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NEET MDS 2022 Question Paper with Answer

National Eligibility Cum Entrance Test for Masters of Dental Surgery

NEET MDS 2022 (Memory Based)

Physiology

Question. Which of the following will cause a decrease in Extracellular K+?

A. Lactic Acids
B. Epinephrine
C. Glucagon
D. Atropine

Answer. D

Solution. Lactic acid is known to increase extracellular potassium (K+) concentration. Epinephrine, also known as adrenaline, can cause an increase or decrease in extracellular K+ depending on the dose and the specific physiological conditions. In general, epinephrine has a tendency to increase extracellular K+. Glucagon has a tendency to increase extracellular K+. Atropine, which is a muscarinic acetylcholine receptor antagonist, can cause a decrease in extracellular K+. It's important to note that the exact effect of these substances on extracellular K+ can be influenced by various factors such as dose, duration, and overall physiological state of the organism.

Question. Which of the following will be involved in baroreceptor reflex?

A. Negative feedback
B. Positive feedback
C. Adaptive control
D. Feed forward

Answer. A

Solution. The baroreceptor reflex involves negative feedback.

Question. Which of the following events occurs during Phase B to raise body temperature to hypothalamus set point?

A. Shivering
B. Sweating
C. Decrease in thermogenesis
D. Cutaneous vasodilation

Answer. A

Solution. Shivering is an event that occurs during Phase B to raise body temperature to the hypothalamus set point. Shivering is a physiological response that increases heat production by generating muscle contractions, which in turn leads to an increase in body temperature. The hypothalamus set point is the temperature at which the hypothalamus, the part of the brain responsible for regulating body temperature, is set to maintain the body temperature. When the body temperature drops below the set point, the hypothalamus triggers mechanisms such as shivering to raise the body temperature back to the set point.

Question. Which nucleus is involved in hemiballismus?

A. Globus pallidus
B. Caudate nucleus
C. Substantia nigra
D. Subthalamic

Answer. D

Solution. The correct answer is Subthalamic nucleus. Hemiballismus is a type of movement disorder characterized by wild, flailing movements of one limb. It is caused by damage to the subthalamic nucleus, a small nuclei located in the diencephalon, which is involved in regulating movement. When the subthalamic nucleus is damaged, it can disrupt the normal balance of excitatory and inhibitory signals to the basal ganglia, leading to the uncontrolled movements seen in hemiballismus.

Question. A patient came to OPD with a complaint of paresis and numbness after sleeping on his arm. Why?

A. A fibers are more susceptible to pressure than C fibers.
B. B fibers are more susceptible to pressure than A fibers.
C. C fibers are more susceptible to pressure than A fibers.
D. A fibers are more susceptible to pressure than B fibers.

Answer. A

Psychiatry

Question. A patient is brought to the emergency department with symptoms of respiratory depression and suspected to have overdosed on opioids. What should be the next step?

A. Naloxone
B. Buprenorphine
C. Naltrexone
D. Methadone

Answer. A

Solution. The next step in this situation should be to administer Naloxone (Narcan). Naloxone is an opioid antagonist, meaning that it can counteract the effects of opioids. Overdose on opioids can cause respiratory depression, which can lead to decreased breathing and decreased oxygenation of the body's tissues. Naloxone works by binding to the same receptors in the brain that opioids bind to, thereby reversing the effects of the opioids and restoring normal breathing. Naloxone is a fast-acting medication that can quickly reverse the effects of an opioid overdose, and it is often used in emergency situations to save the life of someone who has overdosed. Buprenorphine and methadone are both opioids that are used to treat opioid addiction, while naltrexone is also an opioid antagonist like naloxone, but it is used for the treatment of opioid addiction, rather than for emergency reversal of opioid overdose.

Question. A 16-year old female has an irresistible urge to eat, followed by episodes of self induced vomiting. She is also on appetite suppressants. What is the diagnosis?

