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ok..say those 3 magical words na. i have to sleep now
NCERT IS MUST.

1. The Alkali metals are called good reducing agents. This implies that__:

[A] They easily capture electrons
[B] They are not stable at room temperature
[C] They easily lose electrons
[D] They don’t act with dilute acids

Answer: C [They easily lose electrons]

Notes:

Alkali metals have one electron in their valence shell and hence they easily lose or donate electron.

2. A chloroplast without cell wall is ____ ?

[A] aleuroplast
[B] amyloplast
[C] protoplast
[D] photoplast

Answer: C [protoplast]

Notes:

A chloroplast without cell wall is protoplast. Chloroplasts are organelles that perform photosynthesis. The photosynthetic pigment chlorophyll captures the energy from sunlight, converts it, and stores it in the energy-storage molecules ATP and NADPH while freeing oxygen from water in plant and algal cells.

3. Among typhoid, hysteria, measles & influenza which is / are not contagious disease(s)?

[A] Hysteria only
[B] Hysteria & Measles
[C] Hysteria, Typhoid & Measles
[D] All are contagious diseases

Answer: A [Hysteria only]

Notes:

Among typhoid, hysteria, measles & influenza, only Hysteria is not a contagious disease. A contagious disease is a subset category of transmissible diseases, which are transmitted to other persons.

4. Which among the following is Quick Silver?

[A] Aluminium
[B] Mercury
[C] Lead
[D] Zinc

Answer: B [Mercury]

Notes:

Mercury is a chemical element with the symbol Hg and atomic number 80. The element is also known as quicksilver for its mobility. Mercury is one of the oldest and deadliest poisons, a highly toxic metal mined from a brilliant red ore.

5. Which among the below is not a food plant?

[A] Allium cepa
[B] Allium sativum
[C] Asparagus officinalis
[D] Atropa belladona

Answer: D [Atropa belladona]

Notes:

Atropa belladonna, commonly known as belladonna or deadly nightshade, is a poisonous perennial herbaceous plant in the nightshade family Solanaceae. Allium cepa, Allium sativum and Asparagus officinalis are food plants.

6. Which of the following organism grows on Common Bread?

[A] Bacterium
[B] Yeast
[C] Mucor
[D] Virus

Answer: C [Mucor]

Notes:

Mucor is a microbial genus of approximately 40 species of moulds commonly found in soil, digestive systems, plant surfaces. They also grow on common bread. Mucor may cause infections in man, frogs, amphibians, cattle, and swine.

7. “Svedberg Unit” is a unit of ___?

[A] Concentration
[B] Size
[C] Density
[D] Time

Answer: D [Time]

Notes:

Svedberg unit (S/ Sv) is a unit for sedimentation coefficients. It offers a measure of size of the particle based on sedimentation rate under acceleration. It calculates how fast the particle settles to the bottom of the solution. Svedberg unit is a measure of time (exactly 10−13 seconds).

8. Which among the following acid is NOT a Vitamin ?

[A] Folic Acid
[B] Oleic Acid
[C] Pantothenic Acid
[D] Ascorbic Acid

Answer: B [Oleic Acid]

Notes:

Oleic Acid is not a vitamin. It is a fatty acid which occurs naturally in various animal and vegetable fats and oils. It is an odorless, colorless oil, however commercial samples may be yellowish.

9. Argon is the third most common gas in the Earth's atmosphere, at 0.93%. This gas is generated due to decay of which among the following isotopes in the Earth's crust ?

[A] K-40
[B] Ca-40
[C] Ca-48
[D] K-41

Answer: A [K-40]

Notes:

Potassium-40, which is a rare radioactive isotope of potassium has a very long half life. It undergoes all three types of beta decay (ß-, ß+ and electron capture). About 89% of the time 40K decays to calcium-40 (40Ca). However, 11% of the time it decays to argon-40 (40Ar).

10.Consider the following statements with reference to the active and passive immunity against the pathogens:

1. Vaccines provide us passive immunity
2. Passive immunity can be acquired only artificially

Which among the above statements is/ are correct?

