DO NOT OPEN THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

EXAM ID. - 9245

HTET TGT / Mathematics

TEST SERIES

DATE -__ /__ /____	INSTRUCTION FOR CANDIDATE	TEST SERIES NO.
DAY -		A - 101

QUESTION - 150 MARKS – 150 NEGATIVE MARK – 0 DURATION – 150 MIN

1. Use only ball pens with black or blue ink

2. As soon as the examination starts, you must check this question booklet and if there is any unprinted, mutilated or partially printed page or question in it, then replace it with the correct question booklet through Abhijagar.

3. There are total 150 questions in this question booklet.

4. This is an objective test, in which four options are given for the answer to each question, you have to choose only one option with the correct answer out of these four options.

5. Answers to all questions are to be written on separate answer sheets.

6. Instructions for filling the answer sheet are written on the back side of the answer sheet, read them carefully before filling the answer sheet.

7. Blank pages are available in this question booklet for rough work.

8. Candidates cannot leave the room before the end of the examination.

9. After the examination is over, you can go out with his permission by submitting the ORIGINAL COPY of the answer sheet to the invigilator.

10. After the completion of the examination, the candidate is allowed to take the question booklet and answer sheet with him/her.

11. 1 marks will be given for each correct answer and 0 marks will be deducted for each wrong answer.

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1. निम्न में से अशुद्ध वर्तनी का चयन कीजिए -

(a) अधिनियम (b) उन्मुख
(c) आघूर्ण (d) ओसत

2. आज भी भारत में श्रवण कुमार पैदा होते हैं । वाक्य में रेखांकित शब्द में संज्ञा हैं -

(a) भाववाचक (b) जातिवाचक
(c) व्यक्तिवाचक (d) संकेतवाचक

3. 'न नौ मन तेल होगा , न राधा नाचेगी' लोकोक्ति का क्या अर्थ है -

(a) न पूरी होने वाली शर्त। (b) बिना कहे ही भलाई
(c) बिना सोचे समझे (d) सुनवाई न होना

4. 'उज्ज्वल' का संधि विच्छेद है ?

(a) उत् + जल (b) उत + ज्वल
(c) उत् + ज्वल (d) इनमे से कोई नहीं

5. निम्नलिखित 6 वाक्यांशों में प्रथम व अंतिम निश्चित है ,शेष को उचित क्रम में व्यस्तिथ कीजिए।
(1) गाँव और जंगलों में
(य) लोक कथाओं में
(र) स्वछंद जन्म लेने वाले
(ल) मानवीय संस्कृति का
(व) लोक - गीतों और
(6) अमित भंडार भरा है।

(a) व य ल र (b) य ल र व
(c) र व य ल (d) ल र व य

6. निम्न में से शब्द में उर्दू उपसर्ग है ?

(a) अनुज (b) अभ्यागत
(c) अपवित्र (d) बदनाम

7. 'बंदरिया' शब्द में प्रयुक्त प्रत्यय है -

(a) इका (b) इत
(c) इया (d) ई

8. 'नानी के आगे ननिहाल की बातें' मुहावरे का सही अर्थ है -

(a) अज्ञानी व्यक्ति के आगे ज्ञान की बातें करना (b) अनुभवी व्यक्ति के आगे बेवकूफी की बातें करना
(c) अधिक ज्ञान वाले के आगे अपने ज्ञान की शेखी मारना (d) नानी के पास जाकर अपनी माँ की शिकायत करना

9. अनेकार्थी शब्द "अक्ष " के सही विकल्प का चयन कीजिए -

(a) धुरी (b) अक्षत
(c) चावल (d) इनमें से कोई नहीं

10. ' सम् ' उपसर्ग किस शब्द - समूह में है -

(a) सुचारु , सुघड़ (b) सज्जन , सदगुण
(c) स्वदेश , स्वराज्य (d) संस्कार , संचय

11. इनमें कौन - सा शब्द समूहवाचक नहीं है ?

