



RAMAN SPACE MANTHAN

2025-26

Standard:- IX STATE BOARD

Name:- _____

Std:- _____

Roll no:- _____

School Name:- _____

INSTRUCTIONS

- There will be 3 sections
- Physics: 40 Questions
- Chemistry: 30 Questions
- Biology: 30 Questions
- Total questions 100 each carries 4 mark.
- There is a negative marking as -1
- Total exam time 2 hour.
- Don't mark anything on the question paper

➤ PHYSICS

1. A car moving along straight line cover $1/5^{\text{th}}$ of total distance with speed v_1 and remaining part of distance with speed v_2 . the average speed of car over entire distance is
 - A. $5v_1v_2 / v_2+4v_1$
 - B. $4v_1v_2 / 5v_1+v_2$
 - C. $5v_1v_2 / 4 v_2+v_1$
 - D. $4v_1v_2 / 4 v_1+v_2$
2. Assertion: The equation of motion can be applied only if acceleration is along the direction of velocity and is constant.
Reason: The acceleration of a body is constant then its motion is known as uniform motion.
 - A. Both assertion and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false.
3. A body covers one third of the time with a velocity v_1 the second one third of the time with a velocity v_2 and the last one third of the time with a velocity v_3 . the average velocity is
 - A. $v_1 + v_2 + v_3 + / 3$
 - B. $3 v_1 v_2 v_3 / v_1 v_2 + v_2 v_3 + v_3 v_1$
 - C. $v_1 v_2 + v_2 v_3 + v_3 v_1 / 3$
 - D. $v_1 v_2 v_3 / 3$
4. Two files P and Q revolve around a light in concentric circular paths. the radius of circular path of P is twice of Q . P travels with a uniform linear speed of 4m/s while Q travels with a uniform linear speed of 3 m/s . when P complete three full round, then Q would have completed
 - A. 4 round
 - B. 3 round
 - C. 2 round
 - D. 1 round
5. A particle moving along a straight line cover first one third distance with a speed of 3 ms^{-1} . the rest of the distance is covered in two equal time intervals with speed of 4.5 ms^{-1} and 7.5 ms^{-1} . The average speed of the particle is
 - A. 5.0 ms^{-1}
 - B. 5.5 ms^{-1}
 - C. 4.5 ms^{-1}
 - D. 4.0 ms^{-1}

6. Read the given statement and select the correct option

Statement 1: Reducing the initial velocity to half the initial value, the distance of a moving object decrease by a factor of 2 (for the same deceleration)

Statement 2: Here, the stopping distance is proportional to the square of initial velocity.

- A. Both assertion and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false.
7. A body of mass 2 kg rests on a rough inclined plane making an angle 30° with the horizontal. the coefficient of static friction between the Block and the plane is 0.7. the frictional force on the block is
- A. 9.8N B. $0.7 \times 9.8\text{N}$ C. $9.8 \times 3\text{N}$ D. $0.7 \times 9.8\text{N}$
8. Assertion: when break are applied on a wet road, a car is likely to skid.
Reason: Break prevent rotation of the wheels and there is not sufficient friction between the road and the wheel to stop the translation motion.
- A. Both assertion and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false.
9. A man weighs 80 kg. he stands on a weighing scale in a lift which is moving downwards with a uniform acceleration of 5 m/s^2 . what would be the reading on the scale? ($g = 10 \text{ m/s}^2$)
- A. Zero B. 400N C. 800N D. 1200N

