KJA2/22

<u>DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO.</u>

2022

TEST BOOKLET

Time allowed : 2 hours

Full marks : 200

Answer *all* the questions.

TEST BOOKLET SERIES

D

Serial No. ....

Signature of the Candidate: Arun Kumar Majumder

INSTRUCTIONS

Candidates should read the following instructions carefully before answering the questions:

1. Immediately after the commencement of the examination, you should check that this Test Booklet does not have any unprinted or torn or missing pages or questions, etc. if so, get it replaced by a complete Test Booklet.

2. This booklet consists of 12 pages including this front page.

3. Answer will have to be given in the Answer Sheet (OMR) supplied for the purpose.

4. Please note that it is the candidates' responsibility to encode and fill in the Roll Number and Test Booklet series (A/B/C/D) carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.

5. You have to enter your roll number on the rest Booklet in the Box provided. Do not write anything else on the Test Booklet.

6. This Test Booklet contains 100 questions of multiple-choice answer type. Each question comprises four answers. You will select the answer which you want to mark on the Answer Sheet. In case you feel that there is more than one correct answer, mark the answer, which you consider the best. In any case, choose **ONLY ONE** answer for each question.

7. **There are 100 questions carrying 2 (Two) marks each.**

8. Before you proceed to mark in the Answer Sheet, the answer to various questions in the Test Booklet, you have to fill in some particular in the Answer Sheet (**OMR**) as per instruction therein.

9. After you have completed filling in all your answers on the Answer Sheet (**OMR**) and the examination has concluded, you should hand over to the Invigilator only the Answer Sheet (OMR), you are permitted to take away with you the Test Booklet.

10. Sheet for rough work is appended in the Test Booklet at the end.

11. **Penalty for wrong answer:**

There will be penalties for wrong answer marked by the candidate in the objective type multiple-choice question papers.

   (i) **There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidates, half (½) of the marks assigned to that question will be deducted as penalty.**

   (ii) **If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will be same penalty as above to that question.**

   (iii) **If a question is left blank, i.e., no answer is given by the candidate, neither any mark will be awarded nor any penalty will be imposed.**

12. Candidates are not allowed to use Calculator, Pager, Mobile Phone or any other type of electronic gadget of communication in the Examination Hall.

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1. The least number which when divided by 8, 24 and 36 will leave, in each case, a remainder 3 is
   (A) 68
   (B) 75
   (C) 76
   (D) 72

2. Instrument used for measuring very high temperature is
   (A) Pyroscope
   (B) Pyrometer
   (C) Seismograph
   (D) Xylometer

3. 'Myopia' is associated with
   (A) Eye
   (B) Nose
   (C) Lung
   (D) Kidney

4. Highest Railway Bridge in the world will be constructed on the river—
   (A) Chenab
   (B) Ganga
   (C) Yamuna
   (D) Kaveri

5. The average of the first four of five numbers is 40 and that of the last four numbers is 25. The difference between the first and the last number is
   (A) 40
   (B) 50
   (C) 60
   (D) 70

6. The compound interest on ₹ 5,000 for 2 years @5% p.a. is
   (A) ₹ 521·50
   (B) ₹ 512·50
   (C) ₹ 512
   (D) ₹ 500

7. Select the correct synonym of the following word from the alternatives provided:
   'Incognito'—
   (A) Candid
   (B) Impromptu
   (C) Opposed
   (D) Disguised

8. A can do a piece of work in 2 days and B can do it in 4 days. If they work together the work will be finished in
   (A) $1\frac{1}{3}$ days
   (B) 2 days
   (C) $1\frac{1}{4}$ days
   (D) 3 days

9. In which of the following places Major Dhyanchand Sports University is being established?
   (A) Delhi
   (B) Meerut
   (C) Hyderabad
   (D) Kolkata

10. If tanA = 1 and tanB = $\sqrt{3}$, the value of cosA.cosB – sinA.sinB is
    (A) $\frac{1-\sqrt{3}}{2\sqrt{2}}$
    (B) $\frac{1+\sqrt{3}}{2\sqrt{2}}$
    (C) 3
    (D) 1

