

**CBSE  
Class IX Science  
Term 1  
Sample Paper – 2**

**Biology**

- Q1. Group of viral borned disease is
- (a) Gepatities and typhoid
  - (b) Polio and dengue
  - (c) Rabies and tetanus
  - (d) Measles and cholera
- Q2. Peptic ulcers are caused by
- (a) Bacterium, Helicobacter pylori
  - (b) Virus
  - (c) Protozoan, plasmodium vivax
  - (d) The deficiency of hormone
- Q3. Trypanosoma, Leishmania nad Plasmodium are the example of
- (a) Virus
  - (b) Bacteria
  - (c) Protozoa
  - (d) Worm
- Q4. The group of diseases spread by houseflies is
- (a) Malaria, Cholera, Scabies
  - (b) Abies, Rickets, Diarrhoea
  - (c) Yphoid, Dysentery, Tuberculosis
  - (d) Ingworm, Scurvy, Vomiting
- Q5. In high yielding 'hybrid crop varieties' to exploit hybrid vigor, the farmers need to purchase fresh hybrid seen every year, because
- (a) They are not allowed to grow their own seed
  - (b) The hybrid vigour is lost due ot inbreeding depression
  - (c) The government of India has accepted Dunkel's proposals
  - (d) It is cheaper to purchase fresh seed

- Q6. Livestock refers to
- (a) Pet animals
  - (b) Poultry and pet animals
  - (c) Domestic animals which are kept for use or profit
  - (d) None of the above
- Q7. Which one of the following combinations are most suitable for composite fish culture?
- (a) Surface feeders and bottom feeders
  - (b) Middle zone feeders and bottom feeders
  - (c) Surface feeders only
  - (d) Surface feeders, middle zone feeders and bottom feeders
- Q8. Which of the following poultry bird lays maximum number of eggs annually?
- (a) ILS – 82
  - (b) B – 77
  - (c) HH – 260
  - (d) IBL – 80
- Q9. Human - caused changes to the nitrogen cycle are expected to result in
- (a) An increase in acid rain
  - (b) An increase in the loss of species from ecosystem
  - (c) Higher concentrations of a greenhouse gas
  - (d) All of the above
- Q10. Biosphere occurs
- (a) In lithosphere
  - (b) In lithosphere and hydrosphere
  - (c) Interaction of lithosphere, hydrosphere and atmosphere
  - (d) In atmosphere and hydrosphere
- Q11. The current carbon dioxide concentration of atmosphere is
- (a) 300 ppm
  - (b) 345 ppm
  - (c) 387 ppm
  - (d) 423 ppm

- Q12. Drip irrigation is a device
- (a) To recharge the ground water
  - (b) To reduce wastage of water
  - (c) To prevent water pollution
  - (d) All of them
- Q13. The golgi bodies are related to
- (a) Respiration
  - (b) Excretion
  - (c) Secretion
  - (d) Circulation
- Q14. Transport proteins are required for –
- (a) Diffusion
  - (b) Osmosis
  - (c) Facilitated transport
  - (d) Facilitated transport and active transport
- Q15. Which set does clearly identify striated muscles?
- (a) Cylindrical, syncytial and unbranched
  - (b) Spindle, unbranched and uninucleated
  - (c) Cylindrical, striped and nucleated
  - (d) Cylindrical, striped and branched
- Q16. Nucleated part of nerve cell is called
- (a) Axon
  - (b) Dendrites
  - (c) Cyton
  - (d) None of these
- Q17. Contractile proteins are found in
- (a) Bones
  - (b) Blood
  - (c) Muscles
  - (d) Cartilage

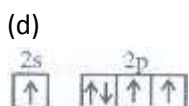
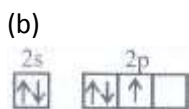
- Q18. The arthropods are the most successful animals group on earth, and they share all the following characteristics except \_\_\_\_\_
- (a) Endoskeleton
  - (b) Exoskeleton
  - (c) Jointed appendages
  - (d) Complex nervous system
- Q19. Corals are
- (a) Poriferans attached to some solid support
  - (b) Cnidarians that are solitary living
  - (c) Poriferans present at the sea bed
  - (d) Cnidarians that live in colonies
- Q20. Clitellum occurs in segments
- (a) 8 – 10
  - (b) 10 – 12
  - (c) 14 – 15
  - (d) 16 – 18