10. Which of the following statements are incorrect?
1. when a batsman hits a cricket ball with his bat, the force applied by the batsman is muscular force.
 2. In an electric bell, the hammer strikes the gong due to electrostatic force.
 3. During dry weather, hair tends to attract the comb while combing and it is due to magnetic force of attraction.
 4. Walking on ice is difficult because of lack of frictional force.
- A. 1 and 2 only B. 1 and 4 only C. 2 and 3 only D. 1, 2 and 4 only
11. Read the given statement and select the correct option.
- Statement 1: it is difficult to drive a vehicle at high speed on a rainy day.
Statement 2: friction is independent of the area of contact between the surface.
- A. Both statement 1 and statement 2 are true and statement 2 is correct explanation of statement 1.
 - B. Both statement 1 and 2 are true but statement 2 is not correct explanation of statement 1.
 - C. statement 1 is true but statement 2 is false.
 - D. Both statement 1 and statement 2 are false.
12. A rubber ball of mass 100g from a height of 4.90 m and after hitting the ground it rebounds to a height of 2.45 m. the impulse imparted to the ball by the ground if they are in contact for 0.2 s is
- A. 1.67 Ns B. 2.38 Ns C. 3.34 Ns D. 0.84 Ns
13. A hydraulic automobile lift is designed to lift cars with a maximum mass of 3000kg. the area of cross section of the piston carrying the load is 425 cm^2 . What maximum pressure would the smaller piston have to bear?
- A. $2.916 \times 10^4 \text{ Pa}$ B. $3.927 \times 10^3 \text{ Pa}$
C. $5.918 \times 10^2 \text{ Pa}$ D. $6.917 \times 10^5 \text{ Pa}$
14. A beaker containing water is placed on the platform of a digital weighing machine. it reads 1100 g. A metal body of density 8 g/cc and mass 200 g is suspended in water in the beaker (without touching the walls of the beaker). It is attached by a suitable string fixed to some support. now the reading of weighing machine will be
- A. 1100 g B. 1125 g C. 1275 g D. 1300 g

15. Assertion: imagine holding two identical bricks under water. bricks A is completely submerged just below the surface of water, while brick B is at a greater depth. the magnitude of force exerted by the person to hold brick B in place is the same as magnitude of force exerted by the person to hold brick A in place.

Reason: the magnitude of buoyant force on a brick completely submerged in water is equal to magnitude of weight of water it displace and does not depend on depth of brick in water.

- A. Both assertion and reason are true and reason is correct explanation of assertion.
B. Both assertion and reason are true but reason is not correct explanation of assertion.
C. Assertion is true but reason is false.
D. Both assertion and reason are false
16. An object of volume V is immersed in a liquid of density p . Calculate the magnitude of buoyant force acting on the object due to liquid.
A. $F_B = V \times g$ B. $F_B = V \times p \times g$ C. $F_B = m \times p \times g$ D. $F_B = V \times p$
17. A bricks of mass 5 kg, having dimension $200 \text{ cm} \times 50 \text{ cm} \times 100 \text{ cm}$ is kept on the ground. calculate the pressure exerted by the brick when it is placed along breadth and height on the ground. ($g = 10 \text{ m s}^{-2}$)
A. 200 N/m^2 B. 500 N/m^2 C. 1000 N/m^2 D. 100 N/m^2
18. A hot air balloon loaded with sandbags has a total mass of M . it is descending with a downward acceleration of $g/2$, where g is the acceleration of free fall. how much sand must be released from the sandbag in order that hot air balloon ascend with the same acceleration?
A. $M/2$ B. $M/3$ C. $2M/3$ D. $3M/4$
19. A rod of length l and mass m fixed at one end, is hanging vertically. The other end is now raised so that the rod makes an angle 30° with horizontal line. The work done in this process will be –
A. $mg l$ B. $mg l / 2$ C. $mg l / 3$ D. $mg l / 4$
20. A water pump lifts water from a level 10m below the ground. the water is pumped at the rate of 30 kg/min negligible velocity. calculate the minimum power the pump should have to do this work.
A. 49 J/s B. 490J/s C. 500 J/s D. 48 J/s

