

GURUKUL COLLEGE

Entrance Model Questions-2080

Science

Full marks: 100

Time: 2:00hours

1. My mother advised me Junk food.
a. don't have b. not to have c. never have d. not to had
2. The painter the room. It is still wet.
a. painted b. was painted c. has painted d. paints
3. The administrator was accused corruption.
a. from b. with c. for d. of
4. I'd never come back?
a. did I b. had I c. Would I d. wouldn't I
5. The adjective of "Child " is:
a. children b. childness c. childless d. childish
6.his negligence, he got success.
a. Through b. Because c. In spite of d. In spite
7. Ram asked me who
a. I was b. was I c. are you d. you are
8. The word "Nationality" is:
a. Pronoun b. Adjective c. Adverb d. Noun
9. The positive of "Students didn't have any book is:
a. Students did have some books b. Students had some books
c. Students had any books d. Students have some books
10. I have not met my father last Sunday.
a. from b. since c. on d. for
11. I simply lovemusic and dancing.
a. nothing b. an c. the d. a
12. He ran the street and entered a taxi waiting on the other side.
a. along b. across c. past d. towards
13. He wears goggle as he is..... one-eyed person.
a. a b. an c. the d. none
14. The projectby the end of this year
a. will have been completed b. will be completing c. will have completed d. will complete
15. My sister lives in London.....
a. so is mine b. so does mine c. so do I d. so is I
16. Let them eat what they like,.....?
a. will we b. shall we c. will you d. do you
17. Have you any idea.....?
a. What is his name b. what his name is c. what name is he d. what name he is
18. My friend prefers coffeetea.
a. from b. to c. than d. but
19. 'emancipation' nearly means
a. captivation b. generalization c. liberation d. operation
20. If he.....properly, he would complete the work in time.
a. manage b. manages c. managed d. had managed
21. The father of botany is
a. Aristotle b. Theophrastus c. Darwin d. Linnaeus
22. Binomial nomenclature of any organism indicates it's
a. Phylum and class b. Class and order c. Order and genus d. Genus and species
23. Interaction of plants and animal with the environment is
a. Ecology b. Limnology c. Environmentology d. Physiology
24. The five-kingdom classification was given by
a. Linnaeus b. Whittaker c. Leeuwenhoek d. John Ray
25. Ferns belongs to
a. Bryophytes b. Pteridophytes c. Gymnosperm d. Angiosperm
26. If one of helix of DNA the base is cytosine the other helix could have
a. Adenine b. Guanine c. Thymine d. Uracil

27. Amoeba is an example of eukaryotic cell because it has
 - a. Nuclear membrane
 - b. DNA
 - c. Contractile Vacuole
 - d. Plasma membrane
28. How many a cells will be productive if a cell divides mitotically 6 times?
 - a. 12
 - b. 24
 - c. 32
 - d. 64
29. Which of the following is the site of protein synthesis?
 - a. DNA
 - b. Nucleolus
 - c. Ribosome
 - d. Chloroplasts
30. The ecological food chain cannot begin in the absence of
 - a. Producers
 - b. Carnivores
 - c. Decomposer
 - d. Consumers
31. Which of the following is physical basis of life?
 - a. Nucleus
 - b. Chromosome
 - c. Protoplasm
 - d. Mitochondria
32. RBC's are formed in
 - a. Bone marrow
 - b. Liver
 - c. Kidney
 - d. Spleen
33. The Locomotory organ of paramecium is
 - a. Setae
 - b. Flagella
 - c. Pseudopodia
 - d. Cilia
34. Animals store carbohydrates are
 - a. Starch
 - b. Glycogen
 - c. Glucose
 - d. All above
35. Which vitamin is necessary for formation of healthy bones and teeth ?
 - a. Vitamin-A
 - b. Vitamin-D
 - c. Vitamin-C
 - d. ALL
36. Silk is associated with
 - a. Sericulture
 - b. Apiculture
 - c. Pisciculture
 - d. Lac Culture
37. Total number of bones in man is
 - a. 260
 - b. 306
 - c. 360
 - d. 206
38. What is the name of Corona Virus?
 - a. Retro Virus
 - b. SARS-COV-2
 - c. Covid Virus
 - d. HIV Virus
39. Which is the second most intelligent mammal?
 - a. Whale
 - b. Lemus
 - c. Dolphin
 - d. Loris
40. Which one of the following has a four chambered heart?
 - a. Frog
 - b. Snake
 - c. Crocodile
 - d. Lizard
41. The process of bending of light by a sharp edge is
 - a. reflection
 - b. dispersion
 - c. refraction
 - d. interference
42. What is the value of acceleration due to gravity at the centre of earth?
 - a. g
 - b. 0
 - c. a
 - d. ∞
43. A body of mass 4 kg is moving with a velocity 144Km/hr on smooth surface. If it is brought to be rest in 40 sec. the force to be applied is
 - a. 4N
 - b. 8N
 - c. 2N
 - d. 1N
44. If the momentum of the body increased by 100% then it's K.E. becomes
 - a. 2 times
 - b. 4 times
 - c. $\frac{1}{2}$ times
 - d. $\frac{1}{4}$ times
45. If the applied force and displacement are mutually perpendicular the work done is,
 - a. 0
 - b. maximum
 - c. infinite
 - d. none
46. How much heat is required to change temperature of 1gm of water by 1°C ?
 - a. 10cal
 - b. 4200cal
 - c. 100cal
 - d. 1 cal
47. Which of the following has the highest sp. Heat capacity?
 - a. Oxygen
 - b. copper
 - c. Silver
 - d. hydrogen
48. Which element is formed during nuclear fusion reaction in the sun?
 - a. Deuterium
 - b. Tritium
 - c. Helium
 - d. all of them
49. Two resistors of resistance $x \Omega$ & $y \Omega$ are connected in parallel. The equivalent resistance will be
 - a. $(x+y) \Omega$
 - b. $(x-y) \Omega$
 - c. $xy \Omega$
 - d. $\left(\frac{xy}{x+y}\right) \Omega$
50. Transformer works under the principle of
 - a. mutual induction
 - b. motor effect
 - c. Both a and b
 - d. None
51. The weight of body in air is 10N displaced 2N when emerged into water. The mass of body in water is
 - a. 8 kg
 - b. 0.8 kg
 - b. 8N
 - d. 0.8 N
52. The SI unit of thrust is
 - a. N/s
 - b. Nm
 - c. N
 - d. K
53. Rainbow occurs due to
 - a. Reflection
 - b. refraction
 - c. TIR
 - d. dispersion
54. For normal incidence, the angle of deviation is
 - a. 0°
 - b. 90°
 - c. 45°
 - d. 180°

