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- 1. A bullet hits and gets embedded in a solid block resting on a horizontal frictionless table. What conserved'? - Momentum
- 2. Which mixture is homogeneous? Methanol and water
- 3. What is formed by strong heating of potassium petmanganate? **O2**
- 4. Most of the digestion occur in which part of alimentory canal of man? Small intestine
- 5. What is the Branch of biology in which we study about relationship between living their and environment? – **Ecology**
- 6. Why does a man inside an artificial satellite feels weightlessness? Because the force of attraction due to earth is zero at that earth is
- 7. Which has the longest wave length? Infra red radiation
- 8. Which plant produce seed but not fruit? Mint
- 9. When are positive ions are formed from neutral atoms? By loss of electrons
- 10. Which Bacteria convert atmospheric nitrogen into nitrogenous compound? -Nitrogen fixing bacteria
- 11. If the ratio of the amplitudes of two waves is 4:3, then what will be the ratio of maximum and minimum intensity? - 49:1
- 12. When the universal gas constant (R) is divided by Avogadro's number (N), what their ratio called?
  - Boltzmann's constant
- 13. Why is yeast is used in bakery in the preparation of bread? Because it make bread soft and spongy
- 14. Which variety of glass is used for the manufacture of optical glasses? Flint glass
- 15. Sex determination of child is done by whose chromosome? Father
- 16. In a stationary longitudinal wave, nodes are points of which variation? -Maximum pressure variation
- 17. Which crop enrich the soil with nitrogen? Pea
- 18. At constant temperature, the product of pressure and volume of a given amount of a gas is constant, whose this law? - Boyles'law
- 19. If the amplitude of sound is doubled and the frequency reduced to one-fourth, what will the intensity? - Decrease by a factor of 4

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- 20. What is good source of protein? **Soyabean**
- 21. The compressed gas available in cooking gas cylinder is a mixture of which gases? - C4H10 + C3H8
- 22. What is the temperature at which the speed of sound in air becomes double of its value 27°C? at 927°C
- 23. For television broadcasting, how much MHz frequency employed normally? -30-300 MHz
- 24. Which insect spreads kala-azar? Sand fly
- 25. By which enzyme is Urea converted into ammonia and carbon dioxide? -Urease
- 26. In the leaf of tobacco what is found? **Nicotin**
- 27. Which property occurs in alkali metals? Largest atomic radil
- 28. A number of images of a candle flame are seen in thick mirror which image will be brightest? - The second image is the brightest
- 29. Parthanogenesis is seen generally in which fruit? Grapes
- 30. Inert gases (Except Helium) comes in which block in the periodic table? pblock
- 31. Whose experiments proved that the speed of light was always the same? -Michelson and Marley
- 32. Why do Blood cells do not shrink in blood? Because blood is isotonic
- 33. Which stem is modified to perform the function of leaf and many internodes called? - Phylloclade
- 34. What is the process of slow and homogeneous cooling of glass called? -**Annealing of glass**
- 35. Which is largest cell organelles? Plastid
- 36. An endoscope is employed to view the internal parts of the body organ. It is based on the principle of which reflection? - Internal reflection
- 37. A solution contains 1 mole alcohol and 4 mole water. What will mole fraction of water and alcohal be? - 4/5 and 1/5
- 38. What is the process in which loss of water occurs in the form of water vapour through aerial part of plant? - Transpiration
- 39. A strong magnetic field is applied on a stationary electron, then how will the electron? – Remains stationary
- 40. Why does Pure water not conduct electricity? Because it is almost not ionised

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- 41. Besides water and light which is more essential as a raw material for photosynthesis? - CO2
- 42. Why is the conduction of electricity through the electrolyte solution? Due to movement of ions of electrolyte
- 43. Which fraction is obtained between temperature 150-300°C during fractional distillation of crude petroleum? - Kerosene
- 44. What is the process of transfer of genetic information from DNA to RNA or formation of RNA from DNA? – **Transcription**
- 45. What is the Study of integrated use of microbiology, biochmistry and engineering? - Biotechnology
- 46. If a proton is brought towards an electron from infinity, how will the potential energy of the system? - Decrease
- 47. What is an example of emulsion? Milk
- 48. Which system is formed by the interaction of a community of organisms with its environment?

### **Ecosystem**

- 49. Which branch of science deals with the study of tissue found in the body of organism? - Histology
- 50. In the electrolysis the amount of mass deposited or liberated at an electrode is directly proportional to which thing? - Amount of charge
- 51. Activated charcoal is employed to remove colouring matter from pure substance, work? it

### Adsorption

- 52. Which substance is more than 80% in the cell? Water
- 53. A horizontal cable carries a current from west to east, the direction of the magnetic field produced by the current at a point vertically above the wire is which side? – **North to south**
- 54. What is the Eosin used to detect the end point of precipitation titration by adsorption called?

#### **Normal indicator**

- 55. Which branch of science that deals with the study of law is genetics for the improvement of human race? - Eugenics
- 56. What is the bond between two amino acids in a protein? Ester bond
- 57. What is the Study of inter-relationships between an entire community and its environment?

## Synecology

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- 58. Ophthalmology is the branch of science in which we study about which thing? -
- 59. The process of converting hydrate Al2O3 into anhydrous aluminium is known as which name?

