



# 100+ Expected Science Questions PDF (English)

1. Which one among the following industries is the maximum consumer of water in India?

- A. Engineering
- B. Paper and Pulp
- C. Textile
- D. Thermal power

**Ans:** D

2. PSW status for:

- A. Primitive Status Word
- B. Process Status Word
- C. Processor Status Word
- D. Program Status Word

**Ans:** D

3. Sun Lab's Java Car uses technology to keep your car networked with the world outside.

- A. embedded
- B. spam
- C. smart Screen
- D. access Point

**Ans:** A

**Sol.** The Sun Labs Open House at Sun facilities in Menlo Park, Calif., featured presentations and demonstrations on technologies still in development. One room even featured a slot car track embedded with real-time Java sensor technology.

4. Related to computers, what is 'Wetware'?

- A. Computer programs
- B. Circulatory
- C. Human brain
- D. Chemical storage devices

**Ans:** C

**Sol.** Wetware is a term drawn from the computer-related idea of hardware or software, but applied to biological life forms. Here, the prefix "wet" is a reference to the water found in living creatures. A wetware computer is an organic computer built from living neurons. Wetware is slang that describes the human element of an information technology (IT) architecture.

5. Which of the following animals is dumb?

- A. Deer
- B. Giraffe
- C. Sag
- D. Yak

**Ans:** B

**Sol.** The **giraffe** (*Giraffa camelopardalis*) is an African even-toed ungulate mammal, the tallest living terrestrial animal and the largest ruminant. Its species name refers to its camel-like shape and its leopard-like coloring. Its chief distinguishing characteristics are its extremely long neck and legs, its horn-like ossicones, and its distinctive coat patterns. It is classified under the family Giraffidae, along with its closest extant relative, the



okapi. The nine subspecies are distinguished by their coat patterns.

6. A computer executes programs in the sequence of

- A. Decode, Fetch, Execute
- B. Execute, Fetch, Decode
- C. Fetch, Decode, Execute
- D. Store, Fetch, Execute

**Ans:** C

7. As per World Health Organization, a pilot program testing the first ever malaria vaccine will begin in \_\_\_\_\_ in the year 2018.

- A. India
- B. Italy
- C. United Kingdom
- D. Africa

**Ans:** D

**Sol.** Malaria remains a major health challenge, infecting more than 200 million people every year and killing about half a million. Children in Africa are the most vulnerable. In 2015, 88 per cent of global cases and 90 per cent of global deaths occurred in Africa. The vaccine, which has reported partial effectiveness, can save tens of thousands of lives if used with existing measures, according to the WHO regional director for Africa, Matshidiso Moeti. However, the challenge lies in delivering four doses of the vaccine for each child in impoverished countries. For prevention, the countries rely on bed netting and insecticides. The three countries (i.e. Kenya, Ghana and

Malawi) will begin piloting the injectable vaccine in 2018 because they continue to have high numbers of malaria cases despite having strong prevention and vaccination programmes. The vaccines will be tested on children five to 17 months old through the existing vaccination programmes in each country. With an objective to see whether its protective effects prove to be true under real-life conditions. At least 120,000 children in each of the three countries will receive the vaccine. The WHO is hoping to eradicate malaria by 2040 despite increasing resistance to anti-malarial drugs—a problem that exists not just in Africa but also in India.

8. Who invented Velcro?

- A. Thomas Edison
- B. William Harvey
- C. George de Mestral
- D. Robert Boyles

**Ans:** C

**Sol.** Velcro is a combination of the French words “velours” means velvet and “crochet,” which means hook and formally patented in 1955. Hook and loop is a fastener closure system in which the rough side is called hook and the softer mate or softer side is called loop.



9. Atomic mass of Oxygen is 16 and atomic number is 8. What is the mass in gms of 2 moles of oxygen gas?

- A. 8
- B. 64
- C. 32
- D. 16

**Ans: B**

**Sol.**

The atomic state of oxygen is  $O_2$

Mass of one oxygen atom = 16

mass of one mole of oxygen gas  $2 \times 16$   
 $= 32$

Hence, Mass of two moles of oxygen gas  
 $= 2 \times 32 = 64$

10. Which of the following generation computers used SNOBOL Language?

- A. First Generation
- B. Second Generation
- C. Third Generation
- D. Fourth Generation

**Ans: C**

**Sol.** SNOBOL is the language of the 3<sup>rd</sup> generation of computer (1964-71). SNOBOL stands for **String Oriented Symbolic Language**.

11. Recently, scientists have found second Great Spot 24000 km across and 12000 km wide on which planet?

- A. Saturn
- B. Mars
- C. Jupiter
- D. Mercury

**Ans: C**

**Sol.** Recently, scientists have found second Great Spot 24000 km across and 12000 km wide on Jupiter. This spot is the cold and high up. The formation of this spot is caused by the energy (magnetic forces) from Jupiter's polar auroras.

12. In IT the technique that is used to increase the bandwidth is

- A. Memory Management
- B. Memory Interleaving
- C. Memory Intraleaving
- D. Memory Leaving

**Ans: B**

**Sol.** In computing, interleaved memory is a design made to compensate for the relatively slow speed of dynamic random-access memory (DRAM) or core memory, by spreading memory addresses evenly across memory bank

13. Which of the following disease is caused by female Anopheles mosquito?

- A. Chicken Pox
- B. Malaria
- C. Black Fever
- D. Cholera

**Ans: B**

**Sol.**

• Malaria is caused by a one-celled **parasite** called a **Plasmodium**. Malaria is transmitted among humans by female mosquitoes of the genus **Anopheles**.

• For egg production, Female mosquitoes take blood meals from their host. Differently from the human host,



the mosquito host does not suffer noticeably from the presence of the parasites.

