

NBME CBSE REAL EXAM 200 QUESTIONS AND ANSWERS LATEST 2023-2024 (usmle step 1) MEDICAL EXAMINATION

70yo M dies in a motor vehicle collision. Was undergoing evaluation for occult blood in the stool. Photo of transverse colon shown. Dx? -

ANSWER- **Tubular adenoma**

38yo M with 1-week hx of watery, itchy eyes and a runny nose. Physical shows inflamed nasal mucosa. No congestion in lower lung.

Pharmacotherapy? - ANSWER- **Loratadine**

16yo girl with 3-day hx of fever, nonproductive cough, and fatigue. T 38.3, P 88/min, BP 102/70. PE shows pale conjunctivae. CXR shows bilateral interstitial infiltrates. Blood spontaneously agglutinates while awaiting transport to the laboratory. Antibody isotypes causing agglutination? - ANSWER- **IgM**

24yo M with small tender blisters on his penis 3 days after unprotected sex. Photograph shown. Causal agent? - ANSWER- **HSV-2**

42yo F with 3-year hx of an intermittent facial rash, including the forehead, eyelids, nose, and cheeks. Rash seems to be getting worse since she moved from New York to Florida last year. Spicy foods precipitate a flushing reaction that seems to exacerbate the rash. PE shows erythema over the nose and cheeks, with scattered telangiectasias and a few papules. Dx? - ANSWER- **Rosacea**

53yo M returned from Africa, has fever, headache, and abdominal discomfort. Received appropriate vaccinations prior to the trip. T 39.4C. A wright-stained peripheral smear shown. Dx? - ANSWER- **Malaria**

68yo F with T2DM and hypertension that has been poorly controlled despite hydrochlorothiazide treatment. BP 150/96, Labs show serum glucose concentration of 130 and proteinuria. In addition to current Rx, which is most appropriate pharmacotherapy? - ANSWER- **Lisinopril**

66yo M with stage IV colon cancer with 3-day hx of severe diarrhea after receiving chemotherapy with fluorouracil, leucovorin, and Irinotecan. prescribed opioid antidiarrheal agent with no CNS effects. Which med? - ANSWER- **Loperamide**

35yo M in ED with 2-hour hx of sever fatigue and dizziness. Had profuse, watery diarrhea for 8 hours despite a lack of oral intake. Recently returned from a medical relief trip to a remote village in Honduras. T 36.7 C, P 122/min, BP 90/50. PE shows dry skin and decreased capillary refill. Stool for occult blood is negative; stool is gray and turbid. Gram stain shows gram-negative, comma-shaped bacteria; no erythrocytes or leukocytes. MOA of toxin? - ANSWER- **Activation of adenylyl cyclase**

59yo F with gradual onset of lack of muscle control in her left arm and leg. Sx 1 mo ago after dx with metastatic breast cancer. PE shows ataxia of left upper and lower extremities. Muscle strength, DTR, sensation, proprioception normal. Metastatic tumor in which location? - ANSWER- **cerebellum**

Newborn delivered at 38 weeks' gestation weighs 1800 g. PE shows petechial rash, microcephaly, and hepatosplenomegaly. Serologic test for CMV: IgG + in mother, + in newborn; IGM - in mother, + in newborn. Explanation? - ANSWER- **Congenital cytomegalovirus infection**

Female newborn is delivered at 38 weeks' gestation. Apgar 8 and 8 at 1/5 min. PE shows a bulging, fluid-filled mass approximately 5 cm in diameter in the midline over the lumbosacral region. No spontaneous movements of the lower extremities. Abnormality most likely occurred because of abnormal development during which periods of postconception (in days)? - ANSWER- 15 to 40

64yo M in ED 3 hours after SOB with exertion and extreme fatigue. Has ischemic heart disease. P 125/min, BP 105/60. ECG shows atrial fibrillation. Intravenous ibutilide is administered. Ten minutes later, ECG shows normal sinus rhythm. Risk for which drug effect in the next 6 hours? - ANSWER- torsades de pointes

65yo F with 20-year hx of osteoarthritis of the hands now has pain radiating down the distal anterior thigh, knee, medial leg, and foot. Bony outgrowth of vertebrae compressing one of the spinal nerves is suspected. Nerve root in which intervertebral foramina is effected? - ANSWER- L3 to L4

38yo M with 3-year hx of T2DM. Taking an oral antihyperglycemic agent, he has tried diet and exercise. BMI 32. PE normal. Hb A1c is 10%. Physician recommends initiation of insulin injections. Responds, "I know that insulin would help control my blood sugar. But a lot of people in my family have diabetes, and insulin made them really sick at times. Patient is at which stage of change? - ANSWER- contemplation

24yo M with 2-day history of an itchy rash on his arms and legs. Returned from a camping trip in the woods 5 days ago. PE shows edematous, erythematous rash with linear vesicles. Cause is activation of which cell types? - ANSWER- T lymphocytes

70yo M from china with poorly differentiated monoclonal carcinoma of the nasopharynx. DNA probes of neoplastic cells are most likely to detect genome of which virus? - ANSWER- EBV

Epidemiologic study of aniline dye, 500 workers with bladder cancer and 200 workers without. Exposed to aniline dyes/Have Bladder cancer: Yes/Yes (250), Yes/No (50), No/Yes (250), No/No (150). Odds ratio? - ANSWER- 3

24yo M with hx of IVDA could not be aroused. Friend reports that the patient injected himself with a drug 6 hours ago. Labs show drug concentration of 0.3. Assuming first-order one-compartment kinetics, has a half-life of 2 hours, and a volume of distribution of 200 L in this patient. What is quantity of drug (in mg) injected? - ANSWER- 480

Compound is taken up by bacterial cells. No energy is necessary for uptake, and the compound is not concentrated in the cell. Which describes this mechanism of transport? - ANSWER- carrier-mediated diffusion

Newborn has male genital ducts but female external genitalia. Cytogenetic analysis shows a 46,XY karyotype, and genetic testing shows a mutation of the gene encoding 5 α -reductase. In absence of this mutation, labia majora would have been? - ANSWER- scrotum

Study designed to evaluate the efficacy of coenzyme Q10 in improving cardiac output in patients with CHF. Sixty patients with CHF are recruited. Each assigned by coin toss to one of two groups. Design? - ANSWER- randomized clinical trial

12yo boy immersed up to his neck in 60F water for 20 minutes. Physiological changes? - ANSWER- Central blood volume INCREASED, ADH (vasopressin) DECREASED, Atrial Natriuretic Peptide INCREASED? C (block3, q23)

Randomized controlled study of 2000 patients with insomnia is conducted to evaluate the efficacy of a new medication to treat this condition. Ten subjects from both the control and treatment groups do not complete the study are not included in the analysis. Treatment group