(a) लोग (b) गण
(c) वर्ग (d) घर

12. "Authorise" के लिए मानक हिन्दी शब्द है -

(a) प्राधिकार देना (b) वर्जन करना
(c) प्रमाणिक (d) विवेकानुसार

13. वागीश' में संधि है।

(a) स्वर संधि (b) विसर्ग संधि
(c) व्यंजन संधि (d) दीर्घ संधि

14. निम्न में शुद्ध वर्तनी पहचानिए

(a) परिणती (b) जलान्जली
(c) वाल्मीकि (d) तिथी

15. निम्न में से किस शब्द में इन' अथवा 'ई' प्रत्यय नहीं है?

(a) अर्थी (b) हस्ती
(c) पंडिताइन (d) रोगी

16. Sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval in the answer-sheet.

That hardly counts, _____

(a) does it? (b) doesn't it?
(c) do it? (d) don't it?

17. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

The call of the seas (A)/ have always (B)/ found an echo in me. (C)/ No error (D)

(a) A (b) B
(c) C (d) D

18. In the following questions, choose the word opposite in meaning to the given word.
Portrayal

(a) rendering (b) original
(c) delineation (d) sketch

19. out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.
Onslaught

(a) Counterattack (b) Resistance
(c) Defense (d) Invasion

20. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

(a) physique (b) quizzical
(c) collaborator (d) quotidiean

21. In the following question, a sentence has been given in Active/Passive Voice. Out of the four alternatives suggested, select the one which best expresses the same sentence in Passive/Active Voice.
It is high time to play cricket.

(a) It was high time that cricket was played.
(b) It is time high for cricket to be played.
(c) It is time high that tea should be taken.
(d) It is time high that tea had been taken.

22. In the following questions, a sentence / a part of the sentence is bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose "No Improvement" option.
He absented from the meeting.

(a) Were absent
(b) Absented himself
(c) Took absence
(d) No improvement

23. In the following question, a sentence has been given in Direct/Indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect/Direct speech.
My uncle said, "I will be here again tomorrow."

(a) My uncle said that he would be here again the next day.
(b) My uncle said that I will be here again tomorrow.
(c) My uncle said that he would be here again tomorrow.
(d) My uncle said that he would be there again the next day.

24. Select the option that will improve the underlined part of the given sentence. In case improvement is needed, select "No improvement required".
Although world war two is over, the consequence of one of the world's deadliest battle has only just begun.

(a) the consequence of one of the world's deadliest battle had
(b) the consequence of one of the world's deadliest battles
(c) the consequences of one of the world's deadliest battle
(d) No improvement required

25. Select the most appropriate meaning of the given idiom.
cost an arm and a leg

(a) very expensive
(b) Prepared for battle
(c) In a deep, insensible sleep
(d) Ready for scrutiny

26. Directions: Select the option that is nearest in meaning to the underlined word and mark the correct answer accordingly.
The researchers turned up no credible evaluations at all.

(a) Elimination
(b) Assessment
(c) Regulation
(d) Segregation

27. Direction: In this question, select the word that is most opposite in meaning to the word given in capital letters.
Opaque

(a) Vague
(b) Firm
(c) Transparent
(d) Poor

28. Direction: Choose the best alternative which best expresses the meaning of the idiom/phrase.
The clock is ticking

(a) A clock that shows actual time
(b) A regular short, sharp sound, especially that made by a clock or watch
(c) Used to say that there is not much time left to do something
(d) Something going to happen bad

