MATHS

Permutations & Combinations Worksheet for MAH MCA CET 2025

For students preparing for MCA Entrance Exam.

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1. How many numbers greater than 40000 can be formed from the digits 2, 4, 5, 5, 7?
   - A. 12
   - B. 24
   - C. 36
   - D. 48

2. In a cricket championship there are 36 matches. The number of teams if each play one match with other are
   - A. 8
   - B. 9
   - C. 10
   - D. 36

3. How many different signals can be given using any number of flags from 4 flags of different colours?
   - A. 32
   - B. 48
   - C. 64
   - D. 120

4. Find the total number of 9 digit numbers which have all the digits different
   - A. $9 \times 9!$
   - B. $9!$
   - C. $10!$
   - D. None of these

5. Find the numerical value of $^{50}P_3$
   - A. 117600
   - B. 120000
   - C. 110000
   - D. 118000

6. Find the numerical value of $^6P_4 + {}^8P_2$
   - A. 500
   - B. 459
   - C. 416
   - D. 366

7. If $^nP_8 = 12 \cdot {}^nP_6$, then the value of n, is
   - A. 8
   - B. 9
   - C. 10
   - D. 11

8. If $^{2n}P_4 = 396 \times {}^nP_2$, then the values of n, is
   - A. 4
   - B. 5
   - C. 6
   - D. 7

9. A man has 3 jackets, 10 shirts and 5 pair of slacks. If an outfit consists of a jacket, a shirt, and a pair of slacks, the different outfits can the man make, is
   - A. 120
   - B. 150
   - C. 180
   - D. 210

10. There are 10 true-false questions in an examination. Then these questions can be answered in
    - A. 240 ways
    - B. 20 ways
    - C. 1024 ways
    - D. 100 ways

11. The number of quadratic expressions with the coefficients drawn from the set {0, 1, 2, 3} is
   A. 27
   B. 36
   C. 48
   D. 64

12. 5 Boys & 3 girls are sitting in a row of 8 seats. Number of ways in which they can be seated so that not all the girls sit side by side, is:
   A. 36000
   B. 9080
   C. 11600
   D. 3960

13. How many of the 900 three-digit numbers have at least one even digit?
   A. 775
   B. 875
   C. 450
   D. 750

14. Four dice are rolled. The number of possible out comes in which at least one die show 6 is
   A. 671
   B. 168
   C. 176
   D. 650

15. Number of 3-digit numbers that can be formed having unit digit as zero and repetition of digit is allowed, is
   A. 72

B. 81
C. 100
D. 90

16. How many numbers greater than 50000 can be formed with the digits 4, 5, 6, 7 and 8 if no digit being repeated?
   A. 96
   B. 256
   C. 218
   D. 126

17. If repetition of digits is not allowed how many numbers of four digits divisible by 5 can be formed with the digits 0, 4, 5, 6, 7
   A. 40
   B. 44
   C. 42
   D. 36

18. If

$$^{k+5}P_{k+1} = \frac{11(k-1)}{2} \cdot {}^{k+3}P_k$$

then k is equal to
   A. 6, 7
   B. 4, 5
   C. 7, 8
   D. 1, 2

Answer Key

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