PREVIOUS YEAR PAPER

UPPSC LT Grade 2025 Prelims — General Studies and Mathematics (KEZE-03)

UPPSC LT Grade Teacher

77 of the paper's 150 questions · +2 for a correct answer, −0.67 for a wrong one · 120 minutes

Left out of the original paper: 73 (any question that needs a figure, a symbol or formatting we cannot show, or whose text did not read back cleanly from the booklet).

The official booklet is a scan with no text; ExamBharo typed this paper from it by hand. Report a typing slip through exambharo.com/contact/.

Questions from the Uttar Pradesh Public Service Commission's paper. Each question is followed by its answer, and the answer key is repeated on the last page.

Take it as a timed practice test: exambharo.com/uppsc-lt-grade/previous-year-papers/uppsc-lt-grade-2025-prelims-mathematics/

General Studies

1. In the Gross Domestic Product (GDP) of India, the largest share in the current years has come from:

(a) Large-scale industries
(b) Service sector
(c) Small and cottage industries
(d) Agricultural sector

Answer: (b)

2. The frequency of ultrasonic waves is:

(a) More than 50,000 Hz
(b) More than 20,000 Hz
(c) 20 Hz to 20,000 Hz
(d) Less than 20 Hz

Answer: (b)

3. Match List I with List II and select the correct answer using the codes given below the lists:
List-I (Tribe) - List-II (Location)
A. Maasai - i. Kalahari Desert
B. Semai - ii. New Zealand
C. Bushmen - iii. Malaysia
D. Maori - iv. East Africa

(a) A-i, B-iv, C-iii, D-ii
(b) A-i, B-ii, C-iv, D-iii
(c) A-iv, B-ii, C-i, D-iii
(d) A-iv, B-iii, C-i, D-ii

Answer: (d)

4. The famous "Dudhsagar Falls" is situated on which river?
   (a) Mandovi river
   (b) Bhadra river
   (c) Sharavati river
   (d) Ulhas river
   Answer: (a)

5. Which crop is known as the "Camel of Crops"?
   (a) Sorghum
   (b) Bajra
   (c) Ragi
   (d) Kodo
   Answer: (a)

6. Biodiversity Hotspots are defined on which of the following basis?
   (a) Vegetation
   (b) All organisms
   (c) Crop diversity
   (d) Animals
   Answer: (a)

7. Match List I with List II and select the correct answe sing the codes given below the lists:
List-I (Name of Scheme) - List-II (Main Objective)
A. MAA - i. Benefits under PMMVY
B. LaQshya - ii. Promotion of breast feedin
C. SUMAN - iii. Improvement in labour room a. ernity OT
D. MCP Card - iv. Free healthcare to pregnant women and newborn child
   (a) A-ii, B-iii, C-iv, D-i
   (b) A-iv, B-iii, C-i, D-ii
   (c) A-ii, B-iv, C-iii, D-i
   (d) A-iv, B-i, C-iii, D-ii
   Answer: (a)

8. When was "Sarva Shiksha Abhiyan" launched in India?
   (a) 2007
   (b) 2001
   (c) 2014
   (d) 2020
   Answer: (b)

9. Which one of the following writs can be issued by High Court to secure the liberty of an individual?

(a) Quo warranto
(b) Mandamus
(c) Habeas Corpus
(d) Prohibition

Answer: (c)

10. Among the crops listed below, which one is not a coarse cereal crop (Millets)?

(a) Wheat
(b) Maize
(c) Jowar
(d) Bajra

Answer: (a)

11. Which country abolished its Two-Child policy in June 2025?

(a) Japan
(b) India
(c) Australia
(d) Vietnam

Answer: (d)

12. Match List I with List II and select the correct ans using the codes given below the lists:
List-I (Article) - List-II (Subject)
A. Article 51A - i. Abolition of titles
B. Article 14 - ii. Fundamental duties
C. Article 17 - iii. Abolition of untouchability
D. Article 18 - iv. Equality before law

