

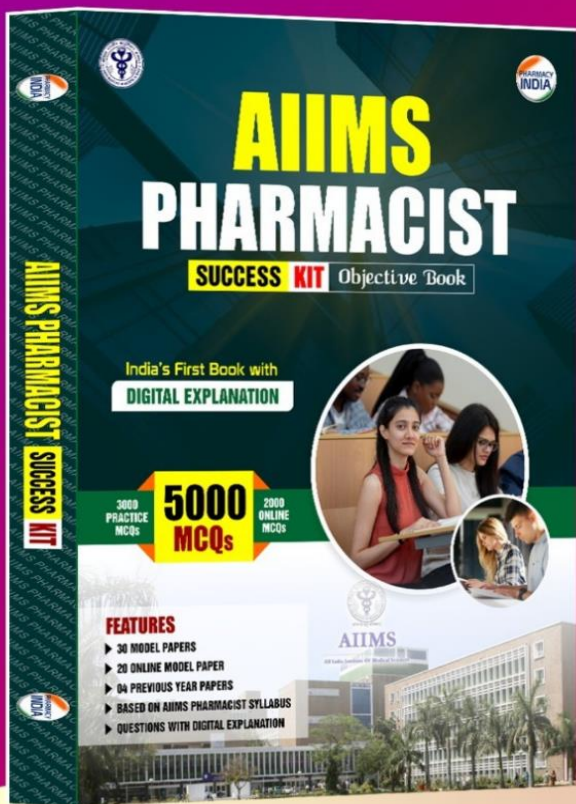


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1. Mixture ----- Rault's law:

Correct Answer: (d) Chloroform & acetone

Explanation:

A mixture of **chloroform and acetone** shows a **negative deviation** from Raoult's law. This occurs due to hydrogen bonding between chloroform and acetone molecules, resulting in a lower total vapor pressure than predicted.

Reference: Physical Chemistry Principles, Pg. 210.

2. Equipment ----- milk:

Correct Answer: (a) Spray dryer

Explanation:

A **spray dryer** is used for drying milk by atomizing the liquid milk into a fine mist and allowing it to come in contact with hot air, resulting in rapid evaporation of water and forming dry milk powder.

Reference: Dairy Technology Handbook, Pg. 156.

3. The ----- secretion is:

Correct Answer: (b) Para amino hippuric acid

Explanation:

Para amino hippuric acid (PAH) is used to measure **active tubular secretion** in the kidneys. It is filtered and secreted by the renal tubules, making it an effective marker for renal plasma flow.

Reference: Renal Physiology and Diagnostics, Pg. 98.

4. The ----- poisoning:

Correct Answer: (b) Naloxone

Explanation:

Naloxone is an antidote for **opioid poisoning**. It acts as an opioid receptor antagonist, reversing the effects of opioids such as respiratory depression, sedation, and hypotension.

Reference: Emergency Pharmacology, Pg. 78.

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5. Plant ----- coils:

Correct Answer: (d) Pyrethrum

Explanation:

Pyrethrum, derived from chrysanthemum flowers, is used in mosquito coils due to its **insecticidal properties**. It acts on the nervous system of mosquitoes, leading to paralysis and death.

Reference: Botanical Pesticides Handbook, Pg. 122.

6. Drugs ----- muscle:

Correct Answer: (d) Dantrolene

Explanation:

Dantrolene acts directly on the **skeletal muscle** by inhibiting calcium release from the sarcoplasmic reticulum, making it effective in treating conditions like malignant hyperthermia and spasticity.

Reference: Muscle Relaxants in Pharmacology, Pg. 87.

7. A ----- activator is:

Correct Answer: (c) Minoxidil

Explanation:

Minoxidil is a **potassium channel activator** that causes vasodilation by relaxing smooth muscles in the blood vessels. It is commonly used to treat hypertension and alopecia.

Reference: Hypertension Treatment Protocols, Pg. 110.

8. Vitamin ----- is:

Correct Answer: (d) Niacin

Explanation:

Vitamin B3, also known as **Niacin**, is essential for energy metabolism and the synthesis of NAD⁺ and NADP⁺. It plays a key role in maintaining healthy skin, nerves, and digestion.

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Reference: Essentials of Human Nutrition, Pg. 45.

9. Chancroid ----- by:

Correct Answer: (a) H. ducreyi

Explanation:

Chancroid is a sexually transmitted bacterial infection caused by **Haemophilus ducreyi**. It is characterized by painful genital ulcers and swollen lymph nodes in the groin.

Reference: Infectious Diseases Handbook, Pg. 67.

10. pKa ----- is:

Correct Answer: (c) 5.4

Explanation:

The **pKa of sulfacetamide** is 5.4, indicating its acidic strength. This value is crucial for understanding its solubility, stability, and bioavailability in pharmaceutical formulations.

Reference: Drug Chemistry and Pharmacokinetics, Pg. 32.