29. Select the most appropriate meaning of the given idiom.
Bury the hatchet

(a) dig a grave
(b) hide a treasure
(c) forget past quarrels
(d) sow the seeds

30. Direction: Select the misspelt word.

(a) Escalate
(b) Strategic
(c) Campaign
(d) Chellange

31. Which of the following bird is the state bird of Haryana?

(a) Asian Cuckoo
(b) Black Dongo
(c) Indian Peacock
(d) Black Francolin

32. Which of the following princely states was attached to Western Haryana?

(a) Nabha
(b) Bikaner
(c) Jaipur
(d) Patiala

33. Bhiwani district of Haryana is the largest producer of mustard. Which district ranks second?

(a) Karnal
(b) Rohtak
(c) Faridabad
(d) Mahendragarh

34. In which assembly was the President's rule imposed for the first time in Haryana?

(a) First
(b) Second
(c) third
(d) fourth

35. The traditional jewelery 'Ramjhol' is related to?

(a) hard (b) cheeky
(c) Payal (d) Hiranami

36. Which is the state sport of Haryana?

(a) Kabaddi (b) Football
(c) Volleyball (d) Wrestling

37. In 1857 AD, the Sikh rulers of which princely state helped the British?

(a) Nabha (b) Kustanga
(c) Bikaner (d) Jaipur

38. What is cultivated under horticulture crops?

(a) Fruit (b) Vegetable
(c) flowers (d) all of them

39. Haryana 13 th during the state assembly elections ..... Haryana Accountant Haryana Group D

(a) Year 2013 (b) Year 2014
(c) year 2015 (d) year 2016

40. Match List I (Name) List II (Method)
A. corrugated 1. Badej method of preparation covering the dye
B. maudia 2. fine covering
C. Gumti 3. To cover cotton cloth with silk buds
D. Bol 4. Silk banded embroidered cloth
code ABCDABCD

(a) 1 2 3 4 (b) 4 3 2 1
(c) 4 1 2 3 (d) 4 1 3 2

41. Just like the second term is related to the first term, choose the post corresponding to the third term.
Magnetic field: ostend :: power:?

(a) Liter (b) meter
(c) Watt (d) Volt

42. If in a code language, LIQUID is written as PMUYMH, then how will SPACE be written in that code language?

(a) WTBGI (b) WTEGI
(c) TEGIW (d) WEIGH

43. If code = 6241, made = 5346, come = 3124 and to = 27 then dome =?

(a) 6134 (b) 5214
(c) 6124 (d) 2634

44. Find the term in place of the question mark (?) In this series.
N−100,K−81,?,E−49,B−36

(a) T−120 (b) U−46
(c) H−64 (d) B−64

45. Read the following information and answer the questions based on it.
(i) 'F − D' means' F is the father of D '
(ii) 'F+D' means' F is the daughter of D
(iii) 'F'÷D' Means' F is the son of D'
(iv) 'F× D' means' F is the wife of D '
Which of the following would mean that Z is the father of Y?

(a) Y−E×Z (b) Y+E÷Z
(c) Y+E−Z (d) Y+E×Z

46. If 'A' letter - for addition, 'B' letter - subtract '' C 'letter for' division 'and' D 'letter - for multiplication then (7 D 3) B6A5 (20 C 20)? The value of will be equal to?

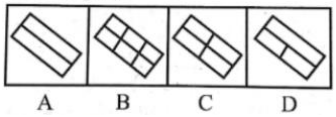
(a) 0 (b) 10
(c) 22 (d) 20

47. Choose the most appropriate Venn diagram for the following words-
Carrier, truck, van

(a) 
(b) 
(c) 
(d) 

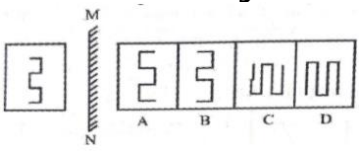
48. The given question figure is embedded in one of the answer figures given below.
What is that answer figure?

प्रश्न आकृति:

उत्तर आकृति:


(a) D (b) B
(c) C (d) A

49. Select the mirror image of the following figure:



(a) D (b) C
(c) B (d) A

50. Consider the given statements to be true even if they seem to be at variance from commonly accepted facts and decide which of the following logically follows from the given statements.
Statements:
1) Some children are smart.

2) Some children are sportsmen.
Conclusions:
I) Some players are smart.
II) Some smart kids are sportsmen.

(a) Only conclusion I follows
(b) Only conclusion II follows.
(c) Both I and II follow.
(d) No conclusion follows.

