ALLEN

SCHOLASTIC APTITUDE TEST

1. X = { x | x is factor of 5}, then set X is _____
   (1) Empty Set   (2) Singleton Set
   (3) Infinite Set   (4) Finite Set

2. If U = {1, 2, 3, 4, 5 }, A = {1, 2, 3},
   B = {2, 3, 4} and C = {3, 4, 5} then
   $(A \cap B) \cap C'$ = _____
   (1) {1}   (2) {2}   (3) {1, 2}   (4) {2, 3}

3. $(2^{-2})^{-3}$ = _____
   (1) 8^2 (2) 8^4 (3) 15^2 (4) 15^4

4. P(x) = (x − 1) (x + 1) is _____ polynomial.
   (1) Linear   (2) Quadratic
   (3) Cubic   (4) Invariant

5. If a + b = 6 and ab = 8, then $a^3 + b^3$ = _____
   (1) 18   (2) 36   (3) 54   (4) 72

6. If A = {1, 2, 3, 4} and B = {5, 6, 7}, then number
   of elements in A × A are
   (1) 4   (2) 8   (3) 12   (4) 16

7. If in 5x − 2y = k, one of answer is (2, −2), then
   k = _____
   (1) −40   (2) 6   (3) 14   (4) 10

8. 'Circle is divided in two equal parts by its diameter',
   The Mathematician who had given this evidence
   first?
   (1) Pythagoras   (2) Thales
   (3) Euclid   (4) Aryabhatt

9. A is midpoint of $\overline{KT}$. If −5 corresponding to K and
   1 corresponding to A, then length $\overline{KT}$ = _____
   (1) 7   (2) 6   (3) 12   (4) 4

10. m∠ABC and m∠ABD is a linear pair of angle, if
    m∠ABC = 30, then m∠ABD = _____
    (1) 30   (2) 60   (3) 150   (4) 15

11. ∠A and ∠B are supplementary angles, if
    m∠A = x + 10 and m∠B = 2x − 40, then m∠A
    = _____
    (1) 40   (2) 50   (3) 80   (4) 30

12. In ΔABC, $\overline{AB} \cong \overline{BC} \cong \overline{CA}$, then ΔABC is _____
    triangle.
    (1) Scalene   (2) Isosceles
    (3) Equilateral   (4) Right Angle

13. H.C.F. (28, 35, 91) = _____
    (1) 1   (2) 5   (3) 7   (4) 14

14. If polynomial P(x) = $3x^3 − x^2 − ax − 45$ has one
    zero of 3, then a = _____
    (1) 3   (2) 6   (3) 9   (4) 12

15. Age of Ramesh is x, Ramesh is 5 years older than
    Mahesh, but 3 years younger than Suresh, than
    Suresh's age is _____ years.
    (1) x + 3   (2) x + 5   (3) x + 8   (4) 8 − x

16. Which cheque can't be encashed, its amount is
    deposited into account?
    (1) Crossed cheque   (2) Order cheque
    (3) Bearer cheque   (4) Demand draft

17. Find value : $(12)^3 + 8^3$ = _____
    (1) 4240   (2) 2240   (3) 1240   (4) 2424

18. Solve equation : $\frac{2x}{5} + 1 = \frac{x}{3} + 3$, then x = _____
    (1) 10   (2) 40   (3) 30   (4) 15

19. How many perfect cubes of positive integers are
    there into 1 to 1000?
    (1) 9   (2) 11   (3) 10   (4) 12

20. Total surface area of closed cylinder = _____
    (1) 2πr(r + h)   (2) 2π(2r + h)
    (3) 2π(r + h)   (4) πr²h

21. Which equation is used to find out the speed of
    object executing uniform circular motion?
    (1) $\frac{\pi r}{t}$ (2) $\frac{\pi r}{2t}$ (3) $\frac{2\pi r}{t}$ (4) $\frac{2\pi r}{t/2}$

22. Which important law directs towards Newton's
    second and third law of motion?
    (1) Law of Pressure
    (2) Law of Conservation of Momentum
    (3) Principle of Archimedes
    (4) Law of Energy Conservation

23. Weight of an object on the Earth is 120N, what is
    weight of that object on the Moon in N?
    (1) 20   (2) 120   (3) 60   (4) 720

