

- If  $A$  and  $B$  are two mutually exclusive events, what is  $P(AB)$ ?  
 (A) 0 (B)  $P(A) + P(B)$   
 (C)  $P(A)P(B)$  (D)  $P(A) + P(B/A)$
- A coin is tossed 4 times, The probability that at least one head turns up, is  
 (A)  $\frac{1}{16}$  (B)  $\frac{2}{16}$   
 (C)  $\frac{14}{16}$  (D)  $\frac{15}{16}$
- The mean and variance of a binomial distribution are 6 and 4, respectively. The parameter  $n$  is  
 (A) 18 (B) 12  
 (C) 10 (D) 9
- A pair of dice thrown, if 5 appears on at least one of the dice, then the probability that the sum is 10 or greater, is  
 (A)  $\frac{11}{36}$  (B)  $\frac{2}{9}$   
 (C)  $\frac{3}{11}$  (D)  $\frac{1}{12}$
- Five coins whose faces are marked 2, 3 are tossed. The chance of obtaining a total of 12 is  
 (A)  $\frac{1}{32}$  (B)  $\frac{1}{16}$   
 (C)  $\frac{3}{16}$  (D)  $\frac{5}{16}$
- A husband and wife appear in an interview for two vacancies in the same post. The probability of husband's selection is  $\frac{1}{5}$  and that of wife's selection is  $\frac{1}{3}$ . What is the probability that only one of them will be selected?  
 (A)  $\frac{1}{5}$  (B)  $\frac{2}{5}$   
 (C)  $\frac{3}{5}$  (D)  $\frac{4}{5}$
- Two letters are drawn at random from the word 'HOME'. What is the probability that both the letters are vowels?  
 (A)  $\frac{1}{6}$  (B)  $\frac{5}{6}$   
 (C)  $\frac{1}{2}$  (D)  $\frac{1}{3}$
- The probability of solving a problem by three students is  $\frac{1}{2}$ ,  $\frac{1}{3}$  and  $\frac{1}{4}$  respectively. The probability that the problem is not to be solved, is equal to  
 (A)  $\frac{1}{3}$  (B)  $\frac{1}{2}$   
 (C)  $\frac{1}{4}$  (D)  $\frac{3}{4}$
- If  $A$  and  $B$  are two events such that  $P(A \cup B) = \frac{3}{4}$ ,  $P(A \cap B) = \frac{1}{4}$  and  $P(\bar{A}) = \frac{2}{3}$ , then  $P(B)$  is equal to  
 (A)  $\frac{1}{3}$  (B)  $\frac{2}{3}$   
 (C)  $\frac{1}{9}$  (D)  $\frac{2}{9}$

10. A box contains 6 distinct dolls, From the box, 3 dolls are randomly selected one by one with replacement. What is the probability of selecting 3 distinct dolls?
- (A)  $\frac{5}{54}$  (B)  $\frac{12}{25}$   
 (C)  $\frac{1}{20}$  (D)  $\frac{5}{9}$
11. If  $A$  and  $B$  are events such that  $P(A \cup B) = 0.5$ ,  $P(\bar{B}) = 0.8$  and  $P\left(\frac{A}{B}\right) = 0.4$  what is  $P(A \cap B)$  equal to?
- (A) 0.08 (B) 0.02  
 (C) 0.8 (D) 0.2
12. The probability that the same number appear on throwing three dice simultaneously is
- (A)  $\frac{1}{6}$  (B)  $\frac{1}{36}$   
 (C)  $\frac{5}{36}$  (D) None of these
13. Three dice are thrown. What is the probability that the same number will appear on each of them?
- (A)  $\frac{1}{6}$  (B)  $\frac{1}{18}$   
 (C)  $\frac{1}{24}$  (D)  $\frac{1}{36}$
14. In a binomial distribution the probability of getting a success is  $\frac{1}{4}$  and standard deviation is 3, then its means is respectively
- (A) 6 (B) 8  
 (C) 12 (D) 10
15. A bag contains 5 black balls, 4 white balls and 3 red balls. If a ball is selected random wise the probability that it is a black or red ball, is
- (A)  $\frac{1}{3}$  (B)  $\frac{1}{4}$   
 (C)  $\frac{5}{12}$  (D)  $\frac{2}{3}$
16. What is the probability of having 53 Sundays or 53 Mondays in a leap year ?
- (A)  $\frac{2}{7}$  (B)  $\frac{3}{7}$   
 (C)  $\frac{4}{7}$  (D)  $\frac{5}{7}$
17. What is the probability that a leap year selected at random contains 53 Mondays?
- (A)  $\frac{1}{7}$  (B)  $\frac{2}{7}$   
 (C)  $\frac{7}{366}$  (D)  $\frac{26}{183}$
18. In tossing a coin twice, let  $E$  and  $F$  denote occurrence of head on first toss and second toss, respectively. Then,  $P(E \cup F)$  is equal to
- (A)  $\frac{1}{4}$  (B)  $\frac{1}{2}$   
 (C)  $\frac{3}{4}$  (D)  $\frac{1}{3}$
19. The probability of having a king and a queen, when the two cards are drawn at random from a pack of 52 cards is
- (A)  $\frac{16}{663}$  (B)  $\frac{6}{663}$   
 (C)  $\frac{4}{663}$  (D)  $\frac{2}{663}$
20. In tossing three coins at a time, what is the probability of getting atleast one head?
- (A)  $\frac{3}{8}$  (B)  $\frac{7}{8}$   
 (C)  $\frac{1}{2}$  (D)  $\frac{1}{8}$
21. Two balls are selected from a box containing 2 blue and 7 red balls, respectively. What is the probability that atleast one ball is blue?
- (A)  $\frac{2}{9}$  (B)  $\frac{7}{9}$   
 (C)  $\frac{5}{12}$  (D)  $\frac{7}{12}$

22. A bag contains 3 black and 4 red balls, respectively. Two balls are drawn at random one at a time without replacement. The probability that the first ball drawn is black, if the second ball is known to be red, is
- (A)  $\frac{1}{2}$                       (B)  $\frac{1}{4}$   
 (C)  $\frac{1}{6}$                       (D)  $\frac{1}{8}$
23. If four dice are thrown together, then what is the probability that the sum of the numbers appearing on them is 25?
- (A) 0                      (B)  $\frac{1}{2}$   
 (C) 1                      (D)  $\frac{1}{1296}$
24. The probability of guessing a correct answer is  $\frac{x}{12}$ . If the probability of not guessing the correct answer is  $\frac{2}{3}$ , then  $x$  is equal to
- (A) 2                      (B) 3  
 (C) 4                      (D) 6
25. Given that,  $P(A) = \frac{1}{3}$ ,  $P(B) = \frac{3}{4}$  and  $P(A \cup B) = \frac{11}{12}$ , what is the value of  $P\left(\frac{B}{A}\right)$ ?
- (A)  $\frac{1}{6}$                       (B)  $\frac{4}{9}$   
 (C)  $\frac{1}{2}$                       (D)  $\frac{1}{3}$
26. A bag contains 5 white and 3 black balls and 4 balls are successively drawn out and not replaced. The probability that they are alternately of different colours, is
- (A)  $\frac{1}{196}$                       (B)  $\frac{1}{7}$   
 (C)  $\frac{13}{56}$                       (D)  $\frac{3}{7}$