PROBABILITY

Small minds discuss persons. Average minds discuss events. Great minds discuss ideas.
Really great minds discuss Mathematics.

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INDIRA AWARD WINNER

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☆ Multiple Choice Questions, with **only** one correct option.

Q01. If E is an event, then the value of $P(E)+P(\bar{E})$ is:
(a) 0 (b) 1 (c) 2 (d) None of these

Q02. If P(E) is 38% for an event E, then the probability of failure of this event is:
(a) 12% (b) 62% (c) 100% (d) 0

Q03. In a survey, it is found that every fifth person possess a vehicle. The probability of a person 'not possessing the vehicle' is:
(a) $\frac{1}{5}$ (b) $\frac{4}{5}$ (c) $\frac{3}{5}$ (d) 1

Q04. Which of the following can't be the probability of an event?
(a) $\frac{2}{3}$ (b) $-\frac{1}{5}$ (c) 15 % (d) 0.7

Q05. If 'p' is the probability of an impossible event then, p = _____?
(a) $\frac{2}{3}$ (b) 0.1 (c) 1 (d) 0

Q06. The probability of a sure event is:
(a) 0 (b) 1 (c) 2 (d) None of these

Q07. What is the probability that an ordinary year has 53 Sundays?
(a) $\frac{6}{13}$ (b) $\frac{1}{7}$ (c) $\frac{2}{7}$ (d) $\frac{3}{8}$

Q08. A bag contains 9 red, 7 white and 4 black balls. A ball is drawn randomly. The probability that the 'ball drawn is not red' is:
(a) $\frac{9}{20}$ (b) $\frac{9}{11}$ (c) $\frac{2}{11}$ (d) $\frac{11}{20}$

Q09. If a die is thrown, and the probability of getting a number less than 5 is given by p then, which of the following is true for p?
(a) 1 (b) 0 (c) $0<p<1$ (d) $p>1$

Q10. If red face cards are removed from the deck of 52 playing cards, then the probability of getting a black jack is:
(a) $\frac{2}{46}$ (b) $\frac{2}{52}$ (c) $\frac{4}{48}$ (d) $\frac{2}{23}$

Q11. If there are 5 prizes and 20 are blanks, then the probability of winning a prize is:

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

Q12. In a bag, there are 100 bulbs out of which 30 are bad ones. A bulb is taken out of the bag at random. The probability of the selected bulb to be good is:
(a) 0.50 (b) 0.70 (c) 0.30 (d) None of these

Q13. A coin is tossed 1000 times and 560 times a 'head' occurs. The empirical probability of occurrence of a Head in this case is:
(a) 0.50 (b) 0.56 (c) 0.44 (d) 0.056

Q14. Two coins are tossed 200 times and the following outcomes are recorded:

HH	HT or TH	TT
56	110	34

The empirical probability of occurrence of at least one Head in the above case is:
(a) 0.33 (b) 0.34 (c) 0.66 (d) 0.83

Q15. On a particular day, the number of vehicles passing a crossing is given here:

Vehicle	Two wheeler	Three wheeler	Four wheeler
Frequency	52	71	77

What is the probability of a two wheeler passing the crossing on that day?
(a) 0.26 (b) 0.71 (c) 0.385 (d) 0.615

Q16. In a bag there are 100 balls, which include normal and good quality balls. There are 40 good quality balls in the bag. A ball is taken out of the bag at random. The probability of the selected ball to be of good quality is:
(a) 0.50 (b) 0.70 (c) 0.60 (d) 0.40

Q17. A coin is tossed 1000 times and 560 times a 'tail' occurs. The empirical probability of occurrence of a Head in this case is:
(a) 0.50 (b) 0.56 (c) 0.44 (d) 0.056

Q18. A coin is tossed two times. What is the probability of getting exactly two heads?
(a) 0.50 (b) 0.75 (c) 0.60 (d) 0.25

Q19. In a simultaneous throw of two coins, the probability of getting at least one head is:
(a) $\frac{1}{4}$ (b) $\frac{2}{4}$ (c) $\frac{3}{4}$ (d) 1

Q20. What is the probability that a number selected from 1, 2, 3, 4, 5,…, 16 is a prime number?
(a) $\frac{1}{16}$ (b) $\frac{10}{16}$ (c) $\frac{6}{16}$ (d) $\frac{7}{16}$