24. Which scientist introduced word - "Nano
    Technology"?
    (1) Richard P. Feynman   (2) Richard E. Smalley
    (3) K. Eric Drexler   (4) Robert F. Curl

25. What is absolute refractive index of water?
    (1) $\frac{3}{4}$ (2) $\frac{4}{3}$ (3) $\frac{3}{2}$ (4) $\frac{2}{3}$

26. On which part of eye the light rays incident while passing through the pupil?

(1) Lens   (2) Retina   (3) Iris   (4) Cornea

27. Two resistors of 3Ω and 6Ω are connected in parallel, then equivalent resistance R = _____

(1) 9Ω (2) $\dfrac{1}{9}\Omega$ (3) 2Ω (4) 4.5Ω

28. On basis of which principle/law submarine is constructed ?

(1) Principle of Archimedes

(2) Law of Pascal

(3) Law of Bernoulli

(4) Law of Newton

29. If an unbalanced force is applied on an object, then object _____

(1) remains stable

(2) moves with acceleration

(3) moves with constant velocity

(4) moves in circular motion

30. A train moving on linear way travels a distance 'D' at constant velocity of 30 km/h, then it travels in opposite direction with same distance and reaches at original station at a constant velocity of 45 km/h. What is the average speed of train?

(1) 36 km/h   (2) 10 km/h

(3) 0   (4) 75 km/h

31. Equation to find out the value of current is ____

(1) $I = Qt$ (2) $I = \dfrac{Q}{t}$ (3) $I = \dfrac{t}{Q}$ (4) $I = wt$

32. Which planet has highest gravitational force in solar system?

(1) Mars   (2) Saturn   (3) Jupiter   (4) Pluto

33. Analyse the given statements and choose the correct option.

Statement-I : When current is represented by a straight line, the magnetic field will be circular.

Statement-II : According to Fleming's left hand rule, the direction of the force is parallel to the magnetic field.

(1) Both statement-I and statement-II are correct and statement-II is the correct explanation of statement-I.

(2) Both statement-I and statement-II are true but statement-II is not the correct explanation of statement-I.

(3) Statement-I is true but statement-II is false.

(4) Statement-I is false but statement-II is true.

34. In an explosion a body breaks up into two pieces of unequal masses. In this

(1) Both parts will have numerically equal momentum

(2) Lighter part will have more momentum

(3) Heavier part will have more momentum

(4) Both parts will have equal kinetic energy

35. Which substance is obtained in liquid form at higher temprature than the room temperature?

(1) Iodine   (2) Bromine

(3) Gallium   (4) Nitrogen

36. Which are alloys of brass?

(1) Ag + Cu   (2) Cu + Zn   (3) Zn + Fe   (4) Cu + Fe

37. Which of the following is not a characteristic of a Cathode Rays ?

(1) It has a negative charge.

(2) It deviates in the electric field.

(3) It passes through black opaque paper.

(4) It travels in straight line.

38. Which rays are used to diagnose Intestinal cancer?

(1) Laser Rays   (2) Cathode Rays

(3) X-Rays   (4) γ-Rays

39. How many times weight of proton is greater than the mass of the electron ?

(1) 1838   (2) 1836   (3) 1338   (4) 1336

40. Which of the following is the oxygen isotope?

(1) $_8O^{14}$ (2) $_8O^{15}$ (3) $_8O^{17}$ (4) $_{16}O^{32}$

41. What is the Molecular formula of Gypsum?

(1) $CaCO_3$ (2) $CaSO_4 \cdot 2H_2O$

(3) CaO (4) $Ca(OH)_2$

42. Which of the following is a relatively light metal?

(1) Lead   (2) Tin

(3) Aluminium   (4) Mercury

43. What is the instrument called for water electrolysis process?

(1) Voltameter   (2) Voltmeter

(3) Hydrometer   (4) Lectometer

44. Which gas will probably be important energy source for future?

(1) Methane   (2) Natural Gas

(3) Dihydrogen   (4) Nitrogen

45. What is the electronic configuration of sulphur ?
(1) 2, 6, 8
(2) 2, 4, 8
(3) 2, 8, 6
(4) 2, 6, 4

46. Which of the following has maximum number of molecules?
(1) 7 grams nitrogen (g)
(2) 23 grams nitrous oxide (g)
(3) 2 grams Hydrogen (g)
(4) 16 grams oxygen (g)

47. Select the incorrect statement.
(1) C_3H_8 does not have any isomer.
(2) $HCOOCH_3$ and CH_3COOH are not same organic compounds.
(3) There is no organic compound with formula CH_2O.
(4) C_3H_4 has two π – bonds.