11. Drugs ----- the git:

Correct Answer: (a) Pepsin

Explanation:

Pepsin is an enzyme used to aid digestion in the **gastrointestinal tract (GIT)**. It breaks down proteins into smaller peptides by cleaving peptide bonds, facilitating easier digestion and absorption of nutrients in the stomach.

Reference: Clinical Enzymology and Digestive Processes, Pg. 90.

12. Adverse ----- results in:

Correct Answer: (a) Fanconi syndrome

Explanation:

Tetracycline can cause **Fanconi syndrome**, a condition associated with kidney damage due to

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impaired reabsorption in renal tubules. It occurs when outdated tetracycline degrades into toxic compounds, leading to electrolyte imbalances and acidosis.

Reference: Pharmacovigilance in Antibiotics, Pg. 45.

13. Metabolite ----- methemoglobinemia:

Correct Answer: (b) Dapsone

Explanation:

Dapsone, an antimicrobial agent, produces a metabolite that oxidizes hemoglobin to methemoglobin, causing **methemoglobinemia**. This condition reduces the oxygen-carrying capacity of blood, leading to symptoms like cyanosis and shortness of breath.

Reference: Drug Toxicity and Hematological Disorders, Pg. 112.

14. Progestins ----- effect:

Correct Answer: (c) Norethisterone

Explanation:

Norethisterone is a progestin with **androgenic effects**, commonly used in oral contraceptives and hormone replacement therapy. It helps regulate menstruation, prevent pregnancy, and treat endometriosis by mimicking natural progesterone.

Reference: Hormonal Therapies in Medicine, Pg. 67.

15. Supplement ----- therapy:

Correct Answer: (b) Folinic acid

Explanation:

Folinic acid is given to cancer patients undergoing **methotrexate therapy** to counteract the toxic effects of methotrexate on normal cells. It acts as a rescue agent by replenishing folate stores, essential for DNA and RNA synthesis.

Reference: Cancer Chemotherapy Guidelines, Pg. 145.

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16. Panaxoside ----- of:

Correct Answer: (a) Ginseng

Explanation:

Panaxoside, a key constituent of **Ginseng**, is known for its adaptogenic properties, helping the body combat stress, enhance immunity, and improve physical and mental performance. It is widely used in herbal medicine.

Reference: Pharmacognosy of Medicinal Plants, Pg. 78.

17. Fluid ----- movement:

Correct Answer: (b) Elutriation

Explanation:

Elutriation involves the movement of fluid in the opposite direction to sedimentation, separating particles based on size and density. It is commonly used in pharmaceutical and industrial processes for particle classification.

Reference: Fundamentals of Particle Technology, Pg. 98.

18. Coulter ----- determination of:

Correct Answer: (c) Particle size

Explanation:

The **Coulter counter** method is used to determine **particle size** by measuring changes in electrical resistance as particles pass through a small aperture. This technique is essential in quality control for pharmaceuticals and other industries.

Reference: Analytical Techniques in Pharmaceutics, Pg. 132.

19. Drug ----- colitis:

Correct Answer: (c) Sulfasalazine

Explanation:

Sulfasalazine is used to treat **ulcerative colitis**, an inflammatory bowel disease. It reduces

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inflammation in the colon by releasing 5-aminosalicylic acid (5-ASA) and sulfapyridine, which act locally to suppress the immune response.

Reference: Gastrointestinal Pharmacology, Pg. 150.

20. A ----- antihistamine:

Correct Answer: (d) Antazoline

Explanation:

Antazoline is a moderately sedative **antihistamine** that blocks H1 receptors, reducing allergy symptoms such as itching, swelling, and nasal congestion. Its mild sedative effect makes it suitable for conditions requiring reduced alertness.

Reference: Antihistamines in Allergy Management, Pg. 95.

21. Avicel ----- name of:

Correct Answer: (c) Microcrystalline cellulose

Explanation:

Avicel is the trade name for **microcrystalline cellulose**, a widely used excipient in pharmaceuticals. It serves as a binder and filler in tablet formulations due to its excellent compressibility, flowability, and stability. It is also used in food products as a stabilizer and thickener.

Reference: Handbook of Pharmaceutical Excipients, Pg. 85.

22. An ----- drug is:

Correct Answer: (d) Tolbutamide

Explanation:

Tolbutamide is an oral hypoglycemic drug belonging to the **sulfonylurea class**. It stimulates the release of insulin from pancreatic beta cells by blocking ATP-sensitive potassium channels. It is primarily used in managing type 2 diabetes mellitus.

Reference: Clinical Pharmacology in Diabetes, Pg. 105.

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23. Complete ----- tablet:

Correct Answer: (b) Capping

Explanation:

Capping refers to the **complete or partial separation of the top or bottom crowns** of a tablet during production. This issue arises due to poor compressibility of the material, inadequate binder concentration, or improper machine settings.

Reference: Pharmaceutical Manufacturing Troubleshooting Guide, Pg. 92.

