

Section : Quantitative Aptitude

Q.1 If $x^2 + y^2 + z^2 = 133$, $xy + yz + zx = 114$ and $xyz = 216$, then the value of $x^3 + y^3 + z^3$ is:

- Ans**
- 1. 942
 - 2. 948
 - 3. 1009
 - 4. 999

Q.2 A trader marks his goods at 40% above the cost price. He sells 70% of the goods at the marked price and the rest, he sells by allowing a 40% discount on the marked price. His percentage profit is:

- Ans**
- 1. 23.4
 - 2. 24.4
 - 3. 23.2
 - 4. 24.2

Q.3 The table shows the production of different types of cars (in thousands).

Year \ Car	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

The total production of all type of cars, except type B, in 2012 is what percent less than the total production of all types of cars in 2016?

- Ans**
- 1. 42
 - 2. 25.8
 - 3. 26.7
 - 4. 40

Q.4 The length of a metallic pipe is 7.56 m. Its external and internal radii are 2.5 cm and 1.5 cm respectively. If 1 cm³ of the metal weigh 7.5 g, then the weight of the pipe is: (Take $\pi = \frac{22}{7}$)

- Ans**
- 1. 70.14 kg
 - 2. 71.28 kg
 - 3. 72.82 kg
 - 4. 69.68 kg

Q.5 In a circle with centre O, ACBO is a parallelogram where C is a point on the minor arc AB. What is the measure of $\angle AOB$?

- Ans**
- 1. 150°
 - 2. 120°
 - 3. 110°
 - 4. 100°

Q.6 If $2x^2 + y^2 + 6x - 2xy + 9 = 0$, then the value of $(4x^3 - y^3 + x^2y^2)$ is:

- Ans**
- 1. -9
 - 2. 9
 - 3. 0
 - 4. -3

Q.7 ABCD is a parallelogram in which diagonals AD and BC intersect at O. AE and DF are perpendiculars on BC at E and F, respectively. Which of the following is NOT true?

- Ans
- 1. $\Delta ABC \cong \Delta DCB$
 - 2. $\Delta AEB \cong \Delta DFC$
 - 3. $\Delta ADC \cong \Delta ABD$
 - 4. $\Delta AOE \cong \Delta DOF$

Q.8 If $\frac{\cos^2 \theta}{\cot^2 \theta - \cos^2 \theta} = 3, 0^\circ < \theta < 90^\circ$, then the value of $\cot \theta + \operatorname{cosec} \theta$ is:

- Ans
- 1. $2\sqrt{3}$
 - 2. $\sqrt{3}$
 - 3. $\frac{\sqrt{3}}{2}$
 - 4. $\frac{3\sqrt{3}}{4}$

Q.9 The vertices of a ΔPQR lie on a circle with centre O. SR is a tangent to the circle at the point R. If QR bisects the $\angle ORS$, then what is the measure of $\angle RPQ$?

- Ans
- 1. 40°
 - 2. 30°
 - 3. 60°
 - 4. 45°

Q.10 The table shows the production of different types of cars (in thousands).

Year \ Car	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

What is the ratio of the total production of type E cars in 2014 and type C cars in 2016 taken together to the total production of type B cars in 2014 and type D cars in 2013 taken together?

- Ans
- 1. 9 : 8
 - 2. 11 : 8
 - 3. 10 : 7
 - 4. 11 : 5

Q.11 The value of $\frac{9}{15}$ of $\left(\frac{2}{3} \div \frac{2}{3} \text{ of } \frac{3}{2}\right) \div \left(\frac{3}{4} \times \frac{3}{4} \div \frac{3}{4} \text{ of } \frac{4}{3}\right)$ of $\left(\frac{5}{4} \div \frac{5}{2} \times \frac{2}{5} \text{ of } \frac{4}{5}\right)$ is:

- Ans
- 1. $\frac{4}{25}$
 - 2. $\frac{20}{9}$
 - 3. $\frac{18}{125}$
 - 4. $\frac{40}{9}$

Q.12 The table shows the production of different types of cars (in thousands).

Year	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

The total production of type E cars in 2012 and 2013 is approximately what percent more than the average production of type A cars during the years 2012 to 2016?

- Ans
- 1. 56.4
 - 2. 52.2
 - 3. 53.8
 - 4. 55.2

Q.13 In ΔABC with sides 6 cm, 7 cm and 8 cm, the angle bisector of the largest angle divides the opposite side into two segments. What is the length of the shorter segment?

- Ans
- 1. $\frac{48}{13}$ cm
 - 2. $\frac{24}{5}$ cm
 - 3. $\frac{21}{5}$ cm
 - 4. $\frac{56}{13}$ cm

Q.14 The efficiencies of A, B and C are in the ratio 5 : 3 : 8. Working together they can complete a work in 30 days. A and B worked together for 20 days. The remaining work will be completed by C alone in:

- Ans 1. 36 days

2. 32 days

3. 30 days

4. 40 days

Q.15 If $x + y = 12$ and $xy = 27, x > y$, then the value of $(x^3 - y^3)$ is:

Ans 1. 702

2. 710

3. 724

4. 720

Q.16 The distance between two stations A and B is 800 km. A train X starts from A and moves towards B at 40 km/h and another train Y starts from B and moves towards A at 60 km/h. How far from A will they cross each other?