21. Crane A and crane B take 1 minute and 2 minute respectively to lift a car of mass 2 ton upward through a vertical height $h = 3$ m. if the efficiencies of the engine of both the cranes are equal, your inference is that
- A. The power supplied by crane B is 1000 kW
 - B. The crane A and the crane B consume equal amount of fuel
 - C. The power supplied by crane A is more than the power supplied by crane B
 - D. The crane A consumes more fuel in lifting the car than the crane B
22. A pump on the ground floor of a building can pump up water too fill a tank of volume 30 m^3 in 15 min. if the tank is 40 m above the general and the efficiency of the pump is 30 percentage, then how much electric power is consumed by the pump? (take $g = 9.8 \text{ m/s}$)
- A. 100 kW
 - B. 43.60 kW
 - C. 50.60 kW
 - D. 87.2 kW
23. Read the given statements and mark the correct option.
- statement 1: when a body undergoes uniform circle motion, its momentum goes on changing but kinetic energy remains constant.
- statement 2: in uniform circle motion, acceleration of the body is zero.
- A. Both statement 1 and statement 2 are true and statement 2 is correct explanation of statement 1.
 - B. Both statement 1 and 2 are true but statement 2 is not correct explanation of statement 1.
 - C. statement 1 is true but statement 2 is false.
 - D. Both statement 1 and statement 2 are false.
24. A stone is projected vertically up. at certain height h above the ground, the ratio of its potential energy is 3:4, the height at which ratio is 4:3 is:
- A. $\frac{2}{5}h$
 - B. $\frac{9}{8}h$
 - C. $\frac{4}{3}h$
 - D. $\frac{4}{7}h$
25. Assertion: The loudness of sound is directly proportional to the density of the medium through which it propagates
- Reason: Greater the elasticity of the medium, faster is the sound.
- A. assertion Both and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false

26. Which of the following statement is / are correct?
1. sound wave does not follow the same law of reflection as light does.
 2. tone is a sound of a single frequency while note is mixture of several frequencies
 3. infrasonic waves are used in SONAR.
- A. 2 only B. 1,2 and 3 only C. 2 and 3 only D. 1 only
27. For an oscillating pendulum of fixed length, which of the following is true?
- A. frequency depends on amplitude of oscillation.
 - B. frequency and time period are not related.
 - C. time period depends on amplitude of oscillation.
 - D. frequency and time period are related and do not on amplitude on Amplitude of oscillation.
28. A source can produce wave of wavelength 100mm in a medium X and of wavelength 0.25 cm in another medium Y. if the velocity of wave in medium X is 80 ms^{-1} , then the velocity of wave in medium Y is
- A. 2 ms^{-1} B. 4 ms^{-1} C. 6 ms^{-1} D. 8 ms^{-1}
29. A boy standing at a certain distance from a wall produce a loud sound. He hears echo of the sound after 2.2 s. velocity of sound in air is 340 ms^{-1} . distance between the wall and the boy is
- A. 340 m B. 748 m C. 374 m D. 680 m
30. Earthquake generates sound waves inside the earth which consists of both transverse (S) and longitudinal (P) sound wave. the speed S wave is about 5.0 km/s and that of P wave is 10.0 km/s . A seismograph records the P and S wave. the first P wave arrives 4 minutes before the first S wave. distance did the earthquake occur?
- A. 1750 km B. 2250 km C. 2400 km D. 1920 km
31. A cylindrical conductor of length l and uniform area of cross -section A has resistance R. Another conductor of length $2l$ and resistance R of the material must have area of cross-section
- A. $A/2$ B. $3A/2$ C. $2A$ D. $3A$
32. A current of 1A is drawn by a filament of an electric bulb. number of electrons passing through a cross – section of the filament in 16 seconds would be roughly
- A. 10^{20} B. 10^{16} C. 10^{18} D. 10^{23}