24. Ceresin ----- is:

Correct Answer: (b) Ozokerite & Paraffin wax

Explanation:

Ceresin is a blend of **ozokerite** and **paraffin wax**, commonly used in pharmaceutical and cosmetic formulations. It acts as a thickening agent in ointments and creams, providing stability and enhancing texture.

Reference: Cosmetic Formulation Basics, Pg. 78.

25. A ----- cephalosporin:

Correct Answer: (d) Cefaclor

Explanation:

Cefaclor is a second-generation cephalosporin antibiotic that exhibits enhanced activity against **Gram-negative bacteria** compared to first-generation cephalosporins. It is used to treat infections such as pneumonia, otitis media, and skin infections.

Reference: Antibiotic Classification and Usage, Pg. 125.

26. An ----- t-cell:

(a) Cyclosporine

Explanation:

Cyclosporine is an immunosuppressant that specifically targets T-cells by inhibiting their activation. It works by binding to cyclophilin, which then inhibits **calcineurin**, a protein

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necessary for the activation of T-cells. This prevents the release of interleukin-2 (IL-2), which is critical for T-cell proliferation.

Muromonab (option c) is also an immunosuppressant but targets **CD3** on T-cells, leading to T-cell depletion, which is a different mechanism compared to cyclosporine.

Reference:

- Hall, J.E. **Guyton and Hall Textbook of Medical Physiology**, 13th Edition, Elsevier. Chapter on Immunosuppressants.

27. Number ----- of fat is:

Correct Answer: (d) Saponification value

Explanation:

The **saponification value** measures the number of milligrams of potassium hydroxide required to neutralize free acids and saponify esters in 1 gram of fat. It indicates the molecular weight and quality of fats and oils, important in both pharmaceutical and cosmetic industries.

Reference: Lipid Chemistry and Applications, Pg. 75.

28. Part ----- container:

Correct Answer: (d) Ferrule

Explanation:

The **ferrule** is the part of an aerosol container that holds the valve components in place and provides a seal. It ensures the proper functioning and safety of the container by maintaining pressure and preventing leaks.

Reference: Packaging and Dispensing in Pharmaceuticals, Pg. 88.

29. Standards ----- schedule:

Correct Answer: (c) Schedule O

Explanation:

Schedule O of the Drugs and Cosmetics Act outlines the standards for disinfectants and

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antiseptics. It provides specifications for quality, labeling, and testing of these products to ensure their efficacy in infection control.

Reference: Drugs and Cosmetics Act and Rules, Pg. 210.

30. Novocaine ----- name of:

Correct Answer: (d) Procaine

Explanation:

Novocaine is the trade name for **procaine**, a local anesthetic that blocks nerve impulses by inhibiting sodium channels. It is commonly used for minor surgical procedures, dental work, and pain management.

Reference: Anesthetics and Their Clinical Use, Pg. 140.

31. Presence ----- detected by:

Correct Answer: (d) Infrared

Explanation:

The presence or absence of a **functional group** in a compound can be detected using **infrared (IR) spectroscopy**. Different functional groups absorb IR radiation at specific wavelengths, producing unique peaks that allow identification of chemical structures.

Reference: Spectroscopic Techniques in Organic Chemistry, Pg. 67.

32. Warfarin ----- albumin by:

Correct Answer: (b) Phenylbutazone

Explanation:

Phenylbutazone displaces **warfarin** from its binding site on human serum albumin, increasing the free (active) form of warfarin in the bloodstream. This can lead to enhanced anticoagulant effects and a higher risk of bleeding.

Reference: Drug-Protein Interactions, Pg. 85.

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33. Agent ----- gall bladder:

Correct Answer: (c) Lopanoic acid

Explanation:

Lopanoic acid is used as a contrast medium in **X-ray examinations of the gallbladder**. It enhances the visibility of the gallbladder and bile ducts by absorbing X-rays, aiding in the diagnosis of gallbladder disorders.

Reference: Radiological Contrast Agents, Pg. 101.

34. Biotin ----- is:

Correct Answer: (c) Vitamin H

Explanation:

Biotin, also known as **Vitamin H**, is a water-soluble B vitamin essential for metabolism. It acts as a coenzyme for carboxylation reactions involved in the synthesis of fatty acids, amino acids, and glucose.

Reference: Biochemistry of Vitamins, Pg. 72.

35. Most ----- preservative:

Correct Answer: (d) Benzalkonium chloride

Explanation:

Benzalkonium chloride is a commonly used preservative in **eye drops** due to its antimicrobial properties. It prevents contamination and maintains sterility but can cause irritation with prolonged use.

Reference: Ophthalmic Preparations and Preservatives, Pg. 58.

36. An ----- indicator:

Correct Answer: (d) Murexide

Explanation:

Murexide is used as a pM (potential of metal ion) indicator in complexometric titrations to

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determine the concentration of metal ions such as calcium and magnesium. It changes color when metal ions are complexed.

Reference: Analytical Chemistry Indicators, Pg. 82.

