸ್ವೀಕರಣೆ ✓

C. ftp – ವೆಬ್ ಸೈಟ್ ಗಳನ್ನು ಬ್ರೌಸ್ ಮಾಡುವುದು; email – ಲೈವ್ ಚಾಟಿಂಗ್ ಮಾಡುವುದು; voip – ಫೈಲ್‌ಗಳನ್ನು ಪ್ರಿಂಟ್ ಮಾಡುವುದು

D. www – ಫೈಲ್ ವರ್ಗಾವಣೆ; email – ರಿಯಲ್ ಟೈಮ್ ವೀಡಿಯೋ ಕಾಲಿಂಗ್; telnet – ಫೋಟೋಗಳನ್ನು ಕಳುಹಿಸುವುದು

Q83 Computers

Which toolbar in Excel or Office applications allows you to draw shapes, arrows, and flowchart elements?

A. drawing toolbar ✓

B. standard toolbar

C. formula toolbar

D. formatting toolbar



Blackbook Vocabulary — Now in the App!

Download Now on Google Play

Q84 Computers

In MS PowerPoint, which feature enables inserting tables from MS Word or MS Excel?

- A. insert > table
- B. home > table
- C. file > import
- D. insert > object



Q85 Computers

Where can you find options to change the design template of your presentation?

- A. home tab
- B. view tab
- C. design tab
- D. insert tab



Q86 Computers

Which shortcut allows you to select an entire sentence in MS Word 365 without dragging the mouse?

- A. ctrl + shift + end
- B. ವಾಕ್ಯದಲ್ಲಿ ಯಾವ ಜಾಗದಲ್ಲಿ ಯಾದರೂ ctrl + click ಮಾಡುವುದು
- C. ctrl + click
- D. ctrl + shift + →



Q87 Computers

You have a large, comma-separated data set pasted into Word, where each line represents a new row and the commas (,) separate the data that should occupy individual cells. To accurately convert this text into a table while ensuring the data is parsed correctly, which sequence of actions must you take while using MS Word in Microsoft 365?

A. select the entire text, open the table properties dialog box, navigate to the row tab, and specify a fixed row height, which automatically triggers the conversion.

B. select the entire text, go to the insert tab, click table, and select quick tables, then choose the appropriate style.

C. select the entire text, go to the insert tab, click table, and select convert text to table, then confirm that the separator character is set to commas.



D. select the entire text, go to the layout tab (under table tools), select text direction, and choose the convert text to table option.

Q88 Computers

What shortcut key is used in Windows OS to navigate between open programs?

- A. alt + del
- B. alt + tab
- C. alt + ins
- D. alt + f4



Q89 Computers

In a switched Ethernet LAN, which switching method begins forwarding a frame **as soon as the destination MAC address is read**, resulting in the lowest latency but higher risk of forwarding corrupted frames?

- A. fragment-free switching
- B. token passing
- C. store-and-forward switching
- D. cut-through switching



Q90 Computers

Clip art includes:

A. animated gifs & drawings



B. only charts

C. only videos

D. sound files

Q91 Computers

Which of the following best describes the role of PCB in a computer system?

A. an input device for transferring data

B. a protocol used in wireless networks

C. a physical board connecting electronic components



D. a software tool for virus removal

Q92 Computers

In MS Excel, which option allows you to insert a new column between column B and C?

A. use "clear contents" option

B. select column c → press delete

C. right-click on column b header → delete

D. right-click on column c header → insert

**Q93 Computers**

How can a user attach a file to an e-mail in most e-mail clients?

A. click the 'attach file' or paperclip icon and select a file



B. press ctrl + a to attach a file

C. click the 'send' button and select a file

D. go to the edit menu and select 'add file'

Q94 Computers

An email containing sensitive information is received from a client. It needs to be forwarded to a colleague for further action. What measures should be taken to safeguard the sensitive information during this process?

A. redact the sensitive information before forwarding.



B. delete the mail containing sensitive information

C. call your colleague and verbally share the sensitive information.

D. forward the email as is.

Q95 Computers

In R1C1 reference style, how is the cell located at column E and row 8 represented in Microsoft Excel 2021?

A. 8rc5

B. rc85

C. 8r5c

D. r8c5

**Q96 Computers**

Consider the following statements regarding **inserting and deleting rows and columns** in tables in **MS Word 2021**:

1. New rows can be inserted only at the end of a table using the Tab key.
2. The **Layout tab** under **Table Tools** allows users to insert or delete rows and columns at any position within the table.
3. The **Right-click context menu** provides quick options for inserting and deleting rows or columns.

Which of the above statements is/are correct?

A. ಕೇವಲ ಹೇಳಿಕೆ 1 ಮತ್ತು ಹೇಳಿಕೆ 3

B. ಹೇಳಿಕೆ ಮಾತ್ರ 2 ಮತ್ತು ಹೇಳಿಕೆ 3



C. ಕೇವಲ ಹೇಳಿಕೆ 1 ಮತ್ತು ಹೇಳಿಕೆ 2

D. ಹೇಳಿಕೆ 1, ಹೇಳಿಕೆ 2 ಮತ್ತು ಹೇಳಿಕೆ 3



Q97 Computers

The system software component ____ is responsible for booting up the computer system.

A. bios/uefi



B. cli/gui

C. cgi/etf

D. hdmi/vga

Q98 Computers

Windows comes with a _____ that displays currently opened programs. It also allows users to access any specific programs.

A. task manager

B. file explorer

C. start menu

D. taskbar



Q99 Computers

What is the difference between Reply and Forward in email?

A. reply encrypts the email, forward does not.

B. reply sends the email to all contacts, forward sends it to none.

reply sends your response only to the original sender, while forward sends the email to a new recipient.



D. reply deletes the original message, while forward saves it.

Q100 Computers

What factors should be considered for optimal document printing results?

A. printing settings have no impact on final results.

printer selection, paper type, print quality, color options, and page range settings affect printing outcomes and resource efficiency.



C. default printing settings are always appropriate.

D. all documents print identically regardless of settings.