14. For a missile launched with a velocity less than the earth's escape velocity, the total energy is

- A. Either positive or negative
- B. Positive
- C. Negative
- D. Zero

**Ans:** C

**Sol.**

A missile is launched with a velocity less than the escape velocity. The sum of its kinetic energy and potential energy is negative.

15. Addition of excessive amounts of heat in a lake is referred to as

- A. Green House Effect
- B. Thermal pollution
- C. Refrigeration effect
- D. Heat bloom

**Ans:** B

**Sol.**

- Addition of excessive amounts of heat in a lake is referred to as **Thermal pollution**.
- Thermal pollution is the degradation of water quality by any process **that changes ambient water temperature**.
- A common cause of thermal pollution is the use of water as a coolant by power plants and industrial manufacturers.

16. Which tissue transport food to various parts of a plant?

- A. Phloem
- B. Parenchyma
- C. Xylem
- D. Sclerenchyma

**Ans:** A

**Sol.**

**Phloem is the vascular tissue responsible for the transport of food from source tissues.**

- Sclerenchyma, parenchyma, sieve elements and companion cells are some of the cell types from which Phloem is formed.
- *Xylem* transport water from roots to stems in plants.

17. Name the gas used in preparation of bleaching powder

- A. Oxygen
- B. Hydrogen
- C. Nitrogen
- D. Chlorine

**Ans:** D

**Sol.** Bleaching powder is made up with lime and calcium chloride. It's used as a cleaning agent, as a disinfectant, among other things.

18. Georg Simon Ohm in whose honour we have the famous Ohm's Law, hailed from which country?

- A. Russia
- B. Spain
- C. Germany
- D. Poland





**Ans: C**

**Sol.**

• **George Simon Ohm in whose honour we have the famous Ohm's Law, hailed from Germany.**

• Ohm's law states "The current through a conductor between two points is directly proportional to the voltage across the two points."

19. Pernicious Anemia is caused by the deficiency of vitamin \_\_\_\_\_.

- A. B2
- B. B6
- C. B12
- D. B1

**Ans: C**

**Sol.**

• Pernicious anemia is a condition caused by the deficiency of vitamin B12 in the body.

• It is a form of vitamin B12 deficiency anemia.

• Vitamin B12 helps the body to make healthy red blood cells and to keep nerve cells healthy.

20. Xerophthalmia is caused due to the deficiency of vitamin \_\_\_\_\_.

- A. D
- B. K
- C. A
- D. C

**Ans: C**

**Sol.**

• Xerophthalmia is a medical condition in which the eye fails to produce tears.

• Xerophthalmia caused by a severe vitamin A deficiency is described by pathologic dryness of the conjunctiva and cornea.

• The conjunctiva becomes dry, thick and wrinkled.

• If untreated, it can lead to corneal ulceration and ultimately to blindness as a result of corneal damage.

21. An adult human body has \_\_\_\_\_ bones.

- A. 206
- B. 300
- C. 208
- D. 312

**Ans: A**

**Sol.**

• The adult human body contains **206 bones**.

• 172 of the 206 human bones are part of a pair, including all 126 bones of the appendicular skeleton and 46 of the 80 bones in the axial skeleton.

• The 34 unpaired bones include six skull bones, 26 vertebrae, the sternum of the chest and the hyoid under the chin.

22. The largest artery in human body is \_\_\_\_\_.

- A. Aorta
- B. Capillary
- C. Vena cava
- D. Pulmonary vein

**Ans: A**



**Sol.**

- Aorta is the largest and main artery of the human body. It supplies oxygenated blood to the circulatory system.
- It originates from the left ventricle of the heart and ends by dividing into two arteries called the common iliac arteries that go to the legs.

23. The complete form of 'IC' in electronics is

- A. Internal circuit
- B. Independent circuit
- C. Integrated circuit
- D. Inbuilt circuit

**Ans: C**

**Sol.**

An integrated circuit (IC), sometimes called a chip or microchip, is a semiconductor wafer on which thousands or millions of tiny resistors, capacitors, and transistors are fabricated. An IC can function as an amplifier, oscillator, timer, counter, computer memory, or microprocessor.

24. Buckminsterfullerene is an allotrope of which of the following?

- A. Phosphorus
- B. Iron
- C. Carbon
- D. Boron

**Ans: C**

**Sol.**

\* **Buckminster Fullerene is an allotrope of carbon.**

\* It comprises of C-50, C-60 carbon atoms.

\* It contains pentagonal and hexagonal carbon cycles arranged in a football shaped.

\* It is a radical scavenger and also has vital applications in nano technology.

25. The virtue of catenation prevails in \_\_\_\_\_.

- A. Sulphur
- B. Nitrogen
- C. Silicon
- D. Carbon

**Ans: D**

**Sol.**

\* In chemistry, **catenation is the bonding of atoms of the same element into a series**, called a chain.

\* A chain or a ring shape may be open if its ends are not bonded to each other, or closed if they are bonded in a ring (a cyclic compound).

\* **Catenation occurs most readily with carbon**, which forms covalent bonds with other carbon atoms to form longer chains and structures.

\* This is the reason for the presence of the vast number of organic compounds in nature.



26. All isotopes of the same element have.....

- A. Different atomic numbers and different atomic mass
- B. Different atomic numbers and the same atomic mass
- C. The same atomic number but different mass number
- D. The same atomic number and the atomic mass

**Ans:** C

**Sol.** Isotopes are atoms with the same number of protons but that have a different number of neutrons. Since the atomic number is equal to the number of protons and the atomic mass is the sum of protons and neutrons, we can also say that isotopes are elements with the same atomic number but different mass numbers. They are variants of a particular chemical element which differ in neutron number. All isotopes of a given element have the same number of protons in each atom. All isotopes of the same element have same atomic number but different atomic masses.