37. Solvents ----- properties:

Correct Answer: (b) Amphiprotic solvent

Explanation:

An **amphiprotic solvent** exhibits both **protogenic (proton-donating)** and **protophilic (proton-accepting)** properties. Water is a classic example, acting as an acid in some reactions and a base in others, making it versatile in chemical processes.

Reference: Principles of Solvent Chemistry, Pg. 90.

38. The ----- HPTLC is:

Correct Answer: (c) Adsorption

Explanation:

The principle of **High-Performance Thin-Layer Chromatography (HPTLC)** is **adsorption**, where the stationary phase (silica gel) adsorbs compounds. Separation occurs based on the affinity of compounds for the stationary and mobile phases.

Reference: Chromatographic Techniques, Pg. 118.

39. Antioxidants ----- systems:

Correct Answer: (c) Lecithin

Explanation:

Lecithin is an antioxidant used in **oil systems** to prevent oxidation and rancidity. It stabilizes oils by inhibiting the formation of free radicals, thereby extending the shelf life of food and cosmetic products.

Reference: Food Chemistry and Additives, Pg. 75.

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40. Mevalonic ----- enzyme:

Correct Answer: (d) HMG-CoA reductase

Explanation:

HMG-CoA reductase catalyzes the formation of **mevalonic acid**, a key intermediate in cholesterol biosynthesis. Statins target this enzyme to lower cholesterol levels, reducing the risk of cardiovascular diseases.

Reference: Lipid Metabolism and Enzymology, Pg. 122.

41. The ----- measured by:

Correct Answer: (b) Liquidity ratio

Explanation:

The **liquidity ratio** measures a firm's ability to meet its **short-term liabilities** using its liquid assets. Ratios such as the current ratio and quick ratio indicate how well a company can manage its obligations within a short period without raising additional capital.

Reference: Financial Analysis and Ratios, Pg. 88.

42. Drugs ----- called:

Correct Answer: (a) Expectorant

Explanation:

Expectorants increase the production or thinning of mucus in the respiratory tract, making it easier to expel. They are commonly used to treat coughs associated with conditions like bronchitis and the common cold. An example is **guaifenesin**.

Reference: Respiratory Pharmacology, Pg. 75.

43. Precursor ----- digitoxin:

Correct Answer: (a) Purpurea glycoside A

Explanation:

Purpurea glycoside A is a precursor to **digitoxin**, a cardiac glycoside derived from **Digitalis**

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purpurea. It is used to treat heart failure and atrial fibrillation by increasing myocardial contractility and controlling heart rate.

Reference: Cardiac Glycosides and Therapeutics, Pg. 67.

44. Storage ----- plasma:

Correct Answer: (b) In a well-closed container

Explanation:

Dried plasma should be stored **in a well-closed container** to protect it from moisture and contamination. Proper storage conditions ensure the stability and usability of plasma for medical and pharmaceutical applications.

Reference: Guidelines for Blood Products Storage, Pg. 45.

45. Aloe ----- which is:

Correct Answer: (a) C-glycoside

Explanation:

Aloe vera contains **barbaloin**, a **C-glycoside** known for its laxative properties. It works by stimulating bowel movements and is used in the treatment of constipation. Barbaloin also exhibits anti-inflammatory and antibacterial effects.

Reference: Herbal Medicine Formulations, Pg. 90.

46. An ----- alkaloid is:

Correct Answer: (a) Pilocarpine

Explanation:

Pilocarpine is a cholinomimetic alkaloid that stimulates **muscarinic receptors**, increasing saliva production and lowering intraocular pressure. It is used in the treatment of **xerostomia** (dry mouth) and **glaucoma**.

Reference: Cholinergic Drugs Handbook, Pg. 105.

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47. Beta ----- activity:

Correct Answer: (a) Propranolol

Explanation:

Propranolol, a non-selective beta-blocker, exhibits **membrane-stabilizing activity** by blocking sodium channels, reducing excitability in cardiac and nerve cells. It is used for treating arrhythmias, hypertension, and anxiety disorders.

Reference: Beta-Blockers and Cardiovascular Therapy, Pg. 78.

48. A ----- book of:

Correct Answer: (a) Original entry

Explanation:

A **journal** is a book of **original entry**, where financial transactions are first recorded systematically in chronological order. It serves as the foundation for preparing ledgers and financial statements.

Reference: Basics of Accounting, Pg. 67.

49. A ----- origin:

Correct Answer: (b) Shellac

Explanation:

Shellac is a resin of **animal origin** secreted by the lac insect. It is used as a coating agent in pharmaceutical tablets and capsules, as well as in varnishes, polishes, and adhesives due to its natural film-forming properties.

Reference: Natural Resins in Applications, Pg. 112.

50. All ----- called as:

(c) Moderately fine particles

Explanation:

According to the official standards for powders, particles that pass through sieve **No. 44** (355

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μm) but not more than **40%** pass through sieve **No. 85** (180 μm) are classified as **Moderately fine particles**.

