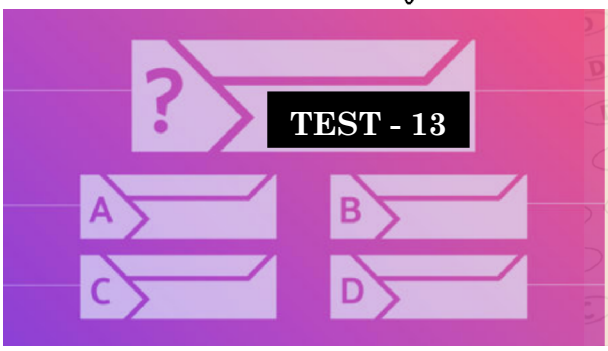
For Video Solutions
CLICK HERE



By O.P. GUPTA

MULTIPLE CHOICE TYPE QUESTIONS

For CBSE 2026 Exams - Mathematics (041) - Class 12

Topics : Probability **Max. Marks : 20**

☑ ***Select the correct option in the followings. Each question carries 1 mark.***

Q01. If A and B are independent events and $P(A \cup B) = \frac{3}{8}$, then $P(A').P(B')$ is

(a) $\frac{5}{8}$ (b) $\frac{3}{8}$ (c) $\frac{1}{8}$ (d) $\frac{7}{8}$

Q02. If $P(A) = \frac{3}{8}$, $P(B) = \frac{1}{2}$, $P(A \cap B) = \frac{1}{4}$, then $P(\overline{A} \mid \overline{B})$ is

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

Q03. Two planes X and Y bomb a target in succession. Their probabilities to hit correctly are 0.3 and 0.2 respectively. The second plane will bomb only if first misses the target. The probability that the target is hit by Y plane, is

(a) $\frac{8}{20}$ (b) $\frac{8}{25}$ (c) $\frac{1}{25}$ (d) $\frac{7}{22}$

Q04. If A and B are two events such that $P(A) = 0.2$, $P(B) = 0.4$ and $P(A \cup B) = 0.5$, then value of $P(A \mid B)$ is

(a) 0.1 (b) 0.25 (c) 0.5 (d) 0.08

Q05. An urn contains 6 balls of which two are red and four are black. Two balls are drawn at random. Probability that they are of the different colours is

(a) $\frac{2}{5}$ (b) $\frac{1}{15}$ (c) $\frac{8}{15}$ (d) $\frac{4}{15}$

Q06. A card is picked at random from a pack of 52 playing cards. Given that the picked card is a queen, the probability of this card to be a card of spade is

(a) $\frac{1}{3}$ (b) $\frac{4}{13}$ (c) $\frac{1}{4}$ (d) $\frac{1}{2}$

Q07. A die is thrown once. Let A be the event that the number obtained is greater than 3. Let B be the event that the number obtained is less than 5. Then, $P(A \cup B)$ is

(a) $\frac{2}{5}$ (b) $\frac{3}{5}$ (c) 0 (d) 1

Q08. A number is chosen randomly from numbers 1 to 60. The probability that the chosen number is a multiple of 2 or 5, is

(a) $\frac{2}{5}$ (b) $\frac{3}{5}$ (c) $\frac{7}{10}$ (d) $\frac{9}{10}$

Q09. From the set {1, 2, 3, 4, 5}, two numbers a and b ($a \neq b$) are chosen at random. The probability that $\frac{a}{b}$ is an integer is

mopgupta (+91-9650350480)

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

Q10. A bag contains 3 white, 4 black and 2 red balls. If 2 balls are drawn at random (without replacement), then the probability that both the balls are white is

(a) $\frac{1}{18}$ (b) $\frac{1}{36}$ (c) $\frac{1}{12}$ (d) $\frac{1}{24}$

Q11. Three dice are thrown simultaneously. The probability of obtaining a total score of 5 is

(a) $\frac{5}{216}$ (b) $\frac{1}{6}$ (c) $\frac{1}{36}$ (d) $\frac{1}{49}$

Q12. A bag contains 3 black, 4 red and 2 green balls. If three balls are drawn simultaneously at random, then the probability that the balls are of different colours is

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

Q13. An unbiased coin is tossed 4 times. Then the probability of getting at least one head, is

