PREVIOUS YEAR PAPER

DSSSB PGT Maths (Female) 2021 — 10 July 2021, Shift 1

DSSSB PGT · 10 July 2021 · Shift 1

117 of the paper's 300 questions · +1 for a correct answer, −0.25 for a wrong one · 180 minutes

Left out of the original paper: 183 (any question that needs a figure, a symbol or formatting we cannot show, or whose text did not read back cleanly from the booklet).

Questions from the Delhi Subordinate Services Selection Board's paper of 10 July 2021, Shift 1. 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/dsssb-pgt/previous-year-papers/dsssb-pgt-2021-maths-female-10-jul-shift-1/

Mental Ability

1. From the given responses, find the missing term in the series.
A1Z , C3Y , E7X , G15W , ?

(a) I31V
(b) A29G
(c) O31V
(d) B29U

Answer: (a)

2. From the given responses, find the missing letter c' er in the series.
ZXVU, VTRQ, ?, NLJI, JHFE

(a) RPNM
(b) KLMN
(c) KLMO
(d) RSNP

Answer: (a)

3. Choose the option that is to unrelated (or odd one out amongst) the given set of words.

(a) Curd
(b) Butter
(c) Paneer
(d) Oil

Answer: (d)

4. Select the option in which the words share the same relationship as that shared by the given pair of words.
Hospital : Treatment

(a) College : Job
(b) Office : Work
(c) Court : lawyer
(d) Soil : Bricks

Answer: (b)

5. In the following question, select the related letter cluster from the given alternatives.
EDKX : MLSF : : ACZO : ?

(a) IKVG

(b) JKHV

(c) JKIV

(d) IKHW

Answer: (d)

7. Priti scored more than Rahul. Yamuna scored as much as Divya. Lokita scored less than Manju. Rahul scored more than Yamuna. Manju scored less than Divya. Who scored the lowest?

(a) Rahul

(b) Yamuna

(c) Manju

(d) Lokita

Answer: (d)

8. Pointing to the photograph, Mamta said that the woman in this photo is the wife of the son of my father's wife's only daughter. How is the Mamta related to that woman?

(a) Sister

(b) Mother

(c) Mother-in-law

(d) Aunt

Answer: (c)

9. In the question below, there are two stat ents owed by four conclusions given in options. You have to take the given statements to be t n if they seem to be at variance with commonly known facts and then decide which of the given conclusion logically follow(s) from the given statements.
Statements:
Some crystals are diamonds.
All emeralds are crystals.

(a) Some emeralds are diamonds

(b) Some crystals are emeralds

(c) All diamonds are emeralds

(d) All crystals are emeralds

Answer: (b)

10. In the question below are given two statements followed by two conclusion. You have to take the two given statements to be true even if they seem to be at variance with the commonly known facts and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.
Statements:
All cars are tyres.
Some clutchs are tyres.
Conclusions:
I. Some cars are clutchs.
II. Some clutchs are cars.

(a) If only conclusion I follows

(b) If only conclusion II follows

(c) If either conclusion I or II follows

(d) If neither conclusion I nor II follows

Answer: (d)

11. In the question given, relations between different elements are shown in the statements. These statements are followed by two conclusions. Find out which of the given conclusions follow(s) the given statements and select the correct alternative from the given choices.
Statement:
$L \geq M = N < O, P < Q \geq R = S \geq L$
Conclusion:
I. $Q > M$
II. $N = Q$

(a) None is true

(b) Only II is true

(c) Only I is true

(d) Either I or II is true

Answer: (a)

12. Which two signs should be interchanged to make the given equation correct?
$20 + 5 \times 3 \div 3 - 1 = 14$

(a) × and –

(b) ÷ and ×

(c) ÷ and +

(d) × and +

Answer: (c)

13. Find the missing number in the series given below.
3, 8, 22, 63, ?

(a) 185

(b) 295

(c) 310

(d) 285

Answer: (a)

16. Rahul starts walking in the south direction and walks a distance of 7 meters. Now he took a left turn and walk 6m. Again he takes a left turn and walks 15m and reached a point P. In which direction is Rahul from the initial point?

