CAT 2023

25 MUST DO QUANT

With Video Solution

PART-1

Prepared By
TEAM AzuCATion

Prepared For
Competitive Exams

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QUESTIONS

Q. 1) When a number is divided by 6 and 35 remainders are 5 and 7 then what would be remainder when 11 times of the number is divided by 15

a. 8 b. 13 c. 7 d. Data inadequatee

Q.2 $Find\ 1^2 - 2^2 + 3^2 - 4^2 + \ldots\ldots + 101^2 = ?$

a. 5151 b. 5051 c. 5001 d. none of these

$Q.\ 3\ If\ x + \frac{1}{x} = 2;$
$then\ x^{100} - x^{99} + x^{98} - x^{97} + \ldots\ldots - x = ?$

a. 1 b. -1 c. 0 d. NoT

Q. 4 If N is smallest prime number which is equal to sum of three consecutive prime numbers then what is the sum of digits of N

a. 3 b. 4 c. 5 d. 7

Q. 5 For a natural "n" $2^{12n} - 6^{4n}$ **is div by**

a. 10 b. 20 c. 50 d. 100 e. All

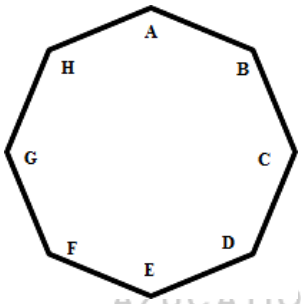
Q. 6 If $\sin\emptyset - \cos\emptyset = \frac{1}{2}$ **then for** $0 \le \emptyset \le \frac{\pi}{2}$**;** $\tan\emptyset + \cot\emptyset = ??$

a. 3/4 b. 8/3 c. 1 d. 0

Q. 7) Product of first 24 prime number is not divisible by

a. 391 b. 371 c. 247 d. 279 e. NoT

Q. 8 Fig is a regular octagon then what is the measurement of angle ADH



a. 22.5 degree b. 45 degree
c. 30 degree d. 60 degree

Q. 9 If $x + y + z = 1$
$x^2 + y^2 + z^2 = 2$
& $x^3 + y^3 + z^3 = 3$, $xyz = ?$

a. 1/2 b. 1/3 c. 1/6 d. NoT

Q. 10) A husband alone can do a piece of work in 60 hours & wife alone in 40 hours, but due to a baby who always destroy their work they together take 16 more hours to complete their work Then in how many days baby alone can destroy all the work.

a. 30 b. 60 c. 120 d. NoT

Q. 11) In Jhumri Tillaiya a Paan-wala priced his beedi at 85 paisa per beedi, but after budget, he reduced the price of beedi and sold beedi of Rs.77.28 in a day. Then what is the total number of beedies he sold in a day?

a.37 b. 47 c. 84 d. 92

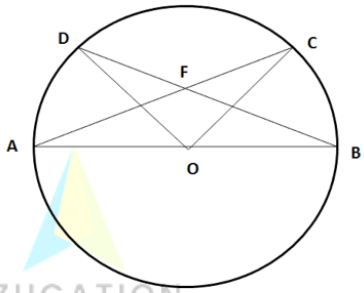
Q. 12) which one is largest among all options

a. $12^{13} + 14^{15}$ b. $13^{12} + 15^{14}$ c. $12^{15} + 14^{13}$ d. $15^{12} + 13^{14}$

Q. 13) If diagonals of a parallelogram are 30cm and 10 cm then among the options which could be sides of parallelogram

a. 22 cm & 4 cm b. 20cm & 10 cm
c. a & b both possible d. NoT

Q. 14). If O is centre of the circle, angle DOC = 42° then what is the measurement of angle BFC



a. 42° b. 68°
c. 69° d. NoT

Q. 15 An alloy X consists of 10% Cadmium and 6% zinc and alloy Y consists of 5% Cadmium and 10% zinc. If he needs at least 14 kg of Cadmium and 14 kg of zinc for his experiment. If alloy X costs 60 paisa per kg and alloy X costs 40 paisa per kg, What is the minimum cost he would occur to fulfil his requirement

a. Rs.72 b. Rs.82
c. Rs.92 d. None of these

Q. 16 If A, B , C ,... Z are 26 positive numbers such that A+B+C+....+Z = 13, then find minimum possible value of $\frac{1}{A}+\frac{1}{B}+\frac{1}{C}+\cdots+\frac{1}{Z}$

a. 2 b. 13 c. 26 d. 52 e. NoT

Q. 17 What is the sum of last two digits of $1^{17}+2^{17}+3^{17}+\cdots.+99^{17}$

a. 0 b. 10 c. 18 d. NoT

Q. 18 If 3cm, 4cm and 5cm are length of altitudes of a triangle then triangle is

a. Acute angled triangle b. Obtuse angled triangle
c. Right angled triangle d. Not possible

Q. 19) The smallest perfect square which is divisible by 8! is

a. 564,480 b. 403,200 c. 2,822,400 d. 604,800

Q. 20. If a, d, c, d are different positive integers such that

$$\frac{1}{a+\frac{1}{b+\frac{1}{c+\frac{1}{d}}}}=\frac{29}{154}$$

then among the options which one is a possible value for a + b + c + d

a. 10 b. 17 c. 14 d. 25

Q. 21 $\left(1-\frac{16}{1}\right)\left(1-\frac{16}{2}\right)\left(1-\frac{16}{3}\right)\left(1-\frac{16}{4}\right)\ldots\left(1-\frac{16}{50}\right)=???$

a. -16 b. 1 c.0 d. NoT

Q. 22 If in ABC **, AB = 6 cm , AC= 8 cm and angle ABC = 60° then what is the perimeter of triangle , then what is the perimeter of triangle.**

a. $17+\sqrt{37}$ b. $17-\sqrt{37}$ c. (a) or (b) d. NoT

Q. 23) If "abc" is a three digit number then abc + bca + cab is always divisible by

a. 11 b. 9 c. 47 d. 37

Q. 24 $\frac{\sqrt{110-\sqrt{110-\sqrt{110-\sqrt{110-\cdots}}}}}{\sqrt{90+\sqrt{90+\sqrt{90+\sqrt{90+\cdots}}}}}$?

Q. 25 $(2^3+4^3+6^3+\cdots+20^3)-(1^3+3^3+5^3+\cdots+19^3)=?$

a. 4300 b. 4200 c. 4100 d. 4000

VIDEO SOLUTION LINK

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ANSWER KEY In BOLD & ITALIC

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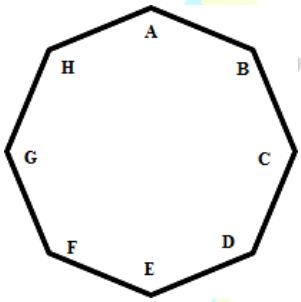

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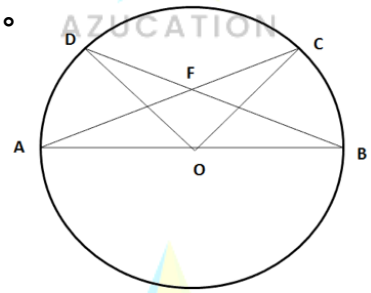

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Ans: 1

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