55. The power of diverging lens is 2D then the focal length of lens is
 a. 50 cm b. 100 cm c. -50cm d. -10cm
56. A body at rest may have
 a. Energy b. momentum c. speed d. velocity
57. Which of the following is constellation?
 a. titan b. vesta c. orion d. enka
58. Fleming's right hand rule is used to find the direction of
 a. Alternating Current b. direct current c. Actual current d. induced current
59. What is the unit of intensity of sound?
 a. Hertz b. decibel c. diopter d. horse power
60. A force F is applied on an object and it moves with velocity v then the power will be
 a. Fv b. F/v c. F²v d. Fv²
61. What is the value of $\sqrt{(25\%)}$?
 a. 50% b. 5% c. 25 % d. 12.5%
62. If $23x + 2y = 7$ and $22y + 3x = -13$, what is the value of $(x - y)^2$?
 a. $\frac{1}{2}$ b. 4 c. 1 d. 10
63. What is the equation of pair lines perpendicular to the lines represented by $4x^2 - 7xy + 5y^2 = 0$ and passes through the origin?
 a. $5x^2 - 7xy + 4y^2 = 0$ b. $4x^2 + 7xy + 5y^2 = 0$ c. $5x^2 + 7xy + 4y^2 = 0$ d. none of them
64. What is the value of $1^3 + 2^3 + 3^3 + \dots + 100^3$?
 a. 1000000 b. 10000 c. 101010 d. 105050
65. Which of the following is a rational number?
 a. $\frac{22}{7}$ b. $\sqrt{2}$ c. e d. π
66. If $4a^2 + \frac{1}{4a^2} = 2$, what is the value of $\frac{4a^2 - 1}{2a}$?
 a. 4 b. 0 c. 2 d. 6
67. If a sphere is halved, total surface of one piece is?
 a. 50% of sphere b. 75% of sphere c. 100% of sphere d. none of them
68. Evaluate $\sqrt{6 + \sqrt{7 + \sqrt{1 + \sqrt{9}}}}$
 a. 4 b. 3 c. 15 d. 2
69. If 30% passed in maths and science, % 65 passed in science and 10% failed in maths and science, How many are failed in science only?
 a. 35 % b. 25% c. 15% d. 30%
70. If $\cos A = \frac{x^2 - y^2}{x^2 + y^2}$, then find the value of $\tan A$
 a. $\frac{x^2 + y^2}{2xy}$ b. $\frac{x^2 - y^2}{2xy}$ c. $\frac{2xy}{x^2 + y^2}$ d. $\frac{2xy}{x^2 - y^2}$
71. There are 1 yellow, 2 blue and 3 green balls in a bag. If two balls are drawn one after another without replacement, what is the probability of getting an yellow and a green ball?
 a. $\frac{1}{5}$ b. $\frac{1}{10}$ c. $\frac{2}{5}$ d. $\frac{3}{10}$
72. If $\frac{p}{q} = \frac{2}{3}$, $\frac{q}{r} = \frac{9}{7}$, find $\frac{r}{p}$
 a. $\frac{7}{6}$ b. $\frac{2}{7}$ c. $\frac{7}{3}$ d. $\frac{2}{3}$
73. If $\sin B = \frac{15}{17}$, find the value of $\sec B$?
 a. $\frac{17}{15}$ b. 1 c. $\frac{17}{8}$ d. $\frac{8}{17}$
74. A boy goes 12km eastward and then 5km northward. How far is he from the original place?
 a. 2km b. 10km c. 13 km d. 17km
75. Which one measures the dispersion of data?
 a. Mode b. Median c. Mean d. Range
76. In a square based pyramid is bisected through its diagonal. What is area of newly exposed part of one piece?
 a. a.h b. $\frac{1}{2} dl$ c. $\frac{1}{2} dh$ d. al

