Memory Test - Review Exam Respiratory+ GP+ Renal+ Body+ CVS+ GIT Physiology_Online_Foundation_1

Total Mark: 100
Time: 90 Min

1. . Plasma osmolarity is mainly maintained by
A) K +
B) Na+
C) Cl-
D) Glucose
E) Ca
Answer: B
Discussion:
Reference: [Ref: Abc bio/7th/P-3,4,7,10]

2. 1st heart sound occurs due to
A) Sudden closure of semilunar valves
B) Sudden closure of A-V valves
C) Oscillation of blood between aorta and atrial wall
D) Movement of blood towards tricuspid valve
E) Turbulence of blood through the aorta
Answer: B
Discussion:
Reference: [Ref: Macleod's/14th /-57]

3. Respiratory center is directly stimulated by
A) PCO2
B) PO2
C) H+ ion
D) Na+ ion
E) K+ ion
Answer: C
Discussion:
Reference: [Ref: Ganong 25th /P-647]

4. A 40-year-old diabetic woman has glycosuria. This may occur due to inadequate, glucose reabsorption at:
A) Collecting duct
B) Distal convoluted tubule
C) Glomerulus
D) Loop of Henle
E) Proximal convoluted tubule
Answer: E
Discussion:
Reference: (Ref: Pastest)

5. A patient underwent total gastrectomy because of a proximal gastric cancer. Which of the following digestive enzymes will be produced in inadequate amounts after the surgery in this patient?
A) Amylase
B) Chymotrypsin
C) Trypsin
D) Pepsin
E) Prolastase
Answer: D
Discussion:
Reference:

6. A patient with restrictive lung disease typically has
A) An increased FEVI and a normal lung compliance
B) A decreased FEVI and an decreased lung compliance
C) A decreased FEVI and an increased lung compliance
D) An increased FEVI and an increased lung compliance
E) An increased FEVI and a decreased lung compliance
Answer: B
Discussion:
Reference: [Ref: BRS Physiology 7th /P-124]

7. Activator of salivary amylase
A) Na
B) Trypsin
C) Chloride
D) Ca
E) HCO3
Answer: C
Discussion:
Reference: (Ref: Ganong 26th/Page-453)

8. An arterial blood gas sample from a 36 years old man show low Po2. If the Po2 in the blood is low, the most likely cause is:
A) Hypoxic Hypoxia
B) AnaemicHypoxia
C) HistotoxicHypoxia
D) Stagnant Hypoxia
E) HypaemicHypoxia
Answer: A
Discussion:
Reference: [Ref: Ganong 25th /P- 648-651]

9. Arterial blood gas analysis report of a 46-year-old woman in the Accident and Emergency Department showed elevated arterial CO, content. The woman is most likely to have which of the following conditions?
A) Chronic renal failure
B) Diabetic ketoacidosis
C) Metabolic acidosis
D) Metabolic alkalosis
E) Respiratory alkalosis
Answer: D
Discussion:
Reference: [Ref: Pastest]

10. Bile salt reuptake principally occurs in the:
A) Duodenum
B) Jejunum
C) Ileum
D) Colon
E) Caecum
Answer: C
Discussion:
Reference: [Ref: Bailey & Love 27th /P-283]

11. Causes of atonic bladder are followings except

A) Crush injury in sacral region
B) Tabetic bladder
C) Damage of sensory nerve fibre from bladder
D) Constrictive fibrosis around sacral dorsal root nerve fibre
E) Damage of spinal cord above sacral region
Answer: E
Discussion:
Reference: [Ref: Guyton/13th/P-330]

12. Compared with the systemic circulation, the pulmonary circulation has a
A) higher blood flow
B) lower resistance
C) higher arterial pressure
D) higher capillary pressure
E) higher cardiac output
Answer: B
Discussion: [VI A]. Blood flow (or cardiac output) in the systemic and pulmonary circulations is nearly equal; pulmonary flow is slightly less than systemic flow because about 2% of the systemic cardiac output bypasses the lungs The pulmonary circulation is characterized by both lower pressure and lower resistance than the systemic circulation, so flows through the two circulations are approximately equal (flow = pressure/resistance)
Reference: (Ref: BRS Physiology)

13. Completely reabsorbed substance from renal tubule
A) HCO3-
B) Amino acid
C) Na+
D) K+
E) H2O
Answer: B
Discussion:
Reference:

14. ECG findings of Hyperkalaemia-
A) Flattened T wave
B) U wave
C) Wide QRS complex
D) Short QT interval
E) ST depression
Answer: C
Discussion:
Reference: [Ref: Ganong/25th/P-534]

15. Following biochemical changes occur in gastric outlet obstruction except
A) Metabolic alkalosis
B) Hyperkalemia
C) Hypocalcaemia
D) Hyponatraemia
E) Hypochloremia
Answer: B
Discussion:
Reference: (Ref: Baily & Love/27th/Page-1129,1130)

16. Highest amount of H+ secretion occurs in which part of nephron
A) PCT
B) ALLH
C) DCT
D) CD
E) CT
Answer: A
Discussion: (ABC biochemistry) [abc bio/7th/P-281]
Reference:

17. Highest pH regarding digestive juices
A) Gastric juice
B) Saliva
C) Bile
D) Brunner gland secretion
E) Pancreatic juice
Answer: D
Discussion:
Reference: (Ref: Ganong 26th Page-447-449)

18. If the clearance of a substance which is freely filtered is less than that of inulin,
A) There is net reabsorption of the substance in the tubules
B) There is net secretion of the substance in the tubules
C) The substance is neither secreted nor reabsorbed in the tubules
D) The substance becomes bound to protein in the tubules
E) The substance is secreted in the proximal tubule to a greater degree than in the distal tubule
Answer: A
Discussion:
Reference: (Ref: Ganong 25th Page-694)

19. In a maximal expiration, the total volume expired is
A) Tidal volume (TV)
B) Vital capacity (VC)
C) Expiratory reserve volume (ERV)
D) Residual volume (RV)
E) Functional residual capacity (FRC)
Answer: B
Discussion: [I B 3]. The volume expired in a forced maximal expiration is forced vital capacity, or vital capacity (VC)
Reference: (Ref: BRS Physiology)

20. Increase PCO2 is associated with
A) Metabolic alkalosis
B) Increase HCO3-
C) Renal loss of H+ decrease
D) Hypokalaemia
E) Hypoventilation
Answer: E
Discussion:
Reference: (Ref: ABC Bio/7th/Page-401-402)

21. Infant respiratory distress syndrome or hyaline membrane disease is caused by lack of surfactant, commonly suffered by premature babies born before 28-32 weeks of gestation. A major function of surfactant is to increase:
A) Alveolar surface tension
B) Pulmonary compliance
C) Release of O2 from haemoglobin in alveolar capillaries
D) The work of breathing
E) The tendency of the lungs to collapse
Answer: B
Discussion:
Reference: [Ref: BRS 6th/P-120]

22. Initiation of an action potential in skeletal muscle?
A) Requires spatial facilitation
B) Requires temporal facilitation
C) Is inhibited by high concentration of calcium at the neuromuscular junction
D) Requires release of NE
E) Requires release of Acetylcholine
Answer: E
Discussion:
Reference: [Ref: Ganong 25th/Edition Page 135]

23. Iron absorption mainly occurs in
A) Duodenum
B) Jejunum
C) Terminal parts ileum
D) Upper part is ileum
E) Colon
Answer: A
Discussion:
Reference: (Ref: Ganong 26th, Page-477)

24. Micelle formation is necessary for the intestinal absorption of
A) Glycerol
B) Leucine
C) Bile acids
D) Vitamin B12
E) Vitamin D
Answer: E
Discussion:
Reference: [Ref: Ganong 26th /P-478]

25. Most suitable factor for increase renal blood flow is
A) Angiotensin-2
B) High protein diet
C) Endothelin
D) Vasoactive NO
E) Epinephrine & nor-epinephrine
Answer: D
Discussion:
Reference: [Ref: Guyton 13th /p-339/B-27.4]

26. One day after an emergency repair of a ruptured abdominal aortic aneurysm, a 64-year-old man has urine output of 40 ml over a 4-hour period. A Foley catheter is still in place. He received 14 units of blood during the operation. His temperature is 37.8 □C, blood pressure 100/50 mmHg, pulse 126/minute, and central venous pressure (CVP) 3 mmHg. Examination shows diffuse peripheral oedema. Heart sounds are normal. The lungs are clear to auscultation. The abdomen is soft. Laboratory studies show: haematocrit 34%, serum sodium 145 mmo1/1, serum potassium 5.0 mmo1/1, and urine sodium 6 mmo1/1. Which of the following is the most likely cause of the oliguria?
A) Heart failure
B) Hypovolaemia
C) Occluded Foley catheter
D) Renal artery thrombosis
E) Transfusion reaction
Answer: B
Discussion:
Reference: [Ref: Pastest]