Reference:

Indian Pharmacopoeia (IP) and British Pharmacopoeia (BP) grading standards for powders.

51. Plant ----- coils:

Correct Answer: (c) Pyrethrum

Explanation:

Pyrethrum, extracted from chrysanthemum flowers, is used in **mosquito coils** for its potent insecticidal properties. It targets the nervous system of insects, causing paralysis and death, making it highly effective in controlling mosquito populations.

Reference: Natural Insecticides in Pest Control, Pg. 112.

52. Enzyme ----- digestion is:

Correct Answer: (b) Trypsin

Explanation:

Trypsin is a digestive enzyme that breaks down **proteins** into smaller peptides in the small intestine. It is produced in the pancreas as an inactive precursor, **trypsinogen**, and activated by **enterokinase**.

Reference: Digestive Enzymes and Their Role, Pg. 98.

53. Richest ----- Lecithin:

Correct Answer: (b) Egg yolk

Explanation:

Egg yolk is the richest natural source of **lecithin**, a phospholipid essential for cell membrane structure and function. Lecithin is widely used in food, cosmetics, and pharmaceuticals as an emulsifying agent.

Reference: Nutritional Sources of Lipids, Pg. 76.

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54. Who ----- Theory?:

Correct Answer: (d) Louis Pasteur

Explanation:

Louis Pasteur proposed the **Germ Theory**, establishing that microorganisms cause infectious diseases. His work laid the foundation for microbiology, sterilization techniques, and vaccines, transforming medical science.

Reference: History of Microbiology, Pg. 45.

55. Enzyme ----- factor:

Correct Answer: (b) Hyaluronidase

Explanation:

Hyaluronidase, known as the **spreading factor**, breaks down hyaluronic acid in connective tissue, enhancing the dispersion of fluids and drugs. It is used in medicine to improve absorption and reduce tissue edema.

Reference: Enzymes in Therapeutics, Pg. 102.

56. The ----- India is:

Correct Answer: (d) Director of CDL

Explanation:

The **Director of the Central Drugs Laboratory (CDL)** is an **ex-officio member** of the Pharmacy Council of India (PCI). The CDL is responsible for drug testing and quality control across India.

Reference: Drug Regulatory Bodies in India, Pg. 125.

57. Casein ----- example of:

Correct Answer: (b) Phosphoproteins

Explanation:

Casein, the primary protein in milk, is a **phosphoprotein** due to its phosphate groups attached to serine residues. It provides essential amino acids and calcium, making it a significant component in human nutrition.

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Reference: Proteins in Food Science, Pg. 78.

58. Immunoglobulin ----- born:

The correct answer is: (a) IgD

Explanation:

IgD is found on the surface of **lymphocytes** (specifically, B-cells) in **newborns**. It plays a role in initiating immune responses. Although **IgM** is the first antibody produced during an immune response, **IgD** is crucial for the activation and differentiation of B cells, especially in the early stages of development. Therefore, IgD is prominent on the surface of B-cells in newborns.

Reference:

- **Janeway's Immunobiology**, 9th Edition, Garland Science. Chapter on Immunoglobulins and their roles in the immune system.
-

59. Antigenic ----- toxins:

Correct Answer: (b) Toxoids

Explanation:

Toxoids are inactivated toxins used in vaccines to stimulate immunity. They retain their antigenic properties but lack toxicity, making them effective against diseases like **diphtheria** and **tetanus**.

Reference: Vaccinology Essentials, Pg. 110.

60. Enzyme ----- leukemia:

Correct Answer: (c) Asparaginase

Explanation:

Asparaginase is used in the treatment of **acute lymphoblastic leukemia** (ALL). It depletes **asparagine**, an amino acid essential for cancer cell survival, thereby inhibiting tumor growth.

Reference: Cancer Enzymes and Chemotherapy, Pg. 130.

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61. One ----- full is:

Correct Answer: (b) 4 ml

Explanation:

One teaspoon is equivalent to **4 ml**, a standard measurement used in both household and pharmaceutical dosing. Accurate measurement is crucial for ensuring the correct administration of liquid medications.

Reference: Standard Units in Drug Dosage, Pg. 25.

62. A ----- substance:

Correct Answer: (a) Adulterated drug

Explanation:

An **adulterated drug** is one that contains **filthy, putrid, or decomposed substances**, rendering it unfit for use. Adulteration compromises the safety and efficacy of drugs, violating regulatory standards and posing serious health risks.

Reference: Pharmaceutical Regulatory Compliance, Pg. 98.

63. Standards ----- under:

Correct Answer: (a) Schedule O

Explanation:

Schedule O of the Drugs and Cosmetics Act specifies standards for disinfectants and antiseptics, including quality control, labeling, and testing requirements to ensure safety and effectiveness in infection prevention.

Reference: Drugs and Cosmetics Rules, Pg. 150.