33. Out of the three bulbs: 25 W, 60W, and 100 W, which bulbs has least resistance?
- A. 25 W bulbs B. 60 W bulbs
C. 100 W bulbs D. all bulbs have equal resistance
34. In an electrical circuit two resistors 2Ω and 4Ω respectively are connected in series to a 6 V battery. the heat dissipated by the 4Ω resistor in 5 s will be
- A. 5 J B. 10 J C. 20 J D. 30 J
35. Assertion: Tungsten metal is used for making filament of incandescent lamps.
Reason: The melting point of tungsten is very low.
- A. assertion Both and reason are true and reason is correct explanation of assertion.
B. Both assertion and reason are true but reason is not correct explanation of assertion.
C. Assertion is true but reason is false.
D. Both assertion and reason are false
36. In the given chain, suppose the amount of energy at fourth trophic level is 5 kJ, what will be the energy available at the producer level?
Grass > Grasshopper > Frog > Snake > Hawk
- A. 5 kJ B. 50 kJ C. 500 kJ D. 5000 kJ
37. In the following group of materials, which group contains only non-biodegradable items?
1. wood, paper, leather 2. Polythene, detergent, PVC
3. plastic, detergent, grass 4. Plastic bakelite, DDT
38. The pH of water sample 0collected from a river was found to be acidic in the range of 3.5-4.5, on the banks of the river were several factories that were discharging effluents into the river. the effluents of which one of the following factories is the most likely cause for lowering the pH of river water?
- A. soap and detergent factory B. lead battery manufacturing factory
C. plastic cup manufacturing factory D. Alcohol distillery

39. Among the statement given below select the once that correctly describe the concept of sustainable development.

1. planned growth with minimum damage to the environment.
2. growth irrespective of the extent of damage caused to the environment.
3. stopping all development work to conserve the environment.
4. growth that is acceptable to all the stakeholder.

A. 1 and 4 B. 2 and 3 C. 2 and 4 D. 3 only

40. In our country, there are attempts to increase the height of several existing dams like Tehri and Almatti, dams, across Narmada. choose the correct statement among the following that are a consequence of raising the height of dams.

1. terrestrial flora and fauna of the area is destroyed completely.
2. dislocation of people and domestic animal living in the area.
3. valuable agricultural land may be permanently lost.
4. it will generate permanent employment for people.

A. 1 and 2 B. 1, 2 and 3 C. 2 and 4 D. 1, 3 and 4

➤ Chemistry

41. Assertion: When we light an incense stick in one corner of our room, its fragrance spread in the whole room very quickly.

Reason: The fragrance of burning stick spread all around due to the diffusion of its smoke in the air.

- A. assertion Both and reason are true and reason is correct explanation of assertion.
- B. Both assertion and reason are true but reason is not correct explanation of assertion.
- C. Assertion is true but reason is false.
- D. Both assertion and reason are false

42. Analyze the following statement and choose the correct option.
1. Gas particles have large interparticle space as compared to liquid and solids.
 2. Gas particles move faster at higher temperature.
 3. Gas is the only state of matter which is fluid.
 4. The effect of pressure on the particles of gases is the same as that on the particles of solids.
 5. Gases occupy more volume for the same number of particles, as compared to solids and liquid.
- A. 1, 2 and 5 only B. 2, 3 and 4 only
 C. 1, 3 and 4 only D. 1, 2, 4 and 5
43. On converting 25 °C, 38 °C and 66 °C to Kelvin scale, the correct sequence of temperature will be respectively
- A. 293 K, 311K and 339K
 - B. 298K, 300K and 338K
 - C. 273K, 278K and 543K
 - D. 298K, 310K and 338K
44. Gases have highly diffusibility. Which of the following is the correct reason for the above statement?
- A. It is due to the high intermolecular forces of attraction.
 - B. It is due to high kinetic energy of molecules.
 - C. It is due to the restricted translatory motion in upward direction.
 - D. All of the above.
45. Read the given statements and select the option that correctly identifies them as true (T) and false (F) ones.
1. The dissolution of crystal of potassium permanganate in water signifies that particles of matter have spaces between them.
 2. With an increase in the temperature of the system, the kinetic energy of the particles increase.
 3. The liquefaction of gases can be carried out increasing pressure and decreasing temperature.
 4. Evaporation is a bulk phenomenon that causes cooling effect.
- | | (1) | (2) | (3) | (4) |
|----|-----|-----|-----|-----|
| A. | T | F | F | T |
| B. | T | F | T | T |
| C. | F | F | T | T |

