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[SET-I/IA]

SET-I/SET-IA/2016

Marks: 150

Time: 2:30 hours

NOTE:

- (i) Attempt all questions. Each question carries one mark. There will be negative marking. Every wrong answer will result in deduction of 1/4 marks.
- (ii) There are 150 questions in this booklet. Against each question four alternative choices (A), (B), (C) and (D) are given, out of which only one is correct. Indicate your choice of answer by Darkening the suitable circle with Black/Blue Ball Pen in the OMR answer sheet supplied to you separately.

[ENGLISH/GK/MENTAL APTITUDE]

Fill in the blanks with suitable tense from the alternatives in the following questions:

1. When I met her last year, _____
 (A) she had married since five years.
 (B) she had been married for five years.
 (C) she was married five years ago.
 (D) she had been married since five years.
2. I shall see him, _____
 (A) before I shall leave for England.
 (B) before I have left for England.
 (C) before I leave for England.
 (D) before I would be leaving for England.
3. When I pay him tomorrow, he _____ everything I owe him.
 (A) has received
 (B) will have received
 (C) would receive
 (D) would have received
4. You will leave India before two months _____
 (A) would pass
 (B) will pass
 (C) would have passed
 (D) have passed

Fill in the blanks with suitable preposition from the alternatives in the following questions:

5. He left the book _____ the table.
 (A) around
 (B) beside
 (C) besides
 (D) at

6. There was some confusion _____ the agreement.

- (A) on
- (B) in
- (C) around
- (D) over

7. Fate smiled _____ him in all his ventures.

- (A) upon
- (B) on
- (C) at
- (D) over

8. Italy has a lot to offer India in her efforts to leap _____ the 20th century.

- (A) to
- (B) in
- (C) into
- (D) over

In each of the following questions, a sentence has been given in Active (or Passive) Voice. Out of the four alternatives suggested select the one which best expresses the same sentence in Passive (or Active) Voice:

9. You must look into the matter.

- (A) The matter has been looked into by you.
- (B) This matter may be looked into by you.
- (C) This matter should be looked into by you.
- (D) This matter into looked by you.

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10. My uncle promised me a present.
 (A) A present was promised by my uncle to me.
 (B) I was promised a present by my uncle.
 (C) I had been promised a present by my uncle.
 (D) I was promised by my uncle a present

11. The clown was being laughed at by them.
 (A) They were laughing at the clown.
 (B) They were laughing on the clown.
 (C) They laughed at the clown.
 (D) The clown was laughed at by them.

12. The noise of the traffic kept me awake.
 (A) I remained awake by the noise of the traffic.
 (B) I was kept awaking by the noise of the traffic.
 (C) I was kept awake by the noise of the traffic.
 (D) The traffic kept me awake by the noise.

13. Which country will host the Commonwealth Games 2018?
 (A) Australia
 (B) England
 (C) Canada
 (D) Russia

14. Which country recently scrapped its famous One Child Policy?
 (A) Russia
 (B) China
 (C) USA
 (D) Brazil

15. Deepika Kumari is associated with which game? She bagged a silver medal in the World Cup final recently.
 (A) Shooting
 (B) Squash
 (C) Archery
 (D) Discuss Throw

16. What is Indradhanush 4?
 (A) It is a four pronged plan encompassing seven to revamp encompassing seven elements to revamp functioning of public sector banks.

- (B) It aims to ensure that all children under the age of two years are fully immunized with vaccine preventable diseases.
 (C) It is an Indo-UK bilateral Air Exercise
 (D) It is a mission launched by ISRO in association with department of Metrology to conduct studies on atmospheric refraction of light.

