MCQs for: Heart

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1. Question Download Solution PDF What is the basis of most useful classification of medications in medical chemistry? This question was previously asked in 69th BPSC Prelims Exam Official Paper (Held On: 30 Sept, 2023) Download PDF Attempt Online View all BPSC Exam Papers > Pharmacological effect Molecular targets Chemical structure None of the above

A. Pharmacological effect

B. Molecular targets

C. Chemical structure

D. None of the above

Answer & Solution:

The correct answer is Molecular targets. Key Points The most useful classification of drugs for medicinal chemists is based on molecular targets. This classification is based on the target molecules, which are usually biomolecules like carbohydrates, lipids, proteins, and nucleic acids. Drugs that target specific biomolecules tend to have better results. These drugs possess some common structural features and may have the same mechanism of action on a specific drug target. There are other ways to classify drugs as well. For example, drugs can be classified based on their chemical structure, pharmacological effect, or drug action. However, the classification based on molecular targets is considered the most useful for medicinal chemists. Additional Information Common examples of molecular targets: Receptors: Many drugs work by binding to and modulating the activity of cell surface receptors. For example, beta-blockers target beta-adrenergic receptors in the heart to reduce heart rate and blood pressure. Enzymes: Enzymes are proteins that catalyze chemical reactions in the body. Drugs can inhibit or enhance the activity of specific enzymes to regulate biological processes. DNA and RNA: Some drugs target nucleic acids. For example, chemotherapy drugs often target the DNA in cancer cells to inhibit their replication. Proteins in Disease-Related Pathways: In diseases like cancer, drugs may target specific proteins or pathways that are dysregulated in the disease. For example, drugs like Imatinib target the BCR-ABL fusion protein in chronic myeloid leukemia. Download Solution PDF Share on Whatsapp

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2. Question Download Solution PDF Which of the following pairs are correctly matched? 1. Anorexia : Sleep disorder 2. Insomnia : Eating disorder 3. Dyspnoea : Shortness of breath 4. Anosmia : Partial or full loss of smell Select the correct answer using the codes given below. This question was previously asked in 69th BPSC Prelims Exam Official Paper (Held On: 30 Sept, 2023) Download PDF Attempt Online View all BPSC Exam Papers > Only 1 and 2 Only 2 and 3 Only 3 and 4 All of the above

A. Only 1 and 2

B. Only 2 and 3

C. Only 3 and 4

D. All of the above

Answer & Solution:

The correct answer is Option 3. Key Points Anorexia: Anorexia, also known as anorexia nervosa, is a serious and potentially life-threatening eating disorder characterized by an intense fear of gaining weight and a distorted body image that leads to self-imposed starvation and extreme thinness. Hence pair 1 is not correct. Individuals with anorexia go to great lengths to lose weight and maintain an extremely low body weight. Anorexic individuals typically have a distorted perception of their own body size and shape. Thoughts about food, calories, and dieting dominate the lives of people with anorexia. They may meticulously count calories, weigh food, and avoid eating certain foods or food groups. Anorexia can lead to a range of serious physical health problems, including malnutrition, electrolyte imbalances, and heart problems. Insomnia: Insomnia is a common sleep disorder characterized by difficulty falling asleep, staying asleep, or experiencing non-restorative or poor-quality sleep. It can lead to a range of negative consequences, including daytime fatigue, irritability, difficulty concentrating, and impaired functioning. High levels of stress, anxiety, or emotional distress can lead to insomnia. Racing thoughts and worries can make it difficult to relax and fall asleep. Certain medical conditions, such as chronic pain, respiratory problems, or hormonal imbalances, can disrupt sleep and lead to insomnia. Poor sleep habits, such as irregular sleep schedules, excessive caffeine or alcohol consumption, and lack of physical activity, can contribute to insomnia. Noise, light, or uncomfortable sleeping conditions can make it challenging to sleep well. Hence pair 2 is incorrect. Dyspnoea: Dyspnoea, often spelled as dyspnea in American English, is a medical term used to describe the subjective sensation of difficult or labored breathing. It is commonly referred to as "shortness of breath." Respiratory disorders such as asthma, chronic obstructive pulmonary disease (COPD), pneumonia, and interstitial lung disease can lead to dyspnoea. Heart-related problems, such as congestive heart failure, coronary artery disease, and heart valve disorders, can result in shortness of breath. Hence pair 3 is correct. Anosmia: Anosmia is a medical term that refers to the complete or partial loss of the sense of smell. It can be temporary or permanent and can result from various causes. Anosmia can affect an individual's quality of life in several ways because the sense of smell plays a significant role in our ability to detect and enjoy flavors, detect hazards such as smoke or spoiled food, and experience various scents in the environment. Anosmia can be caused by various factors, including viral infections (such as the common cold or flu), head injuries, sinus issues, nasal polyps, and neurological disorders. Anosmia can lead to a loss of appetite and a reduced ability to taste and enjoy food. Hence pair 4 is correct. Download Solution PDF Share on Whatsapp