64. Which ----- factor?:

Correct Answer: (c) Vitamin E

Explanation:

Vitamin E, also known as the **antisterility factor**, is essential for reproductive health. It protects

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cells from oxidative damage and supports the function of the immune and reproductive systems, particularly in preventing sterility in animals and humans.

Reference: Vitamins and Their Biological Roles, Pg. 76.

65. Sodium ----- contains:

Correct Answer: (a) 0.9% Sodium Chloride

Explanation:

Sodium chloride injection (IP) contains **0.9% sodium chloride**, making it isotonic with blood plasma. It is commonly used for intravenous hydration, electrolyte replenishment, and as a solvent for medications.

Reference: Intravenous Fluids and Their Composition, Pg. 64.

66. An ----- bleaches:

Correct Answer: (c) Titanium dioxide

Explanation:

Titanium dioxide is an opaque covering agent used in **bleaches** and cosmetic products. It provides whiteness, opacity, and UV protection, making it a vital component in sunscreens and skincare formulations.

Reference: Cosmetic Chemistry and Ingredients, Pg. 102.

67. Which ----- Lyophilizer?:

Correct Answer: (c) Freeze dryer

Explanation:

A **freeze dryer**, also known as a **lyophilizer**, removes water from substances by sublimation under vacuum conditions. It is widely used in pharmaceutical and food industries to preserve heat-sensitive materials.

Reference: Lyophilization Techniques in Pharmaceuticals, Pg. 88.

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68. Autoclaving ----- bath as:

Correct Answer: (c) Leaker testing

Explanation:

Leaker testing is performed by autoclaving ampoules in a dye bath to detect defects. If a container has a leak, the dye enters through the defect, indicating compromised sterility and integrity.

Reference: Quality Control in Parenterals, Pg. 78.

69. High ----- of:

Correct Answer: (c) Leukemia

Explanation:

A **high white blood cell (WBC) count** is indicative of **leukemia**, a type of blood cancer characterized by the uncontrolled proliferation of abnormal WBCs. Early diagnosis is critical for effective treatment.

Reference: Hematological Disorders and Diagnostics, Pg. 132.

70. Example ----- is:

Correct Answer: (d) Gallic acid

Explanation:

Gallic acid is a natural antioxidant found in plants like tea and grapes. It neutralizes free radicals, preventing oxidative stress, and is used in pharmaceutical formulations and food preservation.

Reference: Antioxidants in Health and Medicine, Pg. 67.

71. The ----- mixed with:

Correct Answer: (a) Fibrinogen

Explanation:

When **thrombin** is mixed with **fibrinogen**, it converts fibrinogen into **fibrin**, forming a stable clot. This process is a critical part of the coagulation cascade, ensuring blood clotting to prevent excessive bleeding during injury.

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Reference: Hemostasis and Blood Coagulation, Pg. 78.

72. Exotoxin ----- are:

Correct Answer: (c) Clostridium tetani

Explanation:

Clostridium tetani, the bacterium responsible for tetanus, produces a potent **exotoxin** called **tetanospasmin**. This toxin affects the nervous system, leading to muscle spasms and rigidity, characteristic of tetanus.

Reference: Microbiology and Pathogenesis of Bacteria, Pg. 92.

73. Following ----- except:

The correct answer is:

(d) Propylene glycol

Explanation:

In the fermentative production of **L-glutamic acid**, typical carbon sources include **n-paraffin**, **ethanol**, and **acetic acid**. However, **propylene glycol** is not commonly used as a carbon source for the production of L-glutamic acid through fermentation. It is more commonly used in other types of fermentation processes or industrial applications but not for the production of L-glutamic acid.

Reference:

- "Biotechnology: A Textbook of Industrial Microbiology" by W. Cruieger and A. Cruieger, 2nd Edition, Chapter on Amino Acid Production via Fermentation.
-

74. Among ----- associated with:

Correct Answer: (a) Gamma globulins

Explanation:

Gamma globulins in horse serum contain **antitoxins**, which neutralize toxins like diphtheria toxin. They are critical in passive immunization, providing immediate protection against infections caused by toxin-producing bacteria.

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Reference: Serum Therapy and Immunology, Pg. 125.

75. Small ----- material:

Correct Answer: (a) Stainless steel

Explanation:

Small batch fermenters are primarily made of **stainless steel** due to its corrosion resistance, durability, and ease of sterilization. Stainless steel ensures a sterile environment essential for microbial growth in industrial fermentations.

Reference: Fermentation Technology and Equipment, Pg. 102.

76. Operation ----- by:

Correct Answer: (a) Rajeev Gandhi

Explanation:

The **Operation Blackboard Project**, launched by **Rajeev Gandhi**, aimed to improve primary education in India. It focused on providing basic infrastructure, teaching aids, and resources to government schools.

Reference: Education Policies in India, Pg. 67.

77. A ----- movement:

(c) Keezhariyur bomb case

Explanation:

The **Keezhariyur bomb case** was a major incident in Kerala associated with the **Quit India Movement**. In 1942, a group of freedom fighters in Keezhariyur, Kerala, were involved in manufacturing bombs to attack the British government. Unfortunately, there was an accidental explosion, which led to the deaths and arrests of many activists. This event is remembered as a key episode in Kerala's participation in the Quit India Movement.