Q21. A card is drawn at random from a pack of 52 cards. The probability that the card drawn is a face card is:
(a) $\frac{6}{13}$ (b) $\frac{1}{2}$ (c) $\frac{3}{13}$ (d) $\frac{39}{52}$

Q22. In a simultaneous throw of two dice, what is the probability of getting doublet?
(a) $\frac{1}{6}$ (b) $\frac{1}{4}$ (c) $\frac{3}{4}$ (d) $\frac{2}{3}$

Q23. A die is thrown once. Then the chance of getting a number which is less than 3 and greater than 2 is:
(a) 0 (b) 1 (c) $\frac{1}{6}$ (d) $\frac{5}{6}$

Q24. A card is drawn at random from a pack of 52 cards. What is the probability that the card drawn is a spade or a king?

(a) $\frac{9}{13}$ (b) $\frac{4}{13}$ (c) $\frac{2}{13}$ (d) $\frac{1}{13}$

Q25. A bag contains 6 black balls and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?

(a) $\frac{4}{7}$ (b) $\frac{3}{4}$ (c) $\frac{4}{3}$ (d) $\frac{1}{8}$

Q26. In a game, a number is chosen at random from the set {1, 2, 3, …, 28, 29, 30}. What is the probability that the number chosen is a product of exactly two different prime numbers?

(a) $\frac{1}{6}$ (b) $\frac{7}{30}$ (c) $\frac{4}{15}$ (d) $\frac{1}{5}$

Q27. In a cricket match probability of winning of India against Pakistan is 0.79. Then probability of loosing the match will be:

(a) 0.23 (b) 0.21 (c) 0.14 (d) 0.36

Q28. A number is chosen randomly among the first 100 natural numbers. Then the probability that the number chosen is multiple of 7, will be:

(a) $\frac{7}{50}$ (b) $\frac{7}{15}$ (c) $\frac{7}{29}$ (d) $\frac{3}{13}$

Q29. A bag contains 10 red balls and some white balls. If the probability of drawing a white ball is double that of a red ball, then number of white balls in the bag will be:

(a) 10 (b) 15 (c) 20 (d) 25

Q30. The king, queen and jack of hearts are removed from a deck of 52 playing cards and then well shuffled. One card is selected from the remaining cards. Then the probability of getting a king is:

(a) $\frac{1}{49}$ (b) $\frac{2}{49}$ (c) $\frac{3}{49}$ (d) 1

Q31. Paper cards numbered 1, 2, 3, …., 16, 17 are put in a box and mixed thoroughly. One person draws a card from the box. Then the probability that the odd number on the card is:

(a) $\frac{8}{17}$ (b) $\frac{9}{17}$ (c) $\frac{6}{17}$ (d) $\frac{5}{17}$

Q32. A die is thrown twice. Then the probability that 5 will come up at least once is:

(a) $\frac{11}{36}$ (b) $\frac{7}{36}$ (c) $\frac{5}{36}$ (d) $\frac{25}{36}$

Q33. In a single throw of two dice, the probability of getting a doublet of odd numbers is:

(a) $\frac{11}{12}$ (b) $\frac{1}{12}$ (c) $\frac{5}{12}$ (d) $\frac{1}{2}$

Q34. If three coins are tossed simultaneously, then the probability of getting at least two heads, is:

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

Q35. If $P(E) = 0.05$, then $P(\text{not } E) =$

(a) 0.095 (b) 0.5 (c) 0.9 (d) 0.95

ANSWERS KEY

Q01. b	Q02. b	Q03. b	Q04. b	Q05. d	Q06. b	Q07. b
Q08. d	Q09. c	Q10. a	Q11. a	Q12. b	Q13. b	Q14. d
Q15. a	Q16. d	Q17. c	Q18. d	Q19. c	Q20. c	Q21. c
Q22. a	Q23. a	Q24. b	Q25. a	Q26. b	Q27. b	Q28. a
Q29. c	Q30. c	Q31. b	Q32. a	Q33. b	Q34. c	Q35. d

