

Mazharul Uloom Higher Secondary School, Ambur.

Name of the Student : Medium of Instruction : English Medium
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SCIENCE ONE MARK QUESTIONS**1. LAWS OF MOTION****Choose the correct answer:**

- 1) Inertia of a body depends on
 (a) Weight of the object (b) acceleration due to gravity of the planet (c) mass of the object (d) Both a & b
- 2) Impulse is equals to
 (a) Rate of change of momentum (b) rate of force and time (c) change of momentum (d) rate of change of mass
- 3) Newton's III law is applicable
 (a) For a body is at rest (b) for a body in motion (c) both a & b (d) only for bodies with equal masses
- 4) Plotting a graph for momentum on the X-axis and time on Y-axis. Slope of momentum-time graph gives
 (a) Impulsive force (b) Acceleration (c) Force (d) Rate of force
- 5) In which of the following sport the turning of effect of force used
 (a) Swimming (b) tennis (c) cycling (d) hockey
- 6) The unit of 'g' is $m\ s^{-2}$. It can be also expressed as
 (a) $cm\ s^{-1}$ (b) $N\ kg^{-1}$ (c) $N\ m^2\ kg^{-1}$ (d) $cm^2\ s^{-2}$
- 7) One kilogram force equals to
 (a) 9.8 dyne (b) $9.8 \times 10^4 N$ (c) $98 \times 10^4 dyne$ (d) 980 dyne
- 8) The mass of a body is measured on planet Earth as M kg. When it is taken to a planet of radius half that of the Earth then its value will be _____ kg
 (a) 4 M (b) 2M (c) M/4 (d) M
- (9) If the Earth shrinks to 50% of its real radius its mass remaining the same, the weight of a body on the Earth will
 (a) Decrease by 50% (b) increase by 50% (c) decrease by 25% (d) increase by 300%
- 10) To project the rockets which of the following principle(s) is / (are) required?
 (a) Newton's third law of motion (b) Newton's law of gravitation
 (c) Law of conservation of linear momentum (d) both a and c

Fill in the blanks.

1. To produce a displacement _____ is required.
2. Passengers lean forward when sudden brake is applied in a moving vehicle. This can be explained by _____
3. By convention, the clockwise moments are taken as _____ and the anticlockwise moments are taken as _____
4. _____ is used to change the speed of car.
5. A man of mass 100 kg has a weight of _____ at the surface of the Earth.

Match the following

Column I	Column II
1. Newton's 1	- propulsion of a rocket
2. Newton's II law	- Stable equilibrium of a body
3. Newton's III law	- Law of force
4. Law of conservation of Linear momentum	- Flying nature of bird

2. OPTICS**Choose the correct answer:**

- The refractive index of four substances A, B, C and D are 1.31, 1.43, 1.33, 2.4 respectively. The speed of light is maximum in
(a) A (b) B (c) C (d) D
- Where should an object be placed so that a real and inverted image of same size is obtained by a convex lens
(a) f (b) 2f (c) infinity (d) between f and 2f
- A small bulb is placed at the principal focus of a convex lens. When the bulb is switched on, the lens will produce
(a) a convergent beam of light (b) a divergent beam of light
(c) a parallel beam of light (d) a colored beam of light
- Magnification of a convex lens is
(a) Positive (b) Negative (c) either positive or negative (d) zero
- A convex lens forms a real, diminished point sized image at focus. Then the position of the object is at
(a) Focus (b) infinity (c) at 2f (d) between f and 2f
- Power of a lens is $-4D$, then its focal length is
(a) 4m (b) $-40m$ (c) $-0.25 m$ (d) $-2.5 m$
- In a myopic eye, the image of the object is formed
(a) Behind the retina (b) on the retina (c) in front of the retina (d) on the blind spot
- The eye defect 'presbyopia' can be corrected by
(a) Convex lens (b) concave lens (c) convex mirror (d) Bi focal lenses
- Which of the following lens would you prefer to use while reading small letters found in a dictionary?
(a) A convex lens of focal length 5 cm (b) A concave lens of focal length 5 cm
(c) A convex lens of focal length 10 cm (d) A concave lens of focal length 10 cm
- If V_B , V_G , V_R be the velocity of blue, green and red light respectively in a glass prism, then which of the following statement gives the correct relation?
(a) $V_B = V_G = V_R$ (b) $V_B > V_G > V_R$ (c) $V_B < V_G < V_R$ (d) $V_B < V_G > V_R$

Fill in the blanks:

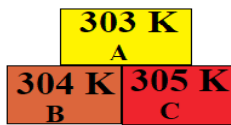
- The path of the light is called as _____
- The refractive index of a transparent medium is always greater than _____
- If the energy of incident beam and the scattered beam are same, then the scattering of light is called as _____ scattering.
- According to Rayleigh's scattering law, the amount of scattering of light is inversely proportional to the fourth power of its _____
- Amount of light entering into the eye is controlled by _____

Match the following:

Column - I	Column - II
1. Retina	- path way of light
2. Pupil	- Far point comes closer
3. Ciliary muscles	- near point moves away
4. Myopia	- Screen of the eye
5. Hypermetropia	- Power of accommodation.

3. THERMAL PHYSICS**Choose the correct answer:**

- The value of universal gas constant
(a) $3.81 \text{ mol}^{-1} \text{ K}^{-1}$ (b) $8.03 \text{ mol}^{-1} \text{ K}^{-1}$ (c) $1.38 \text{ mol}^{-1} \text{ K}^{-1}$ (d) $8.31 \text{ mol}^{-1} \text{ K}^{-1}$
- If a substance is heated or cooled, the change in mass of that substance is
(a) Positive (b) negative (c) zero (d) none of the above
- If a substance is heated or cooled, the linear expansion occurs along the axis of
(a) X or -X (b) Y or -Y (c) both (a) and (b) (d) (a) or (b)
- Temperature is the average _____ of the molecules of a substance
(a) Difference in K.E and P.E (b) sum of P.E and K.E
(c) Difference in T.E and P.E (d) difference in K.E and T.E
- In the Given diagram, the possible direction of heat energy transformation is



- $A \leftarrow B, A \leftarrow C, B \leftarrow C$
- $A \rightarrow B, A \rightarrow C, B \rightarrow C$
- $A \rightarrow B, A \leftarrow C, B \rightarrow C$
- $A \leftarrow B, A \rightarrow C, B \leftarrow C$

Fill in the blanks:

- The value of Avogadro number _____
- The temperature and heat are _____ quantities.
- One calorie is the amount of heat energy required to raise the temperature of _____ of water through _____
- According to Boyle's law, the shape of the graph between pressure and reciprocal of volume is _____

Match the following:

Column-I	Column-II
1. Linear expansion	- (a) change in volume
2. Superficial expansion	- (b) hot body to cold body
3. Cubical expansion	- (c) $1.381 \times 10^{-23} \text{ JK}^{-1}$
4. Heat transformation	- (d) change in length
5. Boltzmann constant	- (e) change in area

4. ELECTRICITY**Choose the best answer:**

- Which of the following is correct?
(a) Rate of change of charge is electrical power. (b) Rate of change of charge is current.
(c) Rate of change of energy is current. (d) Rate of change of current is charge.