(a) South-East
(b) North-East
(c) North-West
(d) South-West

Answer: (b)

General Awareness

21. Which of the following individuals composed the National Song "Vande Mataram"?

(a) Rabindranath Tagore
(b) Bankimchandra Chatterjee
(c) Dr. Rajendra Prasad
(d) Lata Mangeshkar

Answer: (b)

22. Who among the following laid the foundation of Golden Temple?

(a) Guru Arjan Sahib
(b) Guru Amardas Sahib
(c) Guru Ramdas Sahib
(d) Hazrat Mian Mir ji

Answer: (d)

23. The Gateway of India was built to commem[illegible] the visit of which of the following Kings?

(a) King William IV
(b) King Edward VII
(c) King George V
(d) King George I

Answer: (c)

24. Who is the Ex-Officio Chairperson of the NITI Aayog?

(a) Vice President
(b) Home Minister
(c) Prime Minister
(d) President

Answer: (c)

26. Which of the following refrective defects of vision is also known as Far-sightedness?

(a) Myopia
(b) Hypermetropia
(c) Presbyopia
(d) Cataract

Answer: (b)

27. What is the Scientific Name of National Bird of India?

(a) Pavo Cristatus
(b) Panthera Tigris
(c) Peacock
(d) Peak Cokoo

Answer: (a)

28. Which of the following is the largest District in India as per area?

(a) Kuchchh
(b) Mahe
(c) Mumbai
(d) Bangalore

Answer: (a)

29. The water holding capacity is the highest in which of the following soils?

(a) Silt Soil
(b) Chalk Soil
(c) Clayey Soil
(d) Peat Soil

Answer: (c)

30. Where was the first initiative of Mahatma Gandhi [illegible] nationalist in India?

(a) Kheda
(b) Ahmedabad
(c) Champaran
(d) Porbandar

Answer: (c)

31. Who was the judge who presided over Mahatma Gandhi's hearing during the Non-Cooperation Movement in the year 1922?

(a) Justice CN Broomfield
(b) Justice Henry Davison
(c) Justice William McDonell
(d) Justice James Dewar

Answer: (a)

32. Which of the following mahajanapadas was Vaishali the capital of?

(a) Magadha
(b) Vajji
(c) Avanti
(d) Panchala

Answer: (b)

33. Which of the following commission was appointed by the Central Government on Union-State relations in 1983?

(a) Dutt Commission
(b) Sarkaria Commission
(c) Setalvad Commission
(d) Kalelkar Commission

Answer: (b)

34. Who can initiate the process for the removal of the Vice-President of India?

(a) House of People
(b) Council of States
(c) Council of Ministers
(d) President

Answer: (b)

35. Which of the following individuals is the author of the book "Anandamath"?

(a) Rabindranath Tagore
(b) Munshi Premchand
(c) Bankimchandra Chatterji
(d) Dr. Rajendra Prasad

Answer: (c)

36. Who is the first ever Indian recipient of a Nobel F e?

(a) CV Raman
(b) Amartya Sen
(c) Mother Teresa
(d) Rabindranath Tagore

Answer: (d)

37. Which team had won the first Cricket World Cup in the year 1975?

(a) Australia
(b) West Indies
(c) India
(d) Pakistan

Answer: (b)

39. Which of the following organizations developed the COVID-19 vaccine Covishield?

(a) Moderna
(b) Indian Medical Association
(c) Serum Institute of India
(d) Bharat Biotech

Answer: (c)

40. Recently Mount Nyiragongo volcano has erupted. In which of the following countries is it situated?

(a) Democratic Republic of Congo

(b) Morocco

(c) Nigeria

(d) Madagascar

Answer: (a)

Arithmetic Ability

44. LCM of two numbers is 3 times their HCF. The sum of the LCM and the HCF is 44. If one number is 11, then the other number is:

(a) 22

(b) 44

(c) 33

(d) 20

Answer: (c)

46. Average of 45 numbers is 33. If average of first 15 numbers is 28 and average of last 25 numbers is 35, then what is the average of remaining five numbers?