48. Which of the following plant is a parasitic plant?
(1) Cuscuta
(2) Mushroom
(3) Giloe
(4) Fern

49. What does liver secrete?
(1) Insuiln
(2) Bile
(3) Gastric juice
(4) Mucus

50. Where is the bicuspid valve found in human heart?
(1) Between two atria
(2) Between two ventricles
(3) Between right atrium and right ventricle
(4) Between left atrium and left ventricle

51. How many nerves arise from spinal cord?
(1) 21 pair (2) 31 pair (3) 41 pair (4) 51 pair

52. What is the weight of an adult person's brain?
(1) 900 gm
(2) 1350 gm
(3) 1500 gm
(4) 2350 gm

53. What is the movement in a plant due to light called?
(1) Thermonasty
(2) Thigmonasty
(3) Seismonasty
(4) Photonasty

54. Which of the following organism reproduces by spore formation?
(1) Mucor
(2) Planaria
(3) Spirogyra
(4) Potato

55. What is lacking in human red blood cell?
(1) Nucleus
(2) Golgi bodies
(3) Endoplasmic reticulum
(4) All the three

56. Which tissue acts to increase the length of a grass stem?
(1) Primary Meristem
(2) Apical Metistem
(3) Lateral Meristem
(4) Intercalary Meristem

57. Which of the following imparts red colour to the blood?
(1) Erythrocytes
(2) Blood plasma
(3) Leucoplast
(4) Thrombocutes

58. Worms are responsible for which of the following diseases?
(1) Encephalitis
(2) Anthrax
(3) Flu
(4) Elephantiasis

59. Which tissue is living and more prominent in the plants?
(1) Sclerenchyma
(2) Aerenchyma
(3) Collenchyma
(4) Xylem

60. Which of the options given below would not work in the following sentence?
In order for the body to absorb and use_____ these must be broken down by hydrolysis into _____.
(1) polysaccharides, monosaccharides
(2) amino acids, proteins
(3) fats, glycerol and fatty acids
(4) disaccharides, monosaccharides

61. Which of the Vedas is the oldest from the following?
(1) Yajurveda
(2) Samveda
(3) Atharvaveda
(4) Rigveda

62. Where is Asia's largest Windfarm situated?
(1) Bhavnagar
(2) Jamnagar
(3) Surat
(4) Mehsana

63. What is used to melt the metals?
(1) Flourspar
(2) Bauxite
(3) Lignite
(4) Graphite

64. Which are worshipped as pious according to Indian culture?
(1) Neem, Mango, Asopalav
(2) Peepal, Banyan, Tulsi
(3) Mahudo, Khijdo, Palm
(4) None from above

65. Which Veda is considered as a source of Music?
(1) Samveda
(2) Rigveda
(3) Atharvaveda
(4) Yajurveda

66. Which district is the birth place of 'Bharatnatyam' dance style?
    (1) Tiruchirapalli
    (2) Tanjore
    (3) Kanchipuram
    (4) Madurai

67. What is elevated circular path around stupa known as?
    (1) Medhi
    (2) Pradakshina Path
    (3) Harmika
    (4) Arch

68. What is 'Adhai-Din-ka-Jhopara'?
    (1) Temple
    (2) Mosque
    (3) Palace
    (4) Church

69. Who is known as father of Mathematics?
    (1) Brahmagupta
    (2) Bhaskaracharya
    (3) Charak
    (4) Aryabhatta

70. Which is the main festival of Assam state?
    (1) Bihu
    (2) Ganagaur
    (3) Onam
    (4) Ganesha Chaturthi

71. In which district is Narayan Sarovar situated?
    (1) Kutch
    (2) Ahmedabad
    (3) Vadodara
    (4) Narmada

72. When is world Environment day celebrated?
    (1) 5th June
    (2) 5th July
    (3) 5th August
    (4) 5th December

73. In which district is the Ratanmahal Bear Sanctuary situated?
    (1) Panchmahal
    (2) Dahod
    (3) Narmada
    (4) Dang