17. If 'A' is denoted by '2', 'B' by '4', 'C' by '6' and so on, then what will be the sum of the numeric values of the letters of the word 'OWL'?
 (A) 110
 (B) 90
 (C) 100
 (D) 102

18. Sports is related to 'Logo' in the same way as 'Nation' is related to
 (A) Emblem
 (B) Animal
 (C) Ruler
 (D) Anthem

19. If MADRAS is coded as TBSEBN, NEW DELHI will be coded as
 (A) JNKFEXFO
 (B) JIMFFUFO
 (C) JIMFEXFO
 (D) JIMFEXEP

20. P is father of R, S is son of Q, T is brother of P. If R is sister of S, how is Q related to T?
 (A) Brother-in-law
 (B) Sister-in-law
 (C) Daughter-in-law
 (D) Aunt

[MATHEMATICS]

21. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?
 (A) $\frac{1}{10}$
 (B) $\frac{2}{5}$
 (C) $\frac{2}{7}$
 (D) $\frac{5}{7}$

22. The mode is best described as:
 (A) the middle observation
 (B) the same as the average
 (C) the 50th percentile
 (D) the most frequently occurring value

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23. Given $\sin \theta = 0.9816$, evaluate θ to the nearest degree.
 (A) 11°
 (B) 79°
 (C) 43°
 (D) 29°
24. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case.
 (A) 4
 (B) 7
 (C) 9
 (D) 13
25. The ratio between the length and the breadth of a rectangular park is 3 : 2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq. m) is:
 (A) 15360
 (B) 153600
 (C) 30720
 (D) 307200
26. Which one of the following is not a prime number?
 (A) 31
 (B) 61
 (C) 71
 (D) 91
27. $(112 \times 5^4) =$
 (A) 67000
 (B) 70000
 (C) 76500
 (D) 77200
28. Two ships are sailing in the sea on the two sides of a lighthouse. The angle of elevation of the top of the lighthouse is observed from the ships are 30° and 45° respectively. If the lighthouse is 100 m high, the distance between the two ships is:
 (A) 173 m
 (B) 200 m
 (C) 273 m
 (D) 300 m
29. In a shower, 5 cm of rain falls. The volume of water that falls on 1.5 hectares of ground is:
 (A) 75 cu. m
 (B) 750 cu. m
 (C) 7500 cu. m
 (D) 75000 cu. m
30. The diameter of a circle goes through its _____.
 (A) Angle
 (B) Center
 (C) Tangent
 (D) Pi
31. The number Pi is approximately equivalent to _____.
 (A) 3
 (B) 3.14
 (C) 3.41
 (D) 3.15658
32. Three times the first of three consecutive odd integers is 3 more than twice the third. The third integer is:
 (A) 9
 (B) 11
 (C) 13
 (D) 15
33. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is:
 (A) 2 : 5
 (B) 3 : 5
 (C) 4 : 5
 (D) 6 : 7
- Note: Study the following table and answer the questions based on it (34, 35, 36).
 Expenditures of a Company (in Lac Rupees) per Annum Over the given Years.

Year	Items of Expenditure				
	Salary	Fuel & Transport	Bonus	Interest on loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

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34. What is the average amount of interest per year which the company had to pay during this period?

- (A) Rs. 32.43 lac
(B) Rs. 33.72 lac
(C) Rs. 34.18 lac
(D) Rs. 36.66 lac

35. The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period?

- (A) 0.10 %
(B) 0.50 %
(C) 1.00 %
(D) 1.25 %

36. Total expenditure on all these items in 1998 was approximately what percent of the total expenditure in 2002?

- (A) 62 %
(B) 66 %
(C) 69 %
(D) 71 %

37. Find the mean of 19, 13, 15, 25, and 18

- (A) 19
(B) 13
(C) 15
(D) 18

38. For each set of 3 numbers, which set could possibly represent the sides of a right-angled triangle?

- (A) 1, 2, 3
(B) 11, 15, 17
(C) 3, 4, 5
(D) 23, 11, 16

39. In a mixture 60 litres, the ratio of milk and water 2 : 1. If this ratio is to be 1 : 2, then the quantity of water to be further added is:

- (A) 20 litres
(B) 30 litres
(C) 40 litres
(D) 60 litres

40. A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

- (A) 10/21

- (B) 11/21
(C) 2/7
(D) 5/7

41. What is the probability of getting a sum 9 from two throws of a dice?

- (A) 1/6
(B) 1/8
(C) 1/9
(D) 1/12

42. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

- (A) 276
(B) 299
(C) 322
(D) 345

43. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

- (A) 4
(B) 10
(C) 15
(D) 16

44. An error 2% in excess is made while measuring the side of a square. The percentage error in the calculated area of the square is:

- (A) 2.00 %
(B) 2.02 %
(C) 4.00 %
(D) 4.04 %

45. The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is:

- (A) 40 %
(B) 42 %
(C) 44 %
(D) 46 %

46. Three unbiased coins are tossed. What is the probability of getting at most two heads

- (A) 3/4
(B) 1/4
(C) 3/8
(D) 7/8

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TOP SECRET



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47. Two dice are thrown simultaneously. What is the probability of getting two numbers whose product is even?
 (A) $1/2$
 (B) $3/4$
 (C) $3/8$
 (D) $5/16$
48. $(935421 \times 625) = ?$
 (A) 575648125
 (B) 584638125
 (C) 584649125
 (D) 585628125
49. $(17)3.5 \times (17)? = 178$
 (A) 2.29
 (B) 2.75
 (C) 4.25
 (D) 4.50
50. Let N be the greatest number that will divide 1305, 4665 and 6905, leaving the same remainder in each case. Then sum of the digits in N is:
 (A) 4
 (B) 5
 (C) 6
 (D) 8
51. The greatest number of four digits which is divisible by 15, 25, 40 and 75 is:
 (A) 9000
 (B) 9400
 (C) 9600
 (D) 9800
52. A rectangular park 60 m long and 40 m wide has two concrete crossroads running in the middle of the park and rest of the park has been used as a lawn. If the area of the lawn is 2109 sq. m, then what is the width of the road?
 (A) 2.91 m
 (B) 3.00 m
 (C) 5.82 m
 (D) none of these
53. How many of the following numbers are divisible by 132?
 264, 396, 462, 792, 968, 2178, 5184, 6336
 (A) 4
 (B) 5
 (C) 6
 (D) 7
54. If $5^a = 3125$, then the value of $5^{(a+3)}$ is:
 (A) 25
 (B) 125
 (C) 625
 (D) 1625
55. For a box plot, the point inside the box indicates the location of the _____.
 (A) mean
 (B) median
 (C) minimum value
 (D) maximum value
56. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?
 (A) $1/2$
 (B) $2/5$
 (C) $8/15$
 (D) $9/20$
57. A and B together have Rs. 1210. If $4/15$ of A's amount is equal to $2/5$ of B's amount, how much amount does B have?
 (A) Rs. 460
 (B) Rs. 484
 (C) Rs. 550
 (D) Rs. 664
58. Find the mode of 15, 21, 26, 25, 21, 23, 28, 21?
 (A) 21
 (B) 25
 (C) 26
 (D) 15
59. Which of the following are the three most common measures of central location?
 (A) Mean, median and mode
 (B) Average, variance and standard deviation
 (C) Mode, sample mean, and sample variance
 (D) Mean, median, and average
60. The length of the wire in metres will be if 66 cubic centimetres of silver is drawn into a wire 1 mm in diameter:



- (A) 84
(B) 90
(C) 168
(D) 336

61. A hollow iron pipe is 21 cm long and its external diameter is 8 cm. If the thickness of the pipe is 1 cm and iron weighs 8 g/cm^3 , then the weight of the pipe is:

- (A) 3.600 kg
(B) 3.696 kg
(C) 36.00 kg
(D) 36.90 kg

62. If the diameter of a circle is 8, then the _____ of the circle is 4

- (A) Radius
(B) Center
(C) Arc
(D) Area

63. If one-third of one-fourth of a number is 15, then three-tenth of that number is:

- (A) 35
(B) 36
(C) 45
(D) 54

64. The value of $[(10)^{150} \div (10)^{146}]$

- (A) 1000
(B) 10000
(C) 100000
(D) 10^5

65. The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:

- (A) 2.3 m
(B) 4.6 m
(C) 7.8 m
(D) 9.2 m

66. From a point P on a level ground, the angle of elevation of the top tower is 30° . If the tower is 100 m high, the distance of point P from the foot of the tower is:

- (A) 149 m
(B) 156 m
(C) 173 m
(D) 200 m

67. A right triangle with sides 3 cm, 4 cm and 5 cm is rotated the side of 3 cm to form a cone. The volume of the cone so formed is:

- (A) $12 \pi \text{ cm}^3$
(B) $15 \pi \text{ cm}^3$
(C) $16 \pi \text{ cm}^3$
(D) $20 \pi \text{ cm}^3$

68. Find $(256)^{0.16} \times (256)^{0.09} =$

- (A) 4
(B) 16
(C) 64
(D) 256.25

69. A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:

- (A) 720
(B) 900
(C) 1200
(D) 1800

70. An observer 1.6 m tall is 203 away from a tower. The angle of elevation from his eye to the top of the tower is 30° . The heights of the tower is:

- (A) 21.60 m
(B) 23.20 m
(C) 24.72 m
(D) none of these

[PHYSICS]

71. A particle moves along circular path with constant speed. What is the direction of acceleration?

- (A) no direction
(B) In all directions
(C) towards center of circular path
(D) away from center of circular path

72. Let displacement of particle is zero. Distance covered by particle

- (A) must be Zero
(B) cannot be zero
(C) negative
(D) may or may not be zero

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73. A particle moves with uniform velocity. Which statement is true?
 (A) its speed is zero
 (B) Its speed is variable
 (C) Its acceleration is zero
 (D) None of these
74. What is the S.I. unit of force?
 (A) erg
 (B) Newton
 (C) Joule
 (D) none of these
75. A train of length 100m moves with uniform velocity of 45km/hr. How much time is taken by train to cross a bridge of length 500m?
 (A) 48 sec
 (B) 40 sec
 (C) 52 sec
 (D) 60 sec
76. To what the distance covered by a freely falling body is proportional to?
 (A) mass of body
 (B) time of fall
 (C) square of time of fall
 (D) none of these
77. A body is at rest and it is allowed to fall freely. If acceleration due to gravity is 9.8 m/sec^2 , then what is the velocity after two seconds?
 (A) 1960 cm/sec^2
 (B) 1960 cm/sec
 (C) 980 cm/sec
 (D) 490 cm/sec
78. A man pushes a wall but fails to move it. Which kind of work he does?
 (A) positive work
 (B) negative work
 (C) no work
 (D) none of these
79. A body is at rest and it is uniformly accelerated. To what the distance covered by body is proportional to?
 (A) $(\text{time})^2$
 (B) $(\text{time})^{1/2}$
 (C) $(\text{time})^{3/2}$
 (D) none of these

80. A body of mass 1 gm is carried vertically upward through a height of 1m. How much work done is done? (take $g=10\text{m/sec}^2$)
 (A) 1 erg
 (B) 0.1 Joule
 (C) 1000000 erg
 (D) 10000000 erg
81. Let mass of body is 2 kg and its momentum is 2 kg-m/sec. What is the kinetic energy of body?
 (A) 2 joule
 (B) 1 Joule
 (C) 2 ergs
 (D) 2 Newton
82. If mass of body is doubled, then its gravitational potential energy
 (A) remains constant
 (B) doubles
 (C) quadruples
 (D) none of these
83. A body of mass 2 gm moving with uniform acceleration of 4 cm/sec^2 . How much force is applied on body?
 (A) 8 Newton
 (B) 8 dyne
 (C) 4 Joule
 (D) 4 Newton
84. The light waves are
 (A) transverse
 (B) longitudinal
 (C) transverse as well as longitudinal
 (D) none of these
85. Sound waves of wavelength 10 m move with velocity of 330 m/sec. What is the frequency of sound waves?
 (A) 33 Hertz
 (B) 3300 Hertz
 (C) 320 Hertz
 (D) all of these
86. Oscillations of transverse waves are
 (A) in all the directions
 (B) circular
 (C) perpendicular to the direction of propagation of waves
 (D) none of these