#### Calcination

- 60. Fluorescent tubes are fitted with a choke. What does the choke coil? Reduces current in the circuit
- 61. What is the second most common element in the universe? Si
- 62. Entamoeba histolytica is found in which part of man? Intestine
- 63. What is the maximum number of different electrical combination possible with three equal resistances? - 4
- 64. Which is the compound in that oxygen shows + 2 oxidation state? F2O
- 65. The statements "Protoplasm is the physical basis of life" is given by which person? - Purkinje
- 66. Purification of aluminium by electrolyte refining is known as which name? -Hoope's process
- 67. Malaria parasite and Amoeba are grouped under? Protozoa
- 68. Magnetic dipole moment is a vector quantity directed from which direction? -South to north
- 69. What is France's global ranking in terms of the number of animal species under threat? – 8
- 70. Which is the largest phylum in the animal kingdom in respect of number of species? - Arthropoda
- 71. A large magnet is broken into two pieces. If the lengths of two pieces are in the ratio of 3:4. what is the ratio of their pole strengths? -1:1
- 72. Van arkel method of purification of metals involves converting the metal to which compound?

### Volatile compound

- 73. By whom was Tetrahedral nature of bonding in carbon atom first shown? van't Hoff and Le-Bel
- 74. Which ancestor of man for the first time began the bipedal locomotion? -**Australopithecus**
- 75. Which is the contractile protein muscle? Myosin
- 76. Which is the compound in that oxygen shows -1 oxidation state is? Na2O2

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77. What is the reason of floating of the ore particles in concentration by froth floatation process?

### Their being hydrophobic

- 78. What is also known as green protozo? Euglena
- 79. If the electric current in a lamp decreases by 5% then the power output decreases many how by percentages? – 10%
- 80. Acid rain is caused due to emission of which gases into the atmosphere? -Oxides of nitrogen and sulphur
- 81. Which naturally occurring element in the rice husk makes it termite resistant? -Silicon
- 82. Which quantity remains constant in a step-down transformer? Power
- 83. In the extraction of zinc the formation of blue flame is due to the burning of which gas? - **CO**
- 84. What number of essential amino acid is found in man? 20
- 85. Which of the following potassium compounds is known as 'Pearl ash'? K2CO3
- 86. By which is the amount of light entering into the eye controlled? Iris
- 87. Over the last 100 years global sea level has risen by about howmany cm? 10-12. 5 cm
- 88. Whose statement is this? "Algebraic sum of the current meeting at a node is zero" -- Kirchhoff's law
- 89. What is formed when white phosphorus is heated at 540 K in the absence of air? Red phosphorus
- 90. Which tissue help in keeping the body warm? Fatty tissue
- 91. A particle of mass m and charge q travels from rest through a potential difference V. What is its final energy? - qV
- 92. Why are elements of group I known as alkali metals? Their oxides are alkaline
- 93. In which organ carbohydrate is stored as glycogen? Liver
- 94. Which particle has the longest de Broglie wavelength if they are moving with same velocity? - â particle
- 95. Which pollutant is main product of automobile exhaust? NO
- 96. If all plant of the world die than why will all animal ultimately die? Due to Lack of oxygen
- 97. Why does Coagulation of blood not occur inside human body? Due to presence of Heparin
- 98. Which oxide is amphoteric in nature? SnO2

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- 99. In methane molecule how are the four hydrogen atoms arranged? As tetrahedral
- What is an association of individuals of different species living in the same 100 habitat and having functional interactions? - Biotic community
- What is the name of the scientist who stated that matter can be converted into energy? – **Einstein**
- The isotopes of chlorine with mass number 35 and 37 exist in which ratio? 102. -3:1
- A gas is found to have the formula (CO)n. Its vapour density is 70. What 103. must the value of n be? -5
- 104. Which law directly explains the law of conservation of mass? – **Avogadro's** law
- To whom the credit for the discovery of transuranic element goes? -105. Seaborg
- How many moles are there is 140 g of Si (atomic mass of silicon is 28)? -106.
- 107. Which substance does not have a melting point? – **Glass**
- By which a mixture of sand and naphthalene can be separated? -108. sublimation
- An element X forms an oxide X03. What is the valency of X? **6** 109.
- 110. Sodium carbonate crystals lose water molecules. What is this property called? - Efflorescence
- By whom was the law of constant proportions enunciated? **Proust** 111.
- What is the number of unpaired electrons in carbon atom? -2112.
- In an atom the order of filling up of the orbitals is governed by which principle? - Aufbau principle
- Regarding the atom of a chemical element, magnetic quantum number 114. refers? – **Orientation**
- What are the atoms of the elements having same mass number but 115. different atomic number called? - isobars
- Rutherford's scattering experiment related to the size of which thing? -116. nucleus
- By whom was the absolute value of charge on electron determined? -117. R.A. Millikan
- Which property of the elements is a whole number? **Atomic number** 118.