Ans 1. 320 km

2. 300 km

3. 380 km

4. 360 km

Q.17 If a 9-digit number $32x4115y2$ is divisible by 88, then the value of $(4x - y)$ for the smallest possible value of y , is:

Ans 1. 11

2. 31

3. -1

4. 20

Q.18 The average of twelve numbers is 46. The average of the first four numbers is 43 and that of the last five numbers is 49.4. The 5th and the 6th numbers are respectively 4 and 6 more than the 7th number. What is the average of the 5th and the 7th numbers?

Ans 1. 43.5

2. 44.5

3. 44

4. 43

Q.19 The ratio of the present ages of A and B is 8 : 9. After 9 years, this ratio will become 19 : 21. C is 3 years younger to B. What is the present age (in years) of C?

- Ans
- 1. 52
 - 2. 48
 - 3. 49
 - 4. 51

Q.20 What is the compound interest on a sum of ₹10,000 at 14% p.a. for $2\frac{2}{7}$ years where the interest is compounded yearly? (nearest to ₹ 1)

- Ans
- 1. ₹4,439
 - 2. ₹4,296
 - 3. ₹4,394
 - 4. ₹4,259

Q.21 When the price of an item was reduced by 20%, then its sale increased by $x\%$. If there is an increase of 60% in the receipt of the revenue, then the value of x is:

- Ans
- 1. 80
 - 2. 120
 - 3. 96
 - 4. 100

Q.22 The table shows the production of different types of cars (in thousands).

Year Car	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

If the data related to the production of type D cars is represented by a pie chart, then the central angle of the sector representing the production of cars in 2013 will be:

- Ans
- 1. 84°
 - 2. 77°
 - 3. 75°
 - 4. 60°

Q.23 If $\sin \theta = 4 \cos \theta$, then what is the value of $\sin \theta \cos \theta$?

- Ans
- 1. $\frac{3}{10}$
 - 2. $\frac{3}{4}$
 - 3. $\frac{4}{17}$
 - 4. $\frac{2}{9}$

Q.24 Abhi bought two articles for ₹624. He sold one at a loss of 14% and the other at a profit of 14%. If the selling price of both the articles is equal, then the difference between their cost prices (in ₹) is:

- Ans
- 1. 89.64
 - 2. 88.84
 - 3. 89.68
 - 4. 87.36

Q.25 Let $a = \frac{2 \sin x}{1 + \sin x + \cos x}$ and $b = \frac{c}{1 + \sin x}$. Then $a = b$, if $c = ?$

- Ans
- 1. $1 + \sin x - \cos x$
 - 2. $1 - \sin x \cos x$
 - 3. $1 + \cos x - \sin x$
 - 4. $1 + \sin x \cos x$

Section : English Comprehension

Q.1 In the sentence identify the segment which contains the grammatical error.

The street artist Satish Munjal has been painting this wall since the past one week.

- Ans
- 1. since the past one week
 - 2. has been painting
 - 3. this wall
 - 4. The street artist

Q.2 Select the wrongly spelt word.

- Ans
- 1. measure
 - 2. meadow
 - 3. megre
 - 4. matter

Q.3 Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

The Head has been so busy to go through these files and resolve the matter.

- Ans
- 1. No improvement
 - 2. too busy to go through
 - 3. too so busy to go through
 - 4. such busy to go through

Q.4 Given below are four jumbled sentences. Select the option that gives their correct order.

- A. Canada accounts for nearly one-third of the world's production of news print.
- B. Forest products, therefore, have been important export items of Canada for more than a century.
- C. A large part of Canada is covered with coniferous trees.
- D. Pulp and paper are the two most important forest products.

- Ans
- 1. ABCD
 - 2. CBDA
 - 3. DCAB
 - 4. BACD

Q.5 Select the antonym of the given word.

FINITE

- Ans
- 1. limited
 - 2. finished
 - 3. endless
 - 4. bound

Q.6 Select the antonym of the given word.

REPRIMAND

- Ans 1. compliment
 2. apprehend
 3. blame
 4. reproach

Q.7 Select the correct active form of the given sentence.

The wall of this park is being painted by children.

- Ans 1. The wall is painting children of this park.
 2. Children are painting the wall of this park.
 3. Children have been painting the wall of this park.
 4. Children painted the wall of this park.

Q.8 Select the most appropriate meaning of the given idiom.

Lead someone by the nose

- Ans 1. to quarrel with someone
 2. to dominate someone
 3. to do the right thing
 4. to force someone to take the blame

Q.9 Select the word which means the same as the group of words given.