74. Where is the lignite coal found?
    (1) Narayan Sarovar
    (2) Panandhro
    (3) Bhuj
    (4) Lakhpat

75. In which district is the Vansda National Park situated?
    (1) Valsad
    (2) Bhavanagar
    (3) Junagadh
    (4) Jamnagar

76. Which animal in India is on the brink of extinction?
    (1) Sambhar (2) Elephant (3) Ghoral (4) Bear

77. What percentage of land is covered by forests in India ?
    (1) 63.3% (2) 46.3% (3) 33.3% (4) 23.3%

78. Which region of Gujarat is known as 'Land of Golden Leaf'?
    (1) Charotar
    (2) Kanam
    (3) Kutch
    (4) Bhal

79. From which type of rocks do we get coal, crude oil and natural gas?
    (1) Fiery
    (2) Transformation
    (3) Magma
    (4) Sedimentary

80. Which of the following metals is lighter?
    (1) Gold
    (2) Iron
    (3) Copper
    (4) Magnesium

81. What does Indian constitution start with?
    (1) Fundamental Rights
    (2) Preamble
    (3) Fundamental Duties
    (4) Document of freedom

82. How many subjects are included in the Union list?
    (1) 66   (2) 52   (3) 47   (4) 97

83. Which of the following subjects is included in State list?
    (1) Railway
    (2) Marriage and Divorce
    (3) Post and Telegraph
    (4) Law and Order

84. In front of whom a person arrested under 'Preventive Act' be presented?
    (1) Law Board
    (2) Court
    (3) Advisory Board
    (4) State Police Chief

85. What is the name of the day celebrated on 10th December every year?
    (1) Human Duty day
    (2) Human Rights day
    (3) Literacy day
    (4) Women Development day

86. Who has to undergo the process of Impeachment?
    (1) Prime Minister
    (2) Finance Minister
    (3) Vice President
    (4) President

87. Who elects Vice President of India?
    (1) Members of Loksabha and Rajyasabha
    (2) President
    (3) Members of Loksabha
    (4) Elected Members of Rajyasabha

88. Who possess Chairmanship of Planning Commission due to designation?
    (1) President
    (2) Prime Minister
    (3) Vice President
    (4) Chairman of Planning Commission

89. Which of the following right known as 'heart of the constitution'?

(1) Fundamental Right of Freedom

(2) Fundamental Right of Constitutional Remedies

(3) Fundamental Right of Equality

(4) Fundamental Right against Exploitation

90. Which is the system of Government in India?

(1) Presidential   (2) Prime Ministerial

(3) Parliamentary   (4) Cabinet of Ministers

91. What is the idea of a developed country?

(1) Least   (2) Absolute

(3) Relative   (4) Optional

92. In which year was the World Trade Organization established?

(1) 1992   (2) 1998   (3) 1991   (4) 1995

93. What type of country is India?

(1) Developed   (2) Developing

(3) Under developed   (4) None of the above

94. What percent of people from total population was engaged in Agricultural Employment in 2001?

(1) 64 %   (2) 58 %   (3) 52 %   (4) 74 %

95. Where is the headquarters of World Trade Organization situated?

(1) Geneva   (2) Washington

(3) Delhi   (4) Calcutta

96. Which country among the India's neighbor is the smallest?

(1) Nepal   (2) Bhutan

(3) Sri Lanka   (4) Bangladesh

97. How many states and union territories does India have?

(1) India has 26 states and 7 union territories

(2) India has 25 states and 7 union territories

(3) India has 29 states and 7 union territories

(4) India has 28 states and 6 union territories

98. The imaginary longitude that divides India into two

(1) Tropic of Capricon

(2) Prime Merridian

(3) Equator

(4) Indian standard Merridian

99. Which one of the following routes are the oldest and provided India's relationship with other countries?

(1) Land Routes   (2) Sea routes

(3) Air routes   (4) Rail routes

100. The princely states and provinces were two types of

(1) Districts in India

(2) Administrative divisions in India (during British period)

(3) Cities in India

(4) Towns in India

SPACE FOR ROUGH WORK