(a) $\frac{1}{16}$ (b) $\frac{15}{16}$ (c) $\frac{3}{16}$ (d) $\frac{13}{16}$

Q14. A problem is given to three students whose probabilities of solving it are $\frac{1}{3}, \frac{1}{4}$ and $\frac{1}{6}$ respectively. If the events of solving the problem are independent, then the probability that at least one of them solves it, is given by

(a) $\frac{5}{12}$ (b) $\frac{1}{12}$ (c) $\frac{7}{12}$ (d) $\frac{11}{12}$

Q15. If A and B are two independent events with $P(A) = \frac{1}{3}$ and $P(B) = \frac{1}{4}$, then $P(B' \mid A)$ is equal to

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

Q16. Two cards are drawn at random and one-by-one without replacement from a well-shuffled pack of 52 playing cards. Then the probability that one card is red and the other is black, is

(a) $\frac{25}{51}$ (b) $\frac{32}{51}$ (c) $\frac{19}{51}$ (d) $\frac{26}{51}$

Q17. The probability of solving a specific question independently by A and B are $\frac{1}{3}$ and $\frac{1}{5}$ respectively. If both try to solve the question independently, the probability that the question is solved, is

(a) $\frac{7}{15}$ (b) $\frac{8}{15}$ (c) $\frac{2}{15}$ (d) $\frac{14}{15}$

Q18. From a pack of 52 cards, 3 cards are drawn at random (without replacement). The probability that they are two red cards and one black card, is

(a) $\frac{21}{34}$ (b) $\frac{13}{34}$ (c) $\frac{1}{34}$ (d) $\frac{33}{34}$

*Question numbers **19** and **20** are Assertion and Reason based questions. Two statements are given, one labelled **Assertion (A)** and the other labelled **Reason (R)**. Select the correct answer from the codes (a), (b), (c) and (d) as given below.*

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(b) Both Assertion (A) and Reason (R) are true and Reason (R) is **not** the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

*Q19. **Assertion (A) :** A random variable X has the probability distribution as given below.

X	0	1	2	3	4
P(X)	0	K	4K	3K	2K

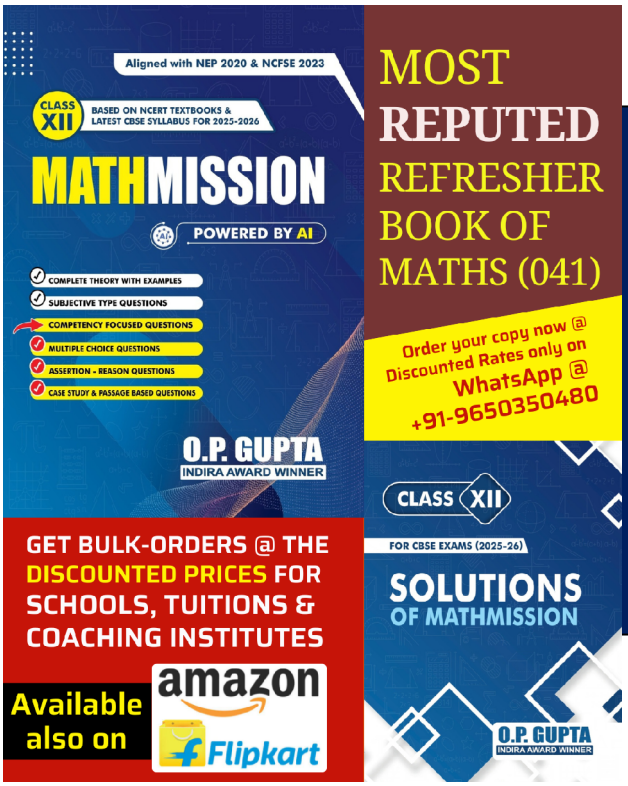
Then $10K = 1$.

Reason (R) : For a probability distribution of random variable X, we have $\sum P(X) = 1$.

Q20. **Assertion (A) :** Let A and B are two independent events. If $P(A) = 0.2$, $P(B) = 0.1$, then $P(A \cap B) = 0.02$.

Reason (R) : For independent events A and B, we always have $P(A \cup B) = P(A) \times P(B)$.

Check LAST PAGE FOR THE QR-CODES to View the DETAILED SOLUTIONS of this Test.
SHARE THIS FILE with all other math scholars.
You may Add our mobile no. +919650350480 to your WhatsApp Groups for regular updates.
MS Word files of MCQ Tests / Subjective Tests / Case-Study Questions are available for SALE.