(a) 35

(b) 37

(c) 39

(d) 38

Answer: (d)

47. 200 students took the examination in a school, and 13 percent of the students got distinction. The number of boys who got distinction is 2 more than the number of girls who got distinction. If 20 percent of the girls got distinction, find the total number of boys in the school ?

(a) 120

(b) 220

(c) 140

(d) 180

Answer: (c)

48. The price of a shirt is decreased by 25 percent and hence the sale is increased by 20 percent.What will be the effect on the total revenue of the shop?

(a) 5 percent increase

(b) 10 percent decrease

(c) No effect

(d) 10 percent increase

Answer: (b)

49. Prakash bought 2 items at the same price. He sold one item at 20 percent profit and another item at 15 percent profit. What is the overall percentage profit he made?

(a) 2.5 percent

(b) 17.5 percent

(c) 16.5 percent

(d) 22.5 percent

Answer: (b)

50. A, B and C are three partners in a business who shared profit in the ratio of 2:5:3. If they had invested for 8 months, 6 months and 9 months respectively, what is the ratio of their investments?

(a) 6:10:9

(b) 3:10:4

(c) 4:5:9

(d) 3:5:4

Answer: (b)

52. A sum of Rs. 3600 is divided into two principals. One principal is invested at 8 percent p.a. for 2 years and the other is invested at 9 percent p.a. for 3 years. If the total simple interest obtained is Rs. 741, then find the larger principal.

(a) Rs. 1800

(b) Rs. 1500

(c) Rs. 2100

(d) Rs. 2400

Answer: (c)

53. The ratio of speed of boat in upstream to [illegible]of boat in downstream is 2: 3. The time taken by boat to cover 45 km in downstream is t hours, then in t hours how many kilometers will be travelled by boat in upstream?

(a) 15 km

(b) 30 km

(c) 40 km

(d) 50 km

Answer: (b)

54. If Arvind reaches his college in 2 hours by his bike at an average speed of 30 km/hr, then what should be his average speed by his car to reach the college half an hour earlier?

(a) 40 km/hr

(b) 36 km/hr

(c) 45 km/hr

(d) 35 km/h

Answer: (a)

55. Roli takes 3 hours to type 24 pages. Neelam takes 9 hours to type 45 pages. In how many hours they will type 351 pages together?

(a) 15 hours

(b) 18 hours

(c) 27 hours

(d) 21 hours

Answer: (c)

General English

61. In the following question, four sentences are given out of which three sentences are grammatically incorrect while one is correct. Find out which sentence is grammatically correct and select the appropriate option.

(a) All Central Acts and subordinate legislations passed by the Centre, include rules, regulations, and circulars, should be made available on this portal.

(b) The data uploaded on the portal should available in machine readable PDF formats.

(c) Navigation on this portal should be such that the complete law-making chain, right from the parent act to the subordinate legislations, is clearly visible.

(d) The portal should allow uploaded of state government Acts, regulations and subordinate legislations as well.

Answer: (c)

62. Identify the segment in the sentence which conta the grammatical error from the given options.
If he had wrote the examination faster and answere ne more question he would have scored better.

(a) If he had wrote the examination faster

(b) and answered one more question

(c) he would have scored better

(d) No error

Answer: (a)

65. Select the most appropriate option to fill in the blank.
She slipped _____ damp grass, breaking a leg, cracking a bone in the other and hurting her shoulder.

(a) at

(b) on

(c) by

(d) to

Answer: (b)

66. Select the most appropriate option to fill in the blank.
We all are well aware that to _____ hygiene, we have to keep ourselves and our surroundings clean.