Kindly send me your key answers to our email id - padasalai.net@gmail.com

2. SI unit of resistance is
 (a) mho (b) joule (c) ohm (d) ohm meter
3. In a simple circuit, why does the bulb glow when you close the switch?
 (a) The switch produces electricity. (b) Closing the switch completes the circuit.
 (c) Closing the switch breaks the circuit. (d) The bulb is getting charged.
4. Kilowatt hour is the unit of
 (a) Resistivity (b) conductivity (c) electrical energy (d) electrical power

Fill in the blanks:

1. When a circuit is open, _____ cannot pass through it.
2. The ratio of the potential difference to the current is known as _____.
3. The wiring in a house consists of _____ circuits.
4. The power of an electric device is a product of _____ and _____.
5. LED stands for _____.

Match the following:

Column - I	Column - II
1. electric current	(a) volt
2. potential difference	(b) ohm meter
3. specific resistance	(c) watt
4. electrical power	(d) joule
5. electrical energy	(e) ampere

5. ACOUSTICS**Choose the correct answer:**

1. When a sound wave travels through air, the air particles
 (a) Vibrate along the direction of the wave motion (b) vibrate but not in any fixed direction
 (c) Vibrate perpendicular to the direction of the wave motion (d) do not vibrate
2. Velocity of sound in a gaseous medium is 330 m s^{-1} . If the pressure is increased by 4 times without causing a change in the temperature, the velocity of sound in the gas is
 (a) 330 m s^{-1} (b) 660 m s^{-1} (c) 156 m s^{-1} (d) 990 m s^{-1}
3. The frequency, which is audible to the human ear is
 (a) 50 kHz (b) 20 kHz (c) 15000 kHz (d) 10000 kHz
4. The velocity of sound in air at a particular temperature is 330 m s^{-1} . What will be its value when temperature is doubled and the pressure is halved?
 (a) 330 m s^{-1} (b) 165 m s^{-1} (c) $330 \times \sqrt{2} \text{ m s}^{-1}$ (d) $320 / \sqrt{2} \text{ m s}^{-1}$
5. If a sound wave travels with a frequency of $1.25 \times 10^4 \text{ Hz}$ at 344 m s^{-1} , the wavelength will be
 (a) 27.52 m (b) 275.2 m (c) 0.02752 m (d) 2.752 m
6. The sound waves are reflected from an obstacle into the same medium from which they were incident. Which of the following changes?
 (a) Speed (b) frequency (c) wavelength (d) none of these
7. Velocity of sound in the atmosphere of a planet is 500 m s^{-1} . The minimum distance between the sources of sound and the obstacle to hear the echo, should be
 (a) 17m (b) 20m (c) 25m (d) 50m

Fill up the blanks:

- Rapid back and forth motion of a particle about its mean position is called _____
- If the energy in a longitudinal wave travels from south to north, the particles of the medium would be vibrating in _____.
- A whistle giving out a sound of frequency 450 Hz, approaches a stationary observer at a speed of 33 ms^{-1} . The frequency heard by the observer is (speed of sound = 330 ms^{-1} .) _____.
- A source of sound is travelling with a velocity 40 km/h towards an observer and emits a sound of frequency 2000 Hz. If the velocity of sound is 1220 km/h, then the apparent frequency heard by the observer is _____.

Match the following:

- | | | |
|-------------------------|---|---------------------|
| 1. Infrasonic | - | (a) Compressions |
| 2. Echo | - | (b) 22 kHz |
| 3. Ultrasonic | - | (c) 10 Hz |
| 4. High pressure region | - | (d) Ultrasonography |

6. NUCLEAR PHYSICS**Choose the correct answer:**

- Man-made radioactivity is also known as _____
(a) Induced radioactivity (b) Spontaneous radioactivity (c) Artificial radioactivity (d) a & c
- Unit of radioactivity is _____
(a) Roentgen (b) curie (c) Becquerel (d) all the above
- Artificial radioactivity was discovered by _____
(a) Becquerel (b) Irene Curie (c) Roentgen (d) Neils Bohr
- In which of the following, no change in mass number of the daughter nuclei takes place
(i) α decay (ii) β decay
(iii) γ decay (iv) neutron decay
(a) (i) is correct (b) (ii) and (iii) are correct (c) (i) & (iv) are correct (d) (ii) & (iv) are correct
- _____ Isotope is used for the treatment of cancer.
(a) Radio Iodine (b) Radio Cobalt (c) Radio Carbon (d) Radio Nickel
- Gamma radiations are dangerous because
(a) it affects eyes & bones (b) it affects tissues
(c) it produces genetic disorder (d) it produces enormous amount of heat
- _____ aprons are used to protect us from gamma radiations
(a) Lead oxide (b) Iron (c) Lead (d) Aluminium
- Which of the following statements is/are correct?
i. α particles are photons
ii. Penetrating power of γ radiation is very low
iii. Ionization power is maximum for α rays
iv. Penetrating power of γ radiation is very high
(a) (i) & (ii) are correct (b) (ii) & (iii) are correct (c) (iv) only correct (d) (iii) & (iv) are correct
- Proton - Proton chain reaction is an example of _____
(a) Nuclear fission (b) α - decay (c) Nuclear fusion (d) β - decay
- In the nuclear reaction ${}_6\text{X}_{12}$ α decay ${}_z\text{Y}_A$, the value of A & Z.
(a) 8, 6 (b) 8, 4 (c) 4, 8 (d) cannot be determined with the given data
- Kamini reactor is located at _____
(a) Kalpakkam (b) Koodankulam (c) Mumbai (d) Rajasthan

12. Which of the following is/are correct?

- Chain reaction takes place in a nuclear reactor and an atomic bomb.
- The chain reaction in a nuclear reactor is controlled
- The chain reaction in a nuclear reactor is not controlled
- No chain reaction takes place in an atom bomb

(a) (i) only correct (b) (i) & (ii) are correct (c) (iv) only correct (d) (iii) & (iv) are correct

Fill in the blanks:

- One roentgen is equal to _____ disintegrations per second
- Positron is an _____.
- Anemia can be cured by _____ isotope
- Abbreviation of ICRP _____
- _____ is used to measure exposure rate of radiation in humans.
- _____ has the greatest penetration power.
- ${}_Z Y^A \rightarrow {}_{Z+1} Y^A + X$; Then, X is _____
- ${}_Z X^A \rightarrow {}_Z Y^A$ This reaction is possible in _____ decay.
- The average energy released in each fusion reaction is about _____ J.
- Nuclear fusion is possible only at an extremely high temperature of the order of _____ K.
- The radio isotope of _____ helps to increase the productivity of crops.
- If the radiation exposure is 100 R, it may cause _____.