(a) A-ii, B-iv, C-iii, D-i
(b) A-i, B-ii, C-iii, D-iv
(c) A-ii, B-iii, C-iv, D-i
(d) A-ii, B-iv, C-i, D-iii

Answer: (a)

13. The Durand Cup is associated with which sport?

(a) Cricket
(b) Basketball
(c) Football
(d) Hockey

Answer: (c)

14. Which building was built in Fatehpur Sikri by Emperor Akbar?

(a) Moti Mahal

(b) Heera Mahal

(c) Panch Mahal

(d) Rang Mahal

Answer: (c)

15. During a bill seeking the promotion and regulation of online gaming, it was disclosed by the Government that people lose close to ₹ 20,000 crore every year. When was the bill introduced in the Lok Sabha?

(a) August 30, 2025

(b) August 20, 2025

(c) July 17, 2025

(d) September 2, 2025

Answer: (b)

16. Match List I with List II and select the correct answer using the codes given below the lists:
List-I (Revolution) - List-II (Production)
A. White - i. Oil seeds
B. Blue - ii. Food grains
C. Yellow - iii. Milk
D. Green - iv. Fish

(a) A-ii, B-iv, C-iii, D-i

(b) A-i, B-iii, C-iv, D-ii

(c) A-iii, B-ii, C-i, D-iv

(d) A-iii, B-iv, C-i, D-ii

Answer: (d)

17. Which one of the following weeds is commonly called "Gajar Ghas" or "Congress grass"?

(a) Parthenium

(b) Bathua

(c) Gokharoo (Xanthium)

(d) Junglee Jowar

Answer: (a)

18. Which political leader forcefully raised the issue of reservation for Backward Castes in Bihar for the first time?

(a) Sharad Yadav

(b) Lalu Prasad Yadav

(c) Karpoori Thakur

(d) Mulayam Singh Yadav

Answer: (c)

19. Which leader was against the idea of strengthening (Autonomy) local government bodies?

(a) B.R. Ambedkar

(b) Vinoba Bhave

(c) Mahatma Gandhi

(d) M.A. Ayyangar

Answer: (a)

20. Match List I with List II and select the correct answer using the codes given below the lists:
List-I (Buddhist Councils) - List-II (Places)
A. First - i. Pataliputra
B. Second - ii. Vaishali
C. Third - iii. Rajgrih
D. Fourth - iv. Kashmir

(a) A-iv, B-iii, C-ii, D-i

(b) A-ii, B-iii, C-iv, D-i

(c) A-iii, B-ii, C-i, D-iv

(d) A-ii, B-i, C-iii, D-iv

Answer: (c)

21. The hump of the camel is made up of:

(a) Cartilage

(b) Lymph

(c) Fat tissue

(d) Collagen fibres

Answer: (c)

22. Who used the term "Biodiversity" for the first time?

(a) R.H. Whittaker

(b) R.D. Barnes

(c) Walter G. Rosen

(d) N. Myers

Answer: (c)

23. The number of diagonals in a hexagon is:

(a) 9

(b) 18

(c) 15

(d) 12

Answer: (a)

24. If 20% of a number is 50, then what is that number?

(a) 300
(b) 150
(c) 250
(d) 350

Answer: (c)

25. When did the All India Congress Committee meet in Bombay, where the famous "Quit India" resolution was passed?

(a) 9th August, 1942
(b) 7th August, 1942
(c) 8th August, 1942
(d) 6th August, 1942

Answer: (c)

26. If the LCM of two numbers is 2079 and their HCF is 27 and if one of the numbers is 189, then find the other number.

(a) 297
(b) 792
(c) 279
(d) 927

Answer: (a)

27. Which of these metals reacts with water at norm emperature?

(a) Sodium
(b) Mercury
(c) Aluminium
(d) Magnesium

Answer: (a)

28. The 2024 Lok Sabha elections in India were conducted in how many phases?

(a) 6
(b) 7
(c) 9
(d) 5

Answer: (b)

29. Consider the following Acts and arrange them in the correct chronological order:
I. Charter Act
II. Pitt's India Act
III. The Indian Councils Act
IV. The Regulating Act
Select the correct answer from the codes given below:

(a) IV, I, II, III

(b) IV, III, II, I

(c) IV, II, I, III

(d) I, II, III, IV

Answer: (c)

30. Which one of the following states receives floods in the winter months?

(a) Gujarat

(b) Tamil Nadu

(c) Madhya Pradesh

(d) Maharashtra

Answer: (b)

Mathematics

31. The sum of coefficients of the polynomial (1 + x - ? ^\¹5 is:

(a) -1

(b) 0

(c) 1

(d) None of the above

Answer: (a)

40. The solution of differential equation (1 + x) y dx + (1 - y) x dy = 0 is:

(a) $xy = Ce^{-x+y}$

(b) $x - y = Ce^{x+y}$

(c) $xy = Ce^{x-y}$

(d) $(x + y) = Ce^{x-y}$

Answer: (a)

41. If f(x) is an even function and f'(0) exists, then the value of f'(0) will be:

(a) 0

(b) -1

(c) 1

(d) 2

Answer: (a)

49. A box contains 4 white and 3 black balls. A man picks up 2 balls at random. What is the probability of both balls being of the same colour?

(a) 5/7
(b) 1/7
(c) 2/7
(d) 3/7

Answer: (d)

50. The eccentricity of the ellipse $4x^2 + y^2 - 8x + 2y + 1 = 0$; is:

(a) $2/\sqrt{3}$
(b) $\sqrt{3}/2$
(c) $\sqrt{2}/3$
(d) $\sqrt{3}/4$

Answer: (b)

55. The angle between the diagonal and an edge of a cube is:

(a) $\cos^{-1}(1/\sqrt{3})$
(b) $\pi/3$
(c) $\pi/4$
(d) $\sin^{-1}(1/\sqrt{3})$

Answer: (a)

57. If $f(z) = |z|$, then for $z \neq 0$, $f(z)$ is:

(a) nowhere differentiable
(b) analytic
(c) differentiable
(d) None of the above

Answer: (a)

60. If ω is the complex cube root of unity, then $\omega^{10} + \omega^{17} + 1$ is equal to:

(a) $1 + \omega$
(b) $\omega + \omega^2$
(c) -1
(d) 0

Answer: (d)

61. Consider the following statements with reference to conics:
I. $5x^2 - 6xy + 5y^2 + 10x - 6y + 10 = 0$ represents an ellipse.
II. The centre of the conic $5x^2 - 6xy + 5y^2 - 4x - 4y + 5 = 0$ is (1, 2).
Which of the above statements is/are correct?

(a) Only II
(b) Neither I nor II
(c) Only I
(d) Both I and II

Answer: (c)

64. If the equation $x^2 - y^2 + z^2 - 4x + 2y + 6z + \lambda = 0$ represents a cone, then the value of λ is:

(a) 12

(b) 10

(c) 8

(d) 14

Answer: (a)

65. Given below are two statements, one is labelled as Assertion (A) and the other as Reason (R). Select the correct answer using the options given below:
Assertion (A): The order of a finite group is divisible by the order of its subgroup.
Reason (R): Every finite group contains an element of every order that divides the order of the group.

(a) (A) is true, but (R) is false.

(b) Both (A) and (R) are true and (R) is the correct explanation of (A).

(c) (A) is false, but (R) is true.

(d) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

Answer: (a)

66. The order of the element -i of the multiplicative group G = {1, -1, i, -i} is:

(a) 2

(b) 1

(c) 4

(d) 3

Answer: (c)

69. Which term of the progression 5, $\sqrt{5}$, 1,... is ?

(a) 10th

(b) 12th

(c) 11th

(d) 9th

Answer: (c)

70. A problem of mathematics in given to three students A, B and C, whose probability of solving it is 1/2, 3/4 and 1/4 respectively. The probability that the problem will be solved is:

(a) 3/32

(b) 3/8

(c) 1/2

(d) 29/32

Answer: (d)

71. Consider the following statements with reference to eigenvalues of a matrix:
I. Eigenvalues of a Hermitian matrix are all real.
II. If λ is an eigenvalue of an orthogonal matrix A, then λ^{-1} is also an eigenvalue of A.
Which of the above statements is/are correct?