27. Who is known as the father of Internet?

- A. Robert E. Kahn
- B. Tim Berners-Lee
- C. Larry page
- D. Vint Cerf

**Ans:** D

**Sol.** • **Vint Cerf** is known as a “**Father of the Internet**”.

- He is the co-designer of the **Transmission Control Protocol and Internet Protocol**, or TCP/IP.
- He is known as architecture of the Internet.
- He has served as vice president and chief Internet evangelist for Google.
- Tim Berners-Lee invented the **World Wide Web**.

28. Which of the following plays an important role in photosynthesis?

- A. Chloroplast
- B. Centrosome
- C. Tonoplast
- D. Nematoblast

**Ans:** A

**Sol.** Chloroplast plays an important role in photosynthesis. It is the structure in a green plant cell in which photosynthesis occurs. All green plant take part in the process of photosynthesis which converts energy into sugars and the byproduct of the process is oxygen that all animals breathe. The main role of chloroplasts is to conduct photosynthesis, where the photosynthetic pigment chlorophyll captures the energy from sunlight and converts it and stores it This process happens in chloroplasts.





29. \_\_\_\_\_ is the study of the microanatomy of cells, tissues and organs as seen through a microscope.

- A. Paleontology
- B. Histology
- C. Ichthyology
- D. Entomology

**Ans: B**

**Sol.**

- **Histology**- the study of the microanatomy of cells, tissues and organs as seen through a microscope.
- **Paleontology**-study of animal and plant fossils.
- **Ichthyology**-branch of zoology that deals with fishes.
- **Entomology**-study of insects.

30. The oxygen liberated during photosynthesis comes from .....

.....  
...

- A. Water
- B. Carbon dioxide
- C. Glucose
- D. Chlorophyll

**Ans: A**

**Sol.** The oxygen liberated during photosynthesis comes from water. Water is the source of the hydrogen atoms in the sugars created by photosynthesis. Both water molecules and carbon dioxide molecules are broken down using energy from the sun and combined into sugar molecules containing carbon, hydrogen and oxygen.

31. At which stage in its life cycle does the silkworm yield the fiber of commercial use

- A. Larva
- B. Egg
- C. Pupa
- D. Imago

**Ans: C**

**Sol.**

- The silk moth eggs hatch to form **larvae** or caterpillars, known as silkworms.
- The larvae feed on mulberry leaves.

32. Siderosis is a disease caused by the inhalation of

- A. Silica dust
- B. Iron dust
- C. Zinc dust
- D. Coal dust

**Ans: B**

**Sol.** Siderosis is the chronic inflammation of the lungs caused by excessive inhalation of dust containing iron salts or particles.

33. Outside the nucleus DNA is found in

- A. Ribosome
- B. Endoplasmic reticulum
- C. Mitochondria
- D. Golgi bodies

**Ans: C**

**Sol.**

- Most DNA in an individual genome is found in chromosomes but DNA found



outside the nucleus also serves important biological functions.

- It is found in Mitochondria outside the nucleus.

34. Which of the following is **not** an example of circular motion?

- A. Ceiling fan's blades rotating around hub
- B. Artificial satellite orbiting the Earth
- C. Bouncing ball
- D. Car turning through a curve in a race track
- E. None of the above/ More than one of the above

**Ans:** C

**Sol.**

- Circular motion is a movement of an object along the circumference of a circle or rotation along a circular path.
- **Bouncing ball is not an example of circular motion** here.
- All other are examples of circular motion.

35. The weight of an object is maximum \_\_\_\_\_.

- A. on the equator
- B. on the surface of the earth
- C. at the centre of the earth
- D. on the poles of the earth

**Ans:** D

**Sol.**

- The weight of an object on the Earth's surface is the downwards force on that object, given by Newton's second law of

motion, or  $F = ma$  (force = mass  $\times$  acceleration).

- Gravitational acceleration contributes to the total acceleration, but other factors, such as the rotation of the Earth, also contribute, and, therefore, affect the weight of the object.
- As the gravity is slightly higher at the poles, the weight is more as compared to anywhere else.

36. The presence of air bubble in blood stream is dangerous to life because

- A. Air combines with blood forming a complex
- B. The flow of blood increases manifold
- C. The flow of blood is obstructed
- D. The pressure of blood increases manifold

**Ans:** C

**Sol.** The presence of air bubble in blood stream is dangerous to life because the flow of blood is obstructed. Small amounts of arterial air can cause death by blockage of coronary and/or cerebral arteries.

37. Gravitational force is maximum at which of the following places?

- A. The equator
- B. The tropic of cancer
- C. The tropic of capricorn
- D. The poles

**Ans:** D

**Sol.**

The Earth's gravity is stronger at the poles than the equator for two reasons:



The centrifugal force cancels out the gravity minimally, more so at the equator than at the poles.

The poles are closer to the center due to the equatorial bulge and thus have a stronger gravitational field.

38.

The apparent weight of a man in a lift is less than the real weight when\_\_\_\_\_

- A. The lift is going down with an acceleration
- B. The lift is going up with uniform speed
- C. The lift is going down with uniform speed
- D. The lift is going up with an acceleration

**Ans:** A

**Sol.**

- The apparent weight of a man in a lift is less than the real weight **when the lift is going down with an acceleration.**
- The lift falls freely under gravity. The man also falls freely under gravity that's why the man feels that he has lost his weight.

39. Different elements always have

- A. Same atomic number and same electronic configuration
- B. Different atomic number
- C. Different atomic number and different number of valence electrons
- D. Same number of electrons and neutrons

**Ans:** B

**Sol.** Atoms of different elements have different atomic numbers. However there is also different valence electrons, but not in all cases.