D. T T T F

46. Two chemical species A and B combine together to form a product X which contains both A and B, $A+B = X$. A and B cannot be broken down into simpler substance by simple chemical reactions. which of the following about the concerning the species A, B and X are correct?

1. X is a compound.
2. A and B are compounds
3. A and B are elements.
4. X has a fixed composition.

A. 1 and 2 B. 1, 3 and 4 C. 2 and 4 D. all of the above

47. Select the correct statement(s).

1. A solution in which size of the solute particle is about 10^{-10} m , is called true solution.
2. A solution which contain maximum possible amount of solute at any given temperature is called a saturated solution.
3. In suspension, the size of particles is of the order of 10^{-7} m or larger.
4. A colloid is a heterogeneous.

A. 1 ,2 and 4 B. 1, 2 and 3 only C. 3 and 4 only D. 1,2 and 4 only

48. Ms Diksha a science teacher gave different substances to three students. one spatula full of copper sulphate was given to student 1, wheat flour was given to students 2 and ink was given to student 3. each student added the given sample to water and stirred. which of the following statements is incorrect about the mixtures prepared by them?

- A. Particles are not visible to the naked eye in case of mixture obtained by student 1 and student 3.
- B. The path of light becomes visible in case of mixture obtained by student 1.
- C. When passed through filter paper, particles of mixture obtained by student 2 remain behind on the filter paper.
- C. The particle of mixture obtained by student 3 are about 100 times bigger than those of the mixture obtained by student 1.

49. Soham a class 9 student mixed some iron filings and sulphur in a China dish and heated them strongly to obtain a residue. Which of the following is not a characteristic property of the residue?
- It cannot be separated into sulphur and iron filling by normal physical methods.
 - Its properties are completely different from iron and sulphur .
 - Its composition is same throughout.
 - Its appearance is different from iron sulphur but it shows chemical properties of both iron and sulphur
50. Select the correct statement.
- Substance having melting point -40°C and boiling point 65°C will have maximum interparticle forces at -35°C .
 - Substance having melting point -110°C and boiling point 25°C , will exist only in liquid state at -110°C .
 - Substance having melting point -110°C will have minimum interparticle distance at 15°C .
 - Substance having melting point 90°C and boiling point 267°C will exist in solid state at room temperature.
51. Two samples X and Y of a pure substance obtained by two different methods contain elements P and Q. substance X has a mass of 2.25 g and contains 0.90g of Q. substance Y is made up of 60 percentage P and 40 percentage Q by weight. This is an illustration of
- law of conservation of mass
 - law of multiple proportion
 - law of simple proportion
 - law of constant proportion
52. In an experiment, 1.50 g of pure copper (2) oxide was reduced to pure metal by heating with pure carbon. In another experiment, 1.15 g of pure copper was treated with nitric acid and the product formed was heated strongly till no further change was observed. the mass of copper (2) oxide so formed was found to be 1.40 g. the mass of pure metal formed in the first experiment and the law followed are, respectively.
- 1.15 g and law of conservation of mass
 - 1.50 g and law of constant proportion
 - 1.23 g and law of constant proportion
 - 2.47 g and law of multiple proportion

53. A given sample of phosphorus contain 0.25 mol of phosphorus molecules (P_4). The number of moles of phosphorus atoms, number of phosphorus molecules and number of phosphorus atoms present in the given sample are , respectively