A. Anorexia nervosa
B. Bulimia nervosa
C. Pica disorder
D. Binge eating disorder

Answer. B

Solution. The diagnosis in this case is likely Bulimia Nervosa. Bulimia Nervosa is an eating disorder characterized by a cycle of binge eating, followed by compensatory behaviors such as self-induced vomiting, use of laxatives, fasting, or excessive exercise to prevent weight gain. Individuals with bulimia nervosa often have an intense fear of gaining weight and a distorted body image, and they may engage in binge eating despite already feeling full. The use of appetite suppressants in this case may be an attempt to control weight, which is a common feature of bulimia nervosa. Anorexia Nervosa is a related eating disorder characterized by a fear of weight gain and a distorted body image, but it is primarily characterized by restriction of food intake, rather than binge eating followed by purging. Pica is a disorder characterized by the persistent eating of non-food items, and Binge Eating Disorder is characterized by recurrent episodes of binge eating without the compensatory behaviors seen in bulimia nervosa.

Question. A patient consumed a large number of TCA pills during the depressive episode and presented with altered sensorium, hypotension and high QRS complexes. What should be the next step?

A. DC cardioversion
B. Start antiarrhythmic drug
C. $NAHCO_3$
D. None of the above

Answer. C

Solution. The next step in this situation should be to administer sodium bicarbonate (NAHCO3). The patient has likely ingested a large amount of tricyclic antidepressants (TCAs), which can lead to a dangerous condition called tricyclic antidepressant toxicity. TCAs can cause a wide range of symptoms, including altered sensorium, hypotension, and arrhythmias. One of the key treatment strategies in TCA toxicity is to alkalize the urine to increase the elimination of the drugs from the body. Sodium bicarbonate (NAHCO3) is commonly used for this purpose as it can quickly raise the pH of the blood and urine, which can help to speed up the elimination of the TCA and reduce the severity of symptoms. DC cardioversion and antiarrhythmic drugs may be used in some cases of TCA toxicity to treat specific arrhythmias, but the initial step in most cases should be to administer sodium bicarbonate to alkalize the urine and promote elimination of the drugs.

Surgery

Question. A 45-year old female underwent thyroidectomy. On the 3rd day she developed perioral numbness. Further investigation involves:

A. Free T3, T4
B. RAI Scan
C. Calcium, Phosphate and PTH levels
D. T3, T4, TSH

Answer. C

Solution. The next step in this situation should be to measure the calcium, phosphate, and parathyroid hormone (PTH) levels. Perioral numbness can occur as a complication of thyroidectomy, especially if the parathyroid glands, which regulate calcium levels in the body, are accidentally removed or damaged during the procedure. The primary function of the parathyroid glands is to regulate calcium levels, and if they are damaged or removed, the levels of calcium, phosphate, and PTH in the blood can become abnormal. A measurement of the calcium, phosphate, and PTH levels can help to determine if the patient has developed hypoparathyroidism, which is a condition characterized by low levels of PTH and low levels of

calcium in the blood. If hypoparathyroidism is suspected, treatment may involve supplementing with calcium and vitamin D to restore normal levels and relieve symptoms. Free T3 and T4, and TSH levels would be measured to assess thyroid function, but in this case, it is unlikely that thyroid function is the cause of the perioral numbness, and measuring the calcium, phosphate, and PTH levels is a more appropriate next step. A RAI scan would be used to assess thyroid function or to determine if there is residual or recurrent thyroid tissue present, but it is unlikely to be helpful in this case where the focus is on calcium regulation and parathyroid function.

Question. All of the following are the components of MEN-2b except:

A. Megalocon
B. Marfanoid habitus
C. Mucosal neuroma
D. Parathyroid adenoma

Answer. D

PSM

Question. Most effective way of controlling rabies in the urban population?

A. Test all dog for rabies
B. Vaccinate the dog population
C. Administer rabies vaccine to all humans
D. Health education of people

Answer. B

Solution. The most effective way of controlling rabies in the urban population is to vaccinate the dog population. Rabies is primarily transmitted to humans through the bite of an infected animal, with dogs being the most common source of transmission. In order to control the spread of rabies in urban areas, it is crucial to focus on the dog population as a source of infection. This can be achieved by implementing programs to vaccinate dogs against rabies, either through mass vaccination campaigns or by requiring that all dogs be vaccinated as a condition of ownership. Testing all dogs for rabies would be helpful in identifying infected animals, but it is not a practical solution for controlling the spread of the disease in a large population. Administering rabies vaccine to all humans is also important, but it is not as effective as controlling the disease at its source in the animal population. Health education of people is an important aspect of rabies control, but it is not enough on its own to prevent the spread of the disease. Vaccinating the dog population is the most effective way of controlling rabies in the

urban population, as it addresses the source of infection and can prevent the spread of the disease to humans.