27. Organ to have the maximum oxygen consumption after liver is
A) Skeletal muscle. .
B) Kidney,
C) Brain.
D) Heart.
E) Skin.
Answer: A
Discussion:
Reference: [Ref: BRS 6th/p-94]

28. Regarding vomiting which of the following is inappropriate
A) Starts with salivation
B) Glottis is opened
C) Breath is held in mid inspiration
D) Vomiting centre is located in medulla
E) Lower esophageal sphincter relaxes
Answer: B
Discussion:
Reference: (Ref: Ganong 26th, Page-490)

29. Severe diarrhoea causes a increase In -
A) Body potassium
B) Body sodium
C) Extracellular fluid volume
D) Total peripheral resistance
E) Blood PH
Answer: D
Discussion:
Reference:

30. Surfactant is secreted by:
A) Type-I pneumocytes
B) Type-II pneumocytes
C) PAMS cells
D) Plasma cells
E) APUD cells
Answer: B
Discussion:
Reference: [Ref: Ganong 25th /P- 622]

31. The cross bridges of the sarcomere in skeletal muscle are made up of
A) Actin
B) Myosin
C) Troponin
D) Tropomyosin
E) Myelin
Answer: B
Discussion:
Reference: [Ref: Ganong 25th edition page-118]

32. The Haemoglobin Oxygen-Dissociation Curve is shifted to the left by:
A) An increase in pCO2
B) A fall in pH
C) A rise in temperature
D) An increase in 2,3-DPG
E) Fetal haemoglobin
Answer: E
Discussion:
Reference:

33. The main respiratory control neurons
A) Send out regular bursts of impulse to expiratory muscles during quiet respiration
B) Are unaffected by stimulation of pain receptors
C) Are located in pons
D) Send out regular bursts of impulse to inspiratory muscles during quiet respiration
E) Are unaffected by impulses from cerebral cortex
Answer: D
Discussion:
Reference: (Ref: Ganong 25th P-667)

34. The risk of developing gall stones increases:
A) When cholesterol micelles are formed in the gall bladder
B) As the bile salt:cholesterol ration increases
C) As the lecithin:cholesterol ration increases
D) When supplementary bile salts are taken by mouth
E) In patients with haemolytic anaemia
Answer: E
Discussion:
Reference: (Ref: Bailey & Love 27th, Page-1199)

35. There are three ways by which carbon dioxide is transported in the blood. About 70% of the carbon dioxide is transported to the lungs:
A) In the form of bicarbonate ions
B) In the form of carbonic acid
C) In the form of carbaminohaemoglobin
D) In chemical combination with albumin
E) In the dissolved state in the water of the plasma and cells
Answer: A
Discussion:
Reference: [Ref: Ganong 25th /P-624]

36. Volume disorder which is most commonly found clinically –
A) Hypertonic hypervolemia
B) Hypertonic hypovolemia
C) Hypertonic volume expansion
D) Isotonic hypervolemia
E) Hypotonic hypervolemia
Answer: B
Discussion: [Explanation: hypertonic hypovolaemia is most commonly seen in many patient]
Reference: (Ref: ABC Bio 7th /Page-337)

37. Which is not type of graded potential?
A) Pacemaker potential
B) Receptor potential
C) Postsynaptic Membrane potential
D) Pre synaptic membrane potential
E) End plate potential.
Answer: D
Discussion:
Reference: [Ref: CC chatterjee 12th edition page 42]

38. Which of the following ionic changes is correctly matched with the component of action potential?
A) Opening of voltage-gated potassium channels: after hyperpolarization.
B) A decrease in extracellular calcium: repolarization
C) Opening of voltage-gated sodium channels: depolarization
D) Rapid closure of voltage-gated sodium channels: resting membrane potential
E) Rapid closure of voltage-gated potassium channel: relative refractory period
Answer: C
Discussion:
Reference: [Ref: Ganong 25th edition page 98]

