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UP B.Ed

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Paper I

Section I : General Awareness

1. Which metal has so far not been discovered in Harappan sites?
   (a) Copper
   (b) Gold
   (c) Silver
   (d) Iron

2. In which Upanishad is mentioned 'Satyameva Jayate'?
   (a) Chandogya Upanishad
   (b) Mundaka Upanishad
   (c) Kathopnishad
   (d) None of the above

3. Who is the author of 'Prithviraja Vijaya'?
   (a) Chand Bardai
   (b) Prithviraj Chauhan
   (c) Jayanaka
   (d) Nayachand Suri

4. Which one of the following was the official language of Gupta period?
   (a) Pali
   (b) Magadhi
   (c) Prakrit
   (d) Sanskrit

5. Which one of the following Muslim rulers was hailed as the 'Jagadguru' by his Muslim subjects, because of his belief in Secularism?
   (a) Hussain Shah
   (b) Zain-ul-Abidin
   (c) Ibrahim Adil Shah II
   (d) Mahmud II

6. Who was the Viceroy of India when the British India's capital was shifted from Calcutta to Delhi?
   (a) Lord Curzon
   (b) Lord Hardinge
   (c) Lord Dalhousie
   (d) Lord William Bentinck

7. Which one among the following was a newspaper founded and edited by Raja Rammohan Roy?
   (a) The Calcutta Gazette
   (b) Mirat-ul-Akhbar
   (c) Harijan
   (d) The Bharat Mihir

8. The first Indian to context an election to the British House of commons was
   (a) Dadabhai Naoroji
   (b) Gopal Krishna Gokhale
   (c) Feroz Shah Mehta
   (d) WC Banerjee

9. With reference to Indian freedom struggle, who of the following formed the Congress Khilafat Swarajya Party?
   (a) Vallabhbhai Patel and Maulana Abul Kalam Azad
   (b) Jawaharlal Nehru and Hakim Ajmal Khan
   (c) Motilal Nehru and CR Das
   (d) All of the above

10. Who among the following has authored the book 'Hind Swaraj'?
    (a) Bal Gangadhar Tilak
    (b) Mahatma Gandhi
    (c) MG Ranade
    (d) None of these

11. Who among the following was the Governor-General of India immediately preceding Chakravarthi Rajagopalachari?
    (a) Linlithgrow
    (b) Lord Mountbatten
    (c) Lord Wavell
    (d) Lord Chelmsford

12. The 'Blue Moon' phenomenon occurs
(a) When two full Moon occur in the same month.
(b) When four full Moon appear in two consecutive months of the same calendar year.
(c) When two full Moon appear in the same month thrice in a calendar year.
(d) None of the above

13. Which one among the following is called 'terrestrial planet'?
(a) Mercury (b) Jupiter (c) Saturn (d) Uranus

14. 'Mohs scale' is used to indicate the
(a) degree of viscosity of a liquid
(b) degree of brittleness of a substance
(c) degree of hardness of minerals
(d) degree of elasticity of a material

15. Cloudy nights are warmer than clear nights because
(a) greenhouse effect
(b) depletion of Ozone layer
(c) insolation
(d) it acts as a hindrance to terrestrial radiation

16. Which one of the following countries is not bordering Caspian sea?
(a) Russia   (b) Iran
(c) Poland   (d) Kazakhstan

17. Identify the odd one.
(a) Benguela current   (b) Peruvian current
(c) Canary current   (d) Gulf stream

18. Bushmen tribes are found in
(a) Atacama desert   (b) Gobi desert
(c) Patagonian desert   (d) Kalahari desert

19. The second largest river basin in India is that of
(a) Mahanadi   (b) Godavari
(c) Narmada   (d) Krishna

20. The energy that can harness heat stored below the Earth's surface is known as
(a) Thermal energy   (b) Nuclear energy
(c) Tidal energy   (d) Geo-thermal energy

21. The East Central Railway Zone head quarters is located at
(a) Patna   (b) Hajipur
(c) Muzaffarpur   (d) Katihar

22. Disguised unemployment refers to
(a) Employment of more persons in a job which can be accomplished by lesser number of person
(b) Person with no job
(c) Unemployment among housewives
(d) Unemployment among people above 60 year of age

23. Nirmal Gram Puraskar is related with
(a) Sanitation   (b) Environment
(c) Unemployment   (d) Food production

24. Mid-Day Meal Scheme was started in the year
(a) 1995   (b) 1996
(c) 1997   (d) 1998

25. Inclusive growth of enunciated in the Eleventh Five Year Plan does not include which one of the following?
(a) Reduction of poverty
(b) Extension of employment opportunities
(c) Reduction of gender inequality
(d) Strengthening of capital market

26. Which of the following agencies is not included in the operation of the Kisan Credit Card (KCC)?
(a) Scheduled Commercial Banks
(b) Co-operative Banks
(c) Regional Rural Banks
(d) NABARD

27. When was the Board for Industrial and Financial Reconstruction started?
(a) 1987   (b) 1988   (c) 1990   (d) 1992

28. What is repo rate?
(a) It is the rate at which RBI sells government securities to the banks
(b) It is the rate at which RBI buys government securities from banks
(c) It is the rate at which RBI allows small loan in the market
(d) None of the above