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Discovery of the nucleus of an atom was due to the experiment carried out 119. which person? by

#### Rutherford

- What are the atoms of the elements which have same number of neutrons 120 called? - Isotones
- Whose experiment proved that the speed of light was always the same? -121. **Michelson and Morley**
- Which element has two electrons in the K-shell only? **Helium** 122.
- What is Electromagnetic radiation with maximum wavelength? Radio 123. waves
- 124. Which nuclear particles responsible for holding all nucleons together? – Mesons
- In which process, a nucleus spontaneously breaks down by emitting 125. radiation? - Radioactive decay
- In atomic reactors, graphite is used as which name? Moderator 126.
- Why is Cobalt-60 commonly used in radiation therapy? -Because it emits 127 gamma rays
- A radioactive substance has a half life of four months. Three-fourth of the 128. substance would decay in howmany months? - 8 months
- What is a bond formed by the transfer of electrons between atoms of the 129. elements called? - ionic bond
- What is a bond formed by sharing of electrons between atoms of the 130. called? covalent elements bond
- What is the maximum number of hydrogen bonds in a H2O molecule? 4 131.
- Select the compound in which chlorine shows oxidation state + 7? -132 HCIO4
- 133. What is the oxidation of two Cl atoms in bleaching powder Ca(OCl) Cl? – +1,-1
- What is the Oxidation state of Mn in acidic KMnO4 change from? +7 to 134. +2
- Why is Molten NaCl good conductor of electricity? Free ions 135
- What is the common oxidation state of alkali metals in the combined state? 136. \_ +1
- 137. What is the oxidation number and covalency-of sulphur in S8? - **0, 2**
- Starch iodide paper is used to test for the presence of which agent? -138. Oxidising agent

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- The pH of water at 25° C is 7. When it is heated to 100°C, what will the pH 139. of water? - increases
- When Metal carbonate reacts with dilute acids, what does it forms? CO2 140
- The element common to all the acids is known as which name? -141 Hydrogen
- What is the sum of pH and pOH in aqueous solution at 25°C? 14 142.
- By what factor is a solution with pH = 2 more acidic than one with pH = 6143. ? - 104
- 144. Red litmus paper is changed into blue in solution of which thing? – **Base**
- What is formed by dissolution of base or acid in water? **Exothermic** 145.
- Blue litmus paper is converted into red in solution of which thing? acid 146.
- According to Arrhenius theory of an acid and base, an acid is a substance 147. gives that which ions in water? - H+ ions
- What is the negative logarithmic value of hydrogen on called? pH 148.
- What are the physical state of dispersion medium of a cloud? Gas 149.
- Vander Wall's equation explains the behaviour of which gases? real 150. aases
- In general gas equation, pV= nRT, V is the volume of which gas? n mole 151. of a gas
- What is the ratio of rate of diffusion of oxygen and hydrogen? 1:4 152.
- Absolute zero is the temperature where all gases are expected to have 153. volume? – Zero howmuch volume
- 4.4 g of CO2 contains how many litre of CO2 at STP? 2.24 litre 154.
- Glucose or fructose is converted into C2H5OH in the presence of which 155 thing? – **zymase**
- Which type of materials act as effective catalysis? **Transition metals** 156.
- What is the substance which decreases the rate of a chemical reaction? 157. Poison
- TEL minimise the knocking effect when mixed with petrol, how does it act? 158. As negative catalyst
- Which is the catalyst used in the manufacture of sulphuric acid by contact 159. process? – V2O5
- Which catalyst is sensitive to temperature changes? **Enzyme** 160.

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- Which is the temperature at which the catalytic activity of the catalyst is 161. Optimum maximum? temperature
- Alcoholic fermentation is brought about the action of which thing? **Yeast** 162
- Which is catalyst used in the Deacon's process for the manufacture of 163. chlorine? - CuCl2
- In the Ostwald's process for manufacture of HNO3, which catalyst is used? 164. – Pt
- Which gas has maximum colorific value? Oil gas 165.
- When ammonium chloride is dissolved in water, the solution becomes 166. cold. Whiat is change?

#### **Endothermic**

- When ice melts into water, which type of change occurs in entropy? -167. Increases
- In which type of coal percentage of carbon is the highest? **Anthracite** 168
- What is the mixture of carbon monoxide and nitrogen called? Producer 169. gas
- What is the mixture of carbon monoxide and hydrogen called? Water 170. qas
- Which law of thermodynamics introduces the concept of entropy? 171. Second law
- 172. For which element, the standard enthalpy is not zero? – C (Diamond)
- Which fuel causes minimum environmental pollution? **Hydrogen** 173.
- Which gas has the highest fuel value? **Hydrogen** 174.
- The compound with negative heat of formation is known as which name? -175. **Exothermic compound**
- Which hydrocarbon is mainly present in gobar gas? Methane 176.
- What happens when the door of a refrigerator is kept open? Room 177 heated
- What does the second law of thermodynamics introduced? The concept 178 of Entropy
- What is an extensive property of the system? **Volume** 179
- A gas expands isothermally and reversible. How much work is done by the 180. gas? – **Maximum**
- About which is the information not conveyed by thermodynamics? Rates 181. of reactions