- A. 6.023×10^{24} , 1 and 3.2×10^{23}
- B. 4, 1.5×10^{23} and 6.023×10^{24}
- C. 1, 1.5×10^{23} and 6.023×10^{23}
- D. 6.023×10^{24} , 3.2×10^{23} and 2

54. Select the correct statement.

- 1. 50 g of Al contains more atom than 50 g of Fe.
- 2. 32.5 g of Mg have the same number of moles of atoms as 40.5 g of Al.
- 3. 20 g of water contain more number of moles as compared to 22 g of carbon dioxide.
- 4. The ratio by mass of elements (Al: F) in aluminium fluoride is 9: 19.
(Given: Atomic mass of H = 1 u, Mg =24 u, O = 16 u, C = 12 u, F =19 u, Al = 27 u and Fe = 56 u)

Choose the correct answer from the options given below:

- A. 1 and 3 only B. 1 and 4 only
- C. 2 and 3 only D. 1, 3 and 4 only

55. A brief description of two experiments is given below:

Experiment 1: 5.40 g of copper oxide was obtained by heating 4.32 g metallic copper with nitric acid and subsequent ignition.

Experiment 2: 1.84 g of copper was obtained by reducing 2.30 g of copper oxide.

Which of the following laws can be explained with the help of these experiment?

- A. law of conservation of mass
- B. law of constant proportion
- C. law of multiple proportion
- D. law of reciprocal proportion

56. Select the correct statement(s) pertaining to Bohr's model of an atom.

1. An electron near the nucleus is attracted more by the nucleus; thereby has lower potential energy.
2. An electron continuously radiates energy as long as it revolves in a discrete orbit.
3. The model could not explain the spectra of multi – electron atoms.
4. This is the first atomic model based on quantization of energy.

Choose the correct answer from the options given below:

- A. 1, 3 and 4 only B. 1 and 2 only
C. 3 and 4 only D. 1 and 4 only

57. Assertion: Thomson's atomic model is known as 'raisin pudding' model.

Reason: The atom is visualized as a pudding of positive charge with electrons (raisins) embedded in it.

- A. assertion Both and reason are true and reason is correct explanation of assertion.
B. Both assertion and reason are true but reason is not correct explanation of assertion.
C. Assertion is true but reason is false.
D. Both assertion and reason are false

58. Rutherford's α – ray scattering experiment led to the discovery of the nucleus and to the conclusion that an atom consists of large empty space.

Arrange the following steps in a sequence which explains the experiment and also the above – mentioned conclusion:

1. to make out the observation a spherical ZnS screen was placed surrounding the gold foil.
2. The substance which acts as a source of α -particle is taken in a lead container and made to pass through a slit between like charged positive plates.
3. It was observed that most of the particle passed straight through the gold foil, few were deflected through small angle. however, very few completely rebounded.
4. A narrow, condensed beam consisting of α -particle is made to a thin gold foil.

- A. 1,3,2,4 B. 2,3,1,4 C. 4,2,1,3 D. 2,4,1,3

59. According to Bohr, when electron jumps from one shell to another
- A. if it loses energy, it moves away from the nucleus
 - B. when it gains energy, it moves toward the nucleus
 - C. it emits energy in the form of radiation when it moves from higher energy level to lower energy level
 - D. it always gains energy in the form of light.

60. Atomic number of a few elements are given here.

P-4, Q-10, R-11, S-15, T-17

Which of the following is correct regarding these elements?

- A. R and T will form a compound R_2T .
 - B. Q and S will combine to form Q_2S .
 - C. R and T both will form univalent ions.
 - D. P has complete octet in its L shell
61. Sodium hydrogen carbonate when added to acetic acid evolves a gas. which of the following statements is true about the gas evolved?
- 1. it turns lime water milky.
 - 2. it extinguishes a burning splinter.
 - 3. it dissolves in a solution of sodium hydroxide.
 - 4. it has a pungent odour.