29. Which body in India does the regulation of Insurance sector?
(a) SEBI
(b) IRDA
(c) FICCI
(d) None of the above

30. Which of the following pairs is wrong?
(a) Pressure—Barometre
(b) Relative density (Liquid)—Pyrometre
(c) Temperature—Thermometre
(d) Earthquake—Seismograph

31. The best conductor of heat among the following is
(a) alcohol
(b) mercury
(c) ether
(d) water

32. The rate of evaporation increases with
    (a) an increase of surface area
    (b) an increase of temperature
    (c) a decrease in humidity
    (d) All of the above

33. Which one of the following is an important ore of Magnesium?
    (a) Cassiterite   (b) Malachite
    (c) Carnalite   (d) Galena

34. German silver is an alloy of
    (a) Gold and Silver
    (b) Copper and Silver
    (c) Copper, Zinc and Silver
    (d) Copper, Zinc and Nickel

35. In the context of Indian wildlife, the flying fox is a
    (a) bat   (b) kite
    (c) stork   (d) vulture

36. What is MRI?
    (a) Magnetic Record of Intestines
    (b) Magnetic Recording of Investigations
    (c) Magnetic Resonance Imaging
    (d) Magnetic Resonance in Intestine

37. In which among the following cities the Headquarters of International Atomic Energy Association (IAEA) is located?
    (a) New York   (b) London
    (c) Paris   (d) Vienna

38. The National Youth Day is celebrated in the memory of
    (a) Swami Dayananda Saraswati
    (b) Swami Vivekananda
    (c) Jawaharlal Nehru
    (d) Subhash Chandra Bose

39. Konark festival is associated with which state?
    (a) Karnataka
    (b) Maharashtra
    (c) Odisha
    (d) Bihar

40. What is the target of renewable energy capacity by 2022 for India?
    (a) 150 GW   (b) 175 GW
    (c) 160 GW   (d) 100 GW

41. Which among the following Article defines Money Bill?
    (a) Article 56   (b) Article 110
    (c) Article 72   (d) Article 121

42. The Legislative Council in the state can be abolished by
    (a) President
    (b) State Legislative Assembly
    (c) Governor
    (d) Parliament

43. Which among the following Constitutional Amendment made Right to Education of a Fundamental Right?
    (a) 42   (b) 86   (c) 96   (d) 44

44. The provision containing admission or establishment of new state is given in
    (a) Article 5   (b) Article 2
    (c) Article 1   (d) Article 4

45. Which among the following is Fundamental Duty of Indian Citizen?
    (a) Equality before law
    (b) Prohibition on untouchability
    (c) Abolishment of titles
    (d) To defend country and render national services when required

46. Who decides the reasonableness of the restrictions placed on Fundamental Rights in India?
    (a) Parliament   (b) Courts
    (c) President   (d) Prime Minister

47. What the minimum age for a person seeking election to the Lok Sabha?
    (a) 18 years   (b) 20 years
    (c) 25 years   (d) 35 years

48. Who is the Chairman of NITI Aayog?
    (a) President   (b) Vice President
    (c) Prime Minister   (d) Speaker

49. A person who is not a member of the any House of Parliament can be appointed as Minister for how many months?
    (a) 2 months   (b) 3 months
    (c) 4 months   (d) 6 months

50. Statue of Unity is located in which state?
    (a) Gujarat   (b) Meghalaya
    (c) Punjab   (d) Haryana

Section II : English Language

51. There is something special .... him.
- (a) of
- (b) about
- (c) for
- (d) inside

52. My wife asked him if he'd ever been convicted .... a crime.
- (a) with
- (b) by
- (c) of
- (d) on

53. I'm sorry that you .... come to the party.
- (a) can't
- (b) couldn't
- (c) hasn't
- (d) had

54. I usually .... chapatti for breakfast, but yesterday I had toast.
- (a) had been
- (b) had
- (c) have been
- (d) have

55. The teacher gave a lecture in which she pointed .... an error in the notes.
- (a) by
- (b) out
- (c) in
- (d) with

56. QUIESCENT
- (a) Active
- (b) Dormant
- (c) Weak
- (d) Unconcerned

57. GENUINE
- (a) Candid
- (b) Direct
- (c) Fraudulent
- (d) Forthright

58. BELITTLE
- (a) Criticise
- (b) Flatter
- (c) Adore
- (d) Exaggerate

59. ERRONEOUS
- (a) Enormous
- (b) Wrong
- (c) Eraded
- (d) Weak

60. FABLE
- (a) Story
- (b) Dream
- (c) Truthful
- (d) Plant

61. INDOLENT
- (a) Urgent
- (b) Menacing
- (c) Lazy
- (d) Active

62. Bend over backwards
- (a) Make every effort to help someone
- (b) To bend down
- (c) To bow down in front of others
- (d) To disrespect someone

63. Oily tongue
- (a) Hungry person
- (b) Strong critic
- (c) Flattery
- (d) Rich food

64. They go to the beach when they should be **hitting the books** and then they wonder why they get low marks.
- (a) Scrutinising
- (b) Studying
- (c) Chew over
- (d) Exploring

65. Manisha was reading a book in her room.
- (a) A book was reading by Manisha in her room.
- (b) A book was being read by Manisha in her room.
- (c) A book was being reading by Manisha in her room.
- (d) A book is read by Manisha in her room.