The other options:

- **Payyannur Satyagraha** was part of the struggle for independence, but not directly linked to the Quit India Movement.

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- **Wagon tragedy** occurred in 1938, involving a train accident during the nationalist protests.
- **Kakori conspiracy case** involved a robbery in 1925 to fund revolutionary activities but is not related to the Quit India Movement.

Reference:

- "History of Modern India" by Bipan Chandra, Chapter on the Quit India Movement and associated events.

78. The ----- 2023?:

Correct Answer: (c) Johannesburg

Explanation:

The **15th BRICS Conference** in August 2023 was held in **Johannesburg**, South Africa. Leaders from BRICS nations discussed economic cooperation, sustainable development, and global trade strategies.

Reference: International Conferences and Summits, Pg. 112.

79. The ----- director:

Correct Answer: (b) Alfonso Cuaron

Explanation:

Alfonso Cuaron directed the film **Gravity**, which won seven Oscars, including Best Director. The film is renowned for its groundbreaking visual effects and storytelling, depicting survival in space.

Reference: Cinema and Awards History, Pg. 145.

80. A ----- motives:

(a) Personal motives

Explanation:

A person who works hard to increase their wealth is primarily satisfying their **personal motives**.

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These motives are driven by individual goals, desires, and the pursuit of personal success, such as financial stability or personal luxury.

The other options:

- **Biological motives** relate to basic needs like hunger, thirst, and survival.
- **Secondary motives** are those related to social, cultural, and emotional factors, but in this case, the primary aim is personal wealth accumulation.
- **Social motives** would be related to influencing or helping others, which is not the case here.

Reference:

- "Principles of Economics" by N. Gregory Mankiw, Chapter on Consumer Behavior and Motivation.

81. 'Economic -----' by:

Correct Answer: (d) R.C. Dutt

Explanation:

R.C. Dutt authored the book "**Economic History of India**", highlighting the exploitation of India's economy under British rule. He detailed how colonial policies devastated local industries, agriculture, and trade, leading to widespread poverty.

Reference: Historical Economic Studies of India, Pg. 145.

82. The ----- December is:

Correct Answer: (d) North East Monsoons

Explanation:

The **North East Monsoons**, occurring from October to December, bring rainfall to Kerala. Unlike the South West Monsoons, these are caused by dry continental air from the northeast picking up moisture over the Bay of Bengal.

Reference: Indian Meteorology and Climatology, Pg. 102.

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83. The ----- India:

Correct Answer: (c) Sukumar Sen

Explanation:

Sukumar Sen was the first **Chief Election Commissioner of India**, overseeing the country's first general elections in 1951-52. His leadership established the foundation of free and fair electoral processes in India.

Reference: Electoral Reforms in India, Pg. 78.

84. What ----- energy?:

Correct Answer: (b) Power

Explanation:

Power is defined as the **rate of doing work** or transferring energy over time. It is measured in watts (W) and is calculated as $\text{Power} = \frac{\text{Work}}{\text{Time}}$. It plays a crucial role in mechanical and electrical systems.

Reference: Fundamentals of Physics, Pg. 89.

85. What ----- Sabha?:

Correct Answer: (b) 250

Explanation:

The **maximum strength of the Rajya Sabha**, the upper house of India's Parliament, is **250 members**. This includes 238 representatives from states and union territories and 12 nominated members by the President.

Reference: Structure of Indian Parliament, Pg. 112.

86. Which ----- speed?:

Correct Answer: (b) Solid-State Drive (SSD)

Explanation:

SSDs have the highest data access speed among storage devices. Unlike HDDs, they use flash

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memory with no moving parts, ensuring faster read/write operations, durability, and energy efficiency.

Reference: Storage Devices and Technologies, Pg. 76.

87. In ----- files?:

Correct Answer: (a) .exe

Explanation:

Files with the extension **.exe** are **executable files** in Windows. They contain instructions for running software applications, making them essential for executing programs on a computer.

Reference: File Formats in Operating Systems, Pg. 45.

88. A ----- called:

Correct Answer: (b) Wide Area Network (WAN)

Explanation:

A **Wide Area Network (WAN)** spans a large geographic area, connecting multiple Local Area Networks (LANs). Examples include the internet and corporate networks linking offices in different cities or countries.

Reference: Networking Basics and Types, Pg. 67.

89. Which ----- system?:

Correct Answer: (d) Linux

Explanation:

Linux is an open-source operating system, offering flexibility and customization. It is widely used in servers, desktops, and embedded systems, valued for its security, stability, and community support.

Reference: Open-Source Operating Systems, Pg. 98.

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90. In ----- cells?:

Correct Answer: (c) =SUM()

Explanation:

In Microsoft Excel, the =SUM() function calculates the sum of a range of cells. It is one of the most commonly used functions, essential for performing quick arithmetic operations in spreadsheets.