(a) renew
(b) nurture
(c) maintain
(d) conserve

Answer: (c)

67. Rearrange the following sentences in their correct order to form a meaningful paragraph.
P. There are so many reasons to include veggies into your diet.
Q. Low in calories, nutrient-dense, versatile and tasty.
R. When we use the term healthy, vegetable is the first word that comes to our mind.
S. Filling your plate with healthy and nutritious food items is an effective way to lose weight.

(a) SRQP
(b) RQPS
(c) QPSR
(d) PSRQ

Answer: (a)

68. Rearrange the following sentences in their correct order to form a meaningful paragraph.
P: The government of Maharashtra has come up with guidelines for organising of Ganesh Festival.
Q: If organisers need to have more than 20 people, they need to take permission from the local District Collector.
R: At any given time, no more than 20 people will be allowed to gather in the sanctum within the pandal where the Ganesh idol is kept for worshipping.
S: The District Collector will then verify the size of the pandal and will give permission if satisfied that social distancing will be maintained with 20 plus people.

(a) PRQS
(b) QPSR
(c) RQPS
(d) SRPQ

Answer: (a)

69. Select the most appropriate synonym of the given word.
AMBIVALENCE

(a) Intensity
(b) Violence
(c) Puzzle
(d) Despair

Answer: (c)

70. Select the most appropriate antonym of the given word.
Ostentatious

(a) Modest
(b) Innocence
(c) Flamboyance
(d) Purity

Answer: (a)

71. Select the correctly spelt word

(a) Forrunner
(b) Foerrunner
(c) Forerunner
(d) Forarunner

Answer: (c)

72. Select the wrongly spelt word.

(a) Gaurmet
(b) Grateful
(c) Guarantee
(d) Grandeur

Answer: (a)

73. Select the most appropriate meaning of the given idiom/ phrase.
To burn your finger

(a) To experience unpleasant consequences
(b) Excellent health
(c) In good condition espc. Getting a lot of money
(d) Things always get worse before they get better

Answer: (a)

74. Select the most appropriate meaning of the given idiom/ phrase.
To face the music

(a) To be greeted rudely
(b) To be offered warm hospitality
(c) To enjoy a music programme
(d) To bear the consequences

Answer: (d)

75. Select the word which means the same as the group of words given.
Transmission that combines media of communication:

(a) Multiple
(b) Multimedia
(c) Multitasking
(d) Multimillionaire

Answer: (b)

77. Why did Caesar's wife, Calpurnia, urge him not to go to the Senate?

(a) because she had a visionary dream of something bad to happen

(b) because she was told to do so by the two senators Brutus and Cassius

(c) because an stranger told her to be killed by some senators

(d) because she was not much concerned about Caesar's prestige

Answer: (a)

79. Why did the conspirators plant false documents?

(a) to manipulate Caesar to join their cause to remove Brutus

(b) to manipulate Brutus to join their cause to remove Caesar

(c) to manipulate Portia to join their cause to remove Brutus

(d) to manipulate Cassius to join their cause to remove Brutus

Answer: (b)

Discipline1

102. If S = {a,b,c,d} and p = {(a,a) ,(b,b) ,(c,c), (d,d),(a,b),(b,a),(b,c),(c,b)}, then p is-

(a) Reflexive and transitive

(b) Symmetric and transitive

(c) Reflexive and symmetric

(d) Equivalence

Answer: (c)

103. Let f : R → R be defined as f(x) = 8x. Choose the correct answer:

(a) f is one-one onto

(b) f is many-one onto

(c) f is one-one but not onto

(d) f is neither one-one nor onto

Answer: (a)

104. If f : A → B and g : B → C are one–one, then gof : A → C is-

(a) One-one and onto both

(b) One-one

(c) Onto

(d) Neither One-One, nor onto

Answer: (b)

105. The greatest integer function f: R→ R given by f(x) = [x], (where [x] denotes the greatest integer), is _____.

(a) One-One, onto

(b) One-One, but not onto

(c) Neither One-One nor onto

(d) Onto, but not One-One

Answer: (c)