66. The teacher informed the students about the picnic.
- (a) The students were informed about the picnic by the teacher.
- (b) The students were being informed by the teacher about the picnic.
- (c) The students informed the teacher about the picnic.
- (d) The students are being informed about the picnic by the teacher.

67. He teaches the unpriviliged children for free.
  (a) The unpriviliged children are being taught by him for free.
  (b) The unpriviliged children were taught by him for free.
  (c) The unpriviliged children were being taught by him for free.
  (d) The unpriviliged children are taught by him for free.

68. The thief was caught red-handed by the police.
  (a) The police was caught red-handed by the thief.
  (b) The police caught the thief red-handed.
  (c) The police catches the thief red-handed.
  (d) The thief got caught red-handed.

69. The window pane has been broken by the children.
  (a) The children have broken the window pane.
  (b) The children had broken the window pane.
  (c) The children were breaking the window pane.
  (d) The children broke the window pane.

Directions (Q. Nos. 70-76) *Which of the phrases given below each sentence should replace the phrase printed in bold type to make the sentence grammatically correct? If the sentence is correct as it is, mark (d) No improvement as the answer.*

70. They have published **all detail of an invention**.
  (a) all details of invention
  (b) all the details of invention
  (c) all the details of the invention
  (d) No improvement

71. He **teach** us grammar.
  (a) taught   (b) teaches
  (c) teaching   (d) No improvement

72. In winter people **do not took** a bath.
  (a) do not take   (b) did not taken
  (c) not taken   (d) No improvement

73. Sugar is **grown** in Southern parts of India.
  (a) grows
  (b) grew
  (c) grow
  (d) No improvement

74. Aditya and Rahul were shopping **on a mall**.
  (a) into the mall   (b) at the mall
  (c) by the mall   (d) No improvement

75. Why did he deprive you **from** the membership?
  (a) in   (b) by
  (c) of   (d) No improvement

76. Was the question answered?
  (a) answer   (b) answering
  (c) answers   (d) No improvement

Directions (Q. Nos. 77-81) *In these questions, 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.*

77. "Take care on the steps", said the guide to the tourists.
  (a) The guide asked the tourists that they should mind their steps.
  (b) The guide warned that they should mind their steps.
  (c) The guide warned the tourists to take care on the steps.
  (d) The guide requested the tourists to take care on the steps.

78. "Mahi would come again soon", she assured them.
  (a) She assured them that Mahi would come again soon.
  (b) She assured them that Mahi will be coming soon.
  (c) She assured Mahi would come again soon.
  (d) She assured them Mahi would come again.

79. The Principal asked me why I was late.
  (a) The Principal said to me, "Why you were late?"
  (b) The Principal said to me, "Why you are late?"
  (c) The Principal said to me, "Why were you late?"
  (d) The Principal said to me, "Why are you late?"

80. Tim said, "I went to Australia to visit my family".
  (a) Tim said that he went to Australia to visit his family.
  (b) Tim said that he had gone to Australia to visit his family.
  (c) Tim said that he is going to Australia to visit his family.
  (d) Tim said that he was going to Australia to visit his family.

81. He told me that he had expected me to attend the function.
    (a) He said to me, "I expect you to attend the function."
    (b) He said to me, "I expected you to attend the function."
    (c) He said to me, "I was expecting you to attend the function."
    (d) He said to me, "I have expected you to attend the function."

Directions (Q. Nos. 82-84) *Find out the correct degree in the given options.*

82. He is the strongest wrestler.
    (a) Positive   (b) Superlative
    (c) Comparative   (d) None of these

83. She is smarter than her brother.
    (a) Comparative
    (b) Superlative
    (c) Positive
    (d) None of the above

84. These mangoes are tastier than those.
    (a) Positive   (b) Comparative
    (c) Superlative   (d) None of these

Directions (Q. Nos. 85-87) *Which figure of speech is used in the following sentences?*

85. The righteous shall flourish as the palm tree.
    (a) Simile   (b) Metaphor
    (c) Personification   (d) Apostrophe

86. The camel is the ship of the desert.
    (a) Simile
    (b) Oxymoron
    (c) Personification
    (d) Metaphor

87. O Solitude ! where are the charms that sages have seen in thy face?
    (a) Personification   (b) Hyperbola
    (c) Apostrophe   (d) Metaphor

Directions (Q. Nos. 88 and 89) *Find the wrongly spelt word out of the given four options.*

88. (a) Solitude   (b) Stationery
    (c) Cameraderie   (d) Mischievous

89. (a) Reneissance   (b) Renegade
    (c) Wreck   (d) Recognition

Directions (Q. Nos. 90-94) *Choose the correct alternative to fill in the blank.*

90. Three independent .... testified to seeing him at the scene of the crime.
    (a) person   (b) witnesses
    (c) spectator   (d) attestant

91. Could I have a .... of chocolate?
    (a) bar   (b) block
    (c) slice   (d) piece

92. She lived .... juice for ten days to slim down for the fashion show.
    (a) with   (b) by
    (c) in   (d) off

93. If she .... not interested, we ....
    vacant the proposal.
    (a) is, had   (b) is, will
    (c) was, have   (d) is, would

94. The police forces .... an operation to trace out the kidnapped person.
    (a) had launch   (b) have launch
    (c) have launched   (d) has launched

Directions (Q. Nos. 95-100) *Choose the alternative which can substituted for the given words/sentences.*