51. By selling a car for Rs.2,78,000, a dealer gains 25%. If the profit is reduced to 18%, then the selling price will be:

(a) Rs.2,62,432
(b) Rs.2,65,432
(c) Rs.2,72,432
(d) Rs.2,60,432

52. A and B together can do a piece of work in 50 days. If A is 40% less efficient than B, in how many days can A working alone complete 60% of the work?

(a) 70
(b) 110
(c) 80
(d) 105

53. Three numbers are in the ratio of 2:3:5 and their LCM is 90. Find their HCF.

(a) 9
(b) 1
(c) 6
(d) 3

54. On simple interest a sum of Rs.640 becomes Rs.832 in 2 years. What will Rs.860 become in 4 years at the same rate of simple interest?

(a) Rs. 1,250
(b) Rs.1,376
(c) Rs.1,426
(d) Rs.1,150

55. The average weight of 49 students in a class is 39 kg. Seven of them whose average weight is 40 kg leave the class and other seven students whose average weight is 54 kg join the class. What is the new average weight (in kg) of the class?

(a) 41
(b) 39
(c) 42
(d) 40

56. A shopkeeper gives two successive discounts on a watch marked 2,750. The first discount given is 10%. If the customer pays 2,103.75 for the watch, then what is the second discount?

(a) 15%
(b) 30%
(c) 12%
(d) 10%

57. Which of the following numbers are divisible by 2, 3 and 5?

(a) 5467760
(b) 1345678
(c) 2345760
(d) 2456732

58. O is the incentre of the triangle PQR. If angle POR = 140 degree, then what is the angle PQR?

(a) 40 degree
(b) 140 degree
(c) 100 degree
(d) 70 degree

59. If the side of an equilateral triangle is 20 cm, then what is its area?

(a) $110\sqrt{3}$ cm^2
(b) $125\sqrt{3}$ cm^2
(c) $200\sqrt{3}$ cm^2
(d) $100\sqrt{3}$ cm^2

60. Ratio between the present ages of A and B is 2:3, respectively. After 5 years, the ratio between their ages will be 3: 4. What is B's age at present?

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

61. Gifted children are

(a) non-assertive of their needs
(b) independent in their judgements
(c) independent of teachers
(d) None of the above

62. Which of the following is not a structural element of personality as proposed by Freud?

(a) Id
(b) Super ego
(c) Ego
(d) None of the above

63. Classroom management is an important responsibility of teachers that entails three basic functions, which are _____.

(a) planning, managing and performing
(b) Curriculum, designing and execution
(c) planning, control and communication
(d) controlling, managing and performing

64. Assertion (A): Children learn ways of behaving and values and norms of living in their family.
Reason (R): Family is a secondary agency of socialization of children.
Choose the correct option.

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

65. C.G. Jung has divided personality into introvert, extrovert and ambivert among other types on the basis of _____ test.

(a) Word Association Test
(b) Thematic Apperception Test
(c) Situational Tests
(d) Ink-blot Test

66. IQ = Mental age (M.A.)/chronological age (C.A.) × 100 was propounded by

(a) Revised Stanford-Binet Scale
(b) Minnesota paper form board test
(c) Binet-Simon
(d) None of the above

67. What is the critical role played by a teacher
I. Observer and diagnostician of learner
II. Provider of the environment for learning
II. Facilitator of learning

(a) Only I (b) I and II
(c) II and III (d) I, II, and III

68. Operant Conditioning Theory was propounded by

(a) Pavlov (b) Skinner
(c) Thorndike (d) Kohler

69. A _____ is an impairment that negatively affects communication through spoken language.

(a) Dyslexia (b) Language Processing Disorder
(c) Non-verbal Learning Disability (d) Visual Motor Deficit

70. Teaching learning materials should be selected according to ____ .

(a) their availability in respective areas (b) the objectives of teaching
(c) their cost (d) None of the above

71. Which one of the following statements best describes Inclusion?

(a) It is the belief that some children cannot learn at all. (b) It is the philosophy that all children have a right to get equal education in a regular school system.
(c) It is the philosophy that special children are 'a special gift of God'. (d) It is the belief that children need to be segregated according to their abilities.