108. If f : R→ R and g: R→ R are given by f(x) = cos x, and g(x) = 3x 2 , then -

(a) gof = fog

(b) gof ≠ fog

(c) gof and fog both do not exist

(d) Can't be determined

Answer: (b)

114. Which of the following is incorrect?

(a) Every sequence has a limit point

(b) Every sequence has a monotone subsequence

(c) Every bounded sequence has a convergent subsequence

(d) Every sequence has a countable number of terms

Answer: (a)

119. Which one of the following tests does not give absolute convergence of a series?

(a) Comparison Test

(b) Ratio Test

(c) Leibnitz's test

(d) Root Test

Answer: (c)

120. A conditionally convergent series is a series whi s -

(a) Absolutely divergent

(b) Convergent but not absolutely

(c) Absolutely Convergent

(d) Not convergent but absolutely convergent

Answer: (b)

Discipline2

121. If n is real number and f = r n (cos nθ + i.sin nθ), then

(a) f is analytic everywhere except possibly at θ = 0

(b) f is analytic nowhere

(c) f is analytic everywhere except possibly at r = 0

(d) f is analytic everywhere

Answer: (c)

129. Which of the following is not true?

(a) If f (z) = u + i.v is an analytic function, then u and v are both harmonic functions

(b) If f (z) = u + i.v is an analytic function, then u (x, y) = c and v (x, y) = c are orthogonal 1 2

(c) If a function does not satisfy Cauchy – Riemann equations, then it is not analytic

(d) If u and v are both harmonic functions then f (z) = u + i.v is analytic

Answer: (d)

131. Let X be a complete metric space then no non-empty open sub-set of X is of first category. Which theorem states this?

(a) Bolzano- Weierstrass Theorem

(b) Cauchy's Theorem

(c) The Baire category Theorem

(d) Intermediate Value Theorem

Answer: (c)

134. If a set A = φ , then how many elements are there in P(A)?

(a) 3

(b) No element

(c) 1

(d) 2

Answer: (c)

139. In a group of 400 players, 250 play football and 200 play cricket, then how many people play both the games?

(a) 200

(b) 250

(c) 50

(d) 100

Answer: (c)

Discipline3

142. The equation xy – ax – by + ab = 0 repres

(a) a circle

(b) a pair of straight lines

(c) an ellipse

(d) a hyperbola

Answer: (b)

144. From a hyperbola or ellipse how many normals can be drawn?

(a) One

(b) Two

(c) Three

(d) Four

Answer: (d)

150. Two conjugate diameters of the hyperbola are such that -

(a) Both meet the curve at imaginary points

(b) One meets the curve at real point and another meets at imaginary point

(c) Both meet the curve at real point

(d) They meet the curve at infinity

Answer: (a)

151. The equation of the plane through the point (1, 2, -3) and normal to the straight line joining the points (-1, 3, 4) and (5, 2, -1) is-

(a) x - 2y - 3z - 17 = 0

(b) 6x - y - 5z - 19 = 0

(c) 6x - y + 5z + 19 = 0

(d) 3x - 2y - 5z - 9 = 0

Answer: (b)

157. The image of the point (-3, 8, 4) in the plane 6x - 3y - 2z + 1 = 0, is -

(a) (0, 2, 9)

(b) (-2, 1, 3)

(c) (1, 2, -2)

(d) (9, 2, 0)

Answer: (d)

Discipline4

172. On the surface xyz = 4, what shall be the equation of the tangent plane at the point (1, 2, 2)?

(a) 2x + y + z = 6

(b) x - 2y - z + 1 = 0

(c) x + 2y + z – 1 = 0

(d) x + 2y + z = 2

Answer: (a)

176. For a curve to be a helix which of the f[illegible]owin[illegible]ould be the most necessary and sufficient condition?