95. The government by the king or a queen.
    (a) Democratic   (b) Monarchy
    (c) Plutocracy   (d) Autocracy

96. A life history written by somebody else.
    (a) Biography   (b) Autobiography
    (c) Anthropology   (d) Ornithology

97. An act of killing of an ethnic group.
    (a) Homicide   (b) Patricide
    (c) Genocide   (d) Suicide

98. Pooja does not know how to read and write. Her friends call her.
    (a) Blind folded   (b) Dumb
    (c) Invulnerable   (d) Illiterate

99. Words written on the tomb of a person.
    (a) Manuscript   (b) Inscription
    (c) Epitaph   (d) Engrave

100. A person who insists on something.
    (a) Disciplinarian   (b) Stickler
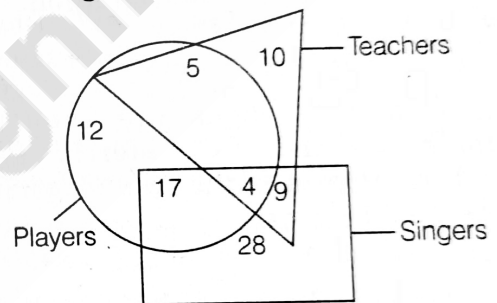   (c) Instantaneous   (d) Boaster

Paper II

Section I : Reasoning and Teaching Aptitude

Directions (Q. Nos. 1-3) *In the questions given below, select the one which is different from the other three responses.*

1. (a) Petrol   (b) Diesel
    (c) Kerosene   (d) LPG

2. (a) ACF   (b) EGI
    (c) IKN   (d) MOR

3. (a) 126   (b) 215
    (c) 342   (d) 511

4. If 'parrot' is known as 'peacock', 'peacock' is known as 'swallow', 'swallow' is known as 'pigeon' and 'pigeon' is known as 'sparrow', then what would be the name of Indian National Bird?
    (a) Parrot   (b) Swallow
    (c) Peacock   (d) Pigeon

5. Shyama says that father of Rajiv's father is my father. How Shyama is related to Rajiv?
    (a) Sister   (b) Mother
    (c) Father's sister (aunt) (d) Niece

6. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
    g _ _ g _ _ gh _ g _ i
    (a) h i h i i h   (b) h h i i h h
    (c) j k l j k l   (d) h i j k l i

7. Which will appear fourth in the dictionary?
    (a) Miracle   (b) Minority
    (c) Mistake   (d) Mission

8. If 'EARN' is written as 'GCTP', how 'NEAR' can be written in that code?
    (a) CTGP   (b) GPTC
    (c) PGCT   (d) PCGT

9. If March 27, 2011 was Sunday, what was the day on June 27, 2012?
    (a) Monday   (b) Wednesday
    (c) Sunday   (d) Saturday

10. If 'LAME' is written as 'ODPH', how can 'MALE' be written in that code?
    (a) PDOH   (b) HOPD
    (c) DOPH   (d) OPDH

Direction (Q. No. 11) *In the following question from the given alternatives select the word which cannot be formed using the letters of the given word.*

11. 'GRASSHOPPER'
    (a) HOPE   (b) SHOP
    (c) GRAM   (d) ROSE

12. There are twelve dozen of apples in a basket. Two dozen are added later. Ten apples got spoilt and are removed. The remaining are transferred equally into two baskets. How many are there in each?
    (a) 89   (b) 168   (c) 158   (d) 79

13. How many teachers are neither players nor singers?

    (a) 5   (b) 10   (c) 4   (d) 9

14. In a double track rail route, two trains start simultaneously from the opposite stations 200 km apart. The train A runs Westwards at a speed of 50 km/h and the opposite train B runs Eastwards at 40 km/h. After 3h, what will be the distance between these two trains?
    (a) 70 km   (b) 30 km
    (c) 50 km   (d) 80km

15. If $20 + 3 = 15$ and $15 + 4 = 30$, then $12 + 6 = ?$
    (a) 36   (b) 27
    (c) 60   (d) 9

16. A, B, C, D, E and F are sitting in a circle facing towards centre. D is between F and B. A is second to the left of D and second to the right of E. Who is facing towards D?
    (a) C   (b) A
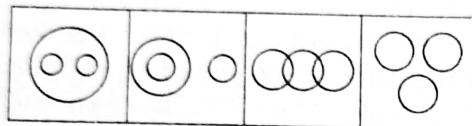   (c) E   (d) B

17. In a certain code, 'TOPPER' is written as 'POTREP'. In that code, which word will be written as 'RUBREG'?
(a) BURGER (b) BLURBE (c) BURGET (d) BEURGR

18. The total number of students in class A and class B is 120. If 15 students from class A are taken and added to class B, the number in class B becomes twice that of A. Find out the number of students in class A in the beginning.
(a) 80   (b) 65   (c) 55   (d) 40

19. Which of the following answer figures indicates best relation between aeroplanes, train, travel?

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

20. Choose the appropriate combination of signs to solve the given equation.
$(23 - 5) * (12 \div 2) * 3 * 16$
(a) + + =   (b) − ÷ =   (c) × ÷ =   (d) + − =

21. If '+' and '−' signs are interchanged, similarly '×' and '÷' are interchanged, then find the answer of the following equation.
$10 - 2 + 12 \times 1 \div 0$
(a) 8   (b) 12   (c) 1   (d) 0