For eg:-

- Calcium(20) = 2,8,8,2
- Beryllium(4) = 2,2
- Magnesium(12) = 2,8,2

Hence, option is B correct.

40. Which among the following is a cation?

- A. Chloride
- B. Ammonium
- C. Iodide
- D. Fluoride

**Ans:** B

**Sol.**

- \* **Ammonium is a cation.**
- \* It is a positively charged polyatomic ion.
- \* Its chemical formula is  $\text{NH}_4^+$ .



41. In biological terms, \_\_\_\_\_ is a relationship between two organisms in which one organism benefits and the other is unaffected.

- A. Parasitism
- B. Commensalism
- C. Amensalism
- D. Mutualism

**Ans: B**

**Sol.**

Commensalism is a type of **relationship** where **one** of the **organisms** benefits greatly from the **symbiosis**. The **other** is **not** helped but is **not harmed** or damaged from the **relationship**. In **other** words, this is a **one-sided symbiotic relationship**.

42. Which of the following is NOT a part of the brain?

- A. Pinna
- B. Pons
- C. Medulla
- D. Thalamus

**Ans: A**

**Sol.**

**The brain has three main parts: the cerebrum, cerebellum and brainstem.**

- **The cerebrum** is the largest part of the brain.
- **The cerebellum** is located under the
- The brainstem acts as a relay center connecting the cerebrum and cerebellum to the spinal cord.
- The pinna is the only visible part of the ear (the auricle) with its special helical shape.

• Its function is to act as a kind of funnel which assists in directing the sound further into the ear.

43. The scientific study of a cell is called \_\_\_\_\_.

- A. Taxonomy
- B. Cytology
- C. Histology
- D. Physiology

**Ans: B**

**Sol.**

\* The scientific study of a cell is called **cytology**. It is a branch of biology studying the structure and function of the cell.

\* **Histology** is study of tissues.

\* **Taxonomy** is naming and classification of organisms.

\* **Physiology** is study of normal functions of living organisms and their parts.

44. 'Mithun', a cattle breed is found in \_\_\_\_\_.

- A. Arunachal Pradesh
- B. Maharashtra
- C. Kerala
- D. Tamilnadu

**Ans: A**

**Sol.**

• Mithun is a cattle breed is found in **Arunachal Pradesh**.

• Mithun is also known as 'Cattle of Mountain'.

• It is an important bovine species of north-eastern hill region of India and



also of China, Myanmar, Bhutan and Bangladesh.

- This magnificent massive bovine is presently reared under free-range condition in the hill forests at an altitude of 1000 to 3000 m above mean sea level.

45. Which among the following is the food tube?

- A. Thymus
- B. Larynx
- C. Oesophagus
- D. Aorta

**Ans:** C

**Sol.**

- Oesophagus is the food tube.
- It connects mouth to stomach.
- When we swallow food, the walls of the oesophagus squeeze together (contract). This moves the food down the oesophagus to the stomach.

46. Energy travels from Sun to Earth through

- A. conduction
- B. convection
- C. radiation
- D. modulation

**Ans:** C

**Sol.** Electromagnetic energy from the sun comes to Earth in the form of radiation. The term "radiation" simply denotes the fact that the energy travels as rays, that is, in straight lines. In general, the terms "solar energy" and "solar radiation" simply refer to energy from the sun. Radiation happens when

heat moves as energy waves, called infrared waves, directly from its source to something else. This is how the heat from the Sun reaches Earth.

47. An eudiometer measures \_\_\_\_\_.

- A. Atmospheric pressure
- B. Time
- C. Volume of gases
- D. Vapour pressure

**Ans:** C

**Sol.** Eudiometer measures the volume of gases. It is a graduated glass tube in which the mixtures of gases can be made to react by an electric spark.

48. Nitric acid does not react with

- A. Gold
- B. Copper
- C. Zinc
- D. Iron

**Ans:** A

**Sol.** Nitric acid is made by reaction of nitrogen dioxide ( $\text{NO}_2$ ) with water. Normally, the nitric oxide produced by the reaction is reoxidized by the oxygen in air to produce additional nitrogen dioxide. Bubbling nitrogen dioxide through hydrogen peroxide can help to improve acid yield. Some precious metals, such as pure gold and platinum-group metals do not react with nitric acid, though pure gold does react with aqua regia, a mixture of concentrated nitric acid and hydrochloric acid. The principal chemical produced from nitric acid is ammonium nitrate. Most of this





is used in fertilizers, although a relatively small amount is used to make explosives. Some nitric acid is used as an intermediate in the polymer industry, notably in the manufacture of polyamides and polyurethanes.

49. Heavy metals got their names because compared to other atoms they have

- A. Higher densities
- B. Higher atomic masses
- C. Higher atomic numbers
- D. Higher atomic radii

**Ans: A**

**Sol.**

- Heavy metals got their names because compared to other atoms they have **higher densities**.
- **Examples** of heavy metals include gallium, thallium, and hafnium.

50. The mercury and sodium street lamps light up because of

- A. Electron absorption
- B. Atomic absorption
- C. Atomic emission
- D. Electron emission

**Ans: C**

**Sol.**

- The mercury and sodium street lamps light up because of Atomic emission.
- Use for illumination of streets.
- These street lamp is made of material highly resistant to all atmospheric conditions, such as, for example, high and low temperatures.

51. The ore of Aluminium is ?

- A. Fluospar
- B. Bauxite
- C. Chalcopyrites
- D. Hematite

**Ans: B**

**Sol.**

- Bauxite is a sedimentary rock with a relatively high aluminium content. It is the world's main source of aluminium.
- Bauxite is **aluminium**-rich ore that is used for **aluminium production** (the metallurgical bauxites) and for **production** of refractory materials, chemicals or cements (the **non**-metallurgical bauxites).