72. Which of the following is NOT an effective strategy to address learners from disadvantaged and deprived backgrounds?

(a) School should be carefully graded cultural content in textbooks. (b) Inclusion of diverse methods of teaching-learning.
(c) Stipulated time should be given for testing their skills. (d) Teaching through the language and dialect of underprivileged learners

73. To make children effective problem solvers, which among the following should NOT be adopted by the teacher?

(a) Giving them rewards for good works (b) By developing different language skills
(c) By developing them to memorize fastly (d) By enabling students to accept demerits

74. The main aim of education is-

(a) development of language skills (b) development of social citizenship
(c) personality development (d) punishment

75. Which of the following is not a quality of effective teaching?

(a) Democratic (b) Sympathetic
(c) Autocratic (d) Desirable information provider

76. Which of the following is not a strength of role-playing?

(a) Promotes lifelong learning (b) Develops sympathetic understanding
(c) Provides immediate feedback (d) Promotes rote learning

77. In Piaget's theory of development, the fourth stage is called

(a) Concrete operation period (b) Formal operation period
(c) Pre-operation period (d) Sensori-motor period

78. Hearing impaired children exhibit:

(a) barriers in communication by language (b) barriers in moving around
(c) barriers in individuals self-care skills (d) barriers in tactile skills

79. Which of the following is not the determinant of personality?

(a) Heredity (b) Environment
(c) Situation (d) Communication

80. Which of the following is not the determinant of personality?

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81. Most prominent member of Gestalt Psychology

(a) Kurt Koffka (b) Max Wertheimer
(c) Wolfgang Kohler (d) All of these

82. The ability to feel what others are feeling is referred to as:

(a) Interpersonal ability (b) Intrapersonal ability
(c) Bodily-kinesthetic ability (d) Naturalistic ability

83. Which of the following abilities form creativity according to Guilford and Torrance?
I. Fluency
II. Interdependency

III. Persistency
IV. Originality

(a) II, III and IV (b) I, II, III and IV
(c) I, II and III (d) I, III and IV

84. What is known as receptive skill in language learning?

(a) Speaking and writing (b) Listening and speaking
(c) Read and write (d) Listen and read

85. Which of the following is/are the assumptions of micro-teaching?

(a) It is a real teaching. (b) It ensures mastery in learning
(c) It is carried under non-complex environment. (d) All of the above

86. The profounder of the three-dimensional theory of intelligence is:

(a) Kohler (b) Thorndike
(c) JP Guildford (d) Vygotsky

87. What is the correct sequence of acquiring a language?

(a) Listening, speaking, reading, writing (b) writing, speaking, reading, listening
(c) Listening, reading, writing, speaking (d) speaking, listening, reading, writing

88. According to National Curriculum Framework (NCF) 2005;

(a) Narrow aim of teaching mathematics is to teach numbers and numbers concepts and higher aims is to teach measuremets. (b) Narrow aim of teaching mathematics is to teach precise calculation and higher aim to teach calculus
(c) The narrow aim of teaching mathematics is to develop numeracy related skills and the higher aim is to develop problem-solving skills (d) Narrow aim of teaching mathematics is to develop mathematical language and higher aim is to solve word problems

89. Which of the following is not an element of creativity?

(a) Adjustment (b) Changing the thoughts of others
(c) Solving problems (d) Ability to go beyond the current situations

90. Which of the following condition will facilitate students' learning and thinking?

(a) Creating situations where students are passive listeners. (b) Discouraging participation in classroom discussion.
(c) Restricting students to take control over their own learning. (d) Providing students with hands-on activities.