22. In the morning, I walked 2 km facing the Sun and stopped. From there, I walked 4 km on my right hand side, from there I walked 1 km again facing the Sun, from there I walked on my right hand side. In which direction I shall be walking now?
(a) East   (b) South-East
(c) South-West   (d) Right hand side

Directions (Q.Nos. 23-25) *In the questions given below, one/two statements are given followed by two Conclusions I and II. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any follow from the given statements?*

23. Statement Uneducated people are exploited by others in the society.
Conclusions
I. People take advantage of uneducated people only.
II. Educated people exploit uneducated persons in society.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Both Conclusions I and II follow
(d) Neither Conclusion I nor II follows

24. Statements All crows are black. Some black things are beautiful.
Conclusions
I. Some crows are beautiful.
II. Some beautiful things are black.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Both Conclusions I and II follow
(d) Neither Conclusion I nor II follows

25. Statement Rakesh is senior to Rajesh and Rajesh is senior to Rahul.
Conclusions
I. Rakesh is senior to Rahul.
II. Rahul is not senior to Rakesh.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Both Conclusions I and II follow
(d) Neither Conclusion I nor II follows

Directions (Q. Nos. 26-28) *In the questions given below, select the missing number / letter from the given responses.*

26. 23, 24, 27, 28, 31, 32,?
(a) 30   (b) 33
(c) 29   (d) 35

27.

49	100	64
9	36	4
81	1	25
19	?	15

(a) 14   (b) 16
(c) 17   (d) 18

28.

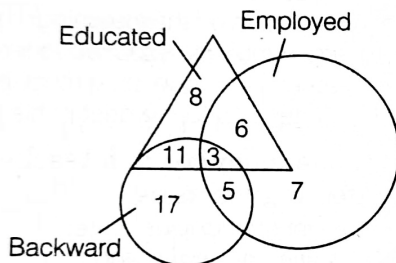| E	G	I
R	U	X
J	N	?

(a) P
(b) R
(c) O
(d) Q

29. Sunita leaves her house at 20 min to seven in the morning, reaches Vineeta's house in 25 min, they finish their breakfast in another 15 min and leave for their office which takes another 35 min. At what time, did they leave Vineeta's house to reach their office?
(a) 7 : 40 am   (b) 7 : 20 am
(e) 7 : 45 am   (d) 8 : 15 am

30. At half past 5 in the evening, the smaller angle between the hour and minute hands of a clock is
(a) 10°   (b) 12°   (c) 15°   (d) 18°

31. How many backward uneducated people are employed according to the figure given below?

(a) 14   (b) 5   (c) 7   (d) 11

Directions (Q. Nos. 32 and 33) *In the question given below, select the related letters/words/numbers from the given alternatives.*

32. Sapling : Tree : : Girl : ?
(a) Woman   (b) Wife
(c) Man   (d) Child

33. CHAIR : RIAHC : : TABLE : ?
(a) SJBID   (b) UBCMF
(c) ELTAB   (d) ELBAT

Directions (Q. Nos. 34 and 35) *The following questions, consist of two words/numbers having a certain relationship to each other, followed by same pair of words/numbers select the related pair that has the same relationship as the original pair of words.*

34. Pigeon : Peace : : ?
(a) Crown : Head
(b) White Flag : Surrender
(c) Laurels : Victory
(d) War : Liberty

35. 9 : 50 : : ?
(a) 20 : 105   (b) 22 : 110
(c) 18 : 190   (d) 15 : 225

Directions (Q.Nos. 36 and 37) *In the questions given below, a series is given, with one number/letter missing. Choose the correct alternative from the given ones that will complete the series.*

36. ELFA, GLHA, ILJA, ?, MLNA
(a) OLPA   (b) KLMA   (c) LLMA   (d) KLLA

37. 15, 39, 74, 122, ?, 265
(a) 151   (b) 165   (c) 171   (d) 185

38. Mohan is taller than Shyam but shorter than Ramesh. Ramesh is taller than Rajat but shorter than Gautam. If Shyam is taller than Rajat, then who is the shortest among all?
(a) Gautam (b) Rajat   (c) Shyam   (d) Ramesh

Directions (Q. Nos. 39-40) *In the questions given below, two/three statements are given followed by two / four Conclusions I, II, III and IV. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any follow the given statements.*

39. Statements
All teachers are experienced.
Some teachers are spinsters.
Conclusions
   I. Some experienced are spinsters.
   II. Some spinsters are experienced.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Either Conclusion I or II follows
(d) Both Conclusions I and II follow

40. Statements
In a consignment, all the boxes contain books.
Some of these boxes have also note books.
Some other boxes have also scribbling pads.
Conclusions In this consignment,
   I. Some boxes contain only scribbling pads.
   II. All boxes contain note books.
   III. Some boxes contain note books and books.
   IV. Some boxes contain note books, scribbling pads and books.
(a) Only Conclusion IV follows
(b) Only Conclusion III follows
(c) Only Conclusion II follows
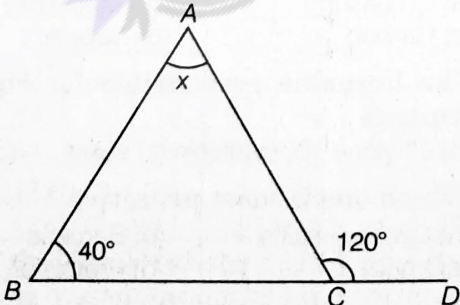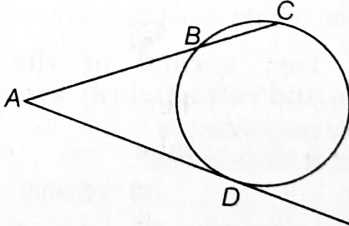(d) Only Conclusion I follows