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- Which is the element that has the highest first ionization potential? 182. Nitrogen
- What has the highest ionization potential? **Ne** 183.
- Which of the following among alkali metals is most reactive? Cs 184
- Which is the element having lowest melting point in periodic table? He 185.
- Which are the elements on the right side of the periodic table? Non-186. metals
- 187. Which transition metal is in liquid state? – **Mercury**
- Which electronic configurations exhibits metallic character? -2, 8, 2188.
- Which element has the lowest electron affinity? **Argon** 189.
- By whom was the calculation of electronegativities first done? Pauling 190.
- Which element does not exist in liquid state at room temperature? Na 191.
- What is the most electropositive amongst the alkaline earth metals? -192. Barium
- Which block of elements is mostly metals with high B.P., M.P. values? d-193 block
- Which are the vertical lines in modern periodic table called? **Group** 194.
- What is horizontal line in modern periodic table called? Period 195.
- In a period, the elements are arranged in which order? Increasing 196. charges in the nucleus
- Which noble gas does not have octet of electrons in its outer shell? **He** 197.
- Which pair of elements is in the same period of the periodic table? Na, Cl 198.
- Why is the electron affinity of chlorine highest than that of fluorine? -199. Smaller nuclear charge
- What is the Electron affinity of noble gases? Almost zero 200.
- Which mirror is to be used to obtain a parallel beam of light from a small 201 lamp? - Concave mirror
- The focal length of the lens in a photographic camera is 5 cm. What is the 202. power of the lens? - + 20 D
- When viewed in white light, why do soap bubbles show colours? -203. Because of interference
- Angular separation between two colours of the spectrum depends upon 204. which thing? Anale of deviation
- Total internal reflection of light is possible when light enters from which thing? – Water to air
- Which is used to remove astigmatism for a human eye? Cylindrical lens 206.

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- Why does diffusion of light in the atmosphere take place? **Due to dust** 207. particles
- Which phenomena can not be attributed to the refraction of light? -208. Redshift
- Total internal reflection can take place when light travels from which thing? 209. Diamond to glass
- The refractive index of a given piece of transparent quartz is greatest for 210. which light? - Violet light
- A virtual image larger than the object can be formed by which mirror? -211. **Concave mirror**
- 212. If there were no atmosphere, what will be the length of the day on the earth? - Decrease
- The focal length of a convex lens is 50 cm. what is its power? +2 D 213.
- For an astronaut in a space ship, how does the sky appear? **Black** 214.
- Which phenomena is used in optical fibres? Total internal reflection 215.
- What is the phenomenon of splitting white light into seven colours? -216. Dispersion
- Critical angle is minimum when a light ray passes which thing? Glass to 217. air
- If the angle between two plane mirrors is 60°; then how many number of 218. image will be formed? – 5
- In which part of the eye lies the pigment, that decides the colour of the 219. eyes of a person? – **Choroid**
- Critical angle of. light passing from glass to water is minimum for which 220. colour? - Violet colour
- To an observer on the lunar surface, during the day time, how will the sky 221. appear? - Black
- What is the unit of luminous efficiency of an electric bulb? Lumen / watt 222.
- Which of light are strongly absorbed by plants? Blue and red 223.
- A far-sighted person has a near point at 100 cm. What must be the power 224. of the correcting lens? – +3.0 D
- How many image can a man see if he stands between two plane mirrors 225. inclined at an angle of  $60^{\circ}$ ? – **5**
- How is image formed on the retina of a human eye? Real and inverted 226.
- The resistance of material increases with temperature. What is this? -227. Metal

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- When do all the magnetic materials lose their magnetic properties? 228. Strongly heated
- What is the relative permeability of a paramagnetic material? Greater 229. than unity
- A soap bubble is given negative charge then what happen in its radius? -230. Increases
- How is the relative permeability of a diamagnetic material? Less than 231. unity
- How are the magnetic field lines in the middle of a solenoid? Parallel to 232. the axis
- Why do Electricians use rubber gloves while working? Rubber is an 233. insulator
- What work is work done in moving a positive charge on an equipotential 234 surface? - Zero
- Kirchhoff's voltage law is based on the law of conservation of which thing? 235. Energy
- Why is In a hydel station the motion produced in turbines? Due to the 236. flow of water
- What is most suitable for the core of an electromagnet? **Soft iron** 237.
- At a grid sub stations the voltage is stepped up to reduce loss of which 238. thing? – **Power**
- Equal charges are given to two spheres of different radii. What will the 239. potential be? More smaller sphere
- Two electron beams are travelling parallel to each other. What will be their reactions? – Repel each other
- Instrument used to store the electric charge is known by which name? -241. Capacitor
- When an ebonite rod is rubbed with fur, which charge acquired by the fur? 242. Positive
- Conversion of chemical energy into electrical energy occurs in which thing? 243. Batterv
- What is the temperature at which a ferromagnetic material becomes 244. Curie paramagnetic? temperature
- A magnetic needle is kept in non uniform magnetic field. What does 245. itexperiences? – A force and a torque

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- 246. Where will be the Time period in a vibration magnetometer infinite? **At** magnetic pole
- 247. The north pole of the earth's magnet is near the geographical which direction? **South**
- 248. If the current in the core decreases, what will the strength of the magnetic field be? **Decreases**
- 249. The intensity of a magnetic field is defined as the force experienced by which pole? **Unit north pole**
- 250. If a material, placed in a magnetic field is thrown out of it, then how is the material? **Diamagnetic**
- 251. The capacity of a pure capacitor is 1 farad. In D.C. circuit, what will its effective resistance be? Infinite
- 252. If a bar magnet is cut length wise into 3 parts, what will the total number of poles be? **6**
- 253. For electroplating a spoon, it is placed in the voltameter at which postion? **The position of cathode**
- A substance, when inserted between the poles of a magnet, is pushed out, what is it? **Diamagnetic**
- 255. By inserting a soft iron piece into solenoid, what does the strength of the magnetic field? **Increase**
- 256. The magnetic induction associated with currents flowing in a hollow copper tube, how will be? only out side
- 257. How is the electric potential at the centre of a charged conductor? **Same** as on the surface
- 258. What is not the cause of low conductivity of electrolyte? **lonisation of salt**
- 259. What is Electric field intensity at a point a hollow charged spherical conductor? **Is zero**
- 260. Which property is processed by the ferromagnetic substance? **Hysterasis**
- 261. Which type of cell can be used if a device requires 75 A of current for 15 seconds? Lead-acid cell
- 262. A hydrogen atom is paramagnetic. What is a hydrogen molecule? **Diamagnetic**