39. Which of the following is inactivated in lungs
A) Angiotensin II
B) Angiotensin I
C) Bradykinin
D) Vasopressin
E) Nor-adrenalin
Answer: C
Discussion:
Reference: [Ref: Ganong 25th /P- 637]

40. Which of the following is the principal buffer in interstitial fluid?
A) Hemoglobin
B) Other proteins
C) Carbonic acid
D) H_2PO_4
E) Compounds containing histidine
Answer: C
Discussion:
Reference: (ganong 25th 717p)

41. Which of the following is true during inspiration?
A) Intrapleural pressure is positive
B) The volume in the lungs is less than the functional residual capacity (FRC)
C) Alveolar pressure equals atmospheric pressure
D) Alveolar pressure is higher than atmospheric pressure
E) Intrapleural pressure is more negative than it is during expiration
Answer: E
Discussion:
Reference: (Ref: BRS Physiology)

42. Which of the following substances has the highest renal clearance?
A) Para-aminohippuric acid (PAH)
B) Inulin
C) Glucose
D) Na^+
E) Cl^-
Answer: A
Discussion: [III D]. Para-aminohippuric acid (PAH) has the greatest clearance of all of the substances because it is both filtered and secreted. Inulin is only filtered. The other substances are filtered and subsequently reab
Reference: (Ref: BRS physiology)

43. Which of these local hormones of GIT acts on sphincter of Oddi
A) Gastrin
B) Secretin
C) CCK-PZ
D) VIP
E) GIP
Answer: C
Discussion:
Reference: (Ref: Ganong 26th Page-457)

44. Which one is not an artery to supply stomach?
A) Rt gastric
B) Lt gastric
C) Lt gastro-epiploic
D) Rt gastro-epiploic
E) Posterior gastric
Answer: E
Discussion:
Reference: (Ref: Bailey & Love 27th, Page-1106)

45. Composition of saliva with high flow rate
A) Only Na+,Cl- of highest conc.
B) Only K+, HCO3- of lowest conc.
C) Highest Na+ and Cl- conc. and lowest K+ and HCO3- conc.
D) Lowest Na+ and Cl- conc.
E) Highest K+ and HCO3- conc.
Answer: D
Discussion:
Reference: (Ref: Ganong 26th, Page-447)

46. In infants, defecation often follows a meal. It is due to
A) Histamine
B) Increased CCK
C) Enterogastric reflex
D) Gastrocolic reflex
E) Increased somatostatin
Answer: D
Discussion:
Reference: Ganong 26th /P-494

47. In which vascular bed does hypoxia cause vasoconstriction?
A) Coronary
B) Pulmonary
C) Cerebral
D) Muscle
E) Skin
Answer: B
Discussion: [VI C]. Pulmonary blood flow is controlled locally by the PO2 of alveolar air. Hypoxia causes pulmonary vasoconstriction and thereby shunts blood away from unventilated areas of the lung, where it would be wasted. In the coronary circulation, hypoxemia causes vasodilation. The cerebral, muscle, and skin circulations are not controlled directly by PO2
Reference: (Ref: BRS Physiology)

48. Maximum oxygen content in fetus is in

A) Ductus arteriosus.
B) Descending aorta.
C) Umbilical vein.
D) Pulmonary vein.
E) Thoracic inferior vena cava.
Answer: C
Discussion:
Reference: [Ref: Lange 15th /P-72

49. Myocardial contractility is best correlated with the intracellular concentration of
A) Na^+
B) K^+
C) Ca^{2+}
D) Cl^-
E) Mg^{2+}
Answer: C
Discussion: Exp: Contractility of myocardial cells depends on the intracellular [Ca^{2+}], which is regulated by Ca^{2+} entry across the cell membrane during the plateau of the action potential and by Ca^{2+} uptake into and release from the sarcoplasmic reticulum (SR). Ca^{2+} binds to troponin C and removes the inhibition of actin–myosin interaction, allowing contraction (shortening) to occur.
Reference: [Ref: BRS Physiology 6th]IV B 6].

50. Stokes-Adams syndrome occurs in
A) SA nodal block
B) First degree heart block
C) Second degree heart block
D) Third degree heart block
E) Right or left bundle branch block
Answer: D
Discussion:
Reference: [Ref: Ganong 25th /P-490