

NTSE STAG 1, 2018-19 Gujarat State

Paper -2: SCHOLASTIC APTITUDE TEST (SAT)

- $(A \cap B)' = \underline{\hspace{2cm}}$
(A) $A \cup B'$ (B) $A' \cup B$ (C) $A \cup B$ (D) $A \cap B$
- The supplementary angle of the complementary of angle having measure 23 has measure _____.
(A) 67 (B) 90 (C) 113 (D) 23
- The width of the class 55.5-60.5 is
(A) 10 (B) 5 (C) 2.5 (D) 7
- \overline{AD} and \overline{BE} are the altitudes of $\triangle ABC$. If $AD=6\text{cm}$, $BC=16\text{ cm}$, $BE =8\text{ cm}$ then $CA= \underline{\hspace{1cm}}$ cm.
(A) 12 (B) 18 (C) 24 (D) 10
- If one factor of the polynomial $x^3 + 4x^2 - 3x - 18$ is $x + 3$, then the other factor is
(A) $x^2 + x$ (B) $x^2 + x + 6$ (C) $x^2 + x - 6$ (D) $x^2 - x + 6$
- If G.C.D of two number is 8 and their product is 384, then their L.C.M is _____
(A) 24 (B) 16 (C) 32 (D) 48
- The sum of the zeros of $3x^2 + 5x - 2$ is _____.
(A) $\frac{3}{5}$ (B) $-\frac{3}{5}$ (C) $\frac{5}{3}$ (D) $-\frac{5}{3}$
- If in a two digit number, the digit at unit place is y and the digit at tens place is 7, then the number is _____.
(A) $70y + 7$ (B) $y + 7$ (C) $y + 70$ (D) $10y + 7$
- If the correspondence $ABC \longleftrightarrow EFD$ is a similarity in $\triangle ABC$ and $\triangle DEF$, then ____ of the following is not true.
(A) $\frac{BC}{DF} = \frac{AC}{DE}$ (B) $\frac{AB}{DE} = \frac{BC}{DF}$ (C) $\frac{AB}{EF} = \frac{AC}{DF}$ (D) $\frac{BC}{DF} = \frac{AB}{EF}$
- If $\triangle ABC$, $m\angle B = 90^\circ$, $AB=BC$. Then $AB:AC= \underline{\hspace{1cm}}$.
(A) 1:3 (B) 1:2 (C) $1:\sqrt{2}$ (D) $\sqrt{2}:1$
- The diagonal of a square is $5\sqrt{2}$. The length of the side of the square is _____.
(A) 10 (B) 5 (C) $3\sqrt{2}$ (D) $2\sqrt{2}$
- The foot of the perpendicular from $P(-3,2)$ to the Y-axis is M. co-ordinates of M are _____.
(A) (3, 0) (B) (0, 2) (C) $\left(\frac{3}{2}, -1\right)$ (D) (-3, 2)

13. If $\tan 5\theta, \tan 4\theta=1$, then θ is ____.
- (A)7 (B)3 (C)10 (D)9
14. For right angle $\triangle ABC, \sin^2 A + \sin^2 B + \sin^2 C =$ _____.
- (A)2 (B)1 (C)0 (D)-1
15. A chord of $??(0,5)$ touches $??(0,3)$. Therefore, the length of the chord = ____
- (A)8 (B)10 (C)7 (D)6
16. A card is selected at random from well-shuffled pack of 52 cards. The probability that the selected card is not an ace is
- (A) $\frac{12}{13}$ (B) $\frac{4}{13}$ (C) $\frac{1}{13}$ (D) $\frac{13}{4}$
17. two balances dice are thrown once. The probability of getting sum of numbers is divisible by 5 is
- (A) $\frac{29}{36}$ (B) $\frac{5}{36}$ (C) $\frac{1}{6}$ (D) $\frac{7}{36}$
18. If $\sqrt{3}$ and $-\sqrt{3}$ are the zeros of a polynomial $p(x)$, then ____ is not the factor of the $p(x)$.
- (A) $x + \sqrt{3}$ (B) $x - \sqrt{3}$ (C) $x^2 - 3$ (D) $x^2 + 3$
19. Equation $\frac{2}{3}x + \frac{3}{2}y = 5$ can be expressed in the standard form as
- (A) $2x + 3y - 5 = 0$ (B) $4x + 9y - 5 = 0$ (C) $4x + 9y + 30 = 0$ (D) $4x + 9y - 30 = 0$
20. $317/3125$ represents
- (A) A terminating decimal (B) A non-recurring decimal
(C) A recurring decimal (D) An integer
21. 100 meter = ____ nm
- (A) 10^{-11} (B) 10^{11} (C) 10^{-9} (D) 10^9
22. Which is not an allotropes of carbon nanostructure?
- (A) Fullerenes (B) Graphene (C) Bucky-ball of born atoms (D) Nanobuds
23. What is speed of light in glass?
- (A) $2 \times 10^8 \text{ ms}^{-1}$ (B) $2.25 \times 10^8 \text{ ms}^{-1}$ (C) $3 \times 10^8 \text{ ms}^{-1}$ (D) $1.75 \times 10^8 \text{ ms}^{-1}$
24. Which equation not represent Snell's law?
- (A) $\frac{n_2}{n_1} = \frac{\sin \theta_1}{\sin \theta_2}$ (B) $\frac{n_1}{n_2} = \frac{\sin \theta_2}{\sin \theta_1}$ (C) $n_1 \sin \theta_1 = n_2 \sin \theta_2$ (D) $n_1 \sin \theta_2 = n_2 \sin \theta_1$