Persons living at the same time

- Ans 1. contemporaries
 2. compatriots
 3. colleagues
 4. cosmopolitans

Q.10 Given below are four jumbled sentences. Select the option that gives their correct order.

- A. In China, thousands of people celebrated it.
B. The Lunar New Year of the Pig began on 5th February.

- C. Others burned the first joss sticks of the year to bring them good fortune.
- D. Some performers re-enacted historical ceremonies.

- Ans
- 1. BDCA
 - 2. DABC
 - 3. BADC
 - 4. ABCD

Q.11 Select the most appropriate option to fill in the blank.

In many countries the _____ in pay for men and women is quite common, for example, in Germany women are paid 21 per cent less as compared to men.

- Ans
- 1. equivalence
 - 2. disagreement
 - 3. unlikeliness
 - 4. disparity

Q.12 Select the synonym of the given word.

DUBIOUS

- Ans
- 1. certain
 - 2. steady
 - 3. loyal
 - 4. fishy

Q.13 Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

You won't tell the secret, won't you?

- Ans
- 1. isn't it
 - 2. would you
 - 3. No improvement
 - 4. will you

Q.14 Select the wrongly spelt word.

- Ans
- 1. remonstrate
 - 2. rendezvous

3. remuneration

4. renaissance

Q.15 Select the synonym of the given word.

ENTICE

Ans 1. enrage

2. entrap

3. ensue

4. entail

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

In 1914 a war began in Europe which engulfed the entire world. The damage (1)_____ by this war has no precedent in history. (2)_____ the earlier wars, the civilian populations were (3)_____ not involved and the casualties were mostly (4)_____ to the warring armies. The war (5)_____ began in 1914 was a total war in which all the resources of the warring states were mobilized.

SubQuestion No : 16

Q.16 Select the most appropriate option for blank No. 1.

Ans 1. generated

2. made

3. caused

4. began

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

In 1914 a war began in Europe which engulfed the entire world. The damage (1)_____ by this war has no precedent in history. (2)_____ the earlier wars, the civilian populations were (3)_____ not involved and the casualties were mostly (4)_____ to the warring armies. The war (5)_____ began in 1914 was a total war in which all the resources of the warring states were mobilized.

SubQuestion No : 17

Q.17 Select the most appropriate option for blank No. 2.

Ans 1. Into

2. At

3. In

4. On

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

In 1914 a war began in Europe which engulfed the entire world. The damage (1)_____ by this war has no precedent in history. (2)_____ the earlier wars, the civilian populations were (3)_____ not involved and the casualties were mostly (4)_____ to the warring armies. The war (5)_____ began in 1914 was a total war in which all the resources of the warring states were mobilized.

SubQuestion No : 18

Q.18 Select the most appropriate option for blank No. 3.

- Ans
- 1. broadly
 - 2. chiefly
 - 3. generally
 - 4. finally

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

In 1914 a war began in Europe which engulfed the entire world. The damage (1)_____ by this war has no precedent in history. (2)_____ the earlier wars, the civilian populations were (3)_____ not involved and the casualties were mostly (4)_____ to the warring armies. The war (5)_____ began in 1914 was a total war in which all the resources of the warring states were mobilized.

SubQuestion No : 19

Q.19 Select the most appropriate option for blank No. 4.

- Ans
- 1. belonged
 - 2. bound
 - 3. confined
 - 4. retrained

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

In 1914 a war began in Europe which engulfed the entire world. The damage (1)_____ by this war has no precedent in history. (2)_____ the earlier wars, the civilian populations were (3)_____ not involved and the casualties were mostly (4)_____ to the warring armies. The war (5)_____ began in 1914 was a total war in which all the resources of the warring states were mobilized.

SubQuestion No : 20

Q.20 Select the most appropriate option for blank No. 5.

- Ans
- 1. what

2. whom

3. who

4. which

Q.21 Select the correct passive form of the given sentence.

Take this suitcase upstairs.

Ans 1. This suitcase should be taken upstairs.

2. You are requested to take this suitcase upstairs.

3. Let this suitcase been taken upstairs.

4. You must be taking this suitcase upstairs.

Q.22 Select the most appropriate meaning of the given idiom.

Couch potato

Ans 1. a person who watches too much television

2. a person who is simple in nature

3. a person who sleeps all day

4. a person who remains relaxed and calm

Q.23 In the sentence identify the segment which contains the grammatical error.

I know the cobbler which mends the shoes outside the gate of our colony.

Ans 1. I know the cobbler

2. which mends

3. the shoes

4. outside the gate

Q.24 Select the most appropriate option to fill in the blank.

Catholics and Protestants have a long history of _____ in Northern Ireland but volunteers from both communities came together to build the monument of Peace.

Ans 1. contest

2. agreement

3. truce

✓ 4. conflict

Q.25 Select the word which means the same as the group of words given.

Someone who believes that people cannot change the way events will happen

- Ans
- ✗ 1. seer
 - ✗ 2. fanatic
 - ✓ 3. fatalist
 - ✗ 4. prophet