Match the following:

Match: I

- | | | |
|---------------------------------------|---|-----------|
| 1. BARC | - | Kalpakkam |
| 2. India's first atomic power station | - | Apsara |
| 3. IGCAR | - | Mumbai |
| 4. First nuclear reactor in India | - | Tarapur |

Match: II

- | | | |
|--------------|---|--------------|
| 1. Fuel | - | lead |
| 2. Moderator | - | heavy water |
| 3. Coolant | - | cadmium rods |
| 4. Shield | - | uranium |

Match: III

- | | | |
|--------------------|---|--------------------------|
| 1. Soddy Fajan | - | Natural radioactivity |
| 2. Irene Curie | - | Displacement law |
| 3. Henry Becquerel | - | Mass energy equivalence |
| 4. Albert Einstein | - | Artificial Radioactivity |

Match: IV

- | | | |
|-------------------------|---|--------------------------|
| 1. Uncontrolled fission | - | Hydrogen Bomb reaction |
| 2. Fertile material | - | Nuclear Reactor |
| 3. Controlled fission | - | Breeder reactor reaction |
| 4. Fusion reaction | - | Atom bomb |

Match: V

- | | | |
|------------|---|-------------------|
| 1. Co - 60 | - | Age of fossil |
| 2. I - 131 | - | Function of Heart |
| 3. Na - 11 | - | Leukemia |
| 4. C - 14 | - | Thyroid disease |

Arrange the following in the correct sequence:**1. Arrange in descending order, on the basis of their penetration power**

Alpha rays, beta rays, gamma rays, cosmic rays

2. Arrange the following in the chronological order of discovery

Nuclear reactor, radioactivity, artificial radioactivity, discovery of radium.

Use the analogy to fill in the blank:

- Spontaneous process : Natural Radioactivity,
Induced process: _____
- Nuclear Fusion : Extreme temperature,
Nuclear Fission: _____
- Increasing crops : Radio phosphorous,
Effective functioning of heart: _____
- Deflected by electric field : α ray,
Null Deflection: _____

7. ATOMS AND MOLECULES**Choose the best answer:**

- Which of the following has the smallest mass?
(a) 6.023×10^{23} atoms of He (b) 1 atom of He (c) 2 g of He (d) 1 mole atoms of He
- Which of the following is a triatomic molecule?
(a) Glucose (b) Helium (c) Carbon dioxide (d) Hydrogen
- The volume occupied by 4.4 g of CO_2 at S.T.P
(a) 22.4 liter (b) 2.24 liter (c) 0.24 liter (d) 0.1 liter
- Mass of 1 mole of Nitrogen atom is
(a) 28 amu (b) 14 amu (c) 28 g (d) 14 g
- Which of the following represents 1 amu?
(a) Mass of a C-12 atom (b) Mass of a hydrogen atom
(c) $1/12^{\text{th}}$ of the mass of a C - 12 atom (d) Mass of O - 16 atom
- Which of the following statement is incorrect?
(a) One gram of C - 12 contains Avogadro's number of atoms.
(b) One mole of oxygen gas contains Avogadro's number of molecules.
(c) One mole of hydrogen gas contains Avogadro's number of atoms.
(d) One mole of electrons stands for 6.023×10^{23} electrons.
- The volume occupied by 1 mole of a diatomic gas at S.T.P is
(a) 11.2 litre (b) 5.6 litre (c) 22.4 litre (d) 44.8 litre
- In the nucleus of ${}_{20}\text{Ca}_{40}$, there are
(a) 20 protons and 40 neutrons (b) 20 protons and 20 neutrons
(c) 20 protons and 40 electrons (d) 40 protons and 20 electrons
- The gram molecular mass of oxygen molecule is
(a) 16 g (b) 18 g (c) 32 g (d) 17 g
- 1 mole of any substance contains _____ molecules.
(a) 6.023×10^{23} (b) 6.023×10^{-23} (c) 3.0115×10^{23} (d) 12.046×10^{23}

Fill in the blanks:

1. Atoms of different elements having _____ mass number, but _____ atomic numbers are called isobars.
2. Atoms of different elements having same number of _____ are called isotones.
3. Atoms of one element can be transmuted into atoms of other element by _____
4. The sum of the numbers of protons and neutrons of an atom is called its _____
5. Relative atomic mass is otherwise known as _____
6. The average atomic mass of hydrogen is _____ amu.
7. If a molecule is made of similar kind of atoms, then it is called _____ atomic molecule.
8. The number of atoms present in a molecule is called its _____
9. One mole of any gas occupies _____ ml at S.T.P
10. Atomicity of phosphorous is _____

Match the following:

- | | | |
|-----------------------------|---|------------|
| 1. 8g of O ₂ | - | 4 moles |
| 2. 4g of H ₂ | - | 0.25 moles |
| 3. 52g of He | - | 2 moles |
| 4. 112g of N ₂ | - | 0.5 moles |
| 5. 35.5g of Cl ₂ | - | 13 moles |

8. PERIODIC CLASSIFICATION OF ELEMENTS**Choose the best answer:**

1. The number of periods and groups in the periodic table are _____.
(a) 6, 16 (b) 7, 17 (c) 8, 18 (d) 7, 18
2. The basis of modern periodic law is _____.
(a) atomic number (b) atomic mass (c) isotopic mass (d) number of neutrons
3. _____ group contains the member of halogen family.
(a) 17th (b) 15th (c) 18th (d) 16th
4. _____ is a relative periodic property
(a) Atomic radii (b) ionic radii (c) electron affinity (d) electro negativity
5. Chemical formula of rust is _____.
(a) FeO.xH₂O (b) FeO₄.xH₂O (c) Fe₂O₃.xH₂O (d) FeO
6. In the alumino thermic process the role of Al is _____.
(a) Oxidizing agent (b) reducing agent (c) hydrogenating agent (d) sulphurising agent
7. The process of coating the surface of metal with a thin layer of zinc is called _____.
(a) Painting (b) thinning (c) galvanization (d) electroplating
8. Which of the following have inert gases 2 electrons in the outermost shell?
(a) He (b) Ne (c) Ar (d) Kr
9. Neon shows zero electron affinity due to _____.
(a) Stable arrangement of neutrons (b) Stable configuration of electrons
(c) Reduced size (d) increased density
10. _____ is an important metal to form amalgam.
(a) Ag (b) Hg (c) Mg (d) Al

Fill in the blanks:

1. If the electro negativity difference between two bonded atoms in a molecule is greater than 1.7, the nature of bonding is _____
2. _____ is the longest period in the periodical table.

- _____ forms the basis of modern periodic table.
- If the distance between two Cl atoms in Cl₂ molecule is 1.98Å, then the radius of Cl atom is _____.
- Among the given species A⁻, A⁺, and A, the smallest one in size is _____.
- The scientist who propounded the modern periodic law is _____.
- Across the period, ionic radii _____ (increases, decreases).
- _____ and _____ are called inner transition elements.
- The chief ore of Aluminium is _____.
- The chemical name of rust is _____.