25. National science day celebrates on ____
 (A) March 28 (B) January 28 (C) April 28 (D) February 28
26. When a milky and cloudy layer is formed on the eye lens of old age person, they lose their vision partially or completely. This type of situation is called ____
 (A) Myopia (B) Cataract (C) Hypermetropia (D) Presbyopia
27. Determine the equivalent resistance between points x and y in the following circuit.
 (A) $5\ \Omega$ (B) $12\ \Omega$ (C) $9\ \Omega$ (D) $6\ \Omega$
28. Which formula is not correct for R? (R=Resistance)
 (A) $R = \frac{W}{I^2 t}$ (B) $R = \frac{V^2}{P}$ (C) $R = I^2 t$ (D) $R = \frac{P}{I^2}$
29. The unit of electric potential difference is ____
 (A) JC (B) J/C (C) J (D) C/J
30. Which is not correct?
 (A) Acid+Base \rightarrow Salt+Water (B) Acid+Metal Oxide \rightarrow Salt+ Water
 (C) Non-Metal Oxide+water \rightarrow Base (D) base+Metal \rightarrow Salt+ Hydrogen+Water
31. Which is weak acid?
 (A) Oxalic acid (B) Hydrochloric acid (C) Nitric acid (D) Sulphuric acid
32. What is chemical formula of milk of magnesia?
 (A) $MgNO_3$ (B) $MgSO_4$ (C) $Mg(OH)_3$ (D) $Mg(OH)_2$
33. How many long wire can be drawn from a gram of gold?
 (A) 2 centimeter (B) 2 meter (C) 2 kilometer (D) 200 meter
34. Which alloy is used to preparation of statues?
 (A) Bronze (B) Brass (C) Steel (D) Duralumin
35. Which is not a step of metallurgy?
 (A) Reduction (B) Roasting
 (C) Corrosion (D) Concentration
36. ____ respire through lungs
 (A) Crabs (B) lizard (C) Sepia (D) Prawns
37. Anaerobic respiration takes place only in _____.
 (A) Mitochondria (B) Glands (C) Lungs (D) Cytoplasm