77. A cyclist rides 25000 cm in 1 minute. Find his speed in km/hr.
a. 15km/hr b. 18km/hr c. 20km/hr d. 36km/hr
78. If $p+q+r=0$, then $p^3+q^3+r^3$ equals to:
a. $pq+qr+rp$ b. pqr c. 0 d. $3pqr$
79. What is the radius of a circle if 7cm long arc subtend 1 radian angle at the centre?
a. 14cm b. 7cm c. 10cm d. 21cm
80. If AM and GM of two numbers are 10 and 8 respectively, then the numbers are
a. 14 and 6 b. 16 and 4 c. 18 and 2 d. 15 and 5
81. Number of molecules present in 1.8 gm water is
a. 6.023×10^{22} b. 6.023×10^{23} c. 6.023×10^{21} d. 3.0115×10^{23}
82. Which of the following is the ore of iron?
a. Haematite b. Magnetite c. Silver glance d. Both a and b
83. The reactivity of an elements depends on
a. Size of atom b. valence electron c. both of them d. none of them
84. Oxidation number of Cr in $K_2Cr_2O_7$ is
a. 0 b. +6 c. +3 d. +7
85. First organic compound synthesized in lab from its constituents' elements is
a. CH_3COOH b. NH_4CNO c. NH_2CONH_2 d. CH_4
86. Aqueous solution of Na_2CO_3 is alkaline in nature while an aqueous solution of $FeCl_3$ is
a. Neutral b. Basic c. Cannot be predicted d. Acidic
87. When burning magnesium introduce in atmosphere of carbon dioxide
a. It extinguished b. Continues burning releasing oxygen
c. Continues burning releasing carbon d. Continues burning with sooty flame
88. Presence of urea in drinking water may cause
a. Gigantism in child b. Dwarfism in child c. Sterility in child d. All of above
89. Which of the following is reversible reaction?
a. Formation of ammonia from nitrogen and hydrogen b. Decomposition of potassium chlorate
c. Decomposition of hydrogen peroxide d. None of the above
90. Which of the following is the pair of isotopes?
a. ${}_6C^{12}$ & ${}_6C^{14}$ b. ${}_{17}Cl^{35}$ & ${}_{17}Cl^{37}$ c. ${}_1H^1$ & ${}_1H^2$ d. all of above
91. First period of modern periodic table has only two elements because
a. It is the shortest period. b. s sub-shell has 2 electrons c. K shell has 2 electrons d. none of above
92. Brass is an alloy of
a. Cu + Zn b. Cu + Zn + Ni c. Zn + Sn d. Cu + Sn + Zn
93. IUPAC name of glycerol is
a. Propane-1,2,3-diol b. Propane-1,2,3-triol c. Propanol d. Ethane-1,2-diol
94. Which of the following oxide is used to impart red glass
a. Cobalt Oxide b. Chromium Oxide c. Ferric Oxide d. Copper Oxide
95. The expanded molecular formula of isobutane is.....
a. $CH_3CH_2CH_2CH_3$ b. $CH_3CH(CH_3)CH_3$ c. C_4H_8 d. All of above
96. The correct order of reactivity is
a. $F > Cl > Br > I$ b. $I > Br > Cl > F$ c. $I > Cl > Br > F$ d. None of above
97. Magnesium ribbon burnt in the atmosphere of nitrogen gives
a. magnesium oxide b. Nitrogen dioxide c. Magnesium nitride d. Magnesium nitrate
98. Which of the following metal can displace hydrogen from dilute nitric acid?
a. Magnesium b. Manganese c. Cobalt d. Both a and b
99. Which of the following oxide is water soluble?
a. PbO b. CuO c. Na_2O d. Both a and b
100. Mass of calcium oxide formed by decomposition of 250 gm limestone is
a. 110gm b. 140 gm c. 56 gm d. None of above