87. What is the relationship between wave velocity (v), wavelength (λ) and frequency (n)?
 (A) $n=v\lambda$
 (B) $v=n\lambda$
 (C) $\lambda=nv$
 (D) none of these
88. Which lens is used to remove hypermetropia in human eye?
 (A) convex
 (B) concave
 (C) plano-convex
 (D) all of these
89. The focal length of convex lens is 2m. What is its power?
 (A) + 2 diopter
 (B) - 2 diopter
 (C) - 0.5 diopter
 (D) + 0.5 diopter
90. What is the value of least distance of distinct vision for normal human eye?
 (A) 10 mm
 (B) 10 cm
 (C) 10 m
 (D) none of these
91. A boy of mass 50 kg climbs a vertical height of 10 m in 10 sec. If acceleration due to gravity is 10 m/sec^2 then what is the power of boy?
 (A) 50 watt
 (B) 500 watt
 (C) 100 watt
 (D) 1000 watt
92. What is the value of Universal gravitational constant?
 (A) $6.673 \times 10^{-11} \text{ Nm}^2\text{kg}^{-2}$
 (B) $6.673 \times 10^{11} \text{ Nm}^2\text{kg}^2$
 (C) $6.673 \times 10^{-11} \text{ Nm}^2\text{kg}^{-2}$
 (D) $6.673 \times 10^{11} \text{ Nm}^2\text{kg}^2$
93. Force of 1 Newton displaces a body through 1 meter. How much work is done by force?
 (A) 1 Erg
 (B) 1 Joule
 (C) 1 Dyne
 (D) None of these
94. How many electrons form one Coulomb of charge?
 (A) 6×10^9 electrons
 (B) 6×10^{10} electrons
 (C) 6×10^{18} electrons
 (D) 1×10^{18} electrons
95. For 10 minutes a current of 1 Ampere passes through an electric bulb. How much quantity of charge flow through the bulb?
 (A) 600 C
 (B) 10 C
 (C) 60 C
 (D) None of these
96. What is the relationship between ohm, ampere and volt?
 (A) ohm=ampere/volt
 (B) ohm=volt/ampere
 (C) ohm=volt X ampere
 (D) none of these
97. What is SI unit of electric potential difference?
 (A) watt
 (B) ampere
 (C) volt
 (D) dyne
98. A body starts from rest and its final velocity is 45 m/sec. What is average velocity of body?
 (A) 45 m/sec
 (B) 22.5 m/sec^2
 (C) 22.5 m/sec
 (D) none of these
99. A car accelerates uniformly from 18 km/hr to 36 km/hr in 10 sec. What is acceleration of car?
 (A) 0.01 m/sec^2
 (B) 0.1 m/sec^2
 (C) 0.05 m/sec^2
 (D) 0.5 m/sec^2
100. An electric bulb draws a current of 100 milli-amperes on applying a potential difference of 220 volt. Find the resistance of bulb?
 (A) 2.2 ohm
 (B) 22 ohm
 (C) 220 ohm
 (D) 2200 ohm

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101. A refrigerator rated 400 watt works for 8 hours per day. How much total energy consumed by refrigerator in the month of June?
 (A) 9.6 kWh
 (B) 96 kWh
 (C) 3200 kWh
 (D) 50 kWh

102. 0.1 ampere current passes through 2 ohm resistance for 2 minutes. How much heat energy is produced by the resistance?
 (A) 0.4 Joule
 (B) 24 Joule
 (C) 2.4 Joule
 (D) 2.4 erg

103. A parallel combination of two resistances each of 5 ohm is connected in series with 5 ohm resistance. Find the total resistance of these three resistances?
 (A) 7.5 ohm
 (B) 15 ohm
 (C) 125 ohm
 (D) none of these

104. What is represented by forefinger in Fleming's right hand rule?
 (A) movement of conductor
 (B) current induced in conductor
 (C) magnetic field
 (D) either (A) or (B)

105. Convert a temperature of 40° Celsius into Fahrenheit.
 (A) 72° F
 (B) 140° F
 (C) 100° F
 (D) 104° F

106. When current is passing through the solenoid, magnetic field is produced. The produced magnetic field depends upon which parameters?
 (A) current passing through solenoid
 (B) number of turns of solenoid
 (C) nature of material of core of solenoid
 (D) All of these