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3. Question Download Solution PDF Input and output nerves meet at This question was previously asked in 69th BPSC Prelims Exam Official Paper (Held On: 30 Sept, 2023) Download PDF Attempt Online View all BPSC Exam Papers > liver central nervous system heart None of the above

A. liver

B. central nervous system

C. heart

D. None of the above

Answer & Solution:

The correct answer is central nervous system. Key Points Input and output nerves meet at a structure called the synapse, part of central nervous system. The synapse is a

specialized junction between two nerve cells (neurons) or between a neuron and a target cell, such as a muscle cell or another neuron. At the synapse, information is transmitted from the presynaptic neuron (the input) to the postsynaptic neuron (the output) or target cell. This transmission is typically mediated by chemical neurotransmitters that are released from the presynaptic neuron and received by receptors on the postsynaptic neuron or target cell, allowing for the propagation of nerve signals. Additional Information Central Nervous System (CNS): The central nervous system (CNS) is a crucial part of the human body responsible for processing and coordinating information from the body's sensory organs and controlling various bodily functions. It consists of the brain and the spinal cord. Here are some key aspects of the central nervous system: Brain: The brain is the most complex and vital organ in the CNS. It plays a central role in controlling and coordinating various bodily functions, such as thinking, memory, emotions, movement, and sensory perception. It is protected by the skull and is divided into different regions, each with specific functions. Spinal Cord: The spinal cord is a long, thin, tubular structure that extends from the brain down the vertebral column. It serves as a bridge between the brain and the rest of the body, carrying signals to and from the brain. The spinal cord is responsible for reflex actions and relaying sensory and motor information. Neurons: Neurons are the functional units of the CNS. They are specialized cells that transmit electrical and chemical signals, allowing communication within the nervous system. Neurons have dendrites that receive signals, a cell body that processes information, and an axon that transmits signals to other neurons or to muscles and glands. White Matter and Gray Matter: The brain and spinal cord contain both white matter and gray matter. Gray matter consists of neuron cell bodies and synapses and is involved in information processing. White matter is composed of myelinated axons that transmit signals over longer distances and connects different regions of the CNS. Download Solution PDF Share on Whatsapp

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4. Question Download Solution PDF A fan produces a feeling of comfort during the hot weather because This question was previously asked in 67th BPSC Prelims Held on 8 May 2022 Official Question Paper Download PDF Attempt Online View all BPSC Exam Papers > fan supplies cool air our body radiates more heat in air conductivity of air increases our perspiration evaporates rapidly None of the above/More than one of the above

A. fan supplies cool air

B. our body radiates more heat in air

C. conductivity of air increases

D. our perspiration evaporates rapidly

E. None of the above/More than one of the above

Answer & Solution:

The correct option is our perspiration evaporates rapidly. CONCEPT: Demonstrates the heat transfer mechanism in the human body: Perspiration is basically sweating which occurs in the human body because of the sweat glands present under the skin. Radiation is only dependent on the absolute Temperature it has nothing to do with air or without air, the intensity of radiation remains the same. A fan in a room circulates the air which is present inside the room, it never provides cooler or warmer air rather it provides the air at the room temperature. The conductivity of air is a function of temperature so a

sole fan can never change the temperature of the air as we know fan only circulates the air at the room temperature thus conductive doesn’t change by the virtue of the fan. The process by which the human body gives off heat (Tambient < Tskin): The process by which the human body receives heat (Tambient > Tskin): When the ambient temperature is above body temperature, then radiation, conduction, and convection all transfer heat into the body rather than out. Since there must be a net outward heat transfer, the only mechanisms left under those conditions are the evaporation of perspiration from the skin and the evaporative cooling from exhaled moisture. If part of a liquid evaporates, it cools the liquid remaining behind because it must extract the necessary heat of vaporization from that liquid in order to make the phase change to the gaseous state. It is, therefore, an important means of heat transfer in certain circumstances, such as the cooling of the human body when it is subjected to ambient temperatures above the normal body temperature. EXPLANATION: A fan produces a feeling of comfort during hot weather because our perspiration evaporates rapidly. Perspiration is basically sweating which occurs in the human body because of the sweat glands present under the skin. Due to the warm weather condition, we sweat. Now as the sweat comes out it spreads over the skin, this sweat evaporates under the action of the fan blowing the air which results in effective convection thus taking away the heat from the skin resulting in the cooling effect. Download Solution PDF Share on Whatsapp

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5. Question Download Solution PDF According to Chinese source, Meghavarman, the ruler of Sri Lanka, sent a missionary to which of the following Gupta Kings for permission to build a Buddhist temple at Gaya? This question was previously asked in 69th BPSC Prelims Exam Official Paper (Held On: 30 Sept, 2023) Download PDF Attempt Online View all BPSC Exam Papers > Chandragupta I Samudragupta Chandragupta II None of them

A. Chandragupta I

B. Samudragupta

C. Chandragupta II

D. None of them

Answer & Solution:

The correct answer is Samudragupta. Key Points Meghavarman sent a missionary to Samudragupta for permission to build a Buddhist temple at Gaya. Samudragupta granted permission to Buddhist king of Ceylon Meghavarman to build a monastery at Bodh Gaya. Additional Information The Gupta kingdom was enlarged enormously by Chandragupta's son and successor Samudragupta (A.D. 335-380). He was the opposite of Ashoka. Ashoka believed in a policy of peace and non-aggression, but Samudragupta delighted in violence and conquest. His court poet Harishena wrote a glowing account of the military exploits of his patron. In a long inscription the poet enumerates the peoples and countries that were conquered of Samudragupta. The inscription is engraved at Allahabad on the same pillar which carries the inscriptions of the peace-loving Ashoka. The places and the countries conquered by Samudragupta can be divided into five groups. Group one includes princes of the Ganga-Yamuna doab who were defeated and whose kingdoms were incorporated into the Gupta Empire. Group two includes the rulers of the eastern Himalayan states and some frontier states such as princes of Nepal, Assam, Bengal etc., who were made to feel the weight of Samudragupta's arms. It also covers some republics of Punjab. The republics, which flickered on the ruins of the Maurya empire, were finally

destroyed by Samudragupta. Group three includes the forest kingdoms situated in the Vindhya region and known as Atavika rajyas; they were brought under the control of Samudragupta. Group four includes twelve rulers of the eastern Deccan and south India, who were conquered and liberated. Samudragupta's arms reached as far as Kanchi in Tamil were compelled to recognize his suzerainty. Group five includes the names of the Shakes and Kushans, some of them ruling in Afghanistan. It is said that Samudragupta swept them out of power and received the submission of the rulers of distant lands. The prestige and influence of Samudragupta spread even outside India. If we believe the eulogistic inscription from Allahabad, it would appear that Samudragupta never knew any defeat, and because of his bravery and generalship he is called the Napoleon of India. Download Solution PDF Share on Whatsapp

