ANSWERS:3 D -2

1. (c)	2. (c)	3. (a)	4. (b)	5. (d)	6. (b)	7. (a)	8. (b)	9. (c)
10. (b)	11. (c)	12. (b)	13. (d)	14.(b)	15. (c)	16. (a)	17. (d)	18. (b)
19. (d)	20. (d)	21. (c)	22. (a)	23. (b)	24. (d)	25. (b)	26.(a)	27. (b)
28. (d)	29.(c)	30. (b)	31. (d)	32. (b)	33. (a)	34. (c)	35. (d)	

PROBABILITY

1. If A and B are mutually exclusive events such that P(A) = 0.4 P(B) = x and P(AUB) 0.5 then x=?

   (a) 0. 2 (b) 0. 1 (c) $\frac{4}{5}$ (d) none of these

2. If A and B are independent events such that P(A) = 0.6 P(B) = x and P(AUB) 0.8 then x=?

   (a) $\frac{4}{5}$ (b) 0. 5 (c) $\frac{1}{6}$ (d) none of these

3. If $P(A) = 0.8, P(B) = 0.5 and P(B/A) = 0.4, then P(A/B) = ?$

   (a) 0.32 (b) 0.64 (c) 0.16 (d) 0.25

4. If $P(A) = \frac{6}{11}, P(B) = \frac{5}{11} and P(A \cup B) = \frac{7}{11}, then P(A/B) = ?$

   (a) $\frac{5}{6}$ (b) $\frac{5}{7}$ (c) $\frac{6}{7}$ (d) $\frac{4}{5}$

5. If A and B are events such that $p(A) = \frac{1}{2}, p(B) = \frac{7}{12} and P(A' \cup B') = \frac{1}{4}$, then A and B are

   (a) independent (b) mutually exclusive (c) both 'a' and 'b' (d) none of these

6. It is given that the probability that A can solve a given problem is $\frac{3}{5}$ and the probability that B can solve the same problem is $\frac{2}{3}$. The probability that at least one of A and B can solve a problem is

(a) $\frac{2}{5}$ (b) $\frac{1}{15}$ (c) $\frac{13}{15}$ (d) $\frac{2}{15}$

7. The probabilities of A, B and C of solving a problem are $\frac{1}{6}, \frac{1}{5} and \frac{1}{3}$ respectively.

What is the probability that the problem is solved?

(a) $\frac{4}{9}$ (b) $\frac{5}{9}$ (c) $\frac{1}{3}$ (d) none of these

8. A can hit a target 4 times in 5 shots, B can hit 3 times in 4 shots, and C can hit 2 times in 3 shots. The probability that B and C hit and A does not hit is

(a) $\frac{1}{10}$ (b) $\frac{2}{5}$ (c) $\frac{7}{12}$ (d) none of these

9. A machine operates only when all of its three components function. The probabilities of the failures of the first, second and third component are 0.2, 0.3 and 0.5 respectively. What is the probability that the machine will fail?

(a) 0.70 (b) 0.72 (c) 0.07 (d) none of these

10. A die is rolled. If the outcome is an odd number, what is the probability that it is prime?

(a) $\frac{2}{3}$ (b) $\frac{3}{4}$ (c) $\frac{5}{12}$ (d) none of these

11. If A and B are events such that $P(A) = 0.3, P(B) = 0.2 and P(A \cap B = 0.1, then$

P(AUB)=?

(a) 0.2 (b) 0.1 (c) 0.4 (d) 0.5

12. If $P(A) = \frac{1}{4}, p(B) = \frac{1}{3} and P(A \cap B) = \frac{1}{5}, then P(\overline{B} / \overline{A}) = ?$

(a) $\frac{11}{15}$ (b) $\frac{11}{45}$ (c) $\frac{23}{60}$ (d) $\frac{37}{45}$

13. If A and B are events such that P(A)=0.4, P(B)=0.8 and P(B/A)=0.6,then P(A/B)=?

(a) 0.2 (b) 0.3 (c) 0.4 (d) 0.5

14. If A and B are independent events, then $P(\overline{A} / \overline{B}) = ?$

(a) $1-P(A)$ (b) $1-P(B)$ (c) $1-P(A/\overline{B})$ (d) $-P(\overline{A}/B)$

15. If A and B are two events such that $P(A\cup B)=\frac{5}{6}, p(A\cap B)=\frac{1}{3} and P(\overline{B})=\frac{1}{2},$

Then the events A and B are

(a) independent (b) dependent (c) mutually exclusive (d) none of these

16. A die is thrown twice and the sum of the numbers appearing is observed to be 7.

What is the conditional probability that the number 2 has appeared at least once?

(a) $\frac{1}{6}$ (b) $\frac{1}{3}$ (c) $\frac{2}{7}$ (d) $\frac{3}{5}$

17. Two numbers are selected at random from integers 1 through 9. If the sum is even, what is the probability that both numbers are odd?

(a) $\frac{1}{6}$ (b) $\frac{2}{3}$ (c) $\frac{4}{9}$ (d) $\frac{5}{8}$

18. In a class, 60% of the students read mathematics, 25% biology and 15% both

Mathematics and biology. One student is selected at random. What is the

Probability that he reads mathematics, If it is known th(b)at he reads biology?

(a) $\frac{2}{5}$ (b) $\frac{3}{5}$ (c) $\frac{3}{8}$ (d) $\frac{5}{8}$

19. A couple has 2 children. What is the probability that both are boys, if it is

Known that one of them is a boy?

(a) $\frac{1}{3}$ (b) $\frac{2}{3}$ (c) $\frac{3}{4}$ (d) $\frac{1}{4}$

20. An unbiased die is tossed twice. What is the probability of getting a 4, 5 or 6 on the first Toss and a 1, 2, 3 or 4 on the second toss?

(a) $\frac{1}{3}$ (b) $\frac{2}{3}$ (c) $\frac{3}{4}$ (d) $\frac{5}{6}$

21. Two dice are rolled then n(S) equals

(a) 6 (b) 12 (c) 24 (d) 36

22. A coin and a die are used, then the cardinal number of S

(a) 6 (b) 12 (c) 24 (d) 36

23. Five coins are tossed then n(S) equals

(a) 32 (b) 12 (c) 24 (d) 36

24. The probability of drawing two spade cards from a pack of 52 cards

(a) $\frac{^{13}C_2}{^{52}C_2}$ (b) $\frac{^{12}C_2}{^{52}C_2}$ (c) $\frac{^{26}C_2}{^{52}C_2}$ (d) None of these

25. Let $x_1, x_2, \ldots, x_n$ be n random variables with $p_1, p_2, \ldots, p_n$ corresponding probabilities then $\sum p_i$ equals

(a) 2 (b) 1 (c) 0 (d) 3

26. Let $x_1, x_2, \ldots, x_n$ be n random variables with $p_1, p_2, \ldots, p_n$ corresponding probabilities then $\sum x_i p_i$ is

(a) Mode (b) Median (c) Mean (d) Varience

27. Let $x_1, x_2, \ldots, x_n$ be n random variables with $p_1, p_2, \ldots, p_n$ corresponding probabilities then E(X) is

(a) Mode (b) Median (c) Mean (d) Varience

ANSWERS: PROBABILITY

1. (b)	2. (c)	3. (b)	4. (d)	5. (d)	6. (c)	7. (b)	8. (a)	9. (b)
10. (a)	11.(b)	12. (d)	13. (b)	14. (a)	15. (a)	16. (b)	17. (d)	18. (b)
19. (a)	20. (a)	21(d)	22(b)	23(a)	24(a)	25(c)	26(c)	27(c)