107. Let direction of magnetic field is from east to west. A proton enters into this magnetic field from north to south. What is the direction of force on proton?
 (A) to the west
 (B) to the east
 (C) out of page
 (D) into the page

108. 1 Newton of force is equal to
 (A) 10^5 dyne
 (B) 10^{-5} dyne
 (C) 10^{10} dyne
 (D) 10^{15} dyne

109. Which is used to measure the electric potential difference?
 (A) galvanometer
 (B) ammeter
 (C) voltmeter
 (D) none of these

110. Choose the incorrect statement
 (A) weight of body \neq mass of body
 (B) mass of body remains same everywhere
 (C) weight of body is proportional to mass of body
 (D) All are incorrect

[CHEMISTRY]

111. Proton was discovered by
 (A) Einstein
 (B) Goldstein
 (C) Rutherford
 (D) Thomson

112. Electronic configuration of sodium is
 (A) 2,8,1
 (B) 2,8,2
 (C) 2,2,8
 (D) 1,2,8

113. General formula of alkanes is
 (A) C_nH_{2n-2}
 (B) C_nH_{2n}
 (C) C_nH_{2n+2}
 (D) C_nH_{2n+1}

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114. Valency of the following element is zero
 (A) silver
 (B) gold
 (C) helium
 (D) hydrogen
115. IUPAC name of $\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}_2\text{OH}$ is
 (A) 1-butanol
 (B) isopropyl alcohol
 (C) 2-methylpropanol
 (D) isobutyl alcohol
116. Chemical formula of bleaching powder is
 (A) CaCl_2
 (B) CaCO_3
 (C) CaSO_4
 (D) CaOCl_2
117. Tritium is an isotope of
 (A) hydrogen
 (B) carbon
 (C) water
 (D) oxygen
118. In a dry cell, the negative electrode is
 (A) carbon rod
 (B) zinc container
 (C) manganese dioxide and powdered charcoal
 (D) ammonium chloride paste
119. Greenhouse effect is caused by
 (A) NO_2 gas
 (B) CO gas
 (C) SO_2 gas
 (D) CO_2 gas
120. Aluminum is extracted by the electrolysis of
 (A) bauxite
 (B) alumina
 (C) molten cryolite
 (D) alumina mixed with molten cryolite
121. The radius of the nucleus is
 (A) 10^{-8} cm
 (B) 10^{-13} cm
 (C) 10^{-20} cm
 (D) 10^{-15} cm
122. Property of self-linking of carbon atoms is known as
 (A) carbonation
 (B) catenation
 (C) polymerization
 (D) vulcanization
123. Most durable metal plating on iron to protect against corrosion is
 (A) copper plating
 (B) tin plating
 (C) zinc plating
 (D) nickel plating
124. Conversion of ammonia into nitrate is called
 (A) de-nitrification
 (B) nitration
 (C) nitrification
 (D) ammoniation
125. Addition of tetraethyl lead in the petrol leads to minimization of the following contents in the exhaust of the vehicles
 (A) CO_2
 (B) H_2S
 (C) SO_2
 (D) CO
126. Material which softens on gentle heating but becomes hard on cooling is
 (A) rubber
 (B) thermoplastic
 (C) rayon
 (D) thermosetting
127. Which of the following is a chemical change
 (A) dissolution of sugar in water
 (B) melting of ice
 (C) evolution of steam from boiling water
 (D) evolution of hydrogen by dropping sodium in water
128. In periodic table the element with atomic number 16 will be placed in the group.
 (A) VI A group
 (B) VI B group
 (C) IV A group
 (D) VIII B group
129. Which of the following is used for making insulation of electric wires
 (A) isoprene
 (B) bakelite
 (C) neoprene
 (D) thiokol