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6. Question Download Solution PDF Which States of India have a common border with Myanmar? This question was previously asked in 68th BPSC Prelims (Held on 12 Feb 2023) (Set: B) - Official Paper Download PDF Attempt Online View all BPSC Exam Papers > Manipur, Mizoram, Nagaland, Tripura Arunachal Pradesh, Nagaland, Manipur, Mizoram Arunachal Pradesh, Assam, Manipur, Mizoram More than one of the above None of the above

A. Manipur, Mizoram, Nagaland, Tripura

B. Arunachal Pradesh, Nagaland, Manipur, Mizoram

C. Arunachal Pradesh, Assam, Manipur, Mizoram

D. More than one of the above

E. None of the above

Answer & Solution:

The correct answer is Arunachal Pradesh, Nagaland, Manipur, Mizoram Key Points Indian States bordering Myanmar Myanmar shares a long land border of over 1600 Km with India as well as a maritime boundary in the Bay of Bengal. Four North-Eastern States viz. Arunachal Pradesh, Nagaland, Manipur, and Mizoram share international boundaries with Myanmar. Both countries share a heritage of religious, linguistic, and ethnic ties. Myanmar has a substantial population of Indian origin (est. 1.5- 2 million). Myanmar is our gateway to South East Asia and ASEAN with which we are seeking greater economic integration through India’s 'Look East' and ‘Act East Policy. Download Solution PDF Share on Whatsapp

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7. Question Download Solution PDF The odour of acetic acid resembles that of This question was previously asked in 68th BPSC Prelims (Held on 12 Feb 2023) (Set: B) - Official Paper Download PDF Attempt Online View all BPSC Exam Papers > vinegar tomato kerosene More than one of the above None of the above

A. vinegar

B. tomato

C. kerosene

D. More than one of the above

E. None of the above

Answer & Solution:

The correct answer is -vinegar. Key Points Odour of acetic acid It primarily resembles vinegar. Acetic acid is a colourless liquid It has a sharp, pungent smell and sour taste. The concentration of acetic acid in vinegar can range from 4 to 8 per cent, with higher concentrations resulting in a stronger smell. The smell is so strong because of the volatile nature of acetic acid. Additional Information Odour of Tomato The chemical responsible for the odour of tomato is methyl ketone or 2-nonanone It gives a sweet, fruity aroma. Tomato odour is essential in the food industry as it adds flavour to various dishes. It also helps in attracting pollinators. Odour of Kerosene The odour of kerosene is primarily due to aliphatic hydrocarbons such as naphthalene and alkylbenzenes. These chemicals are typically present in small concentrations. Kerosene has a pungent odour due to its small concentration. Kerosene odour is essential in ensuring that the fuel is not contaminated with other substances, which can affect its performance and safety. Download Solution PDF Share on Whatsapp

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8. Question Download Solution PDF Blood pressure is measured by This question was previously asked in BSSC Group D Official Paper (Held On: 11 May, 2025) Download PDF Attempt Online View all BSSC Group D Papers > Thermometer Barometer Crescograph Sphigmometer

A. Thermometer

B. Barometer

C. Crescograph

D. Sphigmometer

Answer & Solution:

The correct answer is Sphigmometer. Key Points A sphygmomanometer is a medical device used to measure blood pressure accurately. It typically consists of an inflatable cuff, a measuring unit (manometer), and a mechanism to inflate the cuff (bulb). The device measures blood pressure in millimeters of mercury (mmHg) and provides two readings: systolic (maximum pressure) and diastolic (minimum pressure). Modern sphygmomanometers are available in two types: manual (aneroid) and digital. This instrument is widely used in clinical settings and at home to monitor cardiovascular health. Additional Information Blood Pressure (BP): BP is the force of blood pushing against the walls of the arteries as the heart pumps. It is expressed as two values: systolic pressure (when the heart beats) and diastolic pressure (when the heart rests between beats). Normal blood pressure is around 120/80 mmHg, though this can vary. Types of Sphygmomanometers: Aneroid sphygmomanometer: Manual device used with a stethoscope for precise readings. Digital sphygmomanometer: Automatic device that provides easy-to-read digital outputs. Usage of Sphygmomanometer: Primarily used by healthcare providers to diagnose and manage hypertension (high blood pressure).