11. A and B together have ₹ 640, B and C together have ₹ 580, A and C together have ₹ 860. A's sum is
    (A) ₹ 560
    (B) ₹ 500
    (C) ₹ 450
    (D) ₹ 460

12. Which of the following rivers is also known as Vridha Ganga?
    (A) Krishna
    (B) Kaveri
    (C) Godavari
    (D) Narmada

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13. The full form of DAP fertiliser is
(A) Dichloride Pottasium
(B) Dihydroxyacetone Phosphate
(C) Diammonium Phosphate
(D) Dialuminium Phosphate

14. Choose the correct preposition to fill in the blank in the following sentence:
He attributed the loss _____ me.
(A) upon
(B) with
(C) to
(D) in

15. The idiom 'Sinews of war' means
(A) Winning a war
(B) Money
(C) Rescue
(D) Disaster

16. The Merapi volcano, which is one of the most active volcanoes, is located in which country?
(A) Indonesia
(B) Australia
(C) Canada
(D) Kenya

17. Annie Besant arrived in India—
(A) 1878
(B) 1893
(C) 1885
(D) 1901

18. "The gentleman failed to convince the committee." The substitute word/words for 'convince' is
(A) Put across
(B) Put forward
(C) Put around
(D) Put by

19. The greatest number of 4 digits and the least number of 5 digits that have 124 for their H.C.F., are
(A) 9796, 10168
(B) 9976, 10681
(C) 9998, 10040
(D) 9920, 10044

20. The past participle form of the verb 'Swear' is
(A) Sweared
(B) Swore
(C) Sworn
(D) Sworen

21. The word 'long' indicates the dimension of shape of a thing but 'long for' means
(A) Length
(B) Desire
(C) Distance
(D) Pleasure

22. Fill in the blank:
Father is anxious _____ hear from his daughter.
(A) about
(B) to
(C) for
(D) with

23. Fill in the blanks with suitable prepositions:
He toyed _____ the idea _____ going to Delhi.
(A) upon, for
(B) with, of
(C) by, on
(D) to, in

24. A sum of money becomes ₹3250 in 3 years and ₹3875 in 5 years 6 months at simple interest. The rate of interest p.a. is
(A) 6%
(B) 5%
(C) 10%
(D) 8%

25. The greatest prime number of two digits is
(A) 99
(B) 57
(C) 11
(D) 97

26. Which of the Vedas has been rendered musically?
(A) Rig Veda
(B) Sam Veda
(C) Yayur Veda
(D) Atharva Veda

27. A man rows down a river 18 km in 4 hours with the stream and returns in 12 hours. The rate at which the stream flows per hour is
(A) 1·5 km
(B) 1 km
(C) 2 km
(D) 3 km

28. Which of the following rivers flows between Vindhyan and Satpura ranges?
(A) Son
(B) Mahanadi
(C) Godavari
(D) Narmada

29. The marked price of an article is ₹ 450. If a seller marks up its price by 20% and then sells, a buyer will have to pay for it
(A) ₹ 560
(B) ₹ 500
(C) ₹ 520
(D) ₹ 540

30. The highest peak in the Eastern Ghats in India is
(A) Anaimudi
(B) Mahendragiri
(C) Khari
(D) Astamudi

31. The cost price of 16 books is equal to the selling price of 20 books. The percentage of loss is
(A) 30
(B) 20
(C) 15
(D) 10

32. Which country supplies 'MH-60 Romeo Multi Role Helicopters' to India?
(A) U.K.
(B) Russia
(C) France
(D) USA

33. Who won the second position of All England Open Badminton Championship, 2022?
(A) P.V. Sindhu
(B) K. Srikant
(C) Lakshya Sen
(D) Saina Nehwal

34. 'To wink at' means
(A) to look forward
(B) to ignore
(C) to criticise
(D) to look eagerly

35. 'Anthophobia' is a fear of
(A) Fire
(B) Flowers
(C) Dogs
(D) Ghost

36. Fill in the blanks with correct pair of words:
Does _____ know that _____ was absent?
(A) her, I
(B) she, me
(C) her, me
(D) she, I

Please Turn Over

37. Fill in the blank with appropriate preposition:

The gentleman succumbed _____ the injury.