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130. Coal containing maximum percentage of carbon is
 (A) bituminous coal
 (B) anthracite coal
 (C) lignite
 (D) all carbon fuels
131. Which has highest penetrating power
 (A) beta-rays
 (B) alpha-rays
 (C) gamma rays
 (D) all have equal
132. Metal which is a constituent of hemoglobin
 (A) Cu
 (B) Al
 (C) Zn
 (D) Fe
133. Rusting of iron is due to its combination with
 (A) nitrogen
 (B) CO_2
 (C) oxygen
 (D) none of these
134. Which is the heaviest particle
 (A) neutron
 (B) proton
 (C) electron
 (D) α particle
135. Shape of methane molecule is
 (A) octahedral
 (B) tetrahedral
 (C) linear
 (D) square planer
136. Unwanted material in an ore is called
 (A) pollutant
 (B) gangue
 (C) waste
 (D) none of these
137. Lime is
 (A) CaOCl_2
 (B) $(\text{CaSO}_4)_2\text{H}_2\text{O}$
 (C) CaCO_3
 (D) CaO
138. Ratio of hydrogen and oxygen in water by weight is
 (A) 2:8
 (B) 1:8
 (C) 1:16
 (D) none of these
139. Li, Na, K belong to
 (A) halogen family
 (B) alkaline earth family
 (C) noble gases
 (D) alkali metal family
140. Functional group in alcohol series is
 (A) -O-
 (B) -OH
 (C) -COOH
 (D) -CHO
141. One (1) g mole of oxygen is equal to
 (A) 16g of oxygen
 (B) 1 atom of oxygen
 (C) 1 g of oxygen
 (D) none of these
142. Chemical formula of sand is
 (A) Si
 (B) SiO_2
 (C) SiO_3
 (D) SiO
143. Marsh gas mainly contains
 (A) C_2H_6
 (B) C_2H_4
 (C) CH_4
 (D) H_2S
144. Element exhibits tetra valency is
 (A) Cl
 (B) N
 (C) C
 (D) O
145. Formula of cryolite is
 (A) Na_3AlF_6
 (B) Na_3AlI_6
 (C) Na_3AlBr_6
 (D) Na_3AlCl_6
146. Special technique used for mining sulphur
 (A) Frasch process
 (B) C hall's process
 (C) bayers process
 (D) Solvay's proces



147. Combustion products of any hydrocarbon fuels are
(A) CO_2 and H_2O
(B) carbon and steam
(C) CO and CO_2
(D) Cellulose and CO_2

148. Arrange methane, ethane, propane and butane in order of increasing boiling points.
(A) ethane < methane < propane < butane
(B) methane < ethane < propane < butane
(C) Butane < propane < ethane < methane
(D) methane > ethane < propane < butane

149. The gas that resulted in Bhopal gas tragedy was
(A) SO_2
(B) NH_3
(C) CO_2
(D) methyl isocyanate

150. Inert gases belong to
(A) V group
(B) VIII group
(C) I group
(D) Zero group

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SET1/1A

1	B	51	C	101	B
2	C	52	B	102	C
3	B	53	A	103	A
4	D	54	A	104	C
5	B	55	A	105	D
6	D	56	D	106	D
7	B	57	B	107	C
8	C	58	A	108	A
9	C	59	A	109	C
10	B	60	A	110	C
11	A	61	B	111	C
12	C	62	A	112	A
13	A	63	D	113	C
14	B	64	B	114	C
15	C	65	D	115	C
16	C	66	C	116	D
17	C	67	A	117	A
18	A	68	A	118	B
19	C	69	C	119	D
20	B	70	A	120	A
21	C	71	C	121	D
22	D	72	D	122	B
23	B	73	C	123	C
24	A	74	B	124	C
25	B	75	A	125	D
26	D	76	C	126	B
27	B	77	B	127	D
28	C	78	C	128	A
29	B	79	A	129	B
30	B	80	B	130	B
31	B	81	B	131	C
32	D	82	B	132	D
33	C	83	B	133	C
34	D	84	A	134	D
35	C	85	A	135	B
36	C	86	C	136	B
37	D	87	B	137	D
38	C	88	A	138	B
39	D	89	D	139	D
40	A	90	D	140	B
41	C	91	B	141	D
42	C	92	C	142	B
43	D	93	B	143	C
44	D	94	C	144	C
45	C	95	A	145	A
46	D	96	B	146	A
47	B	97	C	147	A
48	B	98	C	148	B
49	D	99	D	149	D
50	A	100	D	150	B

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