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- In nuclear fission, how many percentage of mass is converted into energy? 263. -0.1%
- X210 has half life of 5 day. What is the time taken for seven-eights of 264. sample of X210 to decay? – **15 days**
- If a U-238 nucleus splits into two identical parts, how will the two nuclei be so produced? - Stable
- What is the half-life of a radioactive element which has only 1/32 of its 266. original mass left after a lapse of 60 days? – **12 days**
- If a proton of mass m is moving with the velocity of light, what will its mass be? - Infinite
- What was the fissionable material used in the bomb dropped at Nagasaki 268. (Japan) in the year 1945? – Plutonium
- Energy transferred to a person through gamma rays is measured in by which unit? – Roentgens
- Which field is used to produce deflection in a television picture tube? A 270. magnetic fields
- The electron emitted in beta radiation originates from where? Inner 271. orbits of atoms
- From which the cathode ray particles originate in a discharge tube? 272. Cathode
- Einstein's mass energy relation is given by which expression?  $-\mathbf{E} = \mathbf{mc2}$ 273.
- Which rays will deflect in electric field? **Cathode rays** 274.
- What percentage of the original quantity of a radioactive material is left 275. after five half lives approximately? – 3%
- What is the important conclusion given by Millikan's experiment about the charge? Charge is quantized
- What are Alpha rays emitted from a radioactive substance? Helium 277. nuclear
- Which are the Particles that can be added to the nucleus of an atom 278 without changing its chemical properties? – **Neutrons**
- Which particle has similar mass to that of the electron? **Positron** 279.
- When the speed of electrons increases, then what happens in the value of 280. the specific charge on an electron? – **Decreases**

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- The colour of the +ve column in a gas discharge tube depends on which thing? - The gas in the tube
- The first explosion of an atomic device in India was carried out in which 282. state? - Rajasthan
- Direct conversion of solar energy with the use of photovoltaic cell results in the production of which energy? – **Electrical energy**
- Why is energy is continuously generated in the sun? **Due to nuclear** 284. fusion
- What is the ratio of specific charges of an á-particle to that of a proton? 285. 1/2
- 286. Long distance short-wave radio broad casting uses which waves? **lonospheric** wave
- Which satellite is used in ship-to-shore and shore-to-shore and shore-to-287. communication? ship

#### **Marisat**

- Which is electrical circuits used to get smooth de output from a rectified 288 circuit called? - Filter
- When the temperature of semiconductor is increased, what will happen in 289. its electrical conductivity? – **Increases**
- With the rise of temperature, what will happen in the specific resistance of 290. semiconductor?

#### **Decreases**

- The absorption of radio waves by the atmosphere depends on which thing? – **Their frequency**
- Which are the space waves are affected seriously by atmospheric 292. conditions? - UHF
- With which can Radio wave of constant amplitude be generated? -293. Oscillator
- What is the electrical circuit used to get smooth DC output from a rectifier 294 circuit called? - Filter
- If germanium has to be doped with a donor impurity, how should the 295. foreign be? atom

#### **Pentavalent**

- In a p-type semiconductor, Which are the majority charge carriers? 296. Holes
- The unidirectional property of a pn-junction is useful for its use as which 297. thing? - Rectifier

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**Dr Nirkesh Sharma-Physics/Mathematics** 

- Chemistry-Dr Deepmala Pandey Dr N P Katare Biology Which energy of the electron at absolute zero is called? – **Fermi energy** 298. For television broadcasting, what frequency is employed normally? - 30-299 300 MHz A zener diode is also a p - n junction diode. It can be used as which 300 regular? – **DC voltage regulator** Which effect shows particle nature of height? – Photoelectric effect 301. A particle is executing S.H.M. Then what is the graph of acceleration as a 302. function of displacement? - Hyperbola An atom has 7 electrons in its M-shell and contains 18 neutrons in its nucleus. What is its mass number? - 35 The medicine ephedrin used in the treatment of cough, asthma and 304. from where bronchitis.
  - obtained? **Ephedra** By whom was the concept of dual nature of radiation proposed? - de-305. Broglie
  - In a bisexual flower if androcium and gynoecium mature at different time 306. phenomenon the known as which name? - **Dichogamy**
  - A small drop falls from rest from a large height h in air. What is the final 307. velocity? Almost independent of h
  - Why does Molten sodium chloride conduct electricity? Due to the 308. presence of free ions
  - Which modification of root does not store food? **Stilt** 309
  - The total energy of a particle vibrating in S.H.M. is proportional to which 310. thing? -The square

### of its Amplitude

A body rolling freely on the surface of the earth eventually comes, why 311. rest? does to

#### Because it suffers friction

What is the a biological process in which glucose and fat is oxidised to 312. librate energy?

