Definition of various terms

1. Two coins are tossed. Let A be the event that the first coin shows head and B be the event that the second coin shows a tail. Two events A and B are

(a) Mutually exclusive
(b) Dependent
(c) Independent and mutually exclusive
(d) None of these

2. If $P(A_1 \cup A_2) = 1 - P(A_1^c)P(A_2^c)$ where c stands for complement, then the events A_1 and A_2 are

(a) Mutually exclusive (b) Independent
(c) Equally likely (d) None of these

3. Two fair dice are tossed. Let A be the event that the first die shows an even number and B be the event that the second die shows an odd number. The two event A and B are

(a) Mutually exclusive
(b) Independent and mutually exclusive
(c) Dependent
(d) None of these

4. A card is drawn from a pack of 52 cards. If A = card is of diamond, B = card is an ace and $A \cap B$ = card is ace of diamond, then events A and B are

(a) Independent (b) Mutually exclusive
(c) Dependent (d) Equally likely

5. If A and B are two independent events, then A and $\overline{B}$ are

(a) Not independent (b) Also independent
(c) Mutually exclusive (d) None of these

6. Let A, B, C be three mutually independent events. Consider the two statements S_1 and S_2

$S_1 : A$ and $B \cup C$ are independent

$S_2 : A$ and $B \cap C$ are independent

Then

(a) Both S_1 and S_2 are true

(b) Only S_1 is true

(c) Only S_2 is true

(d) Neither S_1 nor S_2 is true

7. If $P(A) = 2/3$, $P(B) = 1/2$ and $P(A \cup B) = 5/6$ then events A and B are

(a) Mutually exclusive
(b) Independent as well as mutually exhaustive
(c) Independent
(d) Dependent only on A

Definition of probability

1. Two card are drawn successively with replacement from a pack of 52 cards. The probability of drawing two aces is

(a) $\frac{1}{169}$ (b) $\frac{1}{221}$

(c) $\frac{1}{2652}$ (d) $\frac{4}{663}$

2. In a single throw of two dice, the probability of getting more than 7 is

(a) $\frac{7}{36}$ (b) $\frac{7}{12}$

(c) $\frac{5}{12}$ (d) $\frac{5}{36}$

3. The probability of drawing a white ball from a bag containing 3 black balls and 4 white balls, is

(a) $\frac{4}{7}$ (b) $\frac{3}{7}$

(c) $\frac{1}{7}$ (d) None of these

4. *A* and *B* toss a coin alternatively, the first to show a head being the winner. If *A* starts the game, the chance of his winning is

(a) 5/8 (b) 1/2

(c) 1/3 (d) 2/3

5. If two balanced dice are tossed once, the probability of the event, that the sum of the integers coming on the upper sides of the two dice is 9, is

(a) $\frac{7}{18}$ (b) $\frac{5}{36}$

(c) $\frac{1}{9}$ (d) $\frac{1}{6}$

6. From a well shuffled pack of cards one card is drawn at random. The probability that the card drawn is an ace is

(a) $\frac{1}{13}$ (b) $\frac{4}{13}$

(c) $\frac{3}{52}$ (d) None of these

7. A single letter is selected at random from the word "PROBABILITY". The probability that the selected letter is a vowel is

(a) $\frac{2}{11}$ (b) $\frac{3}{11}$

(c) $\frac{4}{11}$ (d) 0

8. There are n letters and n addressed envelopes. The probability that all the letters are not kept in the right envelope, is

(a) $\frac{1}{n!}$ (b) $1-\frac{1}{n!}$

(c) $1-\frac{1}{n}$ (d) None of these

9. From a book containing 100 pages, one page is selected randomly. The probability that the sum of the digits of the page number of the selected page is 11, is

(a) $\frac{2}{25}$ (b) $\frac{9}{100}$

(c) $\frac{11}{100}$ (d) None of these

10. There are two childrens in a family. The probability that both of them are boys is

(a) $\frac{1}{2}$ (b) $\frac{1}{3}$

(c) $\frac{1}{4}$ (d) None of these

11. If a dice is thrown twice, then the probability of getting 1 in the first throw only is

(a) $\frac{1}{36}$ (b) $\frac{3}{36}$

(c) $\frac{5}{36}$ (d) $\frac{1}{6}$

12. Two cards are drawn one by one at random from a pack of 52 cards. The probability that both of them are king, is

(a) $\frac{2}{13}$ (b) $\frac{1}{169}$

(c) $\frac{1}{221}$ (d) $\frac{30}{221}$

13. A coin is tossed and a dice is rolled. The probability that the coin shows the head and the dice shows 6 is

(a) $\frac{1}{8}$ (b) $\frac{1}{12}$

(c) $\frac{1}{2}$ (d) 1

14. A coin is tossed twice. The probability of getting head both the times is

(a) $\frac{1}{2}$ (b) $\frac{1}{4}$

(c) $\frac{3}{4}$ (d) 1

15. From a pack of 52 cards two are drawn with replacement. The probability, that the first is a diamond and the second is a king, is

(a) $\frac{1}{26}$ (b) $\frac{17}{2704}$

(c) $\frac{1}{52}$ (d) None of these

16. Two dice are thrown simultaneously. The probability of getting the sum 2 or 8 or 12 is

(a) $\frac{5}{18}$ (b) $\frac{7}{36}$

(c) $\frac{7}{18}$ (d) $\frac{5}{36}$

17. A dice is thrown twice. The probability of getting 4, 5 or 6 in the first throw and 1, 2, 3 or 4 in the second throw is

(a) 1 (b) $\frac{1}{3}$

(c) $\frac{7}{36}$ (d) None of these

18. Two cards are drawn from a pack of 52 cards. What is the probability that at least one of the cards drawn is an ace

(a) $\frac{33}{221}$ (b) $\frac{188}{221}$

(c) $\frac{1}{26}$ (d) $\frac{21}{221}$

19. One card is drawn from each of two ordinary packs of 52 cards. The probability that at least one of them is an ace of heart, is

(a) $\frac{103}{2704}$ (b) $\frac{1}{2704}$

(c) $\frac{2}{52}$ (d) $\frac{2601}{2704}$

20. A box contains 6 nails and 10 nuts. Half of the nails and half of the nuts are rusted. If one item is chosen at random, what is the probability that it is rusted or is a nail

(a) $\frac{3}{16}$ (b) $\frac{5}{16}$

(c) $\frac{11}{16}$ (d) $\frac{14}{16}$

1	d	2	b	3	d	4	c	5	b
6	a	7	a						

Definition of probability

1	a	2	c	3	a	4	d	5	c
6	a	7	c	8	b	9	a	10	c
11	c	12	c	13	b	14	b	15	c
16	b	17	b	18	a	19	a	20	c