(a) Only I
(b) Neither I nor II
(c) Only II
(d) Both I and II

Answer: (d)

75. The value of m so that the function $2x - x^2 + my^2$ is harmonic is:

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

Answer: (a)

77. Given below are two statements, one is labelled as Assertion (A) and the other as Reason (R). Select the correct answer using the options given below:
Assertion (A): The sum of all coefficients in the binomial expansion of $(x^2 + x - 3)^{19}$ is -1.
Reason (R): The sum of coefficients in the expansion of $(x + y)^n$ is 2^n.

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

Answer: (d)

83. Which of the following statements is/are correct?
I. Every square matrix can be uniquely expressed as P + i Q where P and Q are Hermitian.
II. If A and B are square matrices of same order, then adj(AB) = adj(B). adj(A).
Select the correct answer using the code given below:

(a) Only II
(b) Both I and II
(c) Only I
(d) Neither I nor II

Answer: (b)

86. Equation of the sphere passing through the four points (4, -1, 2), (0, -2, 3), (1, -5, -1) and (2, 0, 1) is:

(a) $x^2 + 2y^2 + z^2 - 4x + 6y - 2z + 5 = 0$
(b) $x^2 + y^2 + z^2 - 4x + 6y - 2z + 5 = 0$
(c) $x^2 + y^2 + 2z^2 - 4x + 6y - 2z + 5 = 0$
(d) $2x^2 + y^2 + z^2 - 4x + 6y - 2z + 5 = 0$

Answer: (b)

88. Match List I with List II and choose the correct answer using the codes given below the lists:
List-I - List-II
A. $3x^2 + 4y^2 - 18x - 24y + 47 = 0$ - i. Ellipse
B. $(4x + 3y)^2 - 256x - 142y + 849 = 0$ - ii. Circle
C. $9x^2 - 16y^2 - 72x + 96y - 144 = 0$ - iii. Hyperbola
D. $2x^2 + 2y^2 + 6x + 4y - 5 = 0$ - iv. Parabola

(a) A-i, B-ii, C-iv, D-iii

(b) A-i, B-iv, C-iii, D-ii

(c) A-i, B-iv, C-ii, D-iii

(d) None of the above

Answer: (b)

90. Match List I and List II and choose the correct answer using the codes given below the lists:
List-I - List-II
A. The mean of cubes of first 10 natural numbers is - i. 10.67
B. The mean of first 100 natural numbers is - ii. 18
C. The median of 25, 36, 18, 17, 17, 29, 16 is - iii. 50.5
D. If the mode of distribution is 20, mean is 6, then median is - iv. 302.5

(a) A-iv, B-iii, C-i, D-ii

(b) A-iii, B-ii, C-i, D-iv

(c) A-iii, B-i, C-ii, D-iv

(d) A-iv, B-iii, C-ii, D-i

Answer: (d)

91. If a set A has 3 elements, then the total number eflexive relations is:

(a) 4

(b) 128

(c) 16

(d) 64

Answer: (d)

92. The points of discontinuity of the greatest integer function defined by $f(x) = [x]$, where $[x]$ denotes the greatest integer less than or equal to x are:

(a) Only positive integral points

(b) All real numbers

(c) Only negative integral points

(d) Every integral number

Answer: (d)

94. Equation of cylinder with axis as z-axis and passing through curve, $x^2 + y^2 = 2z$, $x + y + z = 1$ is:

(a) $x^2 + y^2 - 2x - 2y = 2$

(b) $x^2 - y^2 - 2x + 2y = 2$

(c) $x^2 + y^2 + 2x + 2y = 2$

(d) None of the above

Answer: (c)

95. Consider the following two statements for the cone $x^2 + y^2 - z^2 = 0$:
I. The cone has three mutually perpendicular tangent planes.
II. The cone is self-reciprocal.
Which of the above statements is/are correct?