We have released Set of 2 Books for CBSE XII Maths (041) useful for session 2025-26.

1. MATHMISSION FOR XII
- ☑ COMPLETE THEORY & EXAMPLES
- ☑ SUBJECTIVE TYPE QUESTIONS
- ☑ COMPETENCY FOCUSED QUESTIONS
  - ✪ Multiple Choice Questions
  - ✪ Assertion-Reason Questions
  - ✪ Case-Study / Passage Based Questions
- ☑ H.O.T.S. Questions from recent exams.
- ☑ Answers of all the Questions of Exercises

2. SOLUTIONS OF MATHMISSION
- ☑ Step-by-step Detailed Solutions
  (For all the Exercises of MATHMISSION)

This document contains MCQs for Mathematics (041) of class XII.
✪ **Answers / Solutions** is available on YouTube channel - MATHEMATICIA By O.P. GUPTA
◈ You can **share this document** with other Students / Teachers.

With a lot of Blessings!

O.P. GUPTA
Author & Math Mentor
Indira Award Winner
The O.P. Gupta Advanced Math Classes
@ **Think Academy**, Near Dhansa Bus Stand
Metro Station Gate No.3, Najafgarh, Delhi
Telegram / WhatsApp : +919650350480
YouTube.com/@theopgupta

Exclusive coaching for Maths (041)
By O.P. GUPTA
- ☑ CBSE XII
- ☑ CBSE XI
- ☑ CUET
- ☑ JEE - MAIN
- ☑ NDA

*Q19 has been deleted for 2025-26 Exams.

MATHEMATICS

(Multiple Choice Questions)

Class 12 - CBSE (2025-26)

Scan QR-Codes for more MCQs & Video Solutions

(Alternatively, you can TOUCH THE QR-CODES)

Matrices

Determinants

Relations & Functions

Inverse Trig. Functions

Continuity & Diff.

Application of Derivatives

Indefinite Integrals

Definite Integrals

Application of Integrals

Differential Equations

Vector Algebra

3 D Geometry

Linear Programming

Probability

SCAN **QR-CODE** TO DOWNLOAD MORE **FREE PDF RESOURCES**

ⓘ SHARE THIS FILE with all other math scholars.

ⓘ You may Add our mobile no. +919650350480 to your WhatsApp Groups for regular updates.

ⓘ MS Word files of MCQ Tests / Subjective Tests / Case-Study Questions are available for SALE.

To buy MS Word files, please connect on WhatsApp @ +919650350480 via Message only.

ⓘ PDF Files are FREE for all the Students / Teachers.

theopgupta.com

MATHEMATICIA BY O.P. GUPTA

...a name you can bank upon!

Feel Safe to **Share this Document** with other math scholars

CLICK NOW

TO Download

or, just type - theopgupta.com

FREE PDF TESTS AND ASSIGNMENTS OF THE CLASSES XII, XI & X

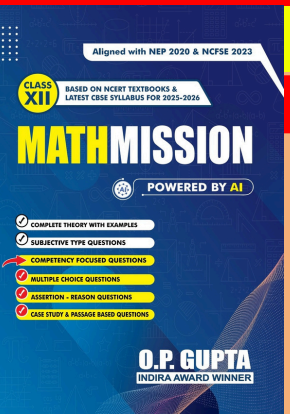
To get FREE PDF Materials, join WhatsApp Teachers Group by Clicking on the Logo

Click on the Book cover to buy!

If you are a **Student**, then you may join our **Students Group**

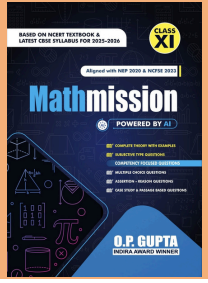
CLICK HERE FOR CLASSES IX & X

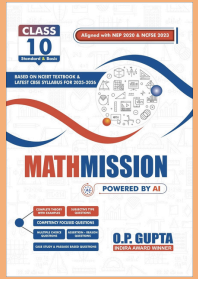
CLICK HERE FOR CLASSES XI & XII



You can add our WhatsApp no. +919650350480 to your Groups also

Many **Direct Questions from our Books** have been asked in the recent CBSE Exams





MATHMISSION FOR XII, XI & X

2025-26 Edition

/theopgupta /theopgupta /theopgupta /@theopgupta

Buy our books on amazon Flipkart

For Bulk Orders of our Books at Discounted Price, contact on +91-9650350480