Question. To promote healthspan the best recommendation is:

A. Restricted calories intake
B. Yoga and exercise
C. Reduce stress level
D. All of the above

Answer. D

Solution. The best recommendation to promote healthspan is "All of the above." Healthspan refers to the length of time an individual lives in good health, without the presence of chronic diseases or disability. To promote healthspan, it is important to adopt a comprehensive approach that addresses multiple aspects of health and well-being. Restricted calories intake, especially caloric restriction with adequate nutrition, has been shown to extend healthspan in some animal models and is being actively studied for its effects on human health. Yoga and exercise are both important for promoting physical fitness and reducing the risk of chronic diseases such as heart disease, diabetes, and certain types of cancer. Exercise has also been shown to improve cognitive function and mental health. Reducing stress levels is also important for promoting healthspan, as chronic stress has been linked to a range of negative health outcomes, including cardiovascular disease, sleep problems, and depression. Adopting a healthy lifestyle that includes a balanced diet, regular physical activity, stress management techniques, and other habits that support health and well-being can help promote healthspan and improve quality of life.

Question. Copper-T is contraindicated in:

A. Menstruation
B. Broken Condom
C. Trophoblastic diseases
D. Postpartum after delivery

Answer. C

Question. Green colour in Triage signifies:

A. Dear patients
B. High priority patients
C. Ambulatory patients
D. Moderate priority patients

Answer. C

Solution. Green is typically used to signify low priority or ambulatory patients in a triage system. Ambulatory patients are those who are able to walk and do not require immediate medical attention, and are therefore given a low priority compared to more seriously injured or ill patients who need to be seen first.

Question. Broken glass vaccine vials at the Vaccination centre are supposed to be disposed of in which container?

A. Yellow bag
B. Red bag
C. Sharps container
D. Blue puncture proof container

Answer. D

Pharmacology

Question. The drug of choice in Paracetamol overdose is?

A. N-acetylcysteine
B. Dopamine
C. Hydralazine
D. Furosemide

Answer. A

Solution. The drug of choice in Paracetamol overdose is N-acetylcysteine (also known as Acetylcysteine). N-acetylcysteine is used as an antidote in the treatment of paracetamol (acetaminophen) overdose because it helps to prevent or reduce liver damage caused by the overdose. It works by replenishing the levels of glutathione, a natural antioxidant that helps to protect the liver from damage. Dopamine, Hydralazine, and Furosemide are not used as the drug of choice in Paracetamol overdose.

Question. A patient on digoxin therapy accidently consum ed 8 tablets of digoxin 0.25 mg. Two hours later, he presented to the emergency doctor with a heart rate of 54 bpm and ECG evidence of third-degree AV block. What is the immediate management of this patient?

A. Digoxin immune Fab
B. Lignocaine
C. Phenytoin
D. DC cardioversion

Answer. A

Solution. The immediate management of a patient who has taken an overdose of digoxin and presents with a low heart rate (bradycardia) and evidence of third-degree AV block on ECG would typically include administration of Digoxin Immune Fab (also known as Digibind or Digifab). Digoxin Immune Fab is a specific antidote for digoxin toxicity that works by binding to the drug in the bloodstream and removing it from the body. In this scenario, it is important to act quickly to remove the excess digoxin from the patient's bloodstream and to stabilize their heart rate and rhythm. In addition to administering Digoxin Immune Fab, other treatments that may be used to manage digoxin toxicity include electrolyte replacement (such as potassium supplementation), supportive measures to maintain blood pressure, and correction of any underlying electrolyte imbalances.

Lignocaine, Phenytoin, and DC cardioversion are not specific treatments for digoxin toxicity and are not typically used as the first-line management in this scenario.

Question. Which of the following hyperlipid em ic drugs acts by inhibition of PCSK-9?

A. Atorvastatin
B. Evolocum ab
C. Ezetimibe
D. Lomotapide

Answer. B

Solution. The drug that acts by inhibition of PCSK-9 is Evolocumab.

Pediatrics

Question. A mother reported that her baby did not pass urine on postnatal day 1. What will be the next step?

A. Start IV hydration
B. Shift to NICU and investigate
C. Continue Breastfeeding and observe
D. Start formula milk

Answer. C

Question. Multiple fractures were detected in the antenatal ultrasound scan. What could be the diagnosis?