### Respiration

What is an example of Miscelles System here? - Soap + Water 313.

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Chemistry-Dr Deepmala Pandey Dr N P Katare - Biology A gale blows over a house. The force due to the gale on the roof is in which 314. direction? the upward direction Why is Ail aqueous solution of copper sulphate is acidica in nature? the Because undergoes hydrolysis Oxygen released during photosynthesis of green plant comes from the breakdown of which thing? - Water The pressure at the bottom of a liquid tank does not depend on which 317. area? Area the liquid surface Which compound transforms baking soda into baking powder? -318. **KHC4H4O6** Water will be absorbed by root hairs, then how is when the external 319. medium? - Hypotonic Why is Weightlessness experienced in spaceship? - Due to absence of 320. gravity How is Perchloric acid prepared? - By the action of Concentrate 321. sulphuric acid on potassium perchlorate What is the Study of system of animal body which protects it from infection 322. various of disease? – Immunology A particle revolves round a circular path with a constant speed, how is the acceleration of the particle? – Along the radius Which is the Branch of science that deal with the improvement of human 324. providing race better environmental condition? - Euthenics Aluminium surface are often 'anodized'. This means deposition of a layer of 325. which oxide? Zinc oxide Which Animal is also known as 'Portuguese man of war'? - Physalia 326. Which metal is extracted by thermal reduction process? – **Copper** 327. An ideal liquid flows through a horizontal tube of variable diameter. The 328. lowest pressure and what will be velocity? - Velocity is highest

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- 329. If a non-metal is added to the interstitial sites of a metal, then how does become? the metal
  - less malleable
- Which is used as a gift in Japan? Euplectella 330.
- A gas is enclosed in a container which is then placed on a fast moving 331. What will be train. temperature of the gas? - Remain unchanged
- When will a hot body radiate maximum energy? If its surface is black and rough
- How many electrons are involved in the oxidation by KMnO4 in basic 333. medium? – 4
- Which chemical substance secreted by particular species of animal to 334. attract another member of same species? – **Pheromones**
- How is the heat transferred by the radiator of a refrigerator? More than that the freezer
- 336. Which compound of zinc is white when cold and yellow when hot? – **ZnO**
- Pheretima posthuma is scientific name of which animal? **Earth worm** 337.
- Merscuric sulphide dissolves in aqua-regia to form which compund? 338. HqCl2
- 339. An individual whose blood type is B may in an emergency donate blood to which person blood groups? – AB or B
- If the amplitude of a wave at a distance t from a point source is A, what will 340. the be amplitude at a distance 2r? - A/2
- In which sequence are the electromagnetic radiations in decreasing order 341. lengths? of wave
  - Infrared, radio, X-rays, visible
- Salts of which element provide colours to fireworks? Strontium and 342. barium
- Which organ have the capacity of regeneration? **Liver** 343.
- With the increase in temperature, what happens in the frequency of the 344. sound from an organ pipe? - Increases
- What is obtained when cadmium chloride is treated with water? Cd(OH)2 345.

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- Which organ cannot be transplanted? **Brain** 346.
- When a coin placed in a bowl of water is seen from above, how does it 347. appears? Raised

### from its position

- What is formed when cadmium reacts with H2S? CdS 348.
- Appetite and satiety centres of brain, where are present in? -349. **Hvpothalmus**
- Which gland disapear during old age? **Thymus** 350.
- How is the matallic nature of transition elements is than that of alkali 351. metals? - Less
- 352. Which types of waves are used in a night vision apparatus? – Infra-redwaves
- When seen in green light, what will the saffron and green portions of our 353. national appear? – Black and green respectively
- The 3d transition series contains how many elements from atomic 354 number? - 21 to 30
- Which blood group is universal doner? O 355.
- Which lanthanides are used in glass, blowers, goggles? Pr. Nd 356.
- Why is the function of the collimator in a spectrometer? To obtain a 357. parallel beam of light
- What is the smallest structural and functional unit of nervous system? -358. Neuron
- Which compound is obtained when auric chloride reacts with sodium 359. chloride? - Na[AuCl4]
- What is systolic and diastolic pressure in a healthy man? 120 mm and 360 80 mm
- The refractive index of a piece of transparent quartz is the greatest for 361. which light? Violet light
- Which part of human brain is the regulating centre for swallowing and 362. vomating? - Medulla oblangata
- By which Carbon and hydrogen are estimated in organic compounds? -363. Liebig's method

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- Dr Nirkesh Sharma-Physics/Mathematics Chemistry-Dr Deepmala Pandey Dr N P Katare - Biology If the refractive angle of a prism is 60° and the minimum deviation is 30°, 364. angle then of incidence is how many degrees? - 45° What is present both in plant and animal? - Plasma membrane What does mixture of CS2 and H2S on passing over heated copper give? -366. Methane If the rotational velocity of a dynamo armature is doubled, what will then the 367. induced emf? - Become double Which is used in storage batteries? - Lead 368. What is the name of the poisonous gas formed by the interaction of 369. acetylene and arsenic trichloride? - Lewisite Which tissue take part in healing the wounds? - Epithelium tissue 370. When a body is earth connected, electrons from the earth flow into the 371. body. What its mean? -This means the body is Charged positively Acetylene is used as an anaesthetic under which name? - Narcylene 372.
  - In daily requirement basis which vitamin is required in largest quantity by 373. human body? the
    - Vitamin C (Ascorbic acid)
  - 374. When does not No current flows between two charged bodies? - If they have potential
  - Denatured spirit is a mixture of ethyl alcohol, methyl alcohol and which thing? other

### **Pvridine**

Consumption of fish is considered to be healthy compared to flesh of other animals whv?

