

Quantitative Aptitude Practice questions on Permutation and

Probability:

1. Sum of three Natural numbers a , b and c is 10. How many ordered triplets (a, b, c) exist?

A. 45

B. 36

C. 54

D. 28

2. Sum of three Whole numbers a , b and c is 10. How many ordered triplets (a, b, c) exist?

A. 66

B. 78

C. 72

D. 56

3. In how many ways 11 identical toys be placed in 3 distinct boxes such that no box is empty?

A. 72

B. 54

C. 45

D. 36

4. a , b , c are three distinct integers from 2 to 10 (both inclusive). Exactly one of ab , bc and ca is odd. abc is a multiple of 4. The arithmetic mean of a and b is an integer and so is the arithmetic mean of a , b and c . How many such triplets are possible (unordered triplets)?

- A. 8
- B. 6
- C. 2
- D. 4

5. A seven-digit number comprises of only 2's and 3's. How many of these are multiples of 12?

- A. 11
- B. 12
- C. 10
- D. 22

6. If all words with 2 distinct vowels and 3 distinct consonants were listed alphabetically, what would be the rank of "ACDEF"?

- A. 4716
- B. 4720
- C. 4718
- D. 1717

7. If we listed all numbers from 100 to 10,000, how many times would the digit 3 be printed?

- A. 3980 B. 3700 C. 3840 D. 3780

8. From the digits 2, 3, 4, 5, 6 and 7, how many 5-digit numbers can be formed that have distinct digits and are multiples of 12?

- A. 36
- B. 60

C. 84

D. 72

9. All numbers from 1 to 200 (in decimal system) are written in base 6 and base 7 systems. How many of the numbers will have a non-zero units digit in both base 6 and base 7 notations?

A. 143

B. 200

C. 157

D. 122

10. All numbers from 1 to 150 (in decimal system) are written in base 6 notation. How many of these will contain zero's?

A. 25

B. 20

C. 35

D. 45

11. How many numbers of up to 5 digits can be created using the digits 1, 2, 3 and 5 each at least once such that they are a multiple of 15?

A. 24

B. 18

C. 15

D. 12

12. How many odd numbers with distinct digits can be created using the digits 1, 2, 3, 4, 5 and 6?

- A. 975
- B. 960
- C. 978
- D. 986

13. All the rearrangements of the word "DEMAND" are written without including any word that has two D's appearing together. If these are arranged alphabetically, what would be the rank of "DEMAND"

- A. 36
- B. 74
- C. 42
- D. 86

14. A and B take part in a duel. A can strike with an accuracy of 0.6. B can strike with an accuracy of 0.8. A has the first shot, post which they strike alternately. What is the probability that A wins the duel?

- A. $\frac{7}{10}$
- B. $\frac{12}{23}$
- C. $\frac{2}{3}$
- D. $\frac{11}{17}$

15. Doctors have devised a test for leptospirosis that has the following property: For any person suffering from leptospirosis, there is a 90% chance of the test returning positive. For a person not suffering from leptospirosis, there is an 80% chance of the test returning negative. It is known that 10% of

people who go for testing have leptospirosis. If a person who gets tested gets a +ve result for leptospirosis (as in, the test result says they have got leptospirosis), what is the probability that they actually have leptospirosis?

A. $\frac{7}{10}$

B. $\frac{8}{11}$

C. $\frac{1}{3}$

D. $\frac{1}{2}$

16. In how many ways can letters of the word ATTITUDE be rearranged such that no two Ts are adjacent to each other?

A. 6720 B. 2400 C. 4320 D. 1800

17. $2a + 5b = 103$. How many pairs of positive integer values can a, b take such that $a > b$?

A. 7

B. 9

C. 14

D. 15

18. If all the rearrangements of the word AMAZON are considered, what is the probability that M will feature between the 2As?

A. $\frac{1}{3}$

B. $\frac{1}{6}$

C. $\frac{2}{5}$

D. $\frac{3}{8}$

19. N is a 3-digit number that is a multiple of 7; what is the probability that it will be a multiple of

5?

A. $\frac{1}{5}$

B. $\frac{11}{54}$

C. $\frac{13}{64}$

D. $\frac{13}{66}$

20. A boss decides to distribute Rs. 2000 between 2 employees. He knows X deserves more than Y, but does not know how much more. So he decides to arbitrarily break Rs. 2000 into two parts and give X the bigger part. What is the chance that X gets twice as much as Y or more?

A. $\frac{2}{5}$ B. $\frac{1}{2}$ C. $\frac{1}{3}$ D. $\frac{2}{3}$

Answer Key –

QA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ANS	B	A	C	D	A	C	A	B	A	D	D	C	B	B	C	B	A	A	C	D