A. 1 and 2 B. 1, 2, and 3 C. 2, 3 and 4 D. 1 and 4

62. Assertion: Copper sulphate crystal are wet because it contain water of crystallization.

Reason: Water of crystallization is the fixed number of molecules of water Present in one formula unit of salt.

- A. assertion Both and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false
63. Four metals Al, Zn, Cu, and Fe are added in different test tubes containing dilute hydrochloric acid. No bubbles are seen in the case of
- A. Al B. Zn C. Cu D. Fe

64. What happens when calcium is treated with water?
1. it does not react with water.
 2. it reacts violently with water.
 3. it reacts less violently with water.
 4. Bubbles of hydrogen gas formed stick to the surface of calcium.
- A. 1 and 4 B. 2 and 3 C. 1 and 2 D. 3 and 4
65. Assertion: Bronze is an alloy of copper and tin.
Reason: Alloys are heterogeneous mixtures of metals with other metals and non-metals.
- A. Both assertion and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false.
66. Which of the following statements are usually correct for carbon compounds? These
1. are good conductors of electricity.
 2. are poor conductors of electricity.
 3. have strong forces of attraction between their molecules.
 4. do not have strong force of attraction between their molecules.
- A. 1 and 3 B. 2 and 3 C. 1 and 4 D. 2 and 4
67. Carbon forms four covalent bonds by sharing its four valence electrons with four univalent atoms, e.g., hydrogen. After the formation of four bonds, carbon attains the electronic configuration of
- A. helium B. neon C. argon D. krypton
68. Assertion: Diamond and graphite are allotropes of carbon.
Reason: Some elements can have several different structural forms while in the same physical state. These forms are called allotropes.
- A. Both assertion and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false

69. Which of the following are the characteristics of isotopes of an elements ?

1. isotopes of an element have same atomic masses
2. isotopes of an element have same atomic number
3. isotopes of an element show same physical properties
4. isotopes of an element show same chemical properties

A. 1, 3, and 4 B. 2, 3 and 4 C. 2 and 3 D. 2 and 4

70. Assertion: According to Mendeleev, the properties of elements are a periodic function of their atomic masses.

Reason: Atomic number is equal to the number of protons.

- A. assertion Both and reason are true and reason is correct explanation of assertion.
- B. Both assertion and reason are true but reason is not correct explanation of assertion.
- C. Assertion is true but reason is false.
- D. Both assertion and reason are false

➤ Biology

71. DNA of eukaryotes have

- A. Fatty acid B. Cholesterol C. Histon D. all of the above

72. Plasmolysis in a plant cell is defined as

- A. Break down (lysis) of plasma membrane in hypotonic medium.
- B. Shrinkage of cytoplasm in hypertonic medium.
- C. Shrinkage of nucleoplasm.
- D. None of them

73. Find out the false sentence.

- A. Golgi apparatus is involved with the formation of lysosomes.
- B. Nucleus, mitochondria and plastid have DNA; hence they are able to make their own structural protein.
- C. Mitochondria is said to be the powerhouse of the cell as ATP is generated in Them.
- D. Cytoplasm is also called protoplasm.

74. Through which of the following processes does *Amoeba* acquire its food?

- A. Exocytosis B. Endocytosis
C. Plasmolysis D. Exocytosis and endocytosis both

75. In the structure of chloroplasts, the disc – shaped structures where the light Reaction of photosynthesis occurs are called:

- A. Cristae B. Grana C. Cisternae D. Thylakoid
76. The lining of oesophagus and mouth is covered with which type of tissue?
 A. Cuboidal epithelium B. Squamous epithelium
 C. Columnar epithelium D. non of above
77. Which of the tissue has deposition of pectin?
 A. Collenchyma B. Sclerenchyma
 C. Phloem D. Xylem
78. If the tip of a sugarcane plant is removed, it continues to grow in length due to the presence of
 A. Cambium B. Apical meristem
 C. Lateral meristem D. Intercalary
79. Which type of cells are found in cartilaginous tissue?
 A. Mast cells B. Basophils C. Osteocytes D. Chondrocytes
80. Which of the following plant tissues provide mechanical support and a Protective covering around seeds?
 A. Parenchyma B. Collenchyma C. Aerenchyma D. Sclerenchyma
81. Which amongst the following is a fungicide?
 A. 2-4 D B. DDT C. Bordeaux mixture D. BHC
82. Ethylene dibromide is used as a
 A. Fumigant B. Fertilizer
 C. Food preservative D. Source of vitamins
83. Which of the following is a weed?
 A. *Oryza sativa* B. *Cyperinus rotundus*
 C. *Arachis hypogoa* D. *Triticum vulgare*
84. Which species of Italian honey bee is useful for honey production?
 A. *Apis serena indica* B. *Apis dorsata*
 C. *Apis flora* D. *Apis mellifera*
85. which one of the following nutrients is available in fertilizers?
 A. Rohu B. Mrigal C. Common carp D. Catla
86. Living fossil is
 A. Ginkgo B. Pinus C. Marsilia D. Azolla
87. Which among the following is not an annelid?
 A. Nereis B. Pheretima C. Hirudinaria D. Periplaneta
88. Differentiation in segmental fashion occurs in
 A. Leech B. Star fish C. Snails D. Ascaris
89. Skeleton is made entirely of cartilage in
 A. Sharks B. Tuna C. Rohu D. none of these

90. Find out the false statement.
- A. Aves are warm – blooded, egg laying and have four chambered heart .
 - B. Aves have feathers covered on their body, fore limbs are modified as wings and they breathe through lungs.
 - C. Most of the mammals are viviparous.
 - D. Fishes amphibians and reptiles viviparous.
91. Which of the following causes malaria?
- A. Salmonella typhimurium
 - B. Trichinella spiralis
 - C. Plasmodium spp
 - D. Leishmania donovani
92. BCG vaccine is used to cure
- A. Pneumonia
 - B. Tuberculosis
 - C. Polio
 - D. AIDS
93. Disease – causing factors existing within the body itself are called
- A. Extrinsic factor
 - B. Hereditary factor
 - C. Congenital factor
 - D. Intrinsic factor
94. Assertion: The type of treatment to be followed is same for all types of pathogens.
Reason: Immunization can prevent many infectious diseases.
- A. assertion Both and reason are true and reason is correct explanation of assertion.
 - B. Both assertion and reason are true but reason is not correct explanation of assertion.
 - C. Assertion is true but reason is false.
 - D. Both assertion and reason are false
95. Making anti- viral drug is more difficult then making anti-bacterial medicines because
- A. viruses make use of host machinery
 - B. viruses are on the border line of living and non – living
 - C. viruses have very few biochemical mechanisms of their own
 - D. viruses have a protein coat
96. How is the term ‘disease’ used in a more limited sense?
- A. when health is not achievable.
 - B. when there is a specific and identifiable cause for discomfort.
 - C. when one is simply not diseased.
 - D. when there are no symptoms present.

97. What does 'good health' mean for a dancer?
- A. having no injuries.
 - B. being able to perform graceful movement.
 - C. having a high level of endurance.
 - D. being free from any diseases.
98. What are symptoms of disease?
- A. condition that can be diagnosed
 - B. feeling or indications that something is wrong
 - C. observable change that a physician can see
 - D. laboratory results confirming
99. Which of the following can lead to a compromised immune system?
- A. Regular exercise
 - B. Balanced diet
 - C. Chronic stress
 - D. Good sleep
100. If you live in an overcrowded and poorly ventilated house, it is possible that you may suffer from which of the following diseases?
- A. Cancer
 - B. AIDS
 - C. air borne disease
 - D. Cholera

Best of luck