Match the following:

- | | | |
|----------------------|---|-------------------------------|
| 1. Galvanisation | - | Noble gas elements |
| 2. Calcination | - | Coating with Zn |
| 3. Redox reaction | - | Silver-tin amalgam |
| 4. Dental filling | - | Alumino thermic process |
| 5. Group 18 elements | - | Heating in the absence of air |

9. SOLUTIONS**Choose the correct answer:**

- A solution is a _____ mixture.
(a) homogeneous (b) heterogeneous (c) homogeneous and heterogeneous (d) non homogeneous
- The number of components in a binary solution is _____.
(a) 2 (b) 3 (c) 4 (d) 5
- Which of the following is the universal solvent?
(a) Acetone (b) Benzene (c) Water (d) Alcohol
- A solution in which no more solute can be dissolved in a definite amount of solvent at a given temperature is called _____.
(a) Saturated solution (b) un saturated solution (c) Super saturated solution (d) Dilute solution
- Identify the non aqueous solution.
(a) Sodium chloride in water (b) glucose in water
(c) Copper sulphate in water (d) sulphur in carbon-di-sulphide
- When pressure is increased at constant temperature the solubility of gases in liquid _____.
(a) No change (b) increases (c) decreases (d) no reaction
- Solubility of NaCl in 100 ml water is 36 g. If 25 g of salt is dissolved in 100 ml of water how much more salt is required for saturation _____.
(a) 12g (b) 11g (c) 16g (d) 20g
- A 25% alcohol solution means
(a) 25 ml alcohol in 100 ml of water (b) 25 ml alcohol in 25 ml of water
(c) 25 ml alcohol in 75 ml of water (d) 75 ml alcohol in 25 ml of water
- Deliquescence is due to _____.
(a) Strong affinity to water (b) Less affinity to water (c) Strong hatred to water (d) Inertness to water
- Which of the following is hygroscopic in nature?
(a) Ferric chloride (b) Copper sulphate penta hydrate (c) Silica gel (d) none of the above

Fill in the blanks:

- The component present in lesser amount, in a solution is called _____.
- Example for liquid in solid type solution is _____.
- Solubility is the amount of solute dissolved in _____ g of solvent.

- Polar compounds are soluble in _____ solvents
- Volume percentage decreases with increases in temperature because _____

Match the following:

- | | | |
|------------------|---|--------------------------------------|
| 1. Blue vitriol | – | CaSO ₄ .2H ₂ O |
| 2. Gypsum | – | CaO |
| 3. Deliquescence | – | CuSO ₄ .5H ₂ O |
| 4. Hygroscopic | – | NaOH |

10. TYPES OF CHEMICAL REACTIONS**Choose the correct answer:**

- $H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$ is a
 (a) Decomposition Reaction (b) Combination Reaction
 (c) Single Displacement Reaction (d) Double Displacement Reaction
- Photolysis is a decomposition reaction caused by _____
 (a) Heat (b) electricity (c) light (d) mechanical energy
- The reaction between carbon and oxygen is represented by $C(s) + O_2(g) \rightarrow CO_2(g) + \text{Heat}$. In which of the type(s), the above reaction can be classified?
 (i) Combination Reaction
 (ii) Combustion Reaction
 (iii) Decomposition Reaction
 (iv) Irreversible Reaction
 (a) i and ii (b) i and iv (c) i, ii and iii (d) i, ii and iv
- The chemical equation $Na_2SO_4(aq) + BaCl_2(aq) \rightarrow BaSO_4(s) \downarrow + 2NaCl(aq)$ represents which of the following types of reaction?
 (a) Neutralization (b) Combustion (c) Precipitation (d) Single displacement
- Which of the following statements are correct about a chemical equilibrium?
 (i) It is dynamic in nature
 (ii) The rate of the forward and backward reactions are equal at equilibrium
 (iii) Irreversible reactions do not attain chemical equilibrium
 (iv) The concentration of reactants and products may be different
 (a) i, ii and iii (b) i, ii and iv (c) ii, iii and iv (d) i, iii and iv
- A single displacement reaction is represented by $X(s) + 2HCl(aq) \rightarrow XCl_2(aq) + H_2(g)$. Which of the following(s) could be X. (i) Zn (ii) Ag (iii) Cu (iv) Mg. Choose the best pair.
 (a) i and ii (b) ii and iii (c) iii and iv (d) i and iv
- Which of the following is not an “element + element \rightarrow compound” type reaction?
 (a) $C(s) + O_2(g) \rightarrow CO_2(g)$ (b) $2K(s) + Br_2(l) \rightarrow 2KBr(s)$
 (c) $2CO(g) + O_2(g) \rightarrow 2CO_2(g)$ (d) $4Fe(s) + 3O_2(g) \rightarrow 2Fe_2O_3(s)$
- Which of the following represents a precipitation reaction?
 (a) $A(s) + B(s) \rightarrow C(s) + D(s)$ (b) $A(s) + B(aq) \rightarrow C(aq) + D(l)$
 (c) $A(aq) + B(aq) \rightarrow C(s) + D(aq)$ (d) $A(aq) + B(s) \rightarrow C(aq) + D(l)$
- The pH of a solution is 3. Its [OH⁻] concentration is
 (a) 1×10^{-3} M (b) 3 M (c) 1×10^{-11} M (d) 11 M
- Powdered CaCO₃ reacts more rapidly than flaky CaCO₃ because of _____.
 (a) Large surface area (b) High pressure (c) High concentration (d) High temperature

Fill in the blanks:

1. A reaction between an acid and a base is called _____.
2. When zinc metal is placed in hydrochloric acid, _____ gas is evolved.
3. The equilibrium attained during the melting of ice is known as _____.
4. The pH of a fruit juice is 5.6. If you add slaked lime to this juice, its pH _____.
5. The value of ionic product of water at 25°C is _____.
6. The normal pH of human blood is _____.
7. Electrolysis is type of _____ reaction.
8. The number of products formed in a synthesis reaction is _____.
9. Chemical volcano is an example for _____ type of reaction.
10. The ion formed by dissolution of H⁺ in water is called _____.

Match the following:

Identify the types of reaction

REACTION	TYPE
$\text{NH}_4\text{OH}_{(\text{aq})} + \text{CH}_3\text{COOH}_{(\text{aq})} \rightarrow \text{CH}_3\text{COONH}_4_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	Single Displacement
$\text{Zn}_{(\text{s})} + \text{CuSO}_4_{(\text{aq})} \rightarrow \text{ZnSO}_4_{(\text{aq})} + \text{Cu}_{(\text{s})}$	Combustion
$\text{ZnCO}_3_{(\text{s})} + \text{Heat} \rightarrow \text{ZnO}_{(\text{s})} + \text{CO}_2_{(\text{g})}$	Neutralisation
$\text{C}_2\text{H}_4_{(\text{g})} + 4\text{O}_2_{(\text{g})} \rightarrow 2\text{CO}_2_{(\text{g})} + 2\text{H}_2\text{O}_{(\text{g})} + \text{Heat}$	Thermal decomposition