(A) in

(B) by

(C) to

(D) with

38. Rani Abbakka Chowta was a queen of which present-day state?

(A) Kerala

(B) Karnataka

(C) Odisha

(D) Andhra Pradesh

39. Which rock system has the maximum concentration of minerals?

(A) Cuddapah System

(B) Dharwar System

(C) Gondwana System

(D) Vindhyan System

40. "The soldiers stood by the commander-in-chief."

Here 'stood by' means

(A) to oppose

(B) to show loyalty

(C) to remain inactive

(D) to advise

41. Who created the famous Rock Garden of Chandigarh?

(A) Goudi

(B) Nekchand

(C) Saarien

(D) Chintamoni Kar

42. In the sentence "I am at <u>one</u> with you."

The word 'one' is used as a

(A) Noun

(B) Pronoun

(C) Adjective

(D) Adverb

43. If $2\sin\theta - \sqrt{3} = 0$ and $2\cos\theta - k = 0$, the value of k is

(A) 2

(B) 1

(C) 0

(D) −1

44. A cooperensis has been identified recently as the biggest dinosaur of which country/ region?

(A) Russia

(B) Australia

(C) Africa

(D) Antarctica

45. If $x = \sqrt{3} + \sqrt{2}$ and $xy = 1$, the value of $(x + y)^2 + (x - y)^2$ is

(A) 16

(B) 20

(C) 22

(D) 24

46. Whom does the Gayatri Mantra in the Rig Veda address?

(A) Indra

(B) Ushas

(C) Savitri

(D) Agni

47. Choose the word nearest meaning to the word underlined in the following sentence:

The children were very '<u>vivacious</u>' in the playground.

(A) Smiling

(B) Sporting

(C) Lively

(D) Joyful

48. Which of the following is not a strong Electrolyte?

(A) Carbonic Acid

(B) Hydrochloric Acid

(C) Potassium Hydroxide

(D) Sodium Hydroxide

49. Nuclear sizes are expressed in a unit, named—

- (A) Tesla
- (B) Newton
- (C) Fermi
- (D) Angstorm

50. Who was the founder of the City of Agra?

- (A) Ala-ud-din Khalji
- (B) Muhammad Tughlaq
- (C) Firoz Tughlaq
- (D) Sikandar Lodi

51. Along which of the following rivers "Kaziranga National Park" is located?

- (A) Brahmaputra
- (B) Sutlej
- (C) Ganga
- (D) Jamuna

52. The First Battle of Panipat was fought between

- (A) Shershah Suri and Akbar
- (B) Humayun and Ibrahim Lodi
- (C) Ibrahim Lodi and Babur
- (D) Babur and Rana Sanga

53. The length of the longest chord of the circle of radius 6·5 cm is

- (A) 13 cm
- (B) 10 cm
- (C) 8 cm
- (D) 12 cm

54. A rule by the officials is called

- (A) Monarchy
- (B) Bureaucracy
- (C) Administration
- (D) Democracy

55. The base of a right prism is a square of side 5 cm. If its volume be 1025 cc, its height will be

- (A) 31 cm
- (B) 45 cm
- (C) 36 cm
- (D) 41 cm

56. If $2x^3 + x^2 + 5$ be divided by $x + 2$, the remainder is

- (A) 5
- (B) 7
- (C) −7
- (D) −5

57. The word nearest in meaning to 'Prerogative' is

- (A) Privilege
- (B) Adage
- (C) Derogative
- (D) Accumulative

58. Fill in the blanks with suitable words from options:

Good nature and good sense must ever join,
To _____ is human to forgive _____.