41. Shyam goes 5 km in the North from his school. Now, turning to the left, he goes to 10 km and again turns to left and goes to 5 km. How far he is from his school and in which direction?
    (a) 10 km, South from school
    (b) 10 km, North from school
    (c) 10 km, West from school
    (d) 10 km, East from school

42. A and B is a married couple. C and D are brothers. C is the brother of A. How is D related to B?
    (a) Brother-in-law   (b) Brother
    (c) Son-in-law   (d) Cousin

43. In a class of 50 students, Raghu's rank is twice that of Paul. There are 10 students who have ranks worse than that of Raghu. Paul's rank in the class is
    (a) 5th   (b) 10th   (c) 15th   (d) 20th

Directions (Q. Nos. 44 and 45) *In the questions given below, which one of the given responses would be a meaningful order of the following?*

44. 1. Study   2. Employment
    3. Pass   4. Admission
    5. Examination
    (a) 4, 5, 3, 1, 2   (b) 4, 1, 5, 3, 2
    (c) 1, 3, 4, 5, 2   (d) 4, 1, 2, 5, 3

45. 1. Leaf   2. Fruit
    3. Stem   4. Roots
    5. Flower
    (a) 3, 4, 5, 1, 2   (b) 4, 3, 1, 5, 2
    (c) 4, 1, 3, 5, 2   (d) 4, 3, 1, 2, 5

46. The difference of the ages of Rohit and Axar is 12 yr. The ratio of their ages is 3 : 5.
    The age of Axar is
    (a) 32 yr   (b) 24 yr
    (c) 28 yr   (d) 30 yr

47. There are deer and peacocks in a zoo. By counting heads they are 80. The number of their legs is 200. How many peacocks are there?
    (a) 60   (b) 50
    (c) 20   (d) 30

48. Honey, a young female teacher, believes in personalised learning because she thinks that
    (a) learners must learn on their own.
    (b) students must enjoy their learning.
    (c) every person must be exposed to learning.
    (d) every learner is unique and must be given a chance to develop to the best of his ability.

49. Which of the following is a teacher related factor affecting learning?
    (a) Mastery over the subject matter
    (b) Proper seating arrangement
    (c) Availability of teaching-learning resources
    (d) None of the above

50. A teacher can identify a stressed child when the child shows the following behaviour.
    (a) Aggressive behaviour
    (b) Full concentration in studies
    (c) Excessive talking
    (d) Hyperactivity

Section B : Science Group

51. The sum of a number and its reciprocal is $2\frac{1}{30}$. Then, the number is
    (a) $\frac{2}{3}$ or $\frac{3}{2}$ (b) $\frac{4}{3}$ or $\frac{3}{4}$
    (c) $\frac{5}{6}$ or $\frac{6}{5}$ (d) $\frac{7}{6}$ or $\frac{6}{7}$

52. Solid cylinder of brass 8 m high and 4 m diameter is melted and recast into a cone of diameter 3 m. Then, the height of cone is
    (a) 42.66 m
    (b) 34.33 m
    (c) 58.41 m
    (d) 21.03 m

53. Factors of the $(2x^2 - 3x - 2)(2x^2 - 3x) - 63$, is
    (a) $(x - 3)(2x + 3)(x - 1)(x - 7)$
    (b) $(x + 3)(2x - 3)(x - 1)(x - 7)$
    (c) $(x - 3)(2x + 3)(x^2 - 8x + 7)$
    (d) $(x - 3)(2x + 3)(2x^2 - 3x + 7)$

54. What is the value of k, if $(x + 1)$ is a factor of $x^8 + kx^3 - 2x + 1$?
    (a) 1   (b) 2   (c) 3   (d) 4

55. A train 700 m long is running at 72 km/h. If it crosses a tunnel in one minute, then the length of the tunnel is
    (a) 200 m   (b) 300 m   (c) 500 m   (d) 700 m

56. The amount of ₹ 900 becomes ₹ 16000 in 10 yr at compound interest. At the same interest rate will be ₹ 9000 in half the time, so that the amount is
(a) ₹ 12000
(b) ₹ 12500
(c) ₹ 8000
(d) None of these

57. Two chords of a circle intersect each other at right angles. Chords-segment of first chord are 6 and 5, and chords-segment of second chord are 10 and 3. Then, diameter of circle is
(a) $\sqrt{\dfrac{85}{2}}$
(b) $\sqrt{72}$
(c) $\sqrt{170}$
(d) None of these

58. On Sunday 845 people went to the zoo. On Monday only 169 people went. What is the percent decrease in the people visiting the zoo on Monday?
(a) 50%   (b) 60%   (c) 70%   (d) 80%

59. The value of $\dfrac{\sin 75° - \sin 15°}{\cos 75° + \cos 15°}$ is
(a) $\dfrac{2}{\sqrt{3}}$
(b) $\sqrt{3}$
(c) $\dfrac{1}{\sqrt{3}}$
(d) None of these

