Mathematics

Practice Test Paper 5

(Chapter 14: Probability)

Class X | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary steps and reasoning in Sections B, C and D.
4. Give probabilities in their simplest form. Use of calculators is not allowed.

SECTION A

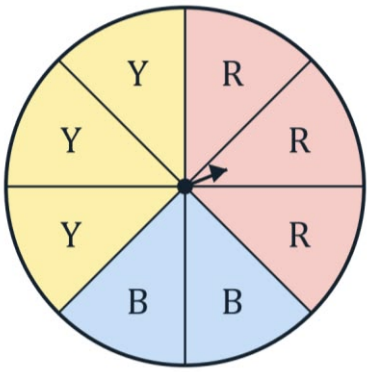
(5 questions × 1 mark = 5 marks)

1. If an event has no favourable outcomes in a finite experiment, what is its probability?

(A) $\frac{1}{2}$ (B) 0

(C) 1 (D) It must be negative

2. The spinner has eight equally likely sectors labelled R, B or Y. Find the probability that it does not stop on R.



(A) $\frac{3}{8}$ (B) $\frac{1}{3}$

(C) $\frac{2}{3}$ (D) $\frac{5}{8}$

3. A fair coin has probability 1/2 of heads on each toss. Which statement is correct?

(A) Every two tosses must give one head.

(B) Exactly five heads must occur in ten tosses.

(C) Head and tail are equally likely on a toss.

(D) Heads becomes certain after two tails.

4. A card is drawn from a standard well-shuffled deck. What is the probability that it is an ace or a face card?

(A) $\frac{4}{13}$ (B) $\frac{3}{13}$

(C) $\frac{1}{13}$ (D) $\frac{1}{4}$

5. A ball is selected at random from the collection in the table. Find the probability of white.

Colour	Red	Blue	White
Number of balls	6	9	5

(A) $\frac{3}{10}$ (B) $\frac{9}{20}$

(C) $\frac{3}{4}$ (D) $\frac{1}{4}$

SECTION B

(4 questions × 2 marks = 8 marks)

6. In a game with no draw, P(win) = x/5 and P(lose) = (x + 1)/5. Find x and P(win).

7. One prime number less than 20 is chosen at random. Find the probability that it is even.

8. One card is drawn from a standard deck. Find the probability that it is black and has a number from 2 to 10 inclusive.

9. A ticket numbered from 1 to 50 is selected at random. Find the probability that its number is divisible by 6 but not by 4.

SECTION C

(3 questions × 3 marks = 9 marks)

10. A fair coin and a fair die are used independently. Find the probabilities of (i) a tail and a prime number and (ii) a head and a number greater than 4.

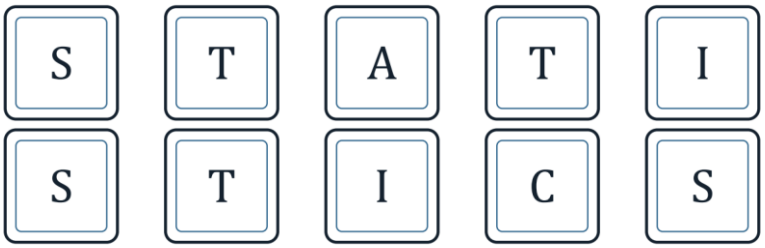
11. A batch contains 240 components. A component chosen at random is defective with probability 0.075. Find the numbers of defective and good components, and the probability of choosing a good one.

12. Two fair dice are rolled independently. Game A wins on a sum of 7; Game B wins on a sum of 10. Find both winning probabilities. Which game has the greater chance of winning, and by what factor?

SECTION D

(Application Based Question - 3 marks)

13. The ten letter tiles shown are mixed in a bag. One tile is drawn at random. Find the following probabilities.



(i) The tile shows T.

(ii) The tile shows a vowel (A, E, I, O or U).

(iii) The tile does not show S.