- (A) Die, Crime
- (B) Love, Sin
- (C) Err, Divine
- (D) Blame, Malign

59. The synonym for the word 'Apogee' is

- (A) Appearance
- (B) Beginning
- (C) Highest point
- (D) Back side

60. A man deposited ₹ 20,000 in post office @5% p.a. compound interest. After 2 years he will receive

- (A) ₹ 22,500
- (B) ₹ 23,000
- (C) ₹ 22,000
- (D) ₹ 22,050

Please Turn Over

61. DE is parallel to BC of ΔABC. It intersects AB and AC at D and E respectively. AD = 4 cm, DB = 2 cm and the area of ΔABC = 12 sq. cm. Area of ΔADE equals to

(A) 8 cm²

(B) 6 cm²

(C) 5 cm²

(D) $5\frac{1}{3}$ cm²

62. The length and breadth of a rectangular parallelepiped is 4 cm and 5 cm respectively. If its volume be 320 cc, its height will be

(A) 24 cm

(B) 20 cm

(C) 12 cm

(D) 16 cm

63. Of the two numbers x and y, if x be increased by 15% and y be decreased by 10%, the two numbers become equal; then $x : y$ is

(A) 3 : 2

(B) 18 : 23

(C) 13 : 15

(D) 17 : 22

64. What is the name of the website launched for services related to broadcast in India?

(A) Broadcast Seva Portal

(B) Bharat Broadcast

(C) Atmanirbhar Broadcast

(D) E- Broadcast Portal

65. The values of x for which $x^2 + x - 90 = 0$, are

(A) 9, 10

(B) 6, 15

(C) 9, – 10

(D) 5, 18

66. 'His bank account was in the black' means

(A) he had untaxed money.

(B) he had a credit balance.

(C) he had a secret account.

(D) he had a fake account.

67. In ΔABC, ∠B = 90°, AB = 1·5 cm, AC = 2·5 cm. The area of the triangle is

(A) 2 sq. cm

(B) 1·5 sq. cm

(C) 3 sq. cm

(D) 2·5 sq. cm

68. The Earth's atmosphere is divided into _____ main layers.

(A) 4

(B) 5

(C) 6

(D) 7

69. A and B started a partnership business. A invested ₹ 500 for 9 months and B invested his capital for 6 months. Total profit was ₹ 69 and B got ₹ 46 as share of profit. B's capital is

(A) ₹ 1,200

(B) ₹ 1,500

(C) ₹ 1,000

(D) ₹ 1,600

70. The amount of ₹1, for 5 years at 5% p.a. simple interest is

(A) ₹ 12·50

(B) ₹ 1·25

(C) ₹ 10·25

(D) ₹ 1·75

71. The ratio of ages of A and B is 5:8. If the difference of their ages be 15 years, the sum of their ages will be

(A) 75 years

(B) 60 years

(C) 65 years

(D) 52 years

72. Fill in the blanks with suitable prepositions:
He is suffering _____ fever accompanied _____ headache.

(A) from, with

(B) of, by

(C) in, to

(D) None of the above

73. Golf player Vijay Singh belongs to the country
   (A) India
   (B) Fiji
   (C) USA
   (D) Pakistan

74. The idiomatic expression 'At daggers drawn' means
   (A) violently opposed to each other.
   (B) violent to everyone.
   (C) dangerous to others.
   (D) intimate to each other.