(a) Only I

(b) Both I and II

(c) Neither I nor II

(d) Only II

Answer: (d)

98. There are 6 red, 4 white and 5 black balls in a bag. 3 balls are drawn successively without replacement. The probability of balls being red, white and black in that order is:

(a) 4/91

(b) 5/91

(c) 5/88

(d) None of the above

Answer: (a)

100. The sum of the infinite series $2/1! + 4/3! + 6/5! + 8/7! + \ldots$ is

(a) e + 1

(b) e

(c) 1/e

(d) e - 1

Answer: (b)

105. The equation of a sphere for which the c... $+ y^2 + z^2 + 7y - 2z + 2 = 0$, $2x + 3y + 4z = 8$ is a great circle, will be:

(a) $x^2 + y^2 + z^2 + 4x - 2y - 6z - 10 = 0$

(b) $x^2 + y^2 + z^2 - 2x + 4y - 6z + 10 = 0$

(c) $x^2 + y^2 + z^2 + 2x - 4y + 6z + 8 = 0$

(d) $x^2 + y^2 + z^2 + 2x + 4y + 6z - 10 = 0$

Answer: (b)

106. The whole area surounded by the curve with the equations $x = a\cos^3 t$, $y = b\sin^3 t$ is:

(a) $3/4\ \pi ab$

(b) $3/8\ \pi ab$

(c) $3/32\ \pi a^2 b$

(d) $3/16\ ab$

Answer: (b)

107. For the statistical data, Mode is related to Median and Mean by the relation

(a) 3 Median - 2 Mean = Mode

(b) 2 Median - 3 Mean = Mode

(c) 3 Median + 2 Mean = Mode

(d) None of the above

Answer: (a)

108. The intercept form of plane is:

(a) x/a - y/b - z/c = 1

(b) ax + by + cz = 1

(c) x/a + y/b + z/c = 1

(d) None of the above

Answer: (c)

110. The locus of a point z satisfying Re (1/z) = λ (λ is non-zero real number) is:

(a) Hyperbola

(b) Ellipse

(c) Straight line

(d) Circle

Answer: (d)

112. An example of a function of a complex variable w n is not continuous everywhere is given by:

(a) exp z

(b) log z

(c) sin z

(d) None of the above

Answer: (b)

115. The differential equation $yx' = y - 1$, $y(0) = 1$ has:

(a) Infinitely many solutions

(b) Finitely many solutions

(c) No solution

(d) Unique solution

Answer: (d)

116. If the line $y - 1 = m(x - 1)$ cuts the circle $x^2 + y^2 = 4$ at two real points, then the number of possible values of m will be:

(a) Infinite

(b) 2

(c) 1

(d) None of the above

Answer: (a)

120. Consider the following two statements for two subgroups H1 and H2 of a group G:
I. $H1 \cap H2$ is not necessarily a subgroup of G.
II. $H1 \cup H2$ is not necessarily a subgroup of G.
Select the correct statement using the code given below:

(a) Both Statements I and II are incorrect.

(b) Both Statements I and II are correct.

(c) Statement II is correct, but Statement I is incorrect.

(d) Statement I is correct, but Statement II is incorrect.

Answer: (c)

121. For what value of 'a', the angle between the normals to the planes $ax - y + z = 5$ and $x + y + 2z = 7$ is $\pi/3$?

(a) 1

(b) 2

(c) 0

(d) -1

Answer: (b)

126. For this question, two statements are given, one labelled as Assertion (A) and the other as Reason (R). Choose the correct answer from the options given below:
Assertion (A): If f(x) is an odd function, then f'(x) is an even function.
Reason (R): If f'(x) is an even function, then f(x) is an odd function.

(a) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(b) Both (A) and (R) are true and (R) is the correct explanation of (A).

(c) (A) is true, but (R) is false.

(d) (A) is false, but (R) is true.