91. Rs 4536 is divided among 4 men, 5 women and 2 boys. The ratio of the shares of a man, a woman and a boy is 7 : 4 : 3. A woman's part is:

(a) Rs. 324 (b) Rs. 168
(c) Rs. 224 (d) Rs. 336

92. A wheel has a radius of 35 cm. How many revolution will it make to cover 11 km?

(a) 4800 (b) 4990
(c) 5000 (d) 5020

93. The coordinates of two vertices of a triangle are (6, 3) and (-1, 7) and its centroid is (1, 5). Then the coordinate of third vertex is:

(a) (2, 5) (b) (2, -5)
(c) (-2, 5) (d) (-2, -5)

94. The total surface area of a solid hemisphere of diameter 14 cm is:

(a) 348 cm^2 (b) 442 cm^2
(c) 462 cm^2 (d) 478 cm^2

95. The volume (in cm^3) of a cube, whose principal diagonal measures $4\sqrt{3}$ cm, is:

(a) 8 (b) 27
(c) 64 (d) 125

96. The price of an article is reduced by 10%. To restore its original price, how much percentage increase must be done in new price?

(a) 10% (b) $9\frac{1}{11}\%$
(c) 11% (d) $11\frac{1}{9}\%$

97. A person buys a shirt at 30% discount on the printed price and sells it at 12% profit on the printed price. Profit on cost price in percentage is:

(a) 42% (b) 48%
(c) 60% (d) 64%

98. If 'A' completes 3/5 of a work in 3 days, 'B' completes 1/5 of the same work in 4 days. If both of them work together, they complete 1/5 of that work. How much time will it take to complete /2?

(a) 2½ days (b) 2 day
(c) 3½ days (d) 4 days

99. The probability that in a family of 3 children, there will be at least one boys is:

(a) 1/2 (b) 1/8
(c) 3/4 (d) 7/8

100. A person bought 6 articles of Rs. 5 and sold 5 articles for Rs. 6. The profit percentage is:
(a) 20% (b) 30%
(c) 40% (d) 44%

101. How many numbers lie between 10 and 300, which leaves always remainder 3 when divided by 4?
(a) 73 (b) 71
(c) 68 (d) 72

102. Which of the following cannot be determined graphically?
(a) Mode (b) Mean
(c) Median (d) None of these

103. The probability that 'A' hits a target is 4/5 and the probability that 'B' hits the same target is 3/4. If each of them hits once. Then the probability of hitting only one of them is:
(a) 3/5 (b) 6/7
(c) 7/8 (d) 7/20

104. If the altitude of an equilateral triangle is $\sqrt{6}$ cm. Then its area is:
(a) $2\sqrt{3}$ cm^2 (b) $2\sqrt{2}$ cm^2
(c) $3\sqrt{3}$ cm^2 (d) $3\sqrt{2}$ cm^2

105. The ratio of third proportional to 12 and 30 and the mean proportional between 9 and 25 is:
(a) 2 : 1 (b) 4 : 3
(c) 5 : 1 (d) 15 : 7

106. If the sum of n terms of a geometrical progression is $5(2^n - 1)$. then common ratio is:
(a) 1/2 (b) 2
(c) 1/3 (d) 3

107. If a solid piece of iron in the form of a cuboid of dimensions 49 cm × 33 cm × 24 cm is moulded to form a solid sphere, then radius of the sphere is
(a) 21 cm (b) 23 cm
(c) 25 cm (d) 19 cm

108. A side of a square plot is 150 m. Inside the plot, 3.5 m wide path is constructed all around the side, the area of the path is:
(a) 2100 sq. m. (b) 2002 sq. m.
(c) 2151 sq. m. (d) 2051 sq. m.

109. If the median is 20 and each data is increased by 2, then new median is:
(a) 22 (b) 18
(c) 24 (d) 20

110. If the diagonals of a quadrilateral bisect one another at right angles, then the quadrilateral is:
(a) Trapezium (b) Rhombus
(c) Parallelogram (d) Rectangle

111. Two cubes each of volume 64 cm^3 are joined end to end. Then the surface area of the resulting cuboid is:
(a) 140 cm^2 (b) 148 cm^2
(c) 160 cm^2 (d) 176 cm^2

112. A bag contains 24 balls of which x are red, 2x are white and 3x are blue balls. A ball is selected at random, the probability that is not red, is:
(a) 1/6 (b) 5/6
(c) 1/3 (d) 2/3

