

Quantitative Aptitude for RRB NTPC

Q1. Reflection of the point (2,-7) in the y-axis is

- (a) (2, 7)
- (b) (-2, -7)
- (c) (-7, 2)
- (d) (7, -2)

Q2. The price of an article is cut by 3%. To restore to its original value, the new price must be increased by

- (a) 3 %
- (b) 7.11 %
- (c) 3.09 %
- (d) 2.69 %

Q3. Simple interest on a certain sum of money for 3 years at 8% per annum is half the compound interest on Rs. 16000 for 2 years at 10% per annum. The sum placed on simple interest is:

- (a) Rs 14000
- (b) Rs 3500
- (c) Rs 7000
- (d) Rs 5600

Q4. On dividing $144a^3b^3c^3$ by $24b^2c$, we get

- (a) $6a^3bc^2$
- (b) $24a^3bc^2$
- (c) $24b^2c$
- (d) $6a^3b^2c$

Q5. If $\cos^4 A - \sin^4 A = X$, then value of X is?

- (a) $\cos^2 A - 1$
- (b) $2\cos^2 A - 1$
- (c) $2\cos^2 A + 1$
- (d) $\cos^2 A + 1$

12 Month Subscription



RAILWAYS

Useful for NTPC | Group D | ALP

TEST PACK

Q6. Ticket for an adult is Rs 1600 and a child is Rs 1200. 1 child goes free with two adults. If a group has 23 adults and 10 children what is the discount the group gets?

- (a) 25.95 %
- (b) 24.59 %
- (c) 25.77 %
- (d) 31.60 %

Q7. A tent is to be built in the form of a cylinder of radius 10 m surmounted by a cone of the same radius. If the height of the cylindrical part is 5 m and slant height of the conical part is 15 m, how much canvas will be required to build the tent? Allow 20% extra canvas for folding and stitching. (Take $\pi = 22/7$)

- (a) 4714.43 sq m
- (b) 3772.14 sq m
- (c) 6783.86 sq m
- (d) 942.8 sq m

Q8. 7 hrs after a goods train passed a station, another train travelling at a speed of 54 km/hr following that goods train passed through that station. If after passing the station the train overtakes the goods train in 11 hours. What is the speed of the goods train?

- (a) 39.6 km/hr
- (b) 49.5 km/hr
- (c) 33 km/hr
- (d) 26.4 km/hr

Q9. The simplified form of $112b^3x^2a^4z^3/7a^3b^2z$ is?

- (a) $16bx^2a^2z$
- (b) $16bx^2az^2$
- (c) $16ba^2z$
- (d) $16bxa^2z$

Q10. What is the equation of the line if its slope is $3/4$ and y intercept is 5?

- (a) $3x + 4y = 20$
- (b) $3x + 4y = 20$
- (c) $3x - 4y = -20$
- (d) $3x - 4y = 20$

Q11.

The greatest of the numbers $\sqrt[2]{8}$, $\sqrt[4]{13}$, $\sqrt[5]{16}$, $\sqrt[10]{41}$ is?

- (a) $\sqrt[4]{13}$
- (b) $\sqrt[5]{16}$
- (c) $\sqrt[10]{41}$
- (d) $\sqrt[2]{8}$

Q12.

If $2^x = 3^y = 6^{-z}$ then $\left(\frac{1}{x} + \frac{1}{y} + \frac{1}{z}\right)$ is equal to?

- (a) 0
- (b) 1
- (c) $3/2$
- (d) $-\frac{1}{2}$

Q13.

$2\sqrt[3]{40} - 4\sqrt[3]{320} + 3\sqrt[3]{625} - 3\sqrt[3]{5}$ is equal to?

- (a) $-2\sqrt[3]{340}$
- (b) 0
- (c) $\sqrt[3]{340}$
- (d) $\sqrt[3]{660}$

Q14.

The value of $\sqrt{40 + \sqrt{9\sqrt{81}}}$ is?

- (a) $\sqrt{111}$
- (b) 9
- (c) 7
- (d) 11

Q15.

If $\frac{(x - \sqrt{24})(\sqrt{75} + \sqrt{50})}{\sqrt{75} - \sqrt{50}} = 1$, then the value of x is?

- (a) $\sqrt{5}$
- (b) 5
- (c) $2\sqrt{5}$
- (d) $3\sqrt{5}$

Q16.