[A] Only 1 is correct
[B] Only 2 is correct
[C] Both 1 & 2 are correct
[D] Neither 1 nor 2 is correct

Answer: A [Only 1 is correct]

Notes:

There are two types of immunity against infectious microorganisms: active immunity and passive immunity. Passive immunity is provided by artificial means such as injections of antibodies and vaccines. The agents used for passive immunity include antibodies from humans or animals Passive immunity can occur naturally, when maternal antibodies are transferred to the foetus through the placenta, and can also be induced artificially, whenever high levels of human (or horse) antibodies specific for a pathogen or toxin are transferred to non-immune individuals.

11. Which of the following is the unit of Impulse?

[A] N
[B] Ns
[C] N/s
[D] Ns^2

Answer: B [Ns]

Notes:

The unit of impulse is Ns. Impulse = Force(N) x Time(s) Impulse can be defined as the integral of a force, F, over the time interval, t, for which it acts.

12. What is the S.I. unit for Luminous Intensity?

[A] mole
[B] ampere
[C] candela
[D] weber

Answer: C [candela]

Notes:

The S.I. unit for Luminous Intensity is candela. The symbol used for candela is cd. Mole is the S.I unit for Quantity of Matter ampere is the S.I unit for Electric Current. Weber is the S.I unit for Magnetic Flux Luminous Intensity is the amount of light that a point source radiates in a given direction

13. The equation of motion ‘v = u +at’ can be applied in which of the following cases?

[A] simple harmonic motion
[B] circular motion
[C] when acceleration is constant
[D] Both b and c

Answer: C [when acceleration is constant]

Notes:

The equation of motion 'v = u +at' can be applied only when the acceleration is constant. It cannot be applied in the cases of simple harmonic motion and circular motion.

14. What is the average power consumption of a heartbeat in an adult?

[A] 1.2 watt
[B] 112.5 watt
[C] 200 watt
[D] 500 watt

Answer: A Notes: [1.2 watt]

Average power consumption by an adult in some of the common processes/activities: 1. Heartbeat – 1.2 watt 2. Sleeping – 75 watt 3. Slow walking – 200 watt 4. Bicycling – 500 watt

15. What is the internal restoring force acting per unit area of cross section of the deformed body called?

[A] Strain
[B] Stress
[C] Pressure
[D] Surface Tension

Answer: B [Stress]

Notes:

Stress is the internal restoring force acting per unit area of cross section of the deformed body. Stress is given by Force/Area.

16. What is the direction of electric and magnetic fields in an electromagnetic wave?

[A] parallel to each other
[B] perpendicular to each other
[C] at 45° to each other
[D] at 120° to each other

Answer: B [perpendicular to each other]

Notes:

Electric and magnetic fields in an electromagnetic wave are perpendicular to each other and to the direction of propagation.

17. What is the triple point of water?

[A] Temperature = -273.16 K, pressure= 6.11×10^{-6}Pa
[B] Temperature = -273.16 K, pressure= 6.11×10^{-3} Pa
[C] Temperature = 273.16 K, pressure= 6.11×10^{-6} Pa
[D] Temperature = 273.16 K, pressure= 6.11×10^{-3} Pa

Answer: D [Temperature = 273.16 K, pressure= 6.11×10^{-3} Pa]

Notes:

The triple point of water is represented by the temperature 273.16 K and pressure 6.11×10^{-3} Pa.

Q18. How many electrons constitutes a 1 coulomb charge?

[A] 3×10^{16}
[B] 6×10^{18}
[C] 9×10^{21}
[D] 1

Answer: B [6×10^{18}]

Notes:

1 coulomb(C) of charge is equivalent to the charge contained in approximately 6×10^{18} electrons. An electron possesses a negative charge of $1.6 \text{ X } 10^{-19}$c. Coulomb is the S.I unit of electric charge.

19. What kind of cell is the mobile phone battery when it is being charged?

[A] Galvanic cell
[B] Fuel cell
[C] Electrolytic cell
[D] None of the above

Answer: C [Electrolytic cell]

Notes:

While the battery is being used in the device it is a galvanic cell function (using the redox energy to produce electricity). While the battery is charging it is an electrolytic cell function (using outside electricity to reverse the completed redox reaction).