113. The single discount, which is equal to three successive discounts of 10 %, 20% and 25%, is:
(a) 49.6% (b) 46%
(c) 50.4% (d) 52%

114. A number is taken from 1 to 100. What is the probability of it being a prime number?
(a) 1/5 (b) 3/5
(c) 1/4 (d) 6/25

115. The slope of the line 4x + 3y - 4 = 0 is:
(a) 3/4 (b) -4/3
(c) 4/3 (d) -3/4

116. 'A' and 'B' can do a piece of work in 12 days. 'B' and 'C' can do in 15 days, 'C' and 'A' can do in 20 days. How many days 'A' alone will finish the same work?
(a) 30 (b) 20
(c) 60 (d) 40

117. The radii of the base of a cylinder and a cone are in the ratio of 3 : 4 and their heights are in the ratio 2 : 3. Then the ratio of their volumes is:
(a) 1 : 2 (b) 9 : 8
(c) 3 : 4 (d) 4 : 3

118. The measure of that angle which four times its supplement is:
(a) 36° (b) 144°
(c) 155° (d) 180°

119. The length of tangent, drawn from a point 8 cm away from the center of a circle of radius 6 cm is:
(a) $\sqrt{7}$ cm (b) $2\sqrt{7}$ cm

(c) $3\sqrt{7}$ cm (d) $5\sqrt{7}$ cm

120. The sum of the remainders obtained when polynomial $2x^3 + (p + 2)x + (p - 2)$ is divided by $(x - 2)$ and when it is divided by $(x + 1)$ is 0. Then the value of p is:

(a) 3 (b) -2
(c) -4 (d) 6

121. If the difference of mode and median is 36, then the difference of median and mean is:

(a) 12 (b) 18
(c) 16 (d) 22

122. If the sum of interior angles of a polygon is 1620°. Then number of sides of the polygon is:

(a) 9 (b) 10
(c) 11 (d) 12

123. $(x^n - y^n)$ is divisible by $(x - y)$ then the value of n is:

(a) an even number (b) an odd number
(c) a prime number (d) a natural number

124. The base of an isosceles triangle 12 cm and its perimet4er is 32. Then the are of isosceles triangle:

(a) 42 cm^2 (b) 48 cm^2
(c) 54 cm^2 (d) 60 cm^2

125. In a right angled triangle ABC, right angle is at C, if tan A = 1, then value of sin A cos A is:

(a) 1 (b) $1/\sqrt{2}$
(c) 1/2 (d) 2

126. From one corner of a square of side 8 cm, a small square of side 1 cm is cut off. Then the perimeter of the remaining figure is:

(a) 28 cm (b) 30 cm
(c) 32 cm (d) 34 cm

127. Two parallel sides of a trapezium are 60 cm and 77 cm and other two sides are 25 cm and 26 cm, then area of the trapezium is:

(a) 1620 cm^2 (b) 1642 cm^2
(c) 1644 cm^2 (d) 1648 cm^2

128. Which one of the following statements is false for the following pair of linear equations?
$a_1x + b_1y + c_1 = 0$
$a_2x + b_2y + c_2 = 0$

(a) If $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$, then the lines will be coincident

(b) If $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$, then the lines will intersect each other

(c) If $\frac{a_1}{a_2} = \frac{b_1}{b_2}$, then the lines will intersecting

(d) If $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$, then the lines will be parallel

129. If the points A(-3, 9), B(a, b) and C(4, -5) are collinear and a + b = 1, then the values of a and b are:

(a) a = 2, b = 1 (b) a = 2, b = -1
(c) a = -2, b = 1 (d) a = -2, b = -1

130. The angles of a triangle are in the ratio 5 : 3 : 7. Then triangle is:

(a) an acute angled triangle (b) an obtused angled triangle
(c) a right angled triangle (d) an isosceles triangle