38. The small intestine receives the secretion from
 (A)Salivary glands (B)Stomach and liver
 (C)Liver and salivary glands (D)Liver and Pancreas
39. Where in do the Pulmonary veins open?
 (A)Left auricle (B)Left ventricle (C)Lungs (D)Right auricle
40. In the velli of ileum the absorption of lipids takes place through....
 (A)Lymph ducts (B)Lymph capillaries (C)Blood capillaries (D)Lymph vessels
41. Which animals in the animals kingdom require the maximum amount of energy?
 (A)Fishes Amphibians (B) Amphibians Reptiles (C)Mammals Reptiles (D)Birds-mammals
42. It is found as four small glands
 (A) Parathyroid gland (B)Adrenal gland (C)Pituitary gland (D)Thyroid gland
43. Whose excessive secretion causes the body to look like gorilla?
 (A)GTH (B)PRL (C)GH (D)MSH
44. Which wave length of harmful UV-radiations is prevented by ozone layer in entering the Earth atmosphere?
 (A)210-300nm (B)200-310nm (C)120-210nm (D)400-700nm
45. Which of the following groups have only non-biodegradable components?
 1. Wood, paper, leather 2.Polythene, detergent, pvc
 3. Plastic, detergent 4.plastic, glass, animal dug
 (A)1 and 4 (B)only 3 (C)2 and 3 (D)1 and 3
46. A car accelerates uniformly from 18 km/h to 36 m/h in 5 sec. Calculate the acceleration.
 (A) 1 ms^{-2} (B) 3.6ms^{-2} (C) 2 ms^{-2} (D) 2.6 ms^{-2}
47. What is the SI unit of momentum?
 (A) g ms^{-1} (B) $\text{g m}^2 \text{ s}^{-1}$ (C) kg ms^{-1} (D) kg ms^{-2}
48. What is mass of the moon?
 (A) $6 \times 10^{24} \text{ kg}$ (B) $7.4 \times 10^{22} \text{ kg}$ (C) $6 \times 10^{22} \text{ kg}$ (D) $7.4 \times 10^{24} \text{ kg}$
49. A boy of mass 50 kg runs a stair case of 45 steps in 9 sec. If the height of each steps is 15 cm.Find his power.(Take $g=10 \text{ ms}^{-2}$).
 (A)275 w (B)350w (C)325 w (D)375 w

50. When we go from solid to gaseous state, the speed of sound _____.
(A) increases (B) increases or decreases
(C) decreases (D) constant
51. What is formula of carbon tetrachloride?
(A) CCl_4 (B) CCl_3 (C) CCl_2 (D) CCl
52. What is the maximum number of electrons that can be accommodated in the outermost orbit?
(A) 2 (B) 8 (C) 3 (D) 18
53. The melting point of ice is _____.
(A) 273.15 k (B) 173.15 k (C) 373.5 k (D) 100 k
54. _____ is not an example of Aerosol.
(A) Fog (B) Clouds (C) Mist (D) Shaving cream
55. Who give the definition of an element?
(A) Robert Boyle (B) John Dalton (C) Lavoisier (D) Thomson
56. _____ is also known as the 'suicide bags' of a cell.
(A) Mitochondria (B) Lysosomes (C) Plastids (D) Golgi apparatus
57. _____ is not an example of simple Tissues.
(A) Parenchyma (B) Collenchyma (C) Sclerenchyma (D) Phloem
58. Which is example of the bryophyte?
(A) spirogyra (B) ulothrix (C) ulva (D) marchantia
59. _____ is not an example of Echinodermata.
(A) Octopus (B) Sea star (C) Echinus (D) Antedon
60. Which is an example of chronic diseases?
(A) Common cold (B) Asthama (C) Flu (D) Pnumonia
61. Who discovered the 'Cape of Good Hope'?
(A) Vasco-da-Gama (B) Bartholomew Diaz (C) Columbus (D) Prince Henry
62. Who becomes the first Governor General of India?
(A) Cornwallis (B) Wellesley (C) Warren Hastings (D) Sir John Shore
63. There are how many commissions were formed in Paris "Peace Process"?
(A) 48 (B) 58 (C) 68 (D) 79

64. Who was the Pioneer of armed revolution in Gujarat?
(A) Aurobindo Ghosh (B) Baarindrakumar Ghosh
(C) Bal Gangadhar Tilak (D) Mahatma Gandhi
65. One lakh mill workers of 75 cotton mill industries in Ahmadabad went on peaceful strike for how many days?
(A) 35 days (B) 95 days (C) 105 days (D) 2010 days
66. In which year union summit was held at Kuala Lumpur?
(A) 2001 (B) 2003 (C) 2004 (D) 2009
67. IN the year 1971, Bangladesh becomes an independent and sovereign country as earlier it was the part of which country?
(A) India (B) Afghanistan (C) China (D) Pakistan
68. Who was appointed as the chairman of state reorganization commission by Jawaharlal Nehru in 1953?
(A) Mr. Hridaynath Kunzru (B) Mr. K.M. Panikkar
(C) Jastice Fazal Ali (D) Dr. Sarvapalli Radhakrishnan
69. Which word was inserted in the constitution by 42nd Amendment 1976?
(A) Social (B) Political (C) Sovereign (D) Secular
70. Who said this "To rule the regime there principles are the foundation."
(A) Mahatma Gandhi (B) Sardar patel (C) Dr. B. K. Ambedkar (D) Dr. Rajendra Prasad
71. If any member of the Loksabha remains absent for a continuous period of how many days without informing the speaker then his seat is declared vacant?
(A) 60 (B) 70 (C) 80 (D) 105
72. The Judge who handles the criminal cases is called?
(A) District Judge (B) Municif Magistrate (C) Sessions Judge (D) Supreme Court Judge
73. In which sea Lakshadweep Island are located?
(A) Bay of Bengal (B) Arabian Sea (C) Red Sea (D) Mediterranean Sea
74. In our routine life, about how many types of minerals are used directly or indirectly?
(A) 100 types (B) 200 types (C) 300 types (D) 400 types
75. Which island in Brahmaputra is the largest riverine Island in the world?
(A) Drivar (B) Barren Island
(C) Great Nicobar Island (D) Mazuli (Majuli)