### Because it contains polyunsaturated fatty acids

What is the reason for excessive solubility of ethyl alcohol in water? - Due 377. hydrogen to

### bonding with water

Through which are the characters are transferred from parents to 378. progeny? - DNA

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- A radioactive substance has a half life of 4 months. In how many months 379. fourths will three of the substance will decays? - 8 months
- The cause of fractional atomic weights of elements? The presence of 380 Isotopes
- Which gas, is used for artificial ripening of fruit? C2H4 381.
- Which branch of biology deal with the study of heredity? **Genetics** 382.
- The maximum number of photo electrons released in photocell is 383. independent of which thing? – **Frequency**
- A fruity smell is produced by the reaction of C2H5OH with which formula? – CH3COOH
- By which can Evolutionary development of a species be best studied? -385. fossils Studying of this species
- What is the process by which vegetable ghee is manufactured? -386. **Hydrogenation**
- Early atmosphere contained methane and other hydrocarbons they have 387. been now replaced by which gas? - Carbon dioxide
- For an electric dipole, how are the field at a point on the equatorial line and 388. dipole the moment? – In opposite direction
- Crop sown soon after the onset of south-west monsoon in India, what is 389. this called? - Kharif
- Thermal decomposition of alkanes is known as which name? Cracking 390.
- If a diamagnetic substance is brought near north and south pole of a oar 391. magnet, what will be then? – It is Repelled by poles
- What is a glass sided tank, bowl in which aquatic animals live? -392. Aquarium
- Deficiency of which vitamin causes xerophthalmia? Vitamin A 393.
- If a wire of resistivity p is stretched to double its length, then what will 394. change in its new resistivity? - Not change

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- Cathode rays enter an electric field normal to the lines of force. Then how 395. path is the electric field is - Parabola
- The word "biodiversity" is a combination of which two words? Biology 396 and diversity
- Which thing is the sweetest natural sugar? **Lactose** 397.
- Jaundice in human beings affects which of the body part? Liver 398.
- How many orangutans disappear each year as result of palm oil farming? 399. **- 5000**
- 400. The sky wave propagation is suitable for radio waves of frequency form how many  $MH_{7}$ ?

#### From 2 MHz to 30 MHz

- . Which is considered a hot-spot of biodiversity in India? Western Ghats 401.
- Trunk of tree increases in grith due to cell division in which tissue? -402. Meristematic tissue
- Which tissue in cells have lost the capicity of cell division? Permanent 403 tissue
- 404 Which scientist studied about wheat rust problem? – K. C. Mehta
- Most of the plants obtain nitrogen from the soil in which from? Nitrates 405.
- Which fungus is responsible for disease late blight of potato? -406. Phytophthora infestans
- Which is responsible for red rot of sugarcane? **Collectorichum falcatum** 407.
- Which stage of development of insect is most harmful for crop? -408. Caterpillar
- In India famous Bengal famine accurred in 1942 by which disease? Leaf 409. spot of rice
- Which factors are most responsible for disease in plant? **Fungi** 410.
- Which fungus is responsible for the tikka disease of groundnut? -411. Cercosplora personata
- Which animals who have constant body temperature? **Homeothermic** 412.
- What is treatment of body defects through massage and exercise? 413. **Physiotherapy**
- What is making interesting discoveries unexpectedly or by accident? -414. Serendipity
- What is Study of growth and development of embryo? **Embryology** 415.

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- Which branch of biology is concerned with study and function of internal 416. organ organism? - Physiology
- Which branch of science deal with the study of causative agent of disease? 417 Etiology
- What is the Study of pulse and arterial blood pressure called? -418. Sphygmology
- Which branch of biology deals with the study of processing and 419. preservation of food?

### Food technology

What is the Study of the effects of toxic chemical substance on animal and 420. plant?

### **Toxicology**

- What is the Branch of science which deals with the study of skin of man? -Dermatology
- The release of which fish into wells helps in controlling the mosquitoes? 422. Gambusia fish
- Which animal lays eggs and does not produce young ones directly? -423. **Echidna**
- How many pair of heart is found in an earthworm? **Four** 424.
- Which substance found in blood which helps in cloting? **Fibrinogen** 425.
- Which worm reach into intestine of human by eating leaf? **Tape worm** 426.
- Which is the phylum that includes exclusively marine animal? -427. **Echinodermata**
- Which organs has its own wave of autonomic excitation? **Heart** 428.
- What is the short upper part of human intestine next to the stomach? -429 **Duodenum**
- A person feel fatigued due to depositon of which acid in their muscles? -430 **Latic Acid**
- In the retina of eye cells what is present for colour differentiation? **Cones** 431.
- Which gland is responsible for the secretion of insulin? **Pancrease** 432.
- What is considered as the easily digestable source of protein? **Soyabean** 433.
- What percentage of water found in blood plasma of human? 91 to 92% 434.
- Which blood vessel bringing blood into Bowman's capsule? Afferent 435. arteriole
- Bu which antibodies are produced in the plasma of blood? Lymphocytes 436.
- Which enzyme take part in digestion of milk protein? **Rennin** 437.