20. What is the net magnetic field in a solenoid?

[A] product of the fields due to all the turns
[B] equal to the field due to the largest turn
[C] vector sum of the fields due to all the turns
[D] arithmetic mean of the fields due to all the turns

Answer: C [vector sum of the fields due to all the turns]

Notes:

The net magnetic field in a solenoid is the vector sum of the fields due to all the turns.

21. What are the nuclei of different atoms containing same number of neutrons known as?

[A] Isobars
[B] Isotopes
[C] Isotones
[D] Isomers

Correct Answer: C [Isotones]

Notes:

Nuclei of different atom containing same number of neutrons are called isotones.

22. Which of these dopants is NOT used to increase the conductivity of a semi-conductor?

[A] Indium
[B] Aluminium
[C] Arsenic
[D] Boron

Answer: B [Aluminium]

Notes:

There are two types of dopants used in doping the tetravalent Si or Ge: (i) Pentavalent (valency 5); like Arsenic (As), Antimony (Sb), Phosphorous (P), etc (ii) Trivalent (valency 3); like Indium (In), Boron (B), Aluminium (Al), etc

23. Which of the following gas is used to prevent the chips from getting oxidised?

[A] Oxygen
[B] Nitrogen
[C] Helium
[D] Lithium

Answer: B [Nitrogen]

Notes:

The chips manufacturers usually flush bags of chips with gas such as nitrogen to prevent the chips from getting oxidised.

24. Who coined the term “Tissue culture”?

[A] Montrose Thomas Burrows
[B] Jack Kevorkian
[C] Charles Scott Sherrington
[D] Ludvig Hektoen

Answer: A [Montrose Thomas Burrows]

Notes:

Tissue culture is the growth of tissues or cells in an artificial medium separate from the organism. It refers to the culture of animal cells and tissues, with the more specific term plant tissue culture being used for plants. The term "tissue culture" was coined by American pathologist Montrose Thomas Burrows.

25. Where is the hub of the global trade in 'cut-flowers'?

[A] Japan
[B] Germany
[C] Netherlands
[D] Colombia

Answer: C [Netherlands]

Notes:

The Netherlands has been the undisputed global trade hub for cut flowers since the early 20th century. More than half of the world's cut flowers still pass through its auction houses where they are bought from producers and re-sold to wholesalers before reaching your local floral shop or grocery.

26. Which of the following is an example of Symbiotic bacteria?

[A] Rhizobium
[B] Protozoa
[C] Flat worms
[D] None of the above

Answer: A [Rhizobium]

Notes:

Rhizobium is a kind of symbiotic bacteria. Many legumes have root nodules that provide a home for symbiotic nitrogen-fixing bacteria called rhizobia. This relationship is particularly common in nitrogen-limited conditions. The Rhizobia convert nitrogen gas from the atmosphere into ammonia.

27. Which of the following animals has the longest life span?

[A] Tortoise
[B] Elephant
[C] Crocodile
[D] Dog

Answer: A [Tortoise]

Notes:

Tortoises are the longest living land animal in the world, although the longest living species of tortoise is a matter of debate. Galápagos tortoises are noted to live over 150 years, but an Aldabra giant tortoise named Adwaita may have been the longest living at an estimated 255 years.

28. Red rot is a disease caused to which of the following plant?

[A] Sugarcane
[B] Wheat
[C] Mustard
[D] Paddy

Answer: A [Sugarcane]

Notes:

Red rot is one of the major constraints in the profitable cultivation of sugarcane. Red rot disease is caused by the fungus Glomerella tucumanensis.

29. Which component in tobacco makes it harmful for human consumption?

[A] Nicotine
[B] Heroin
[C] Morphine
[D] None of the above

Answer: A [Nicotine]

Notes:

The side effects of nicotine can affect the heart, hormones, and gastrointestinal system. Some studies suggest that nicotine may improve memory and concentration.

30. Who is the author of the book “The Sceptical Chymist” that made distinction between chemistry and alchemy and marked beginning of modern Chemistry?

[A] Oswald Croll
[B] Edward Dyer
[C] Georg Brandt
[D] Robert Boyle

Answer: D [Robert Boyle]

Notes:

Robert Boyle is generally considered the first modern chemist and one of the founders of modern chemical science. He also pioneered the scientific method. He developed Boyle's Law which states that, under a closed system with constant pressure, the pressure and volume of a gas are inversely proportional. In 1661, Robert Boyle had published The Sceptical Chymist, a treatise on the distinction between chemistry and alchemy. It contains some of the earliest modern ideas of atoms, molecules, and chemical reaction, and marks the beginning of the history of modern chemistry.