60. The LCM and HCF of polynomial $P(x)$ and $Q(x)$ are $56(x^4 + x)$ and $4(x^2 - x + 1)$, respectively. If the polynomial $P(x) = 28(x^3 + 1)$, then $Q(x)$ is equal to
(a) $6x(x^2 + x - 1)$
(b) $4x(x^2 - x + 1)$
(c) $8x(x^2 - x + 1)$
(d) None of these

61. If $x = 2^{\frac{1}{3}} + 2^{\frac{2}{3}} + 2$, then the value of $x^3 - 6x^2 + 6x$ is
(a) 0
(b) 2
(c) 1
(d) None of these

62. The value of x in the given diagram is

(a) 60°
(b) 80°
(c) 120°
(d) None of these

63. The value of
$$\cot 18° \left[\cot 72° \cdot \cos^2 22° + \frac{1}{\tan 72° \cdot \sec^2 68°} \right]$$
(a) 2
(b) 0
(c) 1
(d) None of these

64. Pipe number 1 can fill the tank in 5 h and pipe number 2 in 10 h. Pipe number 3 can drain the water and make empty in $7\dfrac{1}{2}$ h. If all the three pipes are open all together, then the time required for filling the tank completely would be
(a) 6 h
(b) 16 h
(c) 10 h
(d) None of these

65. The area of two similar triangles are 9 sq m and 36 sq m, respectively. If the height of one triangle is 24 m, then the height of the other one is
(a) 48 m
(b) 38 m
(c) 58 m
(d) None of these

66. A box contains length 10m, width 6 m and height 4 m. How many cubes of volume 15 cu m can accommodate in the box ?
(a) 16   (b) 10   (c) 14   (d) 12

67. A wire of diameter 10 mm is drawn by melting the sphere of radius 9 cm. The length of wire would be
(a) 38.88 cm
(b) 77.76 m
(c) 77.76 cm
(d) 38.88 m

68. In the diagram, AD is the tangent line of the circle and ABC is the secant line. If $AB = 4$ cm and $BC = 5$ cm, then the length of AD is

(a) 7 cm
(b) 8 cm
(c) 6 cm
(d) None of these

69. What are the roots of the guadratic equation $21x^2 - 37x - 28 = 0$?
(a) –7/3, 4/7 (b) 3/7, –7/4 (c) 7/3, –4/7 (d) –3/7, 7/4

70. The first term and last term of an AP are 33 and –57 respectively. If there are 16 terms in the series, then what will be sum?
(a) –135   (b) –192   (c) –207   (d) –165

71. Which term in the following is perfect divisible by $(x^8 + 1)$?
(a) $x^{36} + 1$ (b) $x^{16} + 1$ (c) $x^{72} + 1$ (d) $x^{64} + 1$

72. If $(25)^{x-3} = (125)^{2x-3}$, then the value of x will be
(a) $\frac{2}{3}$ (b) $\frac{3}{2}$ (c) $\frac{3}{4}$ (d) $\frac{1}{4}$

73. If $\frac{a}{b} = \frac{3}{4}$ and $8a + 5b = 22$, then the value of a is
(a) 2   (b) $\frac{2}{3}$ (c) $\frac{5}{8}$ (d) $\frac{3}{2}$

74. The value of 125% of 860 + 75% of 480 is
(a) 1385   (b) 1400   (c) 1415   (d) 1435

75. There are 5 balls in a bag; in which 4 are blue and 1 is red. What is the probability that a blue ball gets picked?
(a) $\frac{1}{5}$ (b) $\frac{3}{5}$ (c) $\frac{4}{5}$ (d) 1

76. Resistivities of semiconductors decrease with a .... of temperature.
(a) decrease   (b) increase
(c) decrease or increase   (d) None of these

77. An electric heater is rated at 800 W. If the supply voltage is 200 V. What is the current rating?
(a) 2.5 A   (b) 4 A   (c) 3 A   (d) 2 A

78. Magnetic field produced by a wire is
(a) parallel along the axis of wire
(b) perpendicular to the plane of the wire
(c) forms circular loops along the axis of wire and coplanar to the wire
(d) direction of field is not constant

79. Incident ray, normal at the point of incidence and refracted ray are always
(a) mutually perpendicular
(b) inclined at acute angles
(c) parallel   (d) coplanar

80. Dispersion of light takes place because
(a) of shape of prism
(b) refraction process
(c) of difference in refractive index for different wavelengths
(d) of prism creating colours

81. Red colour is used for danger signals because
(a) it causes fear
(b) it undergoes least scattering
(c) it undergoes maximum scattering
(d) None of the above

82. Blue colour of sea water is due to
(a) interference of sunlight reflected from the water surface
(b) scattering of sunlight by the water molecules
(c) image of sky in water
(d) refraction of sunlight

83. The radius of curvature of a plane mirror is
(a) ∞ (b) 0   (c) 25 cm   (d) 50 cm

84. The product of resistivity and conductance is depend on
(a) Area of cross section   (b) temperature
(c) length   (d) None of these

85. Which of the following is the weakest acid?
(a) HF   (b) HCl   (c) HNO_3 (d) H_2SO_4

86. What would be the effect of increase of temperature on pressure, provided the volume is constant?
(a) Increase   (b) Decrease
(c) Remains same   (d) Becomes half