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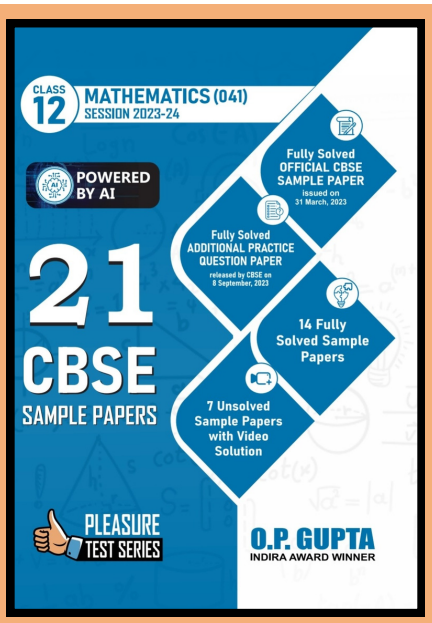

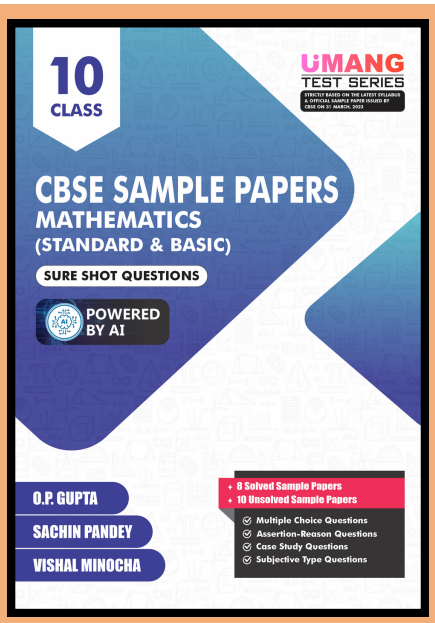

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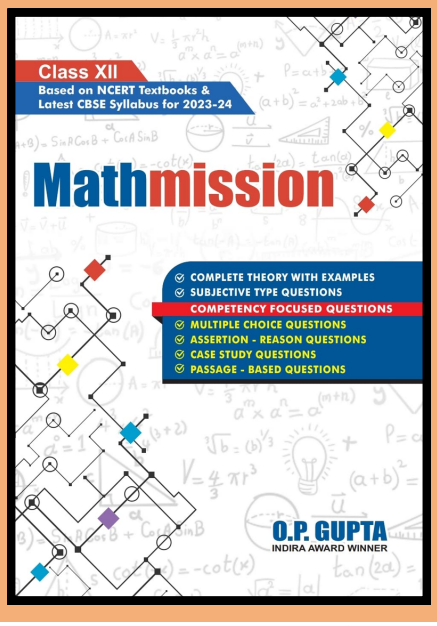

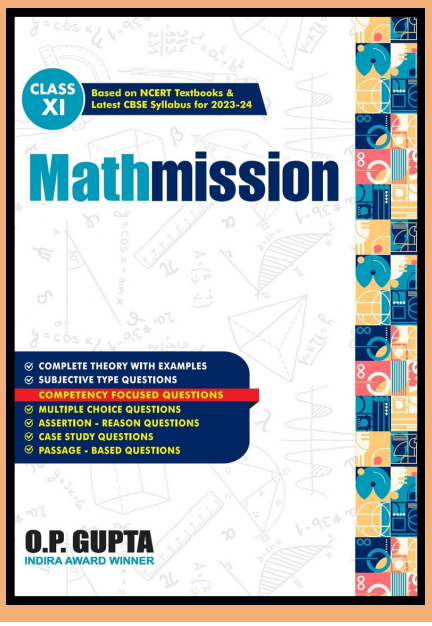

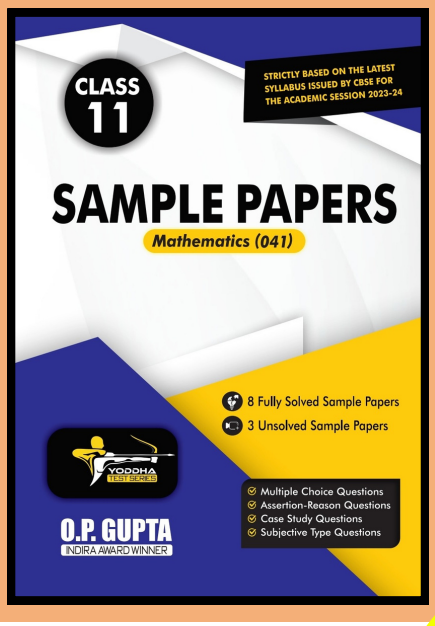

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