11. CARBON AND ITS COMPOUNDS**Choose the best answer:**

1. The molecular formula of an open chain organic compound is C₃H₆. The class of the compound is
(a) alkane (b) alkene (c) alkyne (d) alcohol
2. The IUPAC name of an organic compound is 3-Methyl butan-1-ol. What type compound it is?
(a) Aldehyde (b) Carboxylic acid (c) Ketone (d) Alcohol
3. The secondary suffix used in IUPAC nomenclature of an aldehyde is ____
(a) - ol (b) - oic acid (c) - al (d) - one
4. Which of the following pairs can be the successive members of a homologous series?
(a) C₃H₈ and C₄H₁₀ (b) C₂H₂ and C₂H₄ (c) CH₄ and C₃H₆ (d) C₂H₅OH and C₄H₈OH
5. C₂H₅OH + 3O₂ → 2CO₂ + 3H₂O is a
(a) Reduction of ethanol (b) Combustion of ethanol
(c) Oxidation of ethanoic acid (d) Oxidation of ethanal
6. Rectified spirit is an aqueous solution which contains about _____ of ethanol
(a) 95.5 % (b) 75.5 % (c) 55.5 % (d) 45.5 %
7. Which of the following are used as anaesthetics?
(a) Carboxylic acids (b) Ethers (c) Esters (d) Aldehydes
8. TFM in soaps represents _____ content in soap
(a) Mineral (b) vitamin (c) fatty acid (d) carbohydrate
9. Which of the following statements is wrong about detergents?
(a) It is a sodium salt of long chain fatty acids (b) It is sodium salts of sulphonic acids
(c) The ionic part in a detergent is -SO₃⁻ Na⁺ (d) It is effective even in hard water.

Fill in the blanks:

1. An atom or a group of atoms which is responsible for chemical characteristics of an organic compound is called _____. **Kindly send me your key answers to our email id - padasalai.net@gamil.com**

- The general molecular formula of alkynes is _____
- In IUPAC name, the carbon skeleton of a compound is represented by _____ (root word / prefix / suffix)
- (Saturated / Unsaturated) _____ compounds decolourize bromine water.
- Dehydration of ethanol by conc. Sulphuric acid forms _____ (ethene/ ethane)
- 100 % pure ethanol is called _____
- Ethanoic acid turns _____ litmus to _____
- The alkaline hydrolysis of fatty acids is termed as _____
- Biodegradable detergents are made of _____ (branched / straight) chain hydrocarbons.

Match the following:

1. Functional group -OH	Benzene
2. Heterocyclic	Potassium stearate
3. Unsaturated	Alcohol
4. Soap	Furan
5. Carbocyclic	Ethene

12. PLANT ANATOMY AND PLANT PHYSIOLOGY**Choose the correct answer:**

- Casparian strips are present in the _____ of the root.
(a) cortex (b) pith (c) pericycle (d) endodermis
- The endarch condition is the characteristic feature of
(a) Root (b) stem (c) leaves (d) flower
- The xylem and phloem arranged side by side on same radius is called _____
(a) Radial (b) amphivasal (c) conjoint (d) None of these
- Which is formed during anaerobic respiration
(a) Carbohydrate (b) Ethyl alcohol (c) Acetyl CoA (d) Pyruvate
- Kreb's cycle takes place in
(a) Chloroplast (b) mitochondrial matrix (c) stomata (d) inner mitochondrial membrane
- Oxygen is produced at what point during photosynthesis?
(a) When ATP is converted to ADP (b) when CO₂ is fixed (c) when H₂O is splitted (d) All of these

Fill in the blanks:

- Cortex lies between _____.
- Xylem and phloem occurring on the same radius constitute a vascular bundle called _____.
- Glycolysis takes place in _____.
- The source of O₂ liberated in photosynthesis is _____.
- _____ is ATP factory of the cells

Match the following:

- | | | |
|----------------|---|-----------------------|
| 1. Amphicribal | - | Dracaena |
| 2. Cambium | - | Translocation of food |
| 3. Amphivasal | - | Fern |
| 4. Xylem | - | Secondary growth |
| 5. Phloem | - | Conduction of water |

13. STRUCTURAL ORGANISATION OF ANIMALS**Choose the correct answer:**

- In leech locomotion is performed by
(a) Anterior sucker (b) Posterior sucker (c) Setae (d) None of the above
- The segments of leech are known as
(a) Metameres (somites) (b) Proglottids (c) Strobila (d) All the above
- Pharyngeal ganglion in leech is a part of
(a) Excretory system (b) Nervous system (c) Reproductive system (d) Respiratory system
- The brain of leech lies above the
(a) Mouth (b) Buccal Cavity (c) Pharynx (d) Crop
- The body of leech has
(a) 23 segments (b) 33 segments (c) 38 segments (d) 30 segments
- Mammals are _____ animals.
(a) Cold blooded (b) Warm blooded (c) Poikilothermic (d) All the above
- The animals which give birth to young ones are
(a) Oviparous (b) Viviparous (c) Ovoviviparous (d) All the above

Fill in the blanks:

- The posterior sucker is formed by the _____ segments.
- The existence of two sets of teeth in the life of an animal is called _____ dentition.
- The anterior end of leech has a lobe-like structure called _____.
- The blood sucking habit of leech is known as _____.
- _____ separate nitrogenous waste from the blood in rabbit.
- _____ spinal nerves are present in rabbit.

Match columns I, II and III correctly:

Organs	Membranous Covering	Location
Brain	pleura	abdominal cavity
Kidney	capsule	mediastinum
Heart	meninges	enclosed in thoracic cavity
Lungs	pericardium	cranial cavity

14. TRANSPORTATION IN PLANTS AND CIRCULATION IN ANIMALS**Choose the correct answer:**

- Active transport involves
(a) movement of molecules from lower to higher concentration (b) expenditure of energy
(c) it is an uphill task (d) all of the above
- Water which is absorbed by roots is transported to aerial parts of the plant through
(a) Cortex (b) epidermis (c) phloem (d) xylem
- During transpiration there is loss of
(a) Carbon dioxide (b) oxygen (c) water (d) none of the above
- Root hairs are
(a) cortical cell (b) projection of epidermal cell (c) unicellular (d) both b and c

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5. Which of the following process requires energy?
 (a) active transport (b) diffusion (c) osmosis (d) all of them
6. The wall of human heart is made of
 (a) Endocardium (b) Epicardium (c) Myocardium (d) All of the above
7. Which is the sequence of correct blood flow?
 (a) ventricle - atrium - vein - arteries (b) atrium - ventricle - veins - arteries
 (c) atrium - ventricle - arteries - vein (d) ventricles - vein - atrium - arteries
8. A patient with blood group **O** was injured in an accident and has blood loss. Which blood group the doctor should effectively use for transfusion in this condition?
 (a) O group (b) AB group (c) A or B group (d) all blood group
9. '**Heart of heart**' is called
 (a) SA node (b) AV node (c) Purkinje fibres (d) Bundle of His
10. Which one of the following regarding blood composition is correct?
 (a) Plasma - Blood + Lymphocyte (b) Serum - Blood + Fibrinogen
 (c) Lymph - Plasma + RBC + WBC (d) Blood - Plasma + RBC + WBC + Platelets

Fill in the blanks:

- _____ involves evaporative loss of water from aerial parts.
- Water enters the root cell through a _____ plasma membrane.
- Structures in roots that help to absorb water are _____.
- Normal blood pressure is _____.
- The normal human heartbeat rate is about _____ time per minute.