### Chemistry

- Q21. Boyle's law states that the
- (a) Pressure of a gas is directly proportional to the temperature at constant volume
  - (b) Pressure of a gas is inversely proportional the volume at constant tempter
  - (c) Volume is directly proportional to the temperature at constant pressure
  - (d) None of the above
- Q22. All gases will occupy zero volume when the temperature is reduced to
- (a) 273 °C
  - (b) 273 °A
  - (c) – 273 °C
  - (d) 0°C
- Q23. Densities of two gases are in the ratio 1 : 2 and their temperatures are in the ratio 2 : 1, then the ratio of their respective pressure is
- (a) 1 : 1
  - (b) 1 : 2
  - (c) 2 : 1
  - (d) 4 : 1

- Q24. According to Graham's law at a given temperature, the ratio of the rates of diffusion  $r_A / r_B$  of gases A and B is given by
- (a)  $\left(\frac{P_A}{P_B}\right) \left(\frac{M_A}{M_B}\right)^{1/2}$
  - (b)  $\left(\frac{M_A}{M_B}\right) \left(\frac{P_A}{P_B}\right)^{1/2}$
  - (c)  $\left(\frac{P_B}{M_B}\right) \left(\frac{P_A}{M_A}\right)^{1/2}$
  - (d)  $\left(\frac{M_A}{M_B}\right) \left(\frac{P_B}{P_A}\right)^{1/2}$
- Q25. Two substances A and B when brought together form a substance C with the evolution of heat. The properties of C are entirely different from those of A and B. The substance C is
- (a) A compound
  - (b) An element
  - (c) A mixture
  - (d) None of the above
- Q26. Which component of the mixture (Fe + S) reacts with dil. HCl and gives hydrogen gas?
- (a) Sulphur
  - (b) Iron
  - (c) Both
  - (d) None
- Q27. Which flow chart correctly describes a homogeneous material?
- (a) Unknown – density – 3 layers
  - (b) Unknown – filtration – two substances
  - (c) Unknown – magnet – two substances
  - (d) Unknown – boiling - one temperature
- Q28. Distillation is a good separation technique for
- (a) Solids
  - (b) Liquids
  - (c) Solid alloys
  - (d) Gases
- Q29. One mole of a gas occupies a volume of 22.4 L. This is derived from
- (a) Berzelius' hypothesis
  - (b) Gay Lussac's law
  - (c) Avogadro's law
  - (d) Dalton's law

- Q30. The weight of a molecule of the compound  $C_{60}H_{122}$  is  
 (a)  $1.4 \times 10^{-21} g$   
 (b)  $1.09 \times 10^{-21} g$   
 (c)  $5.025 \times 10^{23} g$   
 (d)  $16.023 \times 10^{23} g$
- Q31. The number of molecules of  $CO_2$  present in 44g of  $CO_2$  is  
 (a)  $6.02 \times 10^{23}$   
 (b)  $3 \times 10^{23}$   
 (c)  $12 \times 10^{23}$   
 (d)  $3 \times 10^{10}$
- Q32. When a colloidal solution is observed under an ultra-microscope, we can see  
 (a) Light scattered by colloidal particles  
 (b) Size of the particle  
 (c) Shape of the particle  
 (d) Relative size
- Q33. The formula of a chloride of a metal M is  $MCl_3$ , the formula of the phosphate of metal M will be  
 (a)  $MPO_4$   
 (b)  $M_2PO_4$   
 (c)  $M_3PO_4$   
 (d)  $M_2(PO_4)_3$
- Q34. The four quantum numbers that could identify the third 3p electron in sulphur are  
 (a)  $n = 3, l = 0, m = +1, s = +\frac{1}{2}$   
 (b)  $n = 2, l = 2, m = -1, s = +\frac{1}{2}$   
 (c)  $n = 3, l = 2, m = +1, s = -\frac{1}{2}$   
 (d)  $n = 3, l = 1, m = -1, s = +\frac{1}{2}$
- Q35. Which of the following orbital diagram violates the Pauli's exclusion principle?



- Q36.  ${}_{13}\text{Al}^{27}$  is a stable isotope.  ${}_{13}\text{Al}^{29}$  is expected to disintegrate by
- (a)  $\alpha$  – emission
  - (b)  $\beta$  – emission
  - (c) Positron emission
  - (d) Proton emission
- Q37. 10 K is equal to
- (a) 283 °C
  - (b) – 263 °C
  - (c) 263 °C
  - (d) – 283 °C
- Q38. The percentage by weight of  $\text{O}_2$  in  $\text{CaSO}_4$  (O = 16, S = 32, Ca = 40) is –
- (a) 64
  - (b) 28.2
  - (c) 47.2
  - (d) 16.2
- Q39. The most common solvent of Earth is .....
- (a) Gasoline
  - (b) Water
  - (c) Turpentine
  - (d) None of the above
- Q40. The solution of sugar in water contains
- (a) Free atoms
  - (b) Free ions
  - (c) Free molecules
  - (d) Free atom and molecules