31. Plant tissues are of how many types?

[A] 3
[B] 2
[C] 5
[D] 6

Answer: A [3]

Notes:

Plants have only three tissue types: 1) Dermal; 2) Ground; and 3) Vascular. These tissues can be simple, consisting of a single cell type, or complex, consisting of more than one cell type.

Q30. How many pairs of ribs are there in human body?

[A] 12
[B] 13
[C] 6
[D] 14

Answer: A [12]

Notes: In humans there are normally 12 pairs of ribs. The first seven pairs are attached directly to the sternum by costal cartilages and are called true ribs. The 8th, 9th, and 10th pairs—false ribs—do not join the sternum directly but are connected to the 7th rib by cartilage

33. What is the ratio of pure gold in 18 carat gold?

[A] 65%
[B] 70%
[C] 75%
[D] 80%

Answer: C [75%]

Notes:

Generally, Degree of purity of 'fitness' of a Gold alloy is measured in Carat. For example 24 carat is pure gold. 22 Carat Gold comprises 22 parts of Gold and 2 parts of other impurities. Similarly, 18 Carat Gold has 18 parts of gold and 6 parts of other metals. In percentage terms, 18K gold is equal to 75% gold and the other 25% contains other metals such as Zinc, copper, silver etc.

34. Which among the following is a crystalline form of Quartz?

[A] Alumina
[B] Glass
[C] Silica
[D] Limestone

Answer: C [Silica]

Notes:

Silica is synonymous with silicon dioxide (SiO2). Silicon and oxygen are the two most abundant elements in the earth's crust. Silica is commonly found in nature as sand. Silica exists in many different forms that can be crystalline as well as non-crystalline (amorphous). Quartz is the most common form of crystalline silica and is the second most common mineral on the earth's surface. It is found in almost every type of rock i.e. igneous, metamorphic and sedimentary. Since it is so abundant, quartz is present in nearly all mining operations. Silica, or silicon dioxide (SiO2), is a group IV metal oxide, which naturally occurs in both crystalline and amorphous forms. The various forms of crystalline silica are α-quartz, β-quartz, α-tridymite, β-tridymite, α-cristobalite, β-cristobalite, keatite, coesite, stishovite, and moganite. The most abundant form of silica is α-quartz, and the term quartz is often used in place of the general term crystalline silica.

35. Who is the father of Genetics?

[A] Gregor Mendel
[B] Thomas Hunt Morgan
[C] Francis Galton
[D] Krateuas

Answer: A [Gregor Mendel]

Notes:

Gregor Mendel was a botanist, educator and Augustinian bishop who was the first to lay the mathematical foundations of the science of genetics, which came to be known as Mendelism.

36. Which of the following biologist is related to Cell Theory?

[A] Carl Linnaeus
[B] Theophrastus
[C] Theodor Schwann
[D] Francis Galton

Answer: C [Theodor Schwann]

Notes:

The classical cell theory was proposed by Theodor Schwann in 1839. There are three parts to this theory. The first part states that all organisms are made up of cells. The second part states that cells are the basic units of life. The third part, which claims that cells come from pre-existing cells that have multiplied, was described by Rudolf Virchow in 1858.

37. Which of the following is the largest group of the plant kingdom?

[A] Thallophyta
[B] Bryophyta
[C] Pteridophyta
[D] Euglena

Answer: A [Thallophyta]

Notes:

The plant kingdom consists of 390,000 species known till date. The plant kingdom is divided into five major groups: Thallophyta, Bryophyta, Pteridophyta, Gymnosperms and Angiosperms.

38. Papaya foot rot is caused by which of the following?

[A] Phytophthora palmivora
[B] Albugo candida
[C] Peronospora parasitica
[D] Pythium aphanidermatum

Answer: D [Pythium aphanidermatum]

Notes:

Papaya foot rot is caused by Pythium aphanidermatum. It is characterized by the presence of water-soaked patches on the stem near ground level.