52. Heat is transmitted from higher temperature to lower temperature in fluids through the actual motion of the molecules in

- A. Conduction
- B. Convection
- C. Radiation
- D. Both conduction and convection

**Ans: B**

**Sol.**

Heat transfer is the exchange of thermal energy between physical systems. The rate of heat transfer is dependent on the temperatures of the systems and the properties of the intervening medium through which the heat is transferred. The three fundamental modes of heat transfer are conduction, convection, and radiation. Convection implies the form of heat transfer, by real movement of



matter, that occurs only in fluids. Fluid alludes to any substance, whose molecules move freely from one place to another, such as liquid and gases. It happens naturally or even forcefully.

53. Who proposed five kingdom classification?

- A. Ernst Mayr
- B. R. H. Whittaker
- C. M. W. Beijerinck
- D. D. I. Ivanovsky

**Ans: B**

**Sol.**

- It was **R.H. Whittaker** who has proposed the five kingdom classification.
- These are Kingdom of Monera, Protista, Fungi, Plantae, and Animalia.

54. In his periodic table, Mendeleev could NOT assign a correct position to \_\_\_\_\_.

- A. Oxygen
- B. Carbon
- C. Nitrogen
- D. Hydrogen

**Ans: D**

**Sol.**

- **Mendeleev could not assign a correct position to Hydrogen.**
- Because hydrogen has one valence electron and act both as alkali and halogens. Hence it was placed in IA and VIB group and could not assign a fixed position.

55. Calcium sulphate dehydrate is commonly known as \_\_\_\_\_.

- A. glass
- B. limestone
- C. asbestos
- D. gypsum

**Ans: D**

**Sol.**

- It is a naturally occurring calcium salt.
- **Calcium sulphate dehydrate,  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$** , is commonly called gypsum.
- It is a white or colourless powder.

56. Why does a black board appears black in colour?

- A. It reflects black colour
- B. It absorbs black colour
- C. It reflects all colours
- D. It absorbs all the colours

**Ans: D**

**Sol.** Black board appears black in colour as it observes all the colours of the visible light and reflects none. Black colour absorbs all the heat while white colour reflects all the lights and absorbs none and help us to stay cool during summers.

57. Which one of the following is a bad thermal conductor?

- A. Aluminum
- B. Copper
- C. Glass
- D. Silver

**Ans: C**



**Sol.**

- **Glass**, wood, and plastics are all bad thermal conductors.
- Metals are good conductors.
- The reason metals conduct heat so well is that the electrons in them can move around easily, and they can carry heat from one part to another.
- Metal atoms are packed more densely and can transmit heat vibrations more readily.
- Metals like copper, aluminum, gold, silver, Iron, etc are some examples of good heat conductors as well as electrical conductors.
- While most non-metallic solids are said to be good insulators, having extremely high resistance to the flow of charge through them.

58. William Crookes was a physical chemist who discovered and named the element \_\_\_\_\_.

- A. Plutonium
- B. Beryllium
- C. Germanium
- D. Thallium

**Ans: D**

**Sol.**

- **British chemist William Crookes discovered thallium in 1861.**
- Both Crookes and French chemist Claude Auguste Lamy isolated the element in 1862 independently.
- Thallium is a malleable, soft element that can be sliced with a knife. Its atomic number is 81.

- Thallium is a toxic metal and should not come into direct contact with skin.

59. Name the densest stable element known on earth.

- A. Tungsten
- B. Rhodium
- C. Osmium
- D. Aluminium

**Ans: C**

**Sol.**

- Osmium is the densest stable element known on Earth.
- Osmium is a chemical element with the symbol Os and atomic number 76.
- It is a hard, brittle, bluish-white transition metal in the platinum group that is found as a trace element in alloys, mostly in platinum ores.

60. How many types of isotopes does Scandium have?

- A. 13
- B. 10
- C. 7
- D. 9

**Ans: A**

**Sol.**

- Scandium is a chemical element with the symbol Sc and atomic number 21
- A silvery-white metallic d-block element, it has historically been classified as a rare-earth element, together with yttrium and the lanthanides.



- Scandium has **13 isotopes** whose half-lives are known, with mass numbers 40 to 52
- Naturally occurring scandium consists of its one stable isotope,  $^{45}\text{Sc}$ .

61. Allantois of Embryo helps in \_\_\_\_\_.

- A. digestion
- B. excretion
- C. respiration
- D. protection

**Ans: B**

**Sol.**

- Allantois of Embryo **helps in excretion.**
- It helps the embryo exchange gases and handles liquid waste.
- The allantois is a sac-like structure that forms near the posterior of the embryo.

62. Respiration is regarded as a \_\_\_\_\_.

- A. Synthetic Process
- B. Catabolic Process
- C. Anabolic Process
- D. Reduction Process

**Ans: B**

**Sol.** Cellular respiration is also a catabolic process because it breaks the small molecules from digestion into even smaller ones as ATP is created

63. 'Pedology' is the science of:

- A. skin disease
- B. ground water
- C. soil
- D. childhood illness

**Ans: C**

**Sol.**

\* Pedology is defined as the science that studies the genesis, nature, distribution and uses the potentiality of soil resources.

\* It is one of two main branches of soil science, the other being edaphology.

64. What is the SI unit of Force?

- A. Pascal
- B. Boyle
- C. Newton
- D. Watt

**Ans: C**

**Sol.** Information about Force

- **Newton** is the SI unit of Force. Force is the product of mass and acceleration
- $\therefore \text{Force} = \text{Mass} \times \text{acceleration}$
- 1 newton =  $10^5$  dyne
- Force can be defined as a push or a pull action and which is a vector quantity due to change in both magnitude and direction and it is represented by the symbol F.