(a) The curvature is constant

(b) The torsion is constant

(c) The ratio of the curvature and the torsion is constant

(d) The product of the curvature and the torsion constant

Answer: (c)

Discipline5

188. Which of the following is true?
1. (1.01) 1000000 > 10000 2. (98) 5 5 > 9500000000

(a) Only 1

(b) Only 2

(c) Both 1 and 2

(d) Neither 1 nor 2

Answer: (c)

199. Which of the following is true?

(a) Every discontinuous function is integrable

(b) Every integrable function is continuous

(c) Every monotone function is integrable

(d) Every integrable function is monotone increasing

Answer: (c)

Discipline6

215. Find the value of statement P(n): 1.6 + 2.9 + 3.12 +..... + n(3n + 3)

(a) n(n + 1) (n + 2)

(b) (n + 1) (n + 2) (n + 3)

(c) n(n + 6)

(d) (n + 3) (n + 6)

Answer: (a)

Discipline7

230. Let H be a subgroup of a group G and K be a normal subgroup of a group G, then -

(a) K is not a normal subgroup of HK

(b) K is a normal subgroup of HK ∩ KH

(c) K is a normal subgroup of KH

(d) K is a normal subgroup of HK

Answer: (d)

231. Let (G, o) and (G′,*) be two groups and f: G → G′ be a homomorphism, then f (G)

(a) Is a cyclic subgroup of G′ if G may not be cyclic

(b) Is a cyclic subgroup of G′

(c) Is not a cyclic subgroup of G′ if G is cyclic

(d) Is a cyclic subgroup of G′ is commutative

Answer: (a)

232. Let (G, o) and (G', *) be two finite groups and Φ: G → G' be an epimorphism then -

(a) O(G) is a divisor of O(G′).

(b) O(G′) is a divisor of O(G).

(c) O(G′) is not a divisor O(G).

(d) O(G) is not a divisor of O(G′)

Answer: (b)

233. Let (G,o) and (G',*) be two groups and Φ: G → G' be a epimorphism. Then Φ is an isomorphism if and only if-

(a) Ker Φ ⊂ {eG}

(b) Ker Φ ⊂ {eG'}

(c) Ker Φ = { eG}

(d) Ker Φ = { eG'}

Answer: (c)

234. If f is continuous mapping of compact metric space X into a metric space Y then:

(a) f is not continuous

(b) f is uniformly continuous

(c) f has a jump at x = θ

(d) f is a step function

Answer: (b)

236. A commutative group G is simple if and only if -

(a) O(G) = n, n is an odd integer

(b) O(G) = n, n is a prime integer

(c) O(G) = n, n is an even integer

(d) O(G) = n, n is a positive integer

Answer: (b)

237. The number of onto homomorphism from Z to Z 8 4

(a) 2

(b) 1

(c) 4

(d) 3

Answer: (a)

239. If 9 P + 5. 9 P = 10 P , then r is - 5 4 r

(a) 9

(b) 8

(c) 5

(d) 10

Answer: (c)

240. Using digits 1, 2, 3, 4, 5 and 6 how many numbers between 3000 and 4000 can be made if no digit should be repeated?

(a) 100

(b) 60

(c) 70

(d) 90

Answer: (b)

Discipline8

241. In how many of the distinct permutation of letters in JUXTAPOSED do the four vowels come together?

(a) 120960

(b) 102960

(c) 190026

(d) 182900

Answer: (a)

242. If no two '-'signs can be repeated, then in how many ways a line can be made from six '+' signs and four '-' signs?

(a) 53

(b) 15

(c) 35

(d) 50

Answer: (c)

245. There is a group of 11 cricketers. 4 can bat and 7 can bowl. In how many ways can a group of 5 cricketers be selected if the group has at least one batsman and bowler?