76. Where is the Miradatar fair held in the Rajab Month 16 to 22nd?
(A) Girnar (B) Bhavnagar (C) Kwant (D) Unava
77. How many types of tunes have been described by Pandit Ahobale?
(A) 108 (B) 29 (C) 101 (D) 19
78. Gujarati Poetry known as Garba and Garbi are chiefly associated with which types of Bhakti?
(A) Ram Bhakti (B) Hanuman Bhakti (C) Meera Bhakti (D) Krishna Bhakti
79. Dholka is a place between which two rivers?
(A) Narmada and Tapi (B) Sabarmati and Narmada
(C) Bhogavo and Sabarmati (D) Sabarmati and Mahi
80. What was built in Lothal to facilitate the Ships?
(A) Hall (B) Dockyard (C) Pillar (D) Grill
81. In which language the earlier Buddhist literature was written?
(A) Hindi (B) Sanskrit (C) Magadhi (D) Pali
82. The ruler of vallabhi belonged to which Dynasty?
(A) Maitrak Dynasty (B) Vijay Ngar Dynasty (C) Mughal Dynasty (D) Vansh Dynasty
83. Who was written the book 'Bij Ganit'?
(A) Shankaracharya (B) Bhaskaracharya (C) Vatsayayan (D) Maharshi Patanjali
84. Hindu caves are built during the reign of which dynasty?
(A) Ashoka Dynasty (B) Maurya Dynasty (C) Kunala Dynasty (D) Rashtrakuta Dynasty
85. How much percentage of the total land of India occupies Red Soil?
(A) 19% (B) 29% (C) 39% (D) 40%
86. Leopard belongs to which family?
(A) Lion (B) Tiger (C) Dog (D) Cat
87. Watermelon and Cucumber are of which types of agriculture crops in India?
(A) Kharif Crops (B) Zaid Crops (C) Rabi Crops (D) Plantation Crops
88. Which are the main source of surface water?
(A) Seas (B) Lakes (C) Rivers (D) Ponds
89. In which country the Bauxite was found first time in 1921?
(A) India (B) America (C) China (D) France

90. 20% rich people of the country share 40% of National income and the Poorest 20% people share how much percentage of National income?
(A) 30% (B) 20% (C) 10% (D) 5%
91. In which year ht World Trade Organization was established?
(A) 1950 (B) 1985 (C) 1995 (D) 2015
92. Where was the first time “Earth conference” organized in 1972?
(A) Stockholm in Sweden (B) Imphal in India
(C) Geneva in Switzerland (D) America in Washington
93. In which year Air Pollution Act was passed in India?
(A) 1961 (B) 1971 (C) 1981 (D) 1999
94. Concept of poverty was first propounded by director of which organization?
(A) WTO (B) WHO (C) ECOSCO (D) UNICEF
95. According to census counting of 2011, how many educated unemployed were in India?
(A) 54 Million (B) 79 Million (C) 81 Million (D) 84 Million
96. Till 2015 there were how many employment exchange centers were in our country?
(A) 908 (B) 947 (C) 1010 (D) 1189
97. According to early hypothesis ‘Varna System’ was based on how many occupations?
(A) 10 (B) 6 (C) 4 (D) 2
98. In which article of India Constitution Schedule tribes are included?
(A) Article-341 (B) Article-342 (C) Article-29 (D) Article-15
99. According to which Article, untouchability is totally eradicated and its practice in any form is prohibited?
(A) Article - 17 (B) Article - 29(a) (C) Article - 341 (D) Article - 25
100. After which year Terrorism has increased in Kashmir?
(A) 1962 (B) 1965 (C) 1988 (D) 1999