65. The infective stage of Malaria is:

- A. Gametocyte
- B. Ring stage
- C. Sporozoite
- D. Merozoite
- E. None of the above/  
More than one of the above

**Ans: C**

**Sol.** Malaria causes anaemia through the rupture of red blood cells during merozoite release. The anaemia caused



may be extreme. Pallor may be visible in the patient. The female Anopheles mosquito (the definitive host) transmits a motile **infective** form (called the **sporozoite**) to a vertebrate host, such as a human (the secondary host)

66. Formic acid is produced by \_\_\_\_\_.

- A. White ants
- B. Cockroaches
- C. Red ants
- D. Mosquitoes

**Ans:** C

**Sol.** Formic acid, systemically named methanoic acid, is the simplest carboxylic acid. The chemical formula is  $\text{HCOOH}$  or  $\text{HCO}_2\text{H}$ . It is an important intermediate in chemical synthesis and occurs naturally, most notably in some ants. Many ants bite, and formicine ants can cause irritation by spraying formic acid; myrmecine ants like fire ants have a dedicated venom-injecting sting, which injects an alkaloid venom, as well as mandibles for biting.

67. Who performs the task of capturing oxygen in the blood?

- A. White blood cells
- B. Red blood cells
- C. Chlorophyll
- D. Hemoglobin

**Ans:** D

**Sol.**

- **Hemoglobin** performs the task of capturing oxygen in the blood.
- Hemoglobin captures oxygen and transports it through the bloodstream by binding oxygen to each of its four heme groups.
- Hemoglobin is contained in red blood cells, which efficiently carries oxygen from the lungs to the tissues of the body.

68. Which of the following has the highest protein content per gram?

- A. Apple
- B. Groundnut
- C. Soyabean
- D. Wheat

**Ans:** C

**Sol.**

**Soyabean** is one of the richest source of protein. The nutrition facts for 3.5 ounces (100 grams) of boiled soybeans are -

- a) Protein: 16.6 grams
- b) Carbs: 9.9 grams
- c) Sugar: 3 grams
- d) Fiber: 6 grams
- e) Fat: 9 grams

69. How many carbon and hydrogen atoms are there in Propane, respectively?

- A. 2, 6
- B. 3, 8
- C. 2, 4
- D. 4, 7

**Ans:** B





**Sol.**

- Propane has 3 carbon atoms and 8 hydrogen atoms.
- It belongs to the alkane group as it contains only single bonds.
- It has a chemical formula  $C_3H_8$ .
- It is commonly used as fuel.

70. What is the atomic mass of Zirconium?

- A. 88.22
- B. 89.22
- C. 90.22
- D. 91.22

**Ans: D**

**Sol.**

- Zirconium is a chemical element with the symbol Zr and atomic number 40.
- The atomic mass of zirconium is 91.224
- The name zirconium is taken from the name of the mineral zircon, the most important source of zirconium.
- It is a lustrous, grey-white, strong transition metal that closely resembles hafnium and, to a lesser extent, titanium.

71. Which of the following is not a component of Smog?

- A. Volatile organic compounds
- B. Nitrogen Oxide
- C. Sulphur dioxide
- D. Chlorine oxide

**Ans: D**

**Sol.**

- Chlorine oxide is not a component of Smog.

• The term "**smog**" was first used in the early 1900s to describe a mix of smoke and fog.

• **Smog** is **composed** mainly of tropospheric ozone ( $O_3$ ), primary particulate matter such as pollen and dust and secondary particulate matter such as **sulphur oxides, volatile organic compounds, nitrogen oxides ( $NO_x$ ) and ammonia gas.**

• When inhaled, smog irritates our airways, increasing our risk of serious **heart and lung diseases.**

• Ozone can damage plant cells and inhibit their growth, reducing the amount of carbon dioxide that they take in during photosynthesis.

72. Cooking vessels have wooden or bakelite handles because

- A. Wood and bakelite are bad conductors of heat
- B. the handle must be strong
- C. the handle should be attractive
- D. None of the above

**Ans: A**

**Sol.** A bad conductor of heat is such a substance which does not conduct or transfer or absorb heat. Cooking vessels have wooden or bakelite handles because they are **bad conductors of heat** due to which they don't get warm/hot when we cook food.



73. What does 'T' stand for in ATM?

- A. Trunk
- B. Transfer
- C. Transaction
- D. Teller

**Ans:** D

**Sol.**

\* The full form of ATM is **Automated Teller Machine**.

\* An ATM is a machine built into the wall of a bank which allows people to take out money from their bank account by using a special card.

74. Animal protein is called first class protein because it is:

- A. cheaper in the market
- B. rich in essential amino acids
- C. easily digestible
- D. delicious in taste

**Ans:** B

**Sol.** First Class proteins are of animal sources: meat, fish, dairy, eggs.

They have a good balance of the essential amino acids and are in similar proportions to those found in human tissues, muscles and organs.

75. What type of lens is used to correct vision of a person suffering from Myopia?

- A. Convex lens
- B. Concave lens
- C. Crossed lens
- D. Cylindrical lens

**Ans:** B

**Sol.**

• Myopia is a condition in which close objects appear clearly, but far ones don't.

• Myopia can be corrected with concave lenses. They spread the light out before it reaches the convex lens in the eye, therefore letting the image focus directly on the retina.

76. Constantan is an alloy of copper and \_\_\_\_\_.

- A. Aluminium
- B. Iron
- C. Tin
- D. Nickel

**Ans:** D

**Sol.**

\* Constantan is a copper–nickel alloy also known as Eureka.

\* It usually consists of 55% copper and 45% nickel. Its main feature is the low thermal variation of its resistivity, which is constant over a wide range of temperatures.