Match the following:

Section I

- | | |
|-----------------------|---------------------|
| 1. Symplastic pathway | - Leaf |
| 2. Transpiration | - Plasmodesmata |
| 3. Osmosis | - Pressure in xylem |
| 4. Root Pressure | - Pressure gradient |

Section II

- | | |
|-------------------|--------------------------|
| 1. Leukemia | - Thrombocytes |
| 2. Platelets | - Phagocyte |
| 3. Monocytes | - Decrease in leucocytes |
| 4. Leucopenia | - Blood Cancer |
| 5. AB blood group | - Allergic condition |
| 6. O blood group | - Inflammation |
| 7. Eosinophil | - Absence of antigen |
| 8. Neutrophils | - Absence of antibody |

15. NERVOUS SYSTEM

Choose the correct answer:

- Bipolar neurons are found in
 (a) retina of eye (b) cerebral cortex (c) embryo (d) respiratory epithelium
- Site for processing of vision, hearing, memory, speech, intelligence and thought is
 (a) Kidney (b) ear (c) brain (d) lungs
- In reflex action, the reflex arc is formed by
 (a) brain, spinal cord, muscle (b) receptor, muscle, spinal cord
 (c) muscle, receptor, brain (d) receptor, spinal cord, muscle

4. Dendrites transmit impulse cell body and axon transmit impulse cell body.
 - (a) away from, away from
 - (b) towards, away from
 - (c) towards,towards
 - (d) away from, towards
5. The outer most of the three cranial meninges is
 - (a) arachnoid membrane
 - (b) piamater
 - (c) duramater
 - (d) myelin sheath
6. There are pairs of cranial nerves and pairs of spinal nerves.
 - (a) 12, 31
 - (b) 31, 12
 - (c) 12, 13
 - (d) 12, 21
7. The neurons which carries impulse from the central nervous system to the muscle fibre.
 - (a) afferent neurons
 - (b) association neuron
 - (c) efferent neuron
 - (d) unipolar neuron
8. Which nervous band connects the two cerebral hemispheres of brain?
 - (a) thalamus
 - (b) hypothalamus
 - (c) corpus callosum
 - (d) pons
9. Node of Ranvier is found in
 - (a) muscles
 - (b) axons
 - (c) dendrites
 - (d) cyton
10. Vomiting centre is located in
 - (a) medulla oblongata
 - (b) stomach
 - (c) cerebrum
 - (d) hypothalamus
11. Nerve cells do not possess
 - (a) neurilemma
 - (b) sarcolemma
 - (c) axon
 - (d) dendrites
12. A person who met with an accident lost control of body temperature, water balance, and hunger. Which of the following part of brain is supposed to be damaged?
 - (a) Medulla oblongata
 - (b) cerebrum
 - (c) pons
 - (d) hypothalamus

Fill in the blanks:

1. _____ is the longest cell in our body.
2. Impulses travel rapidly in _____ neurons.
3. A change in the environment that causes an animal to react is called _____.
4. _____ carries the impulse towards the cell body.
5. The two antagonistic component of autonomic nervous system are _____ and _____.
6. A neuron contains all cell organelles except _____.
7. _____ maintains the constant pressure inside the cranium.
8. _____ and _____ increases the surface area of cerebrum.
9. The part of human brain which acts as relay center is _____.

Match the following:

Column I	Column II
1. Nissil's granules	Forebrain
2. Hypothalamus	Peripheral Nervous system
3. Cerebellum	Cyton
4. Schwann cell	Hindbrain

16. PLANT AND ANIMAL HORMONES

Choose the correct answer:

1. Gibberellins cause:
 - (a) Shortening of genetically tall plants
 - (b) Elongation of dwarf plants
 - (c) Promotion of rooting
 - (d) yellowing of young leaves
2. The hormone which has positive effect on apical dominance is:
 - (a) Cytokinin
 - (b) Auxin
 - (c) Gibberellin
 - (d) Ethylene
3. Which one of the following hormones is naturally not found in plants?
 - (a) 2, 4-D
 - (b) GA₃
 - (c) Gibberellin
 - (d) IAA

4. Avena coleoptile test was conducted by
 (a) Darwin (b) N. Smit (c) Paal (d) F.W. Went
5. To increase the sugar production in sugarcane they are sprayed with _____
 (a) Auxin (b) Cytokinin (c) Gibberellins (d) Ethylene
6. LH is secreted by
 (a) Adrenal gland (b) Thyroid gland (c) Anterior pituitary (d) Hypothalamus.
7. Identify the exocrine gland
 (a) Pituitary gland (b) Adrenal gland (c) Salivary gland (d) Thyroid gland
8. Which organ acts as both exocrine gland as well as endocrine gland?
 (a) Pancreas (b) Kidney (c) Liver (d) Lungs
9. Which one is referred as "Master Gland"?
 (a) Pineal gland (b) Pituitary gland (c) Thyroid gland (d) Adrenal gland

Fill in the blanks:

1. _____ causes cell elongation, apical dominance and prevents abscission.
2. _____ is a gaseous hormone involved in abscission of organs and acceleration of fruit ripening.
3. _____ causes stomatal closure.
4. Gibberellins induce stem elongation in _____ plants.
5. The hormone which has negative effect on apical dominance is _____.
6. Calcium metabolism of the body is controlled by _____.
7. In the islets of Langerhans, beta cells secrete _____.
8. The growth and functions of thyroid gland is controlled by _____.
9. Decreased secretion of thyroid hormones in the children leads to _____.

Match Column I with Columns II and III:

Column I	Column II	Column III
Auxin	<i>Gibberella fujikuroi</i>	Abscission
Ethylene	Coconut milk	Internodal elongation
Abscissic acid	Coleoptile tip	Apical dominance
Cytokinin	Chloroplast	Ripening
Gibberellins	Fruits	Cell division

Match the following hormones with their deficiency states:

Hormones	Disorders
a) Thyroxine	- Acromegaly
b) Insulin	- Tetany
c) Parathormone	- Simple goitre
d) Growth hormone	- Diabetes insipidus
e) ADH	- Diabetes mellitus