39. Dicondylic skull with ten pairs of cranial nerves is found in__

[A] Mammalia
[B] Amphibia
[C] Reptilia
[D] Pisces

Answer: B [Amphibia]

Notes:

Dicondylic skull with ten pairs of cranial nerves is found in Amphibia. Amphibians are small vertebrates that require water or a moist environment to survive. Species in this group include frogs, toads, salamanders, and newts.

40. Which of the following is a specialty of Anura?

[A] hidden gills
[B] venom glands
[C] four limbs
[D] All of the above

Answer: C [four limbs]

Notes:

Four limbs are a specialty of Anura. The front limbs have been modified for elongation and jumping and the head and trunk are fused together.

Q41. How do neurons communicate with one another?

[A] Electrically
[B] Chemically
[C] Through weak, radio-wave-like impulses
[D] Both 1 & 2

Answer: D [Both 1 & 2]

Notes:

Neurons communicate with each other through electrical events called 'action potentials' and chemical neurotransmitters.

42. Which muscle helps move your shoulders?

[A] Smooth muscle
[B] Deltoid muscle
[C] Quadriceps
[D] Tendons

Answer: B [Deltoid muscle]

Notes:

The deltoid muscle is on the outside of your shoulder. It helps you move your hand forward, backward, and to the side.

43. What is the role of the atrioventricular valves?

[A] form a network between the arteries to veins
[B] supplying oxygenated blood away from the heart to all other parts of the body
[C] prevent blood from flowing back into the atria
[D] All of the above

Answer: C [prevent blood from flowing back into the atria]

Notes:

When the ventricles contract, the atrioventricular valves close to prevent blood from flowing back into the atria.

44. Which of the following statements is true about the human liver?

[A] Liver is triangular in shape
[B] Liver is the only visceral organ that can regenerate
[C] Liver is the largest and the internal organ of the human body
[D] All of the above

Answer: D [All of the above]

Notes:

The liver is triangular in shape, the only visceral organ that can regenerate and the largest and internal organ of the human body.

45. Which of the following disease is transmitted by animal bite and saliva?

[A] Rabies
[B] Tuberculosis
[C] Tetanus'
[D] AIDS

Answer: A [Rabies]

Notes:

Rabies disease is transmitted by animal bites and saliva.

46. Ringworm is caused by __

[A] Cryptosporidium parvum
[B] Piroplasmorina
[C] Hypophosphataemia
[D] Trichophyton verrucosum

Answer: D [Trichophyton verrucosum]

Notes:

Ringworm is a contagious skin disease most often caused by Trichophyton verrucosum.

47. Ehrlichiosis is a tick-borne bacterial infection, caused by __

[A] Mycobacterium tuberculosis
[B] Anaplasmataceae
[C] Sphaerophorus necrophorus
[D] Clostridium hemolyticum

Answer: B [Anaplasmataceae]

Notes:

Ehrlichiosis is a tick-borne bacterial infection, caused by Anaplasmataceae.

48. Which of the following is not among Mendel's laws of inheritance?

[A] Law of Dominance
[B] Law of multiple allele traits
[C] Law of Segregation
[D] Law of Independent Assortment

Answer: B [Law of multiple allele traits]

Notes:

Law of multiple allele traits which are not related to Mendel's law of inheritance. Law of Dominance, Law of Segregation, and Law of Independent Assortment are related to the law of inheritance.

49. Which of the following is the sequence of DNA from where replication begins?

[A] selectable marker
[B] the origin of replication
[C] ter sequence
[D] genetic sequence

Answer: B [the origin of replication]

Notes:

The origin of replication is a sequence of DNA on which replication is initiated on a chromosome, plasmid or virus.

50. Air bladder in fish acts as __:

[A] Hydrostatic organ
[B] Accessory respiratory organ
[C] Both accessory respiratory organ and hydrostatic organ
[D] Primary respiratory organ

Answer: A [Hydrostatic organ]

Notes:

Swim bladder is also known as air bladder for fishes. It is a buoyancy organ possessed by most bony fishes. The swim bladder is located in the body cavity and is derived from an out-pocketing of the digestive tube. It contains gas (usually oxygen) and functions as a hydrostatic, or ballast, organ, enabling the fish to maintain its depth without floating upward or sinking. It also serves as a resonating chamber to produce or receive sound.

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