77. Blood is red in colour due to the presence of \_\_\_\_\_.

- A. Cytochrome
- B. Chlorophyll
- C. Hemocyanin
- D. Haemoglobin

**Ans:** D

**Sol.** Each hemoglobin protein is made up subunits called hemes, which are what give blood its red color. More



specifically, the hemes can bind iron molecules, and these iron molecules bind oxygen. The blood cells are red because of the interaction between iron and oxygen.

78. The only living tissue in plant xylem is \_\_\_\_\_.

- A. Xylem fibre
- B. Xylem parenchym
- C. Trachied
- D. Trachea

**Ans: B**

**Sol.**

• Xylem is one of the two types of transport tissue in vascular plants, phloem being the other.

• The **basic function of xylem is to transport water** from roots to shoots and leaves, but it also transports some nutrients.

• The tracheids, the trachea and the xylem fibers are non-living components, while xylem parenchyma represents the only living component of the tissue.

79. Which enzyme produced by HIV allows integration of HIV DNA to host cell's DNA?

- A. Ligase
- B. Helicase
- C. DNA gyrase
- D. Integrase
- E. None of the above/More than one of the above

**Ans: D**

**Sol.**

• **Integrase enzyme** is produced by HIV that allows the integration of HIV DNA into the host cell's DNA.

• The integrase-HIV DNA complex is part of an intracellular nucleoprotein particle known as the "preintegration complex" (PIC).

• This complex consists of linear HIV DNA, viral proteins, and host proteins.

80. 'Nitrous Oxide' is the chemical name of \_\_\_\_\_.

- A. Tear Gas
- B. Fire Extinguisher
- C. Laughing Gas
- D. Mosquito Repellent

**Ans: C**

**Sol.**

• **Nitrous Oxide is also known as Laughing gas.**

• It is used as anaesthetic and pain reducing medicine in surgery and dentistry.

• Its name "laughing gas", coined by Humphry Davy, is due to the euphoric effects upon inhaling it.

81. Who among the following gave the 'Law of Octaves'?

- A. Lavoisier
- B. Mendeleev
- C. Newlands
- D. Dobereiner

**Ans: C**



**Sol.**

• **Law of Octaves was given by Newlands.**

• According to this law if the chemical elements are arranged according to increasing atomic weight, those with similar physical and chemical properties occur after each interval of seven elements.

• He proposed this law in 1865.

82. Calcium salts used as fertilizer is:

- A. Calcium Carbide
- B. Calcium Carbonate
- C. Calcium Cyanide
- D. Calcium Sulphate

**Ans: D**

**Sol.** Calcium sulfate hemihydrate is a calcium salt that is used for a variety of purposes including building materials, as a desiccant, as fertilizer, etc. It exists in various forms and states of hydration. Plaster of Paris is a mixture of powdered and heat-treated gypsum.

83. Blood group was discovered by :

- A. William Harvey
- B. Landsteiner
- C. Pavlov
- D. Alexander Fleming

**Ans: B**

**Sol.** The A,B,O blood group system is widely credited to have been discovered by the Austrian scientist Karl Landsteiner, who identified the O, A, and B blood types in 1900.

84. Fleming's "Left hand Rule" is associated with the effect of\_\_\_\_\_.

- A. Electric field on current
- B. Magnetic field on magnet
- C. Electric field on magnet
- D. Magnetic Field on current

**Ans: D**

**Sol.**

• Fleming's Left Hand Rule is found that whenever a current carrying conductor is placed inside a magnetic field, a force acts on the conductor, in a direction perpendicular to both the directions of the current and the magnetic field.

85. Which instrument is used to measure blood pressure?

- A. Glucometer
- B. Sphygmomanometer
- C. Lactometer
- D. Thermometer

**Ans: B**

**Sol.**

• A *glucose meter* is a medical device for determining the approximate concentration of glucose in the blood.

• The sphygmomanometer is used to measure blood pressure.

• Lactometer- A device that estimates the quality of milk.

• Thermometer-use to measure body temperature.



86. What is the colour of the light emitted by the Sun?

- A. Red
- B. Yellow
- C. White
- D. Orange
- E. None of the above/More than one of the above

**Ans:** C

**Sol.**

- White colour light is emitted by the sun.
- It is a composite of all the visible frequencies of light.
- Sunlight can be broken into the full spectrum of its colours: red, orange, yellow, green, blue, indigo and violet.

87. Which part of brain controls the maintenance of posture, balance and equilibrium?

- A. Brainstem
- B. Diencephalon
- C. Cerebrum
- D. Cerebellum

**Ans:** D

**Sol.**

- The **cerebellum** is at the back of the brain, below the cerebrum.
- It's a lot smaller than the cerebrum.
- It is a very important part of the brain.
- Its function is to coordinate voluntary muscle movements and to maintain posture balance, and equilibrium.

88. Which of the following is a communicable disease?

- A. Diabetes
- B. Asthma
- C. Measles
- D. Scurvy

**Ans:** C

**Sol.**

- **Measles is a highly communicable disease.**
- It is a serious childhood disease caused by a virus.
- It is easily spread by coughing, sneezing or even talking to an infected person. Measles begins with a fever, runny nose and cough.

89. What are the three primary nutrients needed for plant growth?

- A. Nitrogen, Phosphorus and Potassium
- B. Nitrogen, Oxygen and Silicon
- C. Potassium, Boron and Nitrogen
- D. Nitrogen, Phosphorus and Iron

**Ans:** A

**Sol.** Nitrogen, phosphorus and Potassium are known as the primary nutrients of the plant. Broadly nitrogen is vital for photosynthesis, phosphorus is important for development of plant tissue, and potassium is used for regulation of CO<sub>2</sub> uptake.