A. Achondroplasia
B. Osteogenesis imperfecta
C. Marfan syndrome

D. Cretinism

Answer. B

Solution. Multiple fractures detected in an antenatal ultrasound scan could indicate a diagnosis of Osteogenesis Imperfecta, also known as "brittle bone disease." It is an inherited disorder characterized by bones that break easily, often from mild trauma or with no apparent cause. Achondroplasia is a genetic condition that results in dwarfism and affects the development of bones, but it would not typically cause fractures in utero. Marfan syndrome is a genetic disorder that affects the connective tissue in the body and can result in issues with the heart, blood vessels, and bones, but it would not typically cause fractures in utero. Cretinism is a condition that results from a lack of thyroid hormones and can cause stunted growth and intellectual disability, but it would not typically cause fractures in utero.

Question. Which of the following diseases has autosomal recessive Inheritance?

A. Osteogenesis imperfecta
B. Treacher collins syndrome
C. Achondroplasia
D. Cystic fibrosis

Answer. D

Question. A child with Exercise fatigue presented to OPD. The features were suggestive of Mcardle disease. Which of the following enzymes will be deficient in this?

A. My o-Phosphorylase
B. Glucose 6 Phosphatase
C. Lysosomal Glucosidase
D. Phosphofructokinase

Answer. A

Solution. McArdle disease, also known as glycogen storage disease type V, is caused by a deficiency in the enzyme myophosphorylase. Myophosphorylase is responsible for breaking down glycogen, a stored form of glucose, into glucose-1-phosphate, which can then be used as a source of energy. In individuals with McArdle disease, the deficiency of this enzyme leads to the accumulation of glycogen in muscle cells, causing exercise intolerance and fatigue.

Orthopedics

Question. MC complications of untreated radial head dislocation

A. Cubitus varus
B. Cubitus valgus
C. Damage to ulnar nerve
D. Myositis ossificans

Answer. B

Question. A patient presented with multiple swelling in hand & wrist. Finger X ray is given. Identify

A. Multiple Endochromatosis
B. Multiple Brown Tumour
C. Multiple Osteophytic Growth
D. None of the above

Answer. A

Question. Which will be the ideal acture?

A. Analgesic-Closed Reduction-Cast.
B. Neurological Assessment-Analgesic
C. Neurological testing- Crif
D. Neurological assessment- analgesic- cast.

Answer. D

Question. Given the radiograph of a 13 year old child presented with a fall on elbow. Which of the bones has a fracture?

A. Humerus
B. Clavicle
C. Scapula
D. Ribs

Answer. A

Solution. It's difficult to determine which bone has a fracture based solely on a description of the patient's presentation and the radiograph. An x-ray of the injured area would be needed to diagnose the fracture and determine which bone is involved. In this case, a fall on the elbow could result in a fracture of the humerus (upper arm bone), the radius or ulna (forearm bones), or the elbow joint itself. A fracture of the clavicle (collarbone), scapula (shoulder blade), or ribs

would be less likely as a result of a fall on the elbow, but it's still possible, particularly if the force of the fall was significant.

General Medicine

Question. Known cases of C.L.D with Ascites present with abdominal pain and tenderness. Ascitic tap shows presence of 60 PMN cells/ICu.mm. Which of the following is the likely etiology?

A. Tubercular Ascites
B. Malignant Ascites
C. Spontaneous Bacterial peritonitis
D. Chylous ascites

Answer. C

Solution. The presence of a high number of PMN cells (polymorphonuclear leukocytes) in an ascitic tap suggests the presence of inflammation, which is most commonly due to a bacterial infection. In this case, the likely etiology would be spontaneous bacterial peritonitis (SBP). SBP is a common and serious complication of cirrhosis, leading to bacterial infection of the ascitic fluid. Symptoms may include abdominal pain and tenderness, as well as fever and nausea. Tubercular ascites is caused by tuberculosis, which typically presents with low numbers of PMN cells and elevated lymphocytes in the ascitic fluid. Malignant ascites is associated with the spread of cancer to the peritoneal cavity, while chylous ascites is a rare type of ascites caused by lymphatic obstruction. Both of these conditions would typically present with fewer PMN cells in the ascitic fluid compared to SBP.

Question. An 82-year-old patient with hypertension comes with acute onset of breathlessness. Chest X-Ray is shown below. What should be done next?

