Alright ✅
You want me to prepare a **big master question bank** (60+ problems) from

- **Permutations & Combinations**
- **Circular permutations**
- **No-two-together**
- **Grouping together**
- **Identical objects**
- **Word arrangements**
- **MCQ/Number problems**
- **Binary sequences**
- **Tournament & probability style**

I will mix all the types we discussed so you get **variety but same topic family**.
Here's the **question-only master list** for practice.

Master Question Bank – Permutations & Combinations (60+ Problems)

A. Word Arrangement Problems (Different Conditions)

1. How many distinct arrangements are possible for the word **EQUATIONS**?
2. EQUATIONS – All vowels together.
3. EQUATIONS – All consonants together.
4. EQUATIONS – All vowels & all consonants together.
5. EQUATIONS – No two vowels together.
6. EQUATIONS – No two consonants together.
7. EQUATIONS – Starts with a vowel.
8. EQUATIONS – Ends with a consonant.
9. EQUATIONS – Starts and ends with a vowel.
10. EQUATIONS – First letter E, last letter S.
11. EQUATIONS – First letter not a vowel.

12. EQUATIONS – All vowels in alphabetical order.
13. EQUATIONS – All consonants in reverse alphabetical order.
14. EQUATIONS – All vowels together & in alphabetical order.
15. EQUATIONS – All consonants together & in alphabetical order.

B. Word "MISSISSIPPI" Variations

16. How many distinct arrangements are possible for MISSISSIPPI?
17. MISSISSIPPI – All S together.
18. MISSISSIPPI – All S not together.
19. MISSISSIPPI – All vowels together.
20. MISSISSIPPI – All consonants together.
21. MISSISSIPPI – No two S together.
22. MISSISSIPPI – Starts with P.
23. MISSISSIPPI – Does not start with P.
24. MISSISSIPPI – All letters of same type (vowel/consonant) together.
25. MISSISSIPPI – All I together.

C. Boys & Girls in a Row

26. 5 boys, 4 girls – All boys together.
27. 5 boys, 4 girls – All girls together.
28. 5 boys, 4 girls – All boys & all girls together.
29. 5 boys, 4 girls – No two boys together.
30. 5 boys, 4 girls – No two girls together.
31. 5 boys, 4 girls – No two boys & no two girls together.
32. 4 boys, 4 girls – No two boys together.
33. 4 boys, 5 girls – No two boys together.
34. 4 boys, 4 girls – No two boys & no two girls together.
35. 6 boys, 4 girls – Two particular girls together.

36. 6 boys, 4 girls – Exactly two girls together.

D. Circular Permutations

37. Arrange 3 boys around a circular table.
38. Arrange 6 boys around a circular table if all boys are together.
39. Arrange 6 boys & 5 girls around a circular table if all girls are together.
40. Arrange 6 boys & 5 girls around a circular table if all boys & all girls are together.
41. Arrange 6 boys & 5 girls around a circular table if no two girls are together.
42. Arrange 6 boys & 5 girls around a circular table if no two boys are together.
43. Arrange 5 boys & 5 girls around a circular table if no two boys are together.
44. Arrange 6 boys & 4 girls around a circular table if G1 & G2 are always together.
45. Arrange 6 boys & 4 girls around a circular table if exactly two girls are together.
46. Arrange 8 distinct flowers around a circular table.
47. Arrange 4 identical red flowers, 3 identical blue flowers, 6 identical yellow flowers around a circular table.

E. Numbers & Digits

48. How many 4-digit numbers using digits 0–9 (repetition allowed)?
49. How many 4-digit even numbers (repetition allowed)?
50. How many 4-digit even numbers without repetition?
51. How many 4-digit odd numbers without repetition?
52. How many 5-digit numbers with exactly one digit 7?
53. How many 5-digit numbers with exactly two digits 7?
54. How many 5-digit numbers with at least one digit 7?
55. How many 6-digit numbers divisible by 5?
56. How many 6-digit numbers divisible by 25?
57. How many 6-digit numbers divisible by 125?

F. Binary Numbers

58. Binary numbers with m zeros & n ones – No two 1's together.
59. Binary numbers with m zeros & n ones – No two 0's together.
60. Binary numbers with 5 zeros & 5 ones – No two zeros & no two ones together.
61. Binary numbers of length 8 – No two 1's together.
62. Binary numbers of length 8 – No two 0's together.

G. Miscellaneous Arrangements

63. 10 different toys given to 4 children, one each.
64. 12 different gifts given to 5 children (one each).
65. Arrange 4 identical Math books, 3 identical English books, 2 identical Physics books in a row.
66. Arrange 5 identical red flags, 3 identical blue flags, 4 identical green flags in a row.
67. Arrange 6 identical pens & 4 identical pencils in a row.
68. Arrange 8 identical chairs & 2 identical tables in a row.

H. MCQ & Tournament Style

69. A 65-question MCQ (4 options each) – All attempted.
70. Same as above, but questions can be left blank.
71. 50 MCQ (4 options each) + 15 MSQ (4 options, any number correct) – All attempted.
72. Two teams play 10 matches – Each result: A win, B win, or tie.
73. Same as above, but first & last match not tie.
74. Same as above, but 1st match won by A, 4th match won by B.

If you want, I can now

1. **Give answers** for all 74 questions step-by-step,
2. Or make a **PDF question bank** with formulas + solutions.

Do you want me to go with **full solutions** or just **answers table** for quick checking?