Following short questions are selected from previous 5 years papers of different boards. Solve these at your own to perform well in annual exams.

1. Evaluate $\frac{9!}{6!3!}$.
2. Convert $n(n-1)(n-2)...(n-r+1)$ in factorial form.
3. Find the value of n when ${}^nP_2 = 30$.
4. Evaluate ${}^{20}P_3$.
5. Find the value of n when ${}^{11}P_n = 11 \times 10 \times 9$.
6. How many necklaces can be made from 6 beads of different colours?
7. How many signals can be given by 5 flags of different colours using 3 flags at a time?
8. How many triangles can be formed by joining the vertices of a 5 sided figure?
9. How many words can be formed from OBJECT using all letters.
10. How many arrangements of the letters of the word PAKPATTAN taken all at a time can be made?
11. In how many ways can 5 boys and 4 girls be seated on a bench so that the girls and the boys occupy alternate seats?
12. Define combination.
13. Prove that ${}^nC_r = {}^nC_{n-r}$.
14. Evaluate ${}^{10}C_7$.
15. Evaluate ${}^{20}C_{17}$.
16. Find the value of n when ${}^nC_{10} = \frac{12\times11}{2!}$
17. Find n when ${}^nC_6 = {}^nC_{12}$.
18. Find the values of n and r, when ${}^nC_r = 35$, ${}^nP_r = 210$.
19. Find the number of diagonals of a six sided figure.
20. Define probability and sample space.
21. A die is thrown twice. What is the probability that the sum of the number of dots shown is 3 or 5?

22. If $S = \{1, 2, 3, 4, 5\}$, find the probability of numbers multiple of 3.

23. Determine the probability of getting 2 heads in two successive tosses of a balanced coin.

24. A die is rolled. What is probability that dots on the top are greater than 4?

25. A die is rolled. Find the probability that top show dots less than 5.

26. A bag contains 40 balls out of which 5 are green, 15 are black and the remaining are yellow. A ball is taken out of the bag. Find the probability that the ball is yellow.

27. There are 5 green and 3 red balls in a box. Find the probability of one ball taken out is green.

28. A die is thrown twice. What is the probability that sum of numbers of dots shown is 3 or 11.

Best of Luck