1.	If $P(A) = \frac{2}{5}, P(B) = \frac{1}{3}, then\ find\ P(\bar{A} \cap \bar{B})$, given A and B are independent events.							
	A	1	B	0	C	$\frac{2}{5}$	D	$\frac{2}{15}$
2.	Find the probability of getting at least one odd number in a throw of three dice together.							
	A	$\frac{1}{8}$	B	$\frac{7}{8}$	C	$\frac{1}{2}$	D	$\frac{3}{8}$
3.	How many times must a man toss a fair coin, so that the probability of having at least one head is more than 80%?							
	A	5	B	4	C	3	D	2
4.	A bag contains 4 white, 3 red and 5 black balls. If four balls are drawn one by one without replacement, find the probability of getting all white balls.							
	A	$\frac{1}{12}$	B	$\frac{1}{60}$	C	$\frac{1}{15}$	D	$\frac{1}{495}$
5.	A family has two children and the elder child is a girl. The probability that both children are girls:							
	A	$\frac{1}{2}$	B	$\frac{1}{4}$	C	$\frac{2}{3}$	D	$\frac{1}{6}$
6.	$P\left(\frac{A}{B}\right) = 0.3, P(B) = 0.8, P(A) = 0.4, then\ P\left(\frac{B}{A}\right):$							
	A	0.06	B	0.6	C	0.3	D	0.4
7.	A bag contains cards numbered 1 to 25. Two cards are drawn at random, one after the other, without replacement. Then the probability that the number on each card is a multiple of 7:							
	A	$\frac{1}{2}$	B	$\frac{6}{625}$	C	$\frac{1}{100}$	D	$\frac{9}{625}$
8.	Ten cards numbered 1 to 10 are placed in a box, mixed up thoroughly and then one card is drawn randomly. If it is known that the number on the drawn card is more than 3, the probability that it is an even number is :							
	A	$\frac{4}{10}$	B	$\frac{7}{10}$	C	$\frac{4}{7}$		$\frac{1}{2}$

9.	A die is thrown three times. Events A and B are defined as below:							
	A : 4 on the third throw and B : 6 on the first and 5 on the second throw. P(A /B) is equal to:							
	A	$\dfrac{1}{36}$	B	$\dfrac{1}{216}$	C	$\dfrac{1}{2}$	D	$\dfrac{1}{6}$

10.	A die is thrown. If E is the event 'the number appearing is a multiple of		
	3' and F be the event 'the number appearing is even' then which of the following is correct?		
	A	E and F are independent	B	E and F are mutually exclusive
	C	E and F are mutually exhaustive	D	Probability of E given that F has occured = 1

11.	A can hit a target 4 times in 5 shots, B 3 times in 4 shots and C 2 times in 3 shots. Calculate the probability that (i) A, B, C all may hit (ii) none of them will hit the target. Ans: $(i)\frac{2}{5},(ii)\frac{1}{60}$

12.	A and B throw a pair of dice alternatively. A wins the game if he gets 7 and B wins the game if he gets a total of 10. If A starts the game, find the probability that B wins. Ans: $\frac{5}{17}$

13.	A bag contains (2n+1) coins. It is known that n of these have a head on both sides whereas the rest of the coins are fair. A coin is picked from the bag and tossed. If the probability that the toss results in a head is $\frac{31}{42}$, then determine the value of n. Ans: 10

14.	In a factory which manufactures bolts, machines A, B and C manufacture respectively 30%, 50% and 20% of the bolts. Of their outputs 3, 4, 1 percent respectively are defective bolts. A bolt is drawn from the product and is found to be defective. Find the probability that this is **not** manufactured by machine B Ans: $1-\frac{20}{31}=\frac{11}{31}$

15.	A bag contains 4 balls. Two balls are drawn at random (without replacement) and are found to be white. What is the probability that all balls in the bag are white? Ans: $\frac{3}{5}$

16.	Given three identical boxes, I, II and III each containing two coins. In box I, both coins are gold coins, in box II, both are silver coins and in box III, there is one gold and one silver coin. A person chooses a box at random and takes out a coin. If the coin is of gold, what is the probability that the other coin in the box is also of gold? Ans: $\frac{2}{3}$

17.	Bag I contains 3 red and 4 black balls and Bag II contains 4 red and 5 black balls. One ball is transferred from Bag I to Bag II and then a ball is drawn from Bag II at random. The ball so drawn is found to be red in colour. Find the probability that the transferred ball is black. Ans: $\frac{1}{3}$

18.	It is known that 20% of the students in a school have above 90% attendance and 80% of the students are irregular. Past year results show that 80% of students who have above 90% attendance and 20% of irregular students get 'A' grade in their annual examination. At the end of a year, a student is chosen at random from the school and is found to have an 'A' grade. What is the probability that the student is irregular ? Ans: $\frac{1}{2}$

19.	Case study Question: A biased die is tossed and respective probabilities for various faces to turn up are the following:

Face	1	2	3	4	5	6
Probability	0.1	0.24	0.19	0.18	0.15	K

Based on the above information, answer the following questions:

(a) What is the value of K?

(b) If a face showing an even number has turned up, then what is the probability that it is the face with 2 or 4?

Ans: (a) k =0.14 , (b) 3/4

20.	Case study Question:

Two persons are competing for a position on the Managing Committee of an organisation. The probabilities that the first and the second person will be appointed are 0·5 and 0·6 respectively. Also, if the first person gets appointed, then the probability of introducing waste treatment plant is 0·7 and the corresponding probability is 0·4, if the second person gets appointed.

Based on the above information, answer the following questions :

(i) What is the probability that the waste treatment plant is introduced ?

(ii) After the selection, if the waste treatment plant is introduced, what is the probability that the first person had introduced it ?

Ans: (i) P(waste treatment plant is introduced)= 0.59   (ii) $P(E_1/A) = 35/59$

Answers(MCQ)

1	C	2	B	3	C	4	D	5	A
6	B	7	C	8	C	9	D	10	A

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