Answer: (c)

127. A coin is tossed twice. The probability of getting head both the times is:

(a) 1/2

(b) 1/4

(c) 1

(d) 3/4

Answer: (b)

128. If a function $f: [2, +\infty) \to A$ defined by $f(x) = x^2 - 4x + 5$ is one-one and onto, then the set A is:

(a) $(-\infty, 1)$

(b) $(0, \infty)$

(c) $(0, 1)$

(d) $[1, +\infty)$

Answer: (d)

130. Match List I with List II and select the correct answer using the codes given below the lists:
List I - List II
A. Right-circular cone - i. $lx + my + nz = p$
B. Plane - ii. $2x + 3y = 0 = z - 3$
C. Straight line - iii. $x^2 + y^2 = z^2 \tan^2 \alpha$
D. Circle - iv. $x^2 + z^2 = 9, y = 4$

(a) A-iv, B-i, C-ii, D-iii

(b) A-iii, B-i, C-ii, D-iv

(c) A-i, B-iii, C-ii, D-iv

(d) A-i, B-ii, C-iv, D-iii

Answer: (b)

136. From a pack of well-shuffled cards, three cards are drawn one-by-one without replacement. The probability of first card being ace, second, king and third, queen is:

(a) 1/2197

(b) 7/16575

(c) 8/16575

(d) None of the above

Answer: (c)

139. The angle between the straight lines represented by the equation $y^2 - xy - 6x^2 = 0$ is:

(a) 45°

(b) 60°

(c) 30°

(d) None of the above

Answer: (a)

142. The sum up to infinity of the series $1/7 + 2/7^2 + 1/7^3 + 2/74 + \ldots + \infty$ is:

(a) 1/5

(b) 1/16

(c) 1/24

(d) 3/16

Answer: (d)

143. The lines $x = ay + b$, $z = cy + d$ and $x = \alpha y + \beta$, $z = \gamma y + \delta$ are perpendicular, if:

(a) $a\alpha + b\beta + c\gamma + 1 = 0$

(b) $b\beta + c\gamma + 1 = 0$

(c) $a\alpha + b\beta + 1 = 0$

(d) $a\alpha + c\gamma + 1 = 0$

Answer: (d)

148. Which of the following is a group?

(a) $(Z, \star)$, where $a \star b = ab \ \forall \ a, b \in Z$

(b) $(R-, \star)$, where $a \star b = a - b \ \forall \ a, b \in R-$

(c) $(R+, \star)$, where $a \star b = ab \ \forall \ a, b \in R+$

(d) $(Z, \star)$, where $a \star b = a - b \ \forall \ a, b \in Z$

Answer: (c)

150. For the curve $y^2 = (x - a)(x - b)(x - c)$, where $a > 0, b > 0, c > 0$, the incorrect statement is:

(a) The curve is not passing through the origin.

(b) The curve cuts the y-axis.

(c) The curve cuts the axis of x at points (a, 0), (b, 0), (c, 0).

(d) The curve is symmetric about x-axis.

Answer: (b)

Answer key

Answer key from the Uttar Pradesh Public Service Commission's official answer key for this sitting. "—" means the key gave none.

General Studies

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

Mathematics

31	**(a)**	40	**(a)**	41	**(a)**	49	**(d)**	50	**(b)**	55	**(a)**	57	**(a)**	60	**(d)**
61	**(c)**	64	**(a)**	65	**(a)**	66	**(c)**	69	**(c)**	70	**(d)**	71	**(d)**	75	**(a)**
77	**(d)**	83	**(b)**	86	**(b)**	88	**(b)**	90	**(d)**	91	**(d)**	92	**(d)**	94	**(c)**
95	**(d)**	98	**(a)**	100	**(b)**	105	**(b)**	106	**(b)**	107	**(a)**	108	**(c)**	110	**(d)**
112	**(b)**	115	**(d)**	116	**(a)**	120	**(c)**	121	**(b)**	126	**(c)**	127	**(b)**	128	**(d)**
130	**(b)**	136	**(c)**	139	**(a)**	142	**(d)**	143	**(d)**	148	**(c)**	150	**(b)**		