Evaluate $\sqrt{20} + \sqrt{12} + \sqrt[3]{729} - \frac{4}{\sqrt{5} - \sqrt{3}} - \sqrt{81}$?

- (a) $\sqrt{2}$
- (b) $\sqrt{3}$
- (c) 0
- (d) $2\sqrt{5}$

BILINGUAL

RRB NTPC 4.0

Starts April 9, 2020

2 PM to 3 PM

Q17.

If a, b are rationals and $a\sqrt{2} + b\sqrt{3} = \sqrt{98} + \sqrt{108} - \sqrt{48} - \sqrt{72}$, then the values of a, b are respectively?

- (a) 1, 2
- (b) 1, 3
- (c) 2, 1
- (d) 2, 3

Q18.

Let $\sqrt[3]{a} = \sqrt[3]{26} + \sqrt[3]{7} + \sqrt[3]{63}$ then?

- (a) $a < 729$ but $a > 216$
- (b) $a < 216$
- (c) $a > 729$
- (d) $a = 729$

Q19.

$2 + \frac{6}{\sqrt{3}} + \frac{1}{2+\sqrt{3}} + \frac{1}{\sqrt{3}-2}$ equals to?

- (a) $+(2\sqrt{3})$
- (b) $-(2 + \sqrt{3})$
- (c) 1
- (d) 2

Q20.

Find the value of $\sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}}$?

- (a) 5
- (b) $3\sqrt{10}$
- (c) 6
- (d) 7

Q21.

If $x + \frac{1}{x} = 2 \cos \theta$,

then find the value of $x^3 + \frac{1}{x^3}$.

- (a) $2 \cos 3\theta$
- (b) $2 \sin 3\theta$
- (c) $\sin 3\theta$
- (d) $\cos 3\theta$

6 Months Subscription

RRB NTPC
KA MAHA PACK

Test Series, Live Classes,
Video Course, eBooks

Bilingual

Q22.

If $0^\circ < \theta < 90^\circ$ & $\tan \theta = \sqrt{6 + \sqrt{6 + \sqrt{6 + \dots \infty}}}$,
then find the value of $\sec^2 \theta$.

- (a) 10
- (b) 12
- (c) 8
- (d) 6

Q23.

If $\tan \theta = \frac{1}{2}$ and $\tan \phi = \frac{1}{3}$, then $\theta + \phi = ?$

- (a) $\pi/6$
- (b) 0
- (c) $\pi/4$
- (d) π

Q24.

If $\frac{\sin \theta + \cos \theta}{\sin \theta - \cos \theta} = 3$,

then find the value of $\sin^4 \theta - \cos^4 \theta$.

- (a) $1/5$
- (b) $2/5$
- (c) $3/5$
- (d) $4/5$

Q25. If $\sin 17^\circ = x/y$, then the value of $\sec 17^\circ - \sin 73^\circ$ is.

- (a) $\frac{y^2 - x^2}{xy}$
- (b) $\frac{x^2}{\sqrt{y^2 - x^2}}$
- (c) $\frac{x^2}{y\sqrt{y^2 + x^2}}$
- (d) $\frac{x^2}{y\sqrt{y^2 - x^2}}$

Q26. If $\sin \theta + \cos \theta = p$ and $\sec \theta + \operatorname{cosec} \theta = q$, then $q(p^2 - 1) = ?$

- (a) p
- (b) $2p$
- (c) $3p$
- (d) $2p^2$

Q27. If $\sin(x + y) = \cos(x - y)$, then find the value of $\cos^2 x$.

- (a) 5
- (b) $-\frac{1}{2}$
- (c) $\frac{1}{2}$
- (d) 3

Q28. Find the value of $3 \sin 20^\circ - 4 \sin^3 20^\circ$.

- (a) $\frac{\sqrt{3}}{2}$
- (b) $\frac{1}{2}$
- (c) $\frac{1}{\sqrt{2}}$
- (d) $\frac{2}{\sqrt{3}}$

Q29.

$$\frac{\sin \theta}{\cot \theta + \operatorname{cosec} \theta} - \frac{\sin \theta}{\cot \theta - \operatorname{cosec} \theta} = ?$$

- (a) 1
- (b) 2
- (c) 3
- (d) 0

Q30. The value of the expression $2(\sin^6 \theta + \cos^6 \theta) - 3(\sin^4 \theta + \cos^4 \theta) + 1$ is

- (a) -1
- (b) 0
- (c) 1
- (d) 2