A. Oxygen inhalation Antibiotics
B. V salbutamol
C. IV nitrogly cerine
D. Nebulized salbutamol

Answer. C

Question. An adult patient complains of palpitations and presents with an irregularly irregular pulse. Pulse deficit is 20, HR=120/m in, BP 110/70 mm Hg. Which of the following will be found in this patient?

A. Absent a wave
B. Canon a wave
C. Absently

D. Prominent V wave

Answer. A

Question. A patient presents with digoxin toxicity. Pulse rate is 54/min with ECG evidence of a degree heart block. What is the best treatment?

A. Digoxin immune fab
B. Lidocaine
C. DC shock
D. Phenytoin

Answer. A

Solution. The best treatment for digoxin toxicity with a heart rate of 54 beats per minute and evidence of a degree of heart block on ECG is administration of digoxin-specific antibodies, also known as digoxin immune fab. This treatment specifically binds to digoxin, neutralizing its effect and rapidly removing it from the bloodstream.

Lidocaine is a medication used to treat ventricular arrhythmias, but would not be the first line of treatment for digoxin toxicity. Defibrillation (DC shock) is not typically used to treat digoxin toxicity. Phenytoin is an anticonvulsant medication, but would not be the first line of treatment for digoxin toxicity.

Biology

Question. A female presented with curdy white discharge. Sample microscopy showed a budding yeast cell with pseudohyphae. Which medium is used to differentiate the species of the causative organism:

A. Bird seed agar
B. Chrome agar
C. SDA
D. PDA

Answer. B

Question. A farmer is presented with sinuses with a discharging granule on the leg granules were crushed and examined, Which of the following statement is correct regarding this scenario:

A. Can be caused by Bacteria and Fungi
B. Involves Skin only. No deeper tissue involvement.

C. Lymphocyte accumulation is present.
D. Spread by the hematogenous route

Answer. A

Solution. The scenario you described could be caused by both bacteria and fungi, and involves deeper tissue involvement beyond just the skin. Sinuses with discharging granules on the leg can be indicative of a deeper infection that has spread from the skin to underlying tissues, such as the subcutaneous tissue or bone. This type of infection can result from a variety of causes, including both bacteria and fungi, and can be difficult to treat if left untreated for an extended period of time. Lymphocyte accumulation may be present in the affected area as part of the body's immune response to the infection. The spread of the infection to deeper tissues can occur through a variety of routes, including the hematogenous route, where the infection spreads through the bloodstream to distant sites. It is important to obtain a proper diagnosis and prompt treatment for this type of infection to prevent further spread and complications. This often involves obtaining a sample of the discharging material for laboratory analysis, such as culture and microscopic examination, to determine the specific cause of the infection and guide appropriate treatment.

Question. A woodworker presented with Chronic localized infection of the skin on his lower legs and feet which were Irregular, rough, cauliflower- like lesions, Microscopy of the biopsy shows Copper pennylmuriform celislmedl ar bodies, the etiological agent

A. CHROMOBLASTOMYCOSIS
B. PHAEOHYPHOMYcoSIS
C. CHROMOSOMY COSIS.
D. RHINOSPORIDIOSIS

Answer. A

Solution. The correct etiological agent for the described skin infection is Chromoblastomycosis. Chromoblastomycosis is a fungal infection caused by different species of dematiaceous fungi and is characterized by chronic and persistent skin lesions that are rough and warty. The presence of copper penny-like muriform cells, as seen in the microscopy of the biopsy, supports the diagnosis of Chromoblastomycosis. Phaeohyphomycosis and Rhinosporidiosis are different fungal infections with different clinical and histopathological features. Chromosomy cosis is not a recognized medical term.

Question. In a patient with rice water diarrhoea, which will be involved?

A. GM1 ganglio side
B. GM2 ganglioside
C. Both A and B
D. None of the above

Answer. A

Question. A young boy presented with fever, sore throat, malaise and abdominal pain, conjunctival suffusion and calf tenderness. No history of cough, vomiting, haemorrhage and travel. What is the diagnosis?

A. Chikungunya
B. Leptospira
C. Dengue hemorrhagic fever
D. Hepatic encephalopathy with hepatitis A

Answer. B

Question. Which of the following is the best way to diagnose Clostridium-associated Diarrhea?

A. Stool culture
B. Toxin Demonstration
C. Blood culture
D. None of the above

Answer. D