131. What is the smallest number by which 8788 must be divided so that the quotient will be a perfect cube?

(a) 3 (b) 4
(c) 5 (d) 6

132. What is the least number which is added to 680621 to make the sum a perfect square?

(a) 5 (b) 6
(c) 4 (d) 8

133. The angle of elevation of the top of a tower from two points at distance a and b metres from the base and in the same straight line with it are complementary, then height of the tower is:

(a) $\sqrt{ab}$ (b) $2\sqrt{ab}$
(c) ab (d) 1/4ab

134. The mean of the following data is:

Class	Frequency
0-5	4
5-10	5
10-15	7
15-20	12
20-25	7
25-30	5

(a) 14 (b) 15
(c) 16 (d) 18

135. The L.C.M. of two prime numbers, x and y (x > y) is 161. Then the value of (x - y) is:

(a) 9 (b) 13
(c) 15 (d) 16

136. In what ratio is the segment joining the points (4, 6) and (-7, -1) divided by x-axis?

(a) 1 : 6 (b) 6 : 2
(c) 2 : 6 (d) 6 : 1

137. The least number must be subtracted from each of numbers 14, 17, 34 and 42, so that the remainders may proportional, is:

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

138. For what value of k the system of linear equations has no solution.
$(3k + 1)x + 3y - 2 = 0$
$(k^2 + 1)x + (k - 2)y - 5 = 0$

(a) 1 (b) -1
(c) 2 (d) 6

139. What is the rational form of $0.\overline{001}$?

(a) 1/99 (b) 100/99
(c) 1/999 (d) 100/999

140. The distance between the points (-4, 7) and (2, -5) is:

(a) $5\sqrt{6}$ units (b) $\sqrt{56}$ units
(c) $4\sqrt{5}$ units (d) $6\sqrt{5}$ units

141. If sec α + tan α = p, then the value of tan α is:

(a) $\frac{p^2-1}{2p}$ (b) $\frac{p^2-1}{p^2+1}$
(c) $\frac{2p}{p^2-1}$ (d) $\frac{p^2-1}{p}$

142. If the diagonals of a rhombus are 24 cm and 10 cm. Then the perimeter of the rhombus is:

(a) 48 cm (b) 52 cm
(c) 56 cm (d) 60 cm

143. A number, whose decimal expression is non-terminating, non-recurring, is called:

(a) Rational (b) Irrational
(c) Both rational and irrational (d) Neither rational nor irrational

144. If $a^x = b^y = c^z$ and $b^2 = ac$, then the value of y is:

(a) $\frac{2xz}{x+z}$ (b) $\frac{xz}{x+z}$
(c) $\frac{xz}{2x+z}$ (d) $\frac{3xz}{x+z}$

145. In a circle of radius 7 cm, an arc subtends an angle of 108° at the centre The are of the sector is:

(a) 43.2 cm^2 (b) 44.2 cm^2
(c) 45.2 cm^2 (d) 46.2 cm^2

146. If $\cos\theta + \sin\theta = \sqrt{2}\cos\theta$, then the value of $\cos\theta - \sin\theta$ is:

(a) $\sqrt{2}\tan\theta$ (b) $\sqrt{2}\sin\theta$
(c) $\sqrt{2}\cot\theta$ (d) $\sqrt{2}\operatorname{cosec}\theta$

147. Which of the following equations has no real root?

(a) $x^2 - 4x + 3\sqrt{2} = 0$ (b) $x^2 + 4x - 3\sqrt{2} = 0$
(c) $x^2 - 4x - 3\sqrt{2} = 0$ (d) $3x^2 + 4\sqrt{3}x + 4 = 0$

148. If $\cot\theta + \cos\theta = p$ and $\cot\theta - \cos\theta = q$, then the value of $(p^2 - q^2)$ is:

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

149. In ΔABC, ∠A = 66°, the internal bisectors of ∠B and ∠C intersect at O. The measure of ∠BOC is:

(a) 57° (b) 114°
(c) 123° (d) 130°

150. The area of the largest triangle can be inscribed in a semicircle whose radius is r cm, is:

(a) 2r cm^2 (b) r^2 cm^2
(c) $2r^2$ cm^2 (d) $r^2/2$ cm^2