Reference: Excel Formulas and Functions, Pg. 45.

91. A ----- work?:

Correct Answer: (b) 6 days

Explanation:

If **A completes work in 10 days** and **B completes the same work in 15 days**, their combined rate of work is:

$$\text{Rate of A} = \frac{1}{10}, \text{ Rate of B} = \frac{1}{15}$$

$$\text{Combined rate} = \frac{1}{10} + \frac{1}{15} = \frac{5}{30} + \frac{2}{30} = \frac{7}{30}$$

Thus, they will complete the work together in $\frac{30}{7} \approx 6$ days.

Reference: Time and Work Calculations, Pg. 45.

92. Excluding ----- hour?:

Correct Answer: (b) 10 minutes

Explanation:

When the bus is running without stoppages, its speed is 54 km/h. Including stoppages, the speed is 45 km/h. The difference in distance covered per hour is:

$$54 - 45 = 9 \text{ km/hour}$$

The bus stops long enough to reduce its effective speed by 9 km/h. Using $\text{Time} = \frac{\text{Distance}}{\text{Speed}}$

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Time stopped per hour = $\frac{9}{54} \times 60 = 10$ minutes.

Reference: Speed and Time Analysis, Pg. 67.

93. A ----- tree in:

Correct Answer: (d) 16 seconds

Explanation:

To calculate the time taken for a train to pass a tree:

$$\text{Speed of train} = 63 \text{ km/h} = \frac{63 \times 1000}{3600} = 17.5 \text{ m/s}$$

$$\text{Length of train} = 280\text{m}, \quad \text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{280}{17.5} = 16\text{seconds.}$$

Reference: Motion in Straight Line, Pg. 55.

94. Find ----- 81:

Correct Answer: (d) 81

Explanation:

The sequence contains all **prime numbers**, except for **81**, which is not a prime number. Primes in the series include 41, 43, 47, 53, 61, 67, 71, and 73.

Reference: Prime Numbers and Their Properties, Pg. 34.

95. Choose ----- series:

The correct answer is:

(b) 8, 0

Explanation:

The given series **2, 15, 4, 12, 6, 7, ?, ?** is a combination of two interlaced series:

1. **First series:** 2, 4, 6, 8

This is a sequence of consecutive even numbers. The missing number is **8**.

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2. **Second series:** 15, 12, 7, 0

This series follows a pattern where each term decreases by 3. The difference between 15 and 12 is 3, and the difference between 12 and 7 is also 5. Thus, continuing the pattern, the next term is $7 - 7 = 0$.

Therefore, the missing terms are **8** and **0**.

Thus, the correct answer is **(b) 8, 0**.

Reference: Sequences and Series Patterns, Pg. 89.

96. Choose the correct ----- 7, ?:

The correct answer is:

(d) PENDICU

Explanation: Let's break down the series:

1. **PERPENDICULAR**

2. **ERPENDICUIA**

Here, the first letter **P** is removed.

3. **RPENDICUL**

The second letter **E** is removed.

The pattern shows that one letter is removed from the beginning and one from the end of the word in each step.

Following this pattern:

- After removing the first letter **R** and the last letter **A**, we are left with **PENDICU**.

Thus, the correct answer is **(d) PENDICU**.

97. Choose ----- ?:

Correct answer is (c) JQ.

Explanation: The pattern in the series **AZ, CX, FU, ?** is as follows:

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- The **first letter** increases by **+2, +3, +4**, and so on:
 $A + 2 = C$, $C + 3 = F$, $F + 4 = J$.
- The **second letter** decreases by **-2, -3, -4**, and so on:
 $Z - 2 = X$, $X - 3 = U$, $U - 4 = Q$.

Thus, the next pair in the series is **JQ**.

Therefore, the correct answer is **(c) JQ**.

Reference: Alphabet Patterns and Sequences, Pg. 45.

98. Choose ----- group:

Correct Answer: (a) Stick

Explanation:

The other options (needle, thorn, pin) share the property of being **sharp**, whereas a **stick** does not, making it the odd one out.

Reference: Logical Grouping and Classification, Pg. 56.

99. If ----- cost?:

Correct Answer: (c) 1000

Explanation:

Let the cost of a table be x and a chair be y . From the given:

$$2x + 3y = 5000 \quad \dots(1)$$

$$3x + 2y = 4000 \quad \dots(2)$$

Solving these equations:

$$x = 1000, y = 500$$

Reference: Algebraic Equations in Cost Analysis, Pg. 78.

100. 45% ----- = ?:

Correct Answer: (b) 217.50

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Solution:

$$45\% \text{ of } 750 = (45/100) * 750 = 337.5$$

$$25\% \text{ of } 480 = (25/100) * 480 = 120$$

$$337.5 - 120 = 217.5$$

Therefore, the correct answer is **(b) 217.50**.

Reference: Percentage Calculations, Pg. 45.



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