Regular monitoring of BP helps in preventing cardiovascular diseases like stroke and heart attack. Associated Instruments: Stethoscope: Used alongside a manual sphygmomanometer to listen to arterial sounds. Pulse oximeter: Measures oxygen saturation and pulse rate, often used together with BP monitoring. Download Solution PDF Share on Whatsapp

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9. Question Download Solution PDF 'Rust Bowl' of the USA is associated with which one of the following regions? This question was previously asked in BPSC 63rd Combined Competitive Exam Official paper Download PDF Attempt Online View all BPSC Exam Papers > Great Lakes region Alabama region California region Pittsburg region None of the above/ More than one of the above

A. Great Lakes region

B. Alabama region

C. California region

D. Pittsburg region

E. None of the above/ More than one of the above

Answer & Solution:

The correct answer is Pittsburg region. The Pittsburg region of the USA is associated with the Rust Bowl of the USA. Rust bowl is a geographic area of the USA which is known for manufacturing the heartland, of the nation. It is also known as the 'Rust Belt'. Additional Information The Great Lakes also called the Great Lakes of North America, is known for its industry that produces steel, chemicals, and other products. The shipping opportunities in the Great Lakes played a critical role in the settlement of the region and the development of the industry. California leads the U.S. in agricultural production. The state is also home to famous cultural institutions and national parks including Hollywood, Disneyland, Yosemite National Park, Alcatraz, Angel Island, and the Golden Gate Bridge. Alabama is nicknamed the Yellowhammer State, after the state bird. Alabama is also known as the "Heart of Dixie" and the "Cotton State". The state tree is the longleaf pine, and the state flower is the camellia. Alabama's capital is Montgomery. Download Solution PDF Share on Whatsapp

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10. Question Download Solution PDF Shaikh Bahauddin Zakaria belonged to which sect? This question was previously asked in BPSC 64TH CCE (Preliminary) Exam Official Paper (Held On: 16 Dec 2018) Download PDF Attempt Online View all BPSC Exam Papers > Suhrawardi Silsilah Rishi Silsilah Chisti Silsilah Firdausi Silsilah None of the above/More than one of the above

A. Suhrawardi Silsilah

B. Rishi Silsilah

C. Chisti Silsilah

D. Firdausi Silsilah

E. None of the above/More than one of the above

Answer & Solution:

The correct answer is Suhrawardi Silsilah. Shaikh Bahauddin Zakaria belonged to Suhrawardi Silsilah. Key Points It was founded by Shaikh Shihabuddin Suhrawardi it was popular in Multan, Lahore and Sindh. This silsilah is considered as more orthodox than Chisti. Baha-ud-din Zakaria was the greatest saint of this silsilah. Baha-ud-din Zakaria invited Iltutmish to attack Qubacha in Multan and was given the title of Shaikh-ul-Islam by Iltutmish. Additional Information The Chisti order was founded by Khwaja Abdal Chisti in Heart. It was brought to India by Khwaja Moin-ud-din Chisti. Shah Niamatullah Qadri was probably the first notable saint of Qadariya order to enter India but it was Syed Muhammad Jilani, who organised it on an effective basis. Sheikh Nuruddin began the rishi movement in Kashmir which was a synthesis of Kashmiri Shaivism and Islamic thought. Sheikh Badruddin of Samark first established Firdausi Silsila in Delhi, but later on, it moved to Bihar and became the most influential mystic older. Download Solution PDF Share on Whatsapp

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