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- Which part of brain is centre of thirst hunger and sleep? **Hypothalmus** 438.
- Blood Coagualtion is prevented by which chemical when it flow through 439. vein? arterv

### Heparin

- Which organelles in the cell, other than nucleus contains DNA? -440. Mitochondria
- What is infolding from the inner membrane of mitochondria called? -441. Cristae
- In a living cell what is the site of ribosome formation? **Nucleolus** 442.
- What do both respiration and photosynthesis require? Cytochromes 443.
- In absence of ribosome in cell which function does not takes place? -444. **Protein synthesis**
- Deficiency of which vitamin, causes xerophthelmia? Vitamin A 445.
- Which antimicrobial drug is suitable for treatment of both tuberculosis and 446. leprosy?

### Rifampicin

- Insects that can transmit diseases to human are referred to as which 447 name? - Vectors
- Pneumoconiosis affects the workers who work mainly in which industry? -448. Coal minina industry
- 449. Lathyrism is caused by excessive consumption of which thing? - Khesari Dal
- Which part of blood carry out the function of body defence? White blood 450. cell
- Which disease is caused due to presence of excess arsenic in water? -451 Skin Cancer
- What is the transmission of characters from one generation to next? -452. Heredity
- Who got noble prize for artificial synthesis of DNA? Kornberg 453.
- What is the smallest part of DNA that undergoes recombination? **Recon** 454.
- By whom was Artificial gene synthesis first done in laboratory? Khurana 455
- By whom the concept of survival of the fittest as advanced? Herbert 456. Spencer
- From the evolutionary point of view, which is the most primitive animal? 457. Turtle

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- Which was the Russian scientist who proposed the theory of origin of life? 458. Oparin
- Who published the book 'Origin of species by natural selection in 1859'? -459. Darwin
- Which is most primitive ancestor of man? Australopithecus 460.
- Which harmful element tobacoo exists in tobacoo? Nicotine 461.
- What is abiotic component of ecosystem? Water 462.
- What is Study of inter relationship between living organism and their 463. environment?

### Ecology

- 464. Epiphytes are plant which depend on other plants for which purpose? – **Mechanical support**
- What amount of energy transferred from one trophic level to next? 10% 465.
- Plant and animal living in a particular area, what is it called? **Community** 466.
- Reduced leaves and sunken stomata are the main feature of which thing? 467. Xerophytes
- What ratio of forest area needed for ecologycal balance in India? 33.3% 468.
- Ultimate environmental hazard to mankind, why? Due to Nuclear 469. pollution
- Sound become hazardous noise pollution at which level? Above 80 dB 470.
- Which energy do not have the problem of pollution? Sun 471.
- 472. Which air pollutant affect the nervous system of man? – **Lead**
- By which is the Atmosphere of big metropolition cities is polluted most? 473. **Automobile**

### exhausts

- National Environmental Engineering research institute is situated in which 474 city? – Nagpur
- 475. Edward Jenner is related with which disease? – **Small pox**
- Which Scientist first explained about circulatory system? William Harvey 476.
- Who discovered Anopheles mosquito transmit malaria? Ronal ross 477.
- Who discovered the causal organism of the disease Anthrax? Robert 478. **Koch**
- 479. Which Scientists has established the 'Phylum Annelida'? – Lamark
- Which Biologist proposed the theory of Germ plasm? Weisman 480.
- For which is the southern blot technique used for the detection? **DNA** 481.
- For which is the northern blot technique used for the detection? **RNA** 482.

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- What is the introduction of foreign genes for improving genotype? 483. **Immunisation**
- Which vitamin is transformed in golden rice? Vitamin A 484.
- Human protein x 1 antitrysin is used for which disease? **Emphysama** 485
- Which type of cell has the ability to develop into any type of all ? Stem 486. cell
- What is the percentage of land area covered under forest according to 487. Indian Forest policy? **- 33%**
- Which organisation is responsible for maintaing Red data book? IUGN 488.
- What is the main cause of extinction of species from tropics? -489. **Deforestation**
- What is the number of plant species estimated to be present in India? -490. 40,000
- Which group has the highest number of endangered species ? Reptiles 491.
- Silent valley having rare plant and animal is located in which state? -492. Kerala
- 493. Which is the first national park established in India? – **Corbet**
- Insectivorous plant generally grow in soil which is deficient in which gas? -494. Nitrogen
- What is one-way relationship where one species benefits at the expense of 495. another is called? – Parasitism
- What is symbiotic relationship in which both species benefit' is best 496 described? – Mutualism
- Which of a species describes the tropic function it fills in its environment? 497 **Niche**
- What is the least influential in determining the distribution of terrestrial 498 biomes? - Salinity
- What is the term for the maximum number of individuals that an area can 499. support
  - indefinitely? Carrying capacity
- The massive hole in the ozone layer over the Antarctica was first 500. discovered which in vear? **- 1985**
- Which animals have a diet mainly consisting of bamboo? **Red pandas** 501.

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