75. Faizee lived in the court of
   (A) Humayun
   (B) Dara Shikoh
   (C) Bahadur Shah Zafar
   (D) Akbar

76. Molten rock below the surface of the earth is called
   (A) Lava
   (B) Magma
   (C) Crystals
   (D) Granite

77. 'Lachrymose nature' means
   (A) Lethargic
   (B) Prone to anger
   (C) Prone to tears
   (D) Courageous

78. Who is regarded as the great law giver of the ancient India?
   (A) Panini
   (B) Manu
   (C) Kautilya
   (D) Baraha Mihir

79. The 'Blue-eyed' person means
   (A) Gentleman
   (B) Richman
   (C) Youngman
   (D) Favourite person

80. Fill in the blank with appropriate word/ group of words, in the following sentence:
   One dark night a watchman _____ passing by an old temple.
   (A) found to
   (B) happened to be
   (C) went
   (D) None of the above

81. The appropriate verbal form of the noun 'flower' is
   (A) flowering
   (B) enflower
   (C) flowren
   (D) flourish

82. 'Shavuot', which was making news recently, is a festival celebrated by which category of religious people?
   (A) Jews
   (B) Muslims
   (C) Christians
   (D) Buddhists

83. The state having largest area under waste land is
   (A) Rajasthan
   (B) Gujarat
   (C) Madhya Pradesh
   (D) Jammu and Kashmir

84. Which 'Water Body' separates Andaman and Nicobar Islands?
   (A) 10 Degree Channel
   (B) 11 Degree Channel
   (C) Andaman Sea
   (D) Bay of Bengal

Please Turn Over

85. If $\dfrac{a}{b+c} = \dfrac{b}{c+a} = \dfrac{c}{a+b} = k$, the value of k is

   (A) ½ or – 1

   (B) – 1 or 1

   (C) 2 or 1

   (D) 3 or – 1

86. Panchatantra was written by

   (A) Bhramabhat

   (B) Vishnu Sharma

   (C) Jaya Deva

   (D) None of them

87. Bathukamma is a floral festival celebrated in which Indian state?

   (A) Kerala

   (B) Telangana

   (C) West Bengal

   (D) Punjab

88. When is World Refugee Day observed every year?

   (A) June 20

   (B) June 25

   (C) June 30

   (D) July 1

89. The ratio of the volumes of two spheres of radii 6 cm and 9 cm is

   (A) 8 : 21

   (B) 7 : 27

   (C) 8 : 27

   (D) 2 : 3

90. "I worked for a _while_."

In the above statement 'while' has been used as

   (A) Noun

   (B) Pronoun

   (C) Adverb

   (D) Adjective

91. Choose the correct preposition to fill in the blank in the following sentence:

The criminal hit the police ———— head with an iron pipe.

   (A) on

   (B) at

   (C) to

   (D) in

92. Which of the following mountains are the oldest according to geological history?

   (A) Nilgiris

   (B) Satpura Range

   (C) Vindhyas

   (D) Aravalli

93. 'Apatanis' are the tribes found in

   (A) Sikkim

   (B) Nagaland

   (C) Arunachal Pradesh

   (D) Assam

94. If a sum of money doubles itself in 10 years 6 months, it will be trebled itself in same rate of simple interest in

   (A) 21 years

   (B) 20 years

   (C) 24 years

   (D) 22 years

95. What is the limit of Foreign Direct Investment permitted in road and highways sector in India?

   (A) 90%

   (B) 100%

   (C) 80%

   (D) 75%

96. A person suffering from uncontrollable desire to steal something is called

   (A) Introvert

   (B) Necromantic

   (C) Necrophobic

   (D) Kleptomaniac

97. 'Litoria Mira', that has been discovered from the rainforests of New Guinea, is a _____.

   (A) Snake

   (B) Frog

   (C) Otter

   (D) Toucan

98. He is <u>out at elbows</u> now.

   The underlined idiom used in the above sentence means

   (A) Rich

   (B) Free from difficulties

   (C) Liberal

   (D) Poor

99. The feminine form of the word 'Fox' is

   (A) Foxen

   (B) Fex

   (C) Vixen

   (D) Foxess

100. The values of x and y for which $\dfrac{3}{x+y}+\dfrac{4}{x-y}=5$ and $\dfrac{15}{x+y}+\dfrac{1}{x-y}=6$ hold simultaneously are

   (A) $x = 1, y = 2$

   (B) $x = 2, y = 3$

   (C) $x = 2, y = 1$

   (D) $x = 3, y = 1$