17. REPRODUCTION IN PLANTS AND ANIMALS**Choose the correct answer:**

1. The plant which propagates with the help of its leaves is _____.
 (a) Onion (b) Neem (c) Ginger (d) Bryophyllum

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2. Asexual reproduction takes place through budding in _____.
- (a) Amoeba (b) Yeast (c) Plasmodium (d) Bacteria
3. Syngamy results in the formation of _____.
- (a) Zoospores (b) Conidia (c) Zygote (d) Chlamydo spores
4. The essential parts of a flower are _____.
- (a) Calyx and Corolla (b) Calyx and Androecium
(c) Corolla and Gynoecium (d) Androecium and Gynoecium
5. Anemophilous flowers have _____.
- (a) Sessile stigma (b) Small smooth stigma (c) Colored flower (d) Large feathery stigma
6. Male gametes in angiosperms are formed by the division of _____.
- (a) Generative cell (b) Vegetative cell (c) Microspore mother cell (d) Microspore
7. What is true of gametes?
- (a) They are diploid (b) They give rise to gonads
(c) They produce hormones (d) They are formed from gonads
8. A single highly coiled tube where sperms are stored, get concentrated and mature is known as
- (a) Epididymis (b) Vasa efferentia (c) Vas deferens (d) Seminiferous tubules
9. The large elongated cells that provide nutrition to developing sperms are
- (a) Primary germ cells (b) Sertoli cells (c) Leydig cells (d) Spermatogonia
10. Estrogen is secreted by
- (a) Anterior pituitary (b) Primary follicle (c) Graffian follicle (d) Corpus luteum
11. Which one of the following is an IUCD?
- (a) Copper – T (b) Oral pills (c) Diaphragm (d) Tubectomy

Fill in the blanks:

1. The embryo sac in a typical dicot at the time of fertilization is _____.
2. After fertilization the ovary develops into _____.
3. Planaria reproduces asexually by _____.
4. Fertilization is _____ in humans
5. The implantation of the embryo occurs at about _____ day of fertilization
6. _____ is the first secretion from the mammary gland after child birth
7. Prolactin is a hormone produced by _____.

Match the following:

Column 1	Column 2
Fission	Spirogyra
Budding	Amoeba
Fragmentation	Yeast

Match the following terms with their respective meanings:

1. Parturition - Duration between pregnancy and birth
2. Gestation - Attachment of zygote to endometrium
3. Ovulation - Delivery of baby from uterus
4. Implantation - Release of egg from Graafian follicle

18. HERIDITY

Choose the correct answer:

- According to Mendel alleles have the following character
(a) Pair of genes (b) Responsible for character (c) Production of gametes (d) Recessive factors
- 9: 3: 3: 1 ratio is due to
(a) Segregation (b) Crossing over (c) Independent assortment (d) Recessiveness
- The region of the chromosome where the spindle fibres get attached during cell division
(a) Chromomere (b) Centrosome (c) Centromere (d) Chromonema
- The centromere is found at the centre of the _____ chromosome.
(a) Telocentric (b) Metacentric (c) Sub-metacentric (d) Acrocentric
- The _____ units form the backbone of the DNA.
(a) 5 carbon sugar (b) Phosphate (c) Nitrogenous bases (d) Sugar phosphate
- Okasaki fragments are joined together by _____.
(a) Helicase (b) DNA polymerase (c) RNA primer (d) DNA ligase
- The number of chromosomes found in human beings is _____.
(a) 22 pairs of autosomes and 1 pair of allosomes. (b) 22 autosomes and 1 allosome
(c) 46 autosomes (d) 46 pairs autosomes and 1 pair of allosomes.
- The loss of one or more chromosome in a ploidy is called _____.
(a) Tetraploidy (b) Aneuploidy (c) Euploidy (d) polyploidy

Fill in the blanks:

- The pairs of contrasting character (traits) of Mendel are called _____.
- Physical expression of a gene is called _____.
- The thin thread like structures found in the nucleus of each cell is called _____.
- DNA consists of two _____ chains.
- An inheritable change in the amount or the structure of a gene or a chromosome is called _____.

Match the following:

- | | |
|----------------------|---------------------------------------|
| 1. Autosomes | - Trisomy 21 |
| 2. Diploid condition | - 9:3:3:1 |
| 3. Allosome | - 22 pair of chromosome |
| 4. Down's syndrome | - 2n |
| 5. Dihybrid ratio | - 23 rd pair of chromosome |

19. ORIGIN AND EVOLUATION OF LIFE

Choose the correct answer:

- Biogenetic law states that _____
(a) Ontogeny and phylogeny go together (b) Ontogeny recapitulates phylogeny
(c) Phylogeny recapitulates ontogeny (d) There is no relationship between phylogeny and ontogeny
- The 'use and disuse theory' was proposed by _____.
(a) Charles Darwin (b) Ernst Haeckel (c) Jean Baptiste Lamarck (d) Gregor Mendel
- Paleontologists deal with
(a) Embryological evidences (b) Fossil evidences (c) Vestigial organ evidences (d) All the above

4. The best way of direct dating fossils of recent origin is by
 (a) Radio-carbon method (b) Uranium lead method (c) Potassium-argon method (d) Both (a) and (c)
5. The term Ethnobotany was coined by
 (a) Khorana (b) J.W. Harsbberger (c) Ronald Ross (d) Hugo de Vries

Fill in the blanks:

1. The characters developed by the animals during their life time, in response to the environmental changes are called _____.
2. The degenerated and non-functional organs found in an organism are called _____.
3. The forelimb of bat and human are examples of _____ organs.
4. The theory of natural selection for evolution was proposed by _____.

Match the following:**Column A****Column B**

- | | | |
|----------------------|---|---|
| 1. Atavism | - | caudal vertebrae and vermiform appendix |
| 2. Vestigial organs | - | a forelimb of a cat and a bat's wing |
| 3. Analogous organs | - | rudimentary tail and thick hair on the body |
| 4. Homologous organs | - | a wing of a bat and a wing of an insect |
| 5. Wood park | - | radiocarbon dating |
| 6. W.F. Libby | - | Thiruvakkarai |

20. BREEDING AND BIOTECHNOLOGY**Choose the correct answer:**

1. Which method of crop improvement can be practised by a farmer if he is inexperienced?
 (a) clonal selection (b) mass selection (c) pureline selection (d) hybridisation
2. Pusa Komal is a disease resistant variety of _____.
 (a) sugarcane (b) rice (c) cow pea (d) maize
3. Himgiri developed by hybridisation and selection for disease resistance against rust pathogens is a variety of _____.
 (a) chilli (b) maize (c) sugarcane (d) wheat
4. The miracle rice which saved millions of lives and celebrated its 50th birthday is _____.
 (a) IR 8 (b) IR 24 (c) Atomita 2 (d) Ponni
5. Which of the following is used to produce products useful to humans by biotechnology techniques?
 (a) enzyme from organism (b) live organism (c) vitamins (d) both (a) and (b)
6. We can cut the DNA with the help of
 (a) scissors (b) restriction endonucleases (c) knife (d) RNAase
7. rDNA is a
 (a) vector DNA (b) circular DNA (c) recombinant of vector DNA and desired DNA (d) satellite DNA
9. DNA fingerprinting is based on the principle of identifying ----- sequences of DNA
 (a) single stranded (b) mutated (c) polymorphic (d) repetitive

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10. Organisms with modified endogenous gene or a foreign gene are also known as
 (a) transgenic organisms (b) genetically modified (c) mutated (d) both a and b
11. In a hexaploid wheat ($2n = 6x = 42$) the haploid (n) and the basic(x) number of chromosomes are
 (a) $n = 7$ and $x = 21$ (b) $n = 21$ and $x = 21$ (c) $n = 7$ and $x = 7$ (d) $n = 21$ and $x = 7$

Fill in the blanks:

- Economically important crop plants with superior quality are raised by _____.
- A protein rich wheat variety is _____.
- _____ is the chemical used for doubling the chromosomes.
- The scientific process which produces crop plants enriched with desirable nutrients are called _____.
- Rice normally grows well in alluvial soil, but _____ is a rice variety produced by mutation breeding that grows well in saline soil.
- _____ technique made it possible to genetically engineer living organism.
- Restriction endonucleases cut the DNA molecule at specific positions known as _____.
- Similar DNA fingerprinting is obtained for _____.
- _____ cells are undifferentiated mass of cells.
- In gene cloning the DNA of interest is integrated in a _____.