87. The product of the magnitude of the charge and the distance between the centres of positive and negative charge is called
(a) charge ratio   (b) dipole
(c) current flow   (d) magnetic moment

88. Which one of the following concentration parameters is not affected by change in temperature?
(a) g/L   (b) normality (c) molarity (d) molality

89. PVC stands for
(a) polyvinyl carbinol   (b) polyvinyl chloral
(c) polyvinyl chloride   (d) polyvinyl chloroform

90. Which of the following substances does not fall in the category of carbohydrates?
(a) Mannose (b) Starch (c) Glycerol (d) Cellulose

91. Which metal is added to steel to make it resistant to rust?
(a) Chromium   (b) Aluminium
(c) Carbon   (d) Copper

92. The hormone responsible for ripening of fruits is
(a) ethylene (b) cytokinin (c) auxin (d) ABA

93. Which one is most primitive ?
(a) Cyanobacteria   (b) Bacteria
(c) Fungi   (d) Protozoa

94. Water vascular system is characteristic of
(a) Porifera   (b) Ctenophora
(c) Echinodermata   (d) Chordata

95. In Urochordata
(a) notochord is not present
(b) notochord is present only throughout the life
(c) notochord is present only in larval tail region
(d) notochord is replaced by vertebral column

96. Which of the following is the largest chromosome?
(a) Satellite chromosome
(b) X-chromosome
(c) Telocentric chromosome
(d) Lampbrush chromosome

97. The membrane phospholipids form bilayer due to
(a) its amphipathic nature
(b) presence of unsaturated fatty acids in its head
(c) presence of saturated and unsaturated fatty acids in its tail
(d) presence of cholesterol along with phospholipids

98. One NADH is oxidised by the electron transport system with subsequent production of
(a) no ATP
(b) one ATP
(c) three ATP
(d) four ATP

99. Rennin present in the gastric juice of infants digests
(a) carbohydrates
(b) proteins
(c) fats
(d) nucleic acids

100. A donor having blood group AB cannot donate his/her blood to the recipient who has blood group O because
(a) donor has both the antigens
(b) donor has both the antibodies
(c) recipient has both antigens
(d) donor has both the antigens and both the antibodies

Answers

Paper I

1	(d)	2	(b)	3	(c)	4	(d)	5	(c)	6	(b)	7	(b)	8	(a)	9	(c)	10	(b)
11	(b)	12	(a)	13	(a)	14	(c)	15	(d)	16	(c)	17	(d)	18	(d)	19	(b)	20	(d)
21	(b)	22	(a)	23	(a)	24	(a)	25	(d)	26	(d)	27	(a)	28	(b)	29	(b)	30	(b)
31	(b)	32	(d)	33	(c)	34	(d)	35	(a)	36	(c)	37	(d)	38	(b)	39	(c)	40	(b)
41	(b)	42	(d)	43	(b)	44	(b)	45	(d)	46	(b)	47	(c)	48	(c)	49	(d)	50	(a)
51	(b)	52	(c)	53	(a)	54	(d)	55	(b)	56	(a)	57	(c)	58	(d)	59	(b)	60	(a)
61	(c)	62	(a)	63	(b)	64	(b)	65	(b)	66	(a)	67	(d)	68	(b)	69	(a)	70	(c)
71	(b)	72	(a)	73	(d)	74	(b)	75	(c)	76	(d)	77	(c)	78	(a)	79	(d)	80	(b)
81	(a)	82	(b)	83	(a)	84	(b)	85	(a)	86	(d)	87	(c)	88	(c)	89	(a)	90	(b)
91	(a)	92	(d)	93	(b)	94	(c)	95	(b)	96	(a)	97	(c)	98	(c)	99	(c)	100	(b)

Paper II

1	(d)	2	(b)	3	(a)	4	(b)	5	(c)	6	(a)	7	(c)	8	(c)	9	(b)	10	(a)
11	(c)	12	(d)	13	(b)	14	(b)	15	(b)	16	(a)	17	(a)	18	(c)	19	(a)	20	(b)
21	(b)	22	(d)	23	(d)	24	(b)	25	(a)	26	(d)	27	(c)	28	(b)	29	(b)	30	(c)
31	(b)	32	(a)	33	(d)	34	(b)	35	(a)	36	(d)	37	(d)	38	(b)	39	(d)	40	(a)
41	(c)	42	(a)	43	(d)	44	(b)	45	(b)	46	(d)	47	(a)	48	(d)	49	(a)	50	(a)
51	(c)	52	(a)	53	(d)	54	(d)	55	(c)	56	(a)	57	(c)	58	(d)	59	(c)	60	(c)
61	(b)	62	(b)	63	(c)	64	(a)	65	(a)	66	(a)	67	(d)	68	(c)	69	(c)	70	(b)
71	(c)	72	(c)	73	(d)	74	(d)	75	(c)	76	(b)	77	(b)	78	(b)	79	(d)	80	(c)
81	(b)	82	(b)	83	(a)	84	(d)	85	(a)	86	(a)	87	(b)	88	(d)	89	(c)	90	(c)
91	(a)	92	(a)	93	(a)	94	(c)	95	(c)	96	(d)	97	(a)	98	(c)	99	(b)	100	(a)