### Physics

- Q41. Power is a measure of the \_\_\_\_\_
- (a) rate of change of momentum
  - (b) force which produces motion
  - (c) change of energy
  - (d) rate of change of energy

- Q42. Two objects of masses  $1 \times 10^{-3}$  kg and  $4 \times 10^{-3}$  kg have equal momentum. What is the ratio of their kinetic energies?
- (a) 4:1
  - (b) 2:1
  - (c) 16:1
  - (d)  $\sqrt{2} : 1$
- Q43. A 40 newton object is released from a height of 10 m. Just before it hits the ground, its kinetic energy, in joules is \_\_\_\_\_
- (a) 400
  - (b) 3920
  - (c) 2800
  - (d) 4000
- Q44. If the speed of an object is doubled then its kinetic energy is \_\_\_\_\_
- (a) doubled
  - (b) quadrupled
  - (c) halved
  - (d) tripled
- Q45. Sound waves do not travel through
- (a) solids
  - (b) liquids
  - (c) gases
  - (d) vacuum
- Q46. The physical quantity, which oscillates in most waves, is
- (a) mass
  - (b) energy
  - (c) amplitude
  - (d) wavelength
- Q47. Sound waves are
- (a) longitudinal
  - (b) transverse
  - (c) partly longitudinal and partly transverse
  - (d) sometimes longitudinal and sometimes transverse



- Q48. The frequency which is not audible to the human ear is
- (a) 50 Hz
  - (b) 500 Hz
  - (c) 5000 Hz
  - (d) 50000 Hz
- Q49. SI unit of gravitational constant is \_\_\_\_\_.
- (a)  $\text{N m}^2\text{kg}^2$
  - (b)  $\text{N m}^2\text{kg}^{-2}$
  - (c)  $\text{N m}^2\text{s}^{-2}$
  - (d)  $\text{N mkg}^{-2}$
- Q50. What is the value of gravitational constant?
- (a)  $6.6734 \times 10^{-11} \text{N m}^2/\text{kg}^2$
  - (b)  $6.6734 \times 10^{-10} \text{N m}^2/\text{kg}^2$
  - (c)  $6.6734 \times 10^{-11} \text{m}/\text{kg}^2$
  - (d)  $6.6734 \times 10^{-11} \text{N m}^2/\text{kg}$
- Q51. If the distance between two bodies is doubled, the force of attraction  $F$  between them will be \_\_\_\_\_
- (a)  $1/4 F$
  - (b)  $2 F$
  - (c)  $1/2 F$
  - (d)  $F$
- Q52. The force of gravitation between two bodies in the universe does not depend on
- (a) the distance between them
  - (b) the product of their masses
  - (c) the sum of their masses
  - (d) the gravitational constant
- Q53. A and B are two objects with masses 100 kg and 75 kg respectively, then \_\_\_\_\_ .
- (a) both will have the same inertia
  - (b) B will have more inertia
  - (c) A will have more inertia
  - (d) both will have less inertia
- Q54. The resultant of balanced forces is \_\_\_\_\_
- (a) non zero
  - (b) equal to zero
  - (c) not equal to zero
  - (d) equal to the acceleration produced in the body

- Q55. The physical quantity, which is the measure of inertia, is \_\_\_\_\_
- (a) density
  - (b) weight
  - (c) force
  - (d) mass
- Q56. The sparks produced during sharpening of a knife against a grinding wheel leaves the rim of the wheel tangentially. This is due to \_\_\_\_\_
- (a) inertia of rest
  - (b) inertia of motion
  - (c) inertia of direction
  - (d) force applied
- Q57. The distance (s) in metres travelled by a particle is related to time (t) in seconds by the equation of motion  $S = 10t + 4t^2$ . What is the initial velocity of the body?
- (a) 10 m/s
  - (b) 6 m/s
  - (c) 4 m/s
  - (d) 10 m/s<sup>2</sup>
- Q58. For the equation  $S = 10t + 4t^2$  what is the acceleration of the body?
- (a) 8 m/s<sup>2</sup>
  - (b) 10 m/s<sup>2</sup>
  - (c) 4 m/s<sup>2</sup>
  - (d) 8 m/s
- Q59. A body moving along a straight line at 20 m/s decelerates at the rate of 4 m/s<sup>2</sup>. After 2 seconds its speed will be equal to
- (a) 8 m/s
  - (b) 12 m/s
  - (c) 16 m/s
  - (d) -12 m/s
- Q60. Give the equation of motion connecting u, v, a and s where the symbols have their usual meaning
- (a)  $V = u + at$
  - (b)  $S = ut + \frac{1}{2} at^2$
  - (c)  $v^2 - u^2 = 2aS$
  - (d)  $a = \frac{v-u}{t}$