90. Photosynthesis takes place in the presence of chlorophyll and \_\_\_\_\_.

- A. water
- B. nutrients
- C. carbon-dioxide
- D. sunlight

**Ans:** D

**Sol.** Photosynthesis takes place in the presence of chlorophyll and sunlight. It takes place in leaves containing chloroplasts that have chlorophyll present in them. It is the chlorophyll that absorbs light energy from the sun and the tiny pores called stomata are the pathway for carbon dioxide to enter and oxygen to leave the plant.

91. Which of the following function is performed by the kidneys in the human body?

- A. Excretion
- B. Respiration
- C. Digestion
- D. Transportation

**Ans:** A

**Sol.**

- **Excretion is performed by the kidneys in the human body.**
- They reside against the back muscles in the upper abdominal cavity and perform the essential function of removing waste products from the blood and regulating the water fluid levels, form urine, and aid in other important functions of the body.

92. Chemical name of laughing gas is \_\_\_\_\_.

- A. Nitric oxide
- B. Hydrogen chloride
- C. Nitrous oxide
- D. Sulphur dioxide

**Ans:** C

**Sol.**

- Nitrous oxide, commonly known as laughing gas.
- It is an oxide of nitrogen.
- At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effects.

93. Ice is packed in sawdust because \_\_\_\_\_.

- A. saw dust does not stick to the ice
- B. saw dust is poor conductor of heat
- C. saw dust is a good conductor of heat
- D. saw dust will not get melted easily

**Ans:** B

**Sol.**

- Sawdust acts as an **insulator against the surrounding temperatures** and helps maintain the low temperatures of ice, so ice is packed in sawdust always or sometimes in layers of sackcloth.

94. It is easy to burst a gas-filled balloon with a needle than with a nail. It is because \_\_\_\_\_.

- A. Gas is reactive with the needle
- B. Nail exerts more pressure than needle on the balloon



C. Needle exerts more pressure than nail on the balloon

D. Nail is more longer than needle.

**Ans: C**

**Sol.** It is easy to burst a gas-filled balloon with a needle than with a nail. It is because needle exerts more pressure than nail on the balloon.

95. Which one of the following statements is INCORRECT?

A. The measurable unit of pressure is denoted as Metre.

B. Evaporation causes cooling.

C. Matter is made up of small particles.

D. Brass is a mixture of 30% zinc and 70% copper.

E. None of the above/

More than one of the above

**Ans: A**

**Sol.**

- The standard SI unit for pressure measurement is the Pascal (Pa) which is equivalent to one Newton per square meter (N/m<sup>2</sup>) or the Kilo Pascal (kPa) where 1 kPa = 1000 Pa.

- The SI base unit for distance is meter, according to the International System of Units.

- Meter is denoted by 'm'.

96. What is the yellow dust present in the middle of a flower called?

A. Pollen

B. Zygote

C. Sperm

D. Stomata

**Ans: A**

**Sol.**

- The yellow dust present in the middle of a flower is called **pollen**.

- It is a very fine powder produced by trees, flowers, grasses, and weeds to fertilize other plants of the same species.

97. Flowers emit fragrance mainly to \_\_\_\_\_.

A. purify air

B. drive away flies

C. attract insects

D. perform all the above

**Ans: C**

**Sol.**

- The primary functions of floral scent are to deter herbivorous and especially florivorous insects and to attract pollinators.

- Floral scent is one of the most important communication channels mediating plant-pollinator interactions.

98. Which of the following are amongst the few carbon-containing compounds NOT classified as organic?

A. Nucleic acids

B. Propane

C. Methane

D. Cyanides

**Ans: D**

**Sol.**

- An organic compound is generally any chemical compound that contains carbon linked with other carbons.



• **Cyanide is categorized as an inorganic compound**, it contains cyno group. In inorganic cyanides, the cyanide group is present as the anion  $CN^-$ .

• Nucleic Acid, Propane, Methane are organic compounds.

99. Mercury is generally used in thermometers because it has \_\_\_\_\_

- A. High fluidity
- B. High density
- C. High coefficient of expansion
- D. High specific heat

**Ans: C**

**Sol.**

• Mercury is a chemical element with symbol Hg, commonly known as quicksilver.

• **Mercury** is the only one in liquid state at room temperature. It's used in thermometers because it has **high coefficient of expansion**. Hence, the slightest change in temperature is notable when it's used in a thermometer.

100. If there were no gravity, which of the following will not be there for a fluid?

- A. Viscosity
- B. Surface Tension
- C. Pressure
- D. Upward Thrust

**Ans: D**

**Sol.** • If there were no gravity, Upward Thrust will not be there for a fluid.

• "When a body is immersed in a liquid, it loses its weight or an upward thrust acts upon it which is equal to the weight of an equal volume of the liquid displaced."

101. The left aortic arch is observed in

- A. Amphibians
- B. Mammals
- C. Reptiles
- D. Aves

**Ans: B**

**Sol.** The varieties of the aortic arch are intimately associated with the development of the fourth arterial arches. The usual aortic arch in man, and of all mammalia, is a left one produced by the persistence and development of the left fourth arch; in birds it is the right fourth arch which forms the permanent aorta; and in reptiles both the right and left fourth arches remain patent.

102. Name the law in Physics which states that equal volume of all gases under the same conditions of temperature and pressure contain equal numbers of molecules.

- A. Ohm's Law
- B. Boyles's Law
- C. Avogadro's Law
- D. Charles's Law

**Ans: C**



**Sol.**

- Avogadro's Law states that equal volume of all gases under the same conditions of temperature and pressure contain equal numbers of molecules.
- The law is a specific case of the ideal gas law.

- Avogadro's law's mathematical **formula** can be written as:  $V \propto n$  or  $V/n = k$ . Where "V" is the volume of the gas, "n" is the amount of the gas (number of moles of the gas) and "k" is a constant for a given pressure and temperature.



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