Match the following:

Column A	-	Column B
1. Sonalika	-	Phaseolus mungo
2. IR 8	-	Sugarcane
3. Saccharum	-	Semi-dwarf wheat
4. Mung No. 1	-	Ground nut
5. TMU – 2	-	Semi-dwarf Rice
6. Insulin	-	Bacillus thuringiensis
7. Bt toxin	-	Beta carotene
8. Golden rice	-	first hormone produced using rDNA technique

21. HEALTH AND DISEASES**Choose the correct answer:**

- Tobacco consumption is known to stimulate secretion of adrenaline. The component causing this could be
 (a) Nicotine (b) Tannic acid (c) Curcumin (d) heptin
- World 'No Tobacco Day' is observed on
 (a) May 31 (b) June 6 (c) April 22 (d) October 2
- Cancer cells are more easily damaged by radiations than normal cells because they are
 (a) Different in structure (b) Non dividing (c) Starved mutation (d) Undergoing rapid division
- Which type of cancer affects lymph nodes and spleen?
 (a) Carcinoma (b) Sarcoma (c) Leukemia (d) Lymphoma
- Excessive consumption of alcohol leads to
 (a) Loss of memory (b) Cirrhosis of liver (c) State of hallucination (d) Suppression of brain
- Coronary heart disease is due to
 (a) *Streptococci* bacteria (b) Inflammation of pericardium
 (c) Weakening of heart valves (d) Insufficient blood supply to heart muscles

7. Cancer of the epithelial cells is called
 (a) Leukemia (b) Sarcoma (c) Carcinoma (d) Lipoma
8. Metastasis is associated with
 (a) Malignant tumour (b) Benign tumour (c) Both (a) and (b) (d) Crown gall tumour
9. Polyphagia is a condition seen in
 (a) Obesity (b) Diabetes mellitus (c) Diabetes insipidus (d) AIDS
10. Where does alcohol effect immediately after drinking?
 (a) eyes (b) auditory region (c) liver (d) central nervous system

Expand the following abbreviations:

1. IDDM 2. HIV 3. BMI 4. AIDS 5. CHD 6. NIDDM

Match the following:

- | | | |
|--------------------------|---|------------------------------------|
| 1. Sarcoma | - | Stomach cancer |
| 2. Carcinoma | - | Excessive thirst |
| 3. Polydipsia | - | Excessive hunger |
| 4. Polyphagia | - | Lack of blood flow to heart muscle |
| 5. Myocardial Infarction | - | Connective tissue cancer |

Fill in the blanks:

- Cirrhosis is caused in liver due to excessive use of _____
- A highly poisonous chemicals derived from tobacco is _____
- Blood cancer is called _____.
- Less response of a drug to a specific dose with repeated use is called _____
- Insulin resistance is a condition in _____ diabetes mellitus.

Analogy type questions. Identify the first words and their relationship and suggest a suitable word for the fourth blank:

- Communicable: AIDS: Non communicable: _____
- Chemotherapy: Chemicals: Radiation therapy: _____
- Hypertension: Hyper cholesterolomia: Glycosuria: _____

22. ENVIRONMENTAL MANAGEMENT

Choose the correct answer:

- Which of the following is / are a fossil fuel? i.Tar ii.Coal iii.Petroleum
 (a) i only (b) i and ii (c) ii and iii (d) i, ii and iii
- What are the steps will you adopt for better waste management?
 (a) reduce the amount of waste formed (b) reuse the waste (c) recycle the waste (d) all of the above
- The gas released from vehicles exhaust are i.carbon monoxide ii.Sulphur dioxide iii.Oxides of nitrogen
 (a) i and ii (b) i and iii (c) ii and iii (d) i, ii and iii
- Soil erosion can be prevented by
 (a) deforestation (b) afforestation (c) over growing (d) removal of vegetation
- A renewable source of energy is
 (a) petroleum (b) coal (c) nuclear fuel (d) trees
- Soil erosion is more where there is
 (a) no rain fall (b) low rainfall (c) rain fall is high (d) none of these
- An inexhaustible resources is
 (a) wind power (b) soil fertility (c) wild life (d) all of the above
- Common energy source in village is
 (a) electricity (b) coal (c) biogas (d) wood and animal dung

9. Green house effect refers to
 (a) cooling of earth (b) trapping of UV rays (c) cultivation of plants (d) warming of earth
10. A cheap, conventional, commercial and inexhaustible source of energy is
 (a) hydropower (b) solar energy (c) wind energy (d) thermal energy
11. Global warming will cause
 (a) raise in level of oceans (b) melting of glaciers (c) sinking of islands (d) all of these
12. Which of the following statement is wrong with respect to wind energy
 (a) wind energy is a renewable energy
 (b) the blades of wind mill are operated with the help of electric motor
 (c) production of wind energy is pollution free
 (d) usage of wind energy can reduce the consumption of fossil fuels.

Fill in the blanks:

- Deforestation leads to _____ in rainfall.
- Removal of soil particles from the land is called _____.
- Chipko movement is initiated against _____.
- _____ is a biosphere reserve in Tamilnadu.
- Tidal energy is _____ type of energy.
- Coal, petroleum and natural gas are called _____ fuels.
- _____ is the most commonly used fuel for the production of electricity.

Match the following:

- | | | |
|--------------------|---|-----------------------|
| 1. Soil erosion | - | energy saving |
| 2. Bio gas | - | acid rain |
| 3. Natural gas | - | removal of vegetation |
| 4. Green house gas | - | renewable energy |
| 5. CFL bulbs | - | CO ₂ |
| 6. Wind | - | non-renewable energy |
| 7. Solid waste | - | lead and heavy metals |

23. VISUAL COMMUNICATION**Choose the best answer:**

- Which software is used to create animation?
 a) Paint b) PDF c) MS Word d) Scratch
- All files are stored in the _____
 a) Folder b) box c) Pai d) scanner
- Which is used to build scripts?
 a) Script area b) Block palette c) stage d) sprite
- Which is used to edit programs?
 a) Inkscape b) script editor c) stage d) sprite
- Where you will create category of blocks?
 a) Block palette b) Block menu c) Script area d) sprite

Match the Following:

- | | | |
|-------------------|---|--------------------|
| 1. Script Area | - | Type notes |
| 2. Folder | - | Animation software |
| 3. Scratch | - | Edit programs |
| 4. Costume editor | - | Store files |
| 5. Notepad | - | Build Scripts |



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ALL THE BEST

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