(a) 669

(b) 441

(c) 237

(d) 745

Answer: (b)

246. The function f(x) = x Sin (1/x), if x = 0 and f(0) = 1 has discontinuity at _____.

(a) 0

(b) 2

(c) 1

(d) 3

Answer: (a)

247. Find the number of diagonals of a polygon whose number of sides is "n".

(a) n(n - 1)/2

(b) (n - 1)(n - 2)/3

(c) n(n - 3)/2

(d) (n - 2)(n - 5)/3

Answer: (c)

253. (1, 1), (-1, -1) and (-√3, √3) are vectors of:

(a) Right angle triangle
(b) Equilateral triangle
(c) Isosceles triangle
(d) Collinear points

Answer: (b)

259. If the ring R is a commutative ring with unity, then the polynomial ring R |x| is-

(a) a commutative ring without unity
(b) a commutative ring with unity
(c) a non commutative ring without unity
(d) a non-commutative ring with unity

Answer: (b)

Discipline9

261. The set of all units in a ring R with unity forms _____.

(a) a field
(b) a ring with unity
(c) a group with respect to multiplication
(d) an integral domain

Answer: (c)

264. The ring (Z , +, .) is an integral domain if and o if: n

(a) n is prime
(b) n is odd
(c) n is odd prime
(d) n is positive integer

Answer: (a)

266. The ring of residue classes (mod m) is an integral domain if m is:

(a) prime
(b) an integer
(c) a rational number
(d) a natural number

Answer: (a)

270. Which one of the following is TRUE?

(a) Every sequence that has a convergent sequence is a bounded sequence
(b) The sequence {n cos⁄n} has a convergent sequence
(c) The sequence {sin n} has a convergent subsequence
(d) Every sequence that has a convergent subsequence is a Cauchy sequence

Answer: (c)

Teaching Methodology

281. Who said that “Mathematics is the language in which God has written the universe”?

(a) Marshal Stone
(b) Galileo Galilei
(c) Aryabhatta
(d) Bertrand Russell

Answer: (b)

282. A good mathematics teacher is one who -

(a) encourages convergent thinking
(b) follows the same method always
(c) gives only a lot of problems to practice with
(d) remains helpful, insightful and explain things well

Answer: (d)

283. Which of the following is /are true regarding the aims of teaching mathematics?
1. To develop a good ability to solve problem
2. To develop the ability to make decision
3. To develop a good understanding of numbers and number system

(a) Only 1 and 2
(b) Only 2 and 3
(c) Only 1 and 3
(d) 1, 2 and 3

Answer: (d)

284. Which is not true about lesson plan?

(a) It helps in orderly delivery to content
(b) It is developed by students
(c) It develops confidence in teacher
(d) It saves from haphazard teaching

Answer: (b)

285. Which of the following is/ are not the principle of Curriculum-construction of mathematics?

(a) Integrity of theory with practice
(b) Principle of unit
(c) Should not be child-centric
(d) The principle of preparation for life

Answer: (c)

286. Which of the following subject/s Mathematics is a part of?

(a) Geography
(b) Economics
(c) Commerce
(d) Geography, Economics and Commerce

Answer: (d)

288. Who of the following invented the letter system?

(a) Bhahmagupta
(b) Sidhanta
(c) Arya- Bhatta- I
(d) Kumargupta

Answer: (c)

289. Who said— "instructional objectives are best described in terms of the terminal behaviour expected from the learners"?

(a) Robert Mager
(b) Robert Miller's
(c) Robert Wadra
(d) Sumit Samele

Answer: (a)

290. Which of the following is not related to early nu er concept?

(a) class inclusion
(b) conservation
(c) measurement
(d) classification

Answer: (c)

291. Educational objectives have been divided into -

(a) Four domains
(b) Five domains
(c) Three domains
(d) Two domains

Answer: (c)

292. The hypothesis underlying team teaching is

(a) A single teacher cannot control the class
(b) Teachers are not competent
(c) The best teachers in schools are shared by more students.
(d) Teachers feel bore while marking alone

Answer: (c)

293. Cooperative learning is an alternative to

(a) Teaching models

(b) Competitive models

(c) Microteaching

(d) Lesson plan

Answer: (b)

294. The number of students in cooperative learning groups are

(a) Eight to ten

(b) Three to four

(c) Ten to Fifteen

(d) Five to Six

Answer: (b)

296. A learner exhibiting difficulty in sorting, recognising pattern, orienting numbers and shape, telling time and measurement may have dyscalculia with difficulty in

(a) Visual memory

(b) Language processing

(c) Visual motor coordination

(d) Visual motor skills

Answer: (c)

297. Which one of the following is not a mathematica ocess?

(a) Estimation

(b) Memorization

(c) Measurement

(d) Visualization

Answer: (b)

298. According to Piaget when the child is at formal operational stage, it is appropriate to introduce

(a) Data handling

(b) Numbers

(c) Geometry

(d) Ratio and proportion

Answer: (d)

299. In a mathematics classroom emphasis is placed on

(a) mathematical content process and reasoning

(b) problem solving strategies

(c) mathematical algorithm and process

(d) mathematical content

Answer: (a)

300. Which one of the following is not a problem-solving strategy in mathematics?

(a) drawing

(b) solving backwards

(c) Rote learning

(d) trial and error

Answer: (c)

Answer key

Answer key from the Delhi Subordinate Services Selection Board's official answer key for this sitting. "—" means the key gave none.

Mental Ability

1	**(a)**	2	**(a)**	3	**(d)**	4	**(b)**	5	**(d)**	7	**(d)**	8	**(c)**	9	**(b)**		
10	**(d)**	11	**(a)**	12	**(c)**	13	**(a)**	16	**(b)**								

General Awareness

21	**(b)**	22	**(d)**	23	**(c)**	24	**(c)**	26	**(b)**	27	**(a)**	28	**(a)**	29	**(c)**		
30	**(c)**	31	**(a)**	32	**(b)**	33	**(b)**	34	**(b)**	35	**(c)**	36	**(d)**	37	**(b)**		
39	**(c)**	40	**(a)**														

Arithmetic Ability

44	**(c)**	46	**(d)**	47	**(c)**	48	**(b)**	49	**(b)**	50	**(b)**	52	**(c)**	53	**(b)**		
54	**(a)**	55	**(c)**														

General English

61	**(c)**	62	**(a)**	65	**(b)**	66	**(c)**	67	**(a)**	68	**(a)**	69	**(c)**	70	**(a)**		
71	**(c)**	72	**(a)**	73	**(a)**	74	**(d)**	75	**(b)**	77	**(a)**	79	**(b)**				

Discipline1

102	**(c)**	103	**(a)**	104	**(b)**	105	**(c)**	[illegible]	**(b)**	114	**(a)**	119	**(c)**	120	**(b)**		

Discipline2

121	**(c)**	129	**(d)**	131	**(c)**	134	**(c)**	139	**(c)**								

Discipline3

142	**(b)**	144	**(d)**	150	**(a)**	151	**(b)**	157	**(d)**								

Discipline4

172	**(a)**	176	**(c)**														

Discipline5

188	**(c)**	199	**(c)**														

Discipline6

215	**(a)**																

Discipline7

230	**(d)**	231	**(a)**	232	**(b)**	233	**(c)**	234	**(b)**	236	**(b)**	237	**(a)**	239	**(c)**		
240	**(b)**																

Discipline8

241	**(a)**	242	**(c)**	245	**(b)**	246	**(a)**	247	**(c)**	253	**(b)**	259	**(b)**

Discipline9

261	**(c)**	264	**(a)**	266	**(a)**	270	**(c)**

Teaching Methodology

281	**(b)**	282	**(d)**	283	**(d)**	284	**(b)**	285	**(c)**	286	**(d)**	288	**(c)**	289	**(a)**
290	**(c)**	291	**(c)**	292	**(c)**	293	**(b)**	294	**(b)**	296	**(c)**	297	**(b)**	298	**(d)**
299	**(a)**	300	**(c)**												