

# KISII UNIVERSITY

## DEPARTMENT OF MEDICAL PHYSIOLOGY

END OF SECOND YEAR EXAMINATION TOWARDS THE DEGREE  
OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY  
(M.B.Ch.B) (2021/22)

### **MEDS 211: MEDICAL PHYSIOLOGY II (Paper 1)**

**DATE: September, 2022**

**TIME: 3HRS**

#### **Section A: Multiple Choice Questions (120 Marks)**

1. Which of the following substances is released from neurons in the GI tract and produces smooth muscle relaxation?
  - (A) Secretin
  - (B) Gastrin
  - (C) Cholecystokinin
  - (D) Vasoactive intestinal peptide
2. Which of the following responses is mediated by parasympathetic muscarinic receptors?
  - (A) Dilation of bronchiolar smooth muscle
  - (B) Miosis
  - (C) Ejaculation
  - (D) Constriction of gastrointestinal (GI) sphincters
3. Cholecystokinin (CCK) has some gastrin-like properties because both CCK and gastrin
  - (A) are released from G cells in the stomach
  - (B) are released from I cells in the duodenum
  - (C) are members of the secretin-homologous family
  - (D) have five identical C-terminal amino acids
4. Which of the following is a property of C fibers?
  - (A) Have the slowest conduction velocity of any nerve fiber type
  - (B) Have the largest diameter of any nerve fiber type
  - (C) Are afferent nerves from muscle spindles
  - (D) Are afferent nerves from Golgi tendon organs
5. When compared with the cones of the retina, the rods
  - (A) are more sensitive to low-intensity light
  - (B) adapt to darkness before the cones
  - (C) are most highly concentrated on the fovea
  - (D) are primarily involved in color vision
6. Which of the following abolishes “receptive relaxation” of the stomach?
  - (A) Parasympathetic stimulation

- (B) Sympathetic stimulation
  - (C) Vagotomy
  - (D) Administration of gastrin
7. Which of the following statements best describes the basilar membrane of the organ of Corti?
- (A) The apex responds better to low frequencies than the base does
  - (B) The base is wider than the apex
  - (C) The base is more compliant than the apex
  - (D) High frequencies produce maximal displacement of the basilar membrane near the helicotrema
8. Which of the following is a feature of the sympathetic, but not the parasympathetic nervous system?
- (A) Ganglia located in the effector organs
  - (B) Preganglionic neurons release norepinephrine
  - (C) Preganglionic neurons release acetylcholine (ACh)
  - (D) Preganglionic neurons originate in the thoracolumbar spinal cord
9. Which of the following substances is secreted in response to an oral glucose load?
- (A) Secretin
  - (B) Gastrin
  - (C) Vasoactive intestinal peptide (VIP)
  - (D) Glucose-dependent insulintropic peptide (GIP)
10. Which autonomic receptor mediates an increase in heart rate?
- (A) Adrenergic  $\alpha_1$  receptors
  - (B) Adrenergic  $\beta_1$  receptors
  - (C) Adrenergic  $\beta_2$  receptors
  - (D) Cholinergic muscarinic receptors
11. Cutting which structure on the left side causes total blindness in the left eye?
- (A) Optic nerve
  - (B) Optic chiasm
  - (C) Optic tract
  - (D) Geniculocalcarine tract
12. Which reflex is responsible for monosynaptic excitation of ipsilateral homonymous muscle?
- (A) Stretch reflex (myotatic)
  - (B) Golgi tendon reflex (inverse myotatic)
  - (C) Flexor withdrawal reflex
  - (D) Subliminal occlusion reflex
13. Slow waves in small intestinal smooth muscle cells are
- (A) action potentials
  - (B) phasic contractions
  - (C) tonic contractions
  - (D) oscillating resting membrane potentials
14. Which type of cell in the visual cortex responds best to a moving bar of light?

- (A) Simple
  - (B) Complex
  - (C) Hypercomplex
  - (D) Bipolar
  - (E) Ganglion
15. Which adrenergic receptor produces its stimulatory effects by the formation of inositol 1,4,5-triphosphate ( $IP_3$ ) and an increase in intracellular  $[Ca^{2+}]$ ?
- (A)  $\alpha_1$  Receptors
  - (B)  $\alpha_2$  Receptors
  - (C)  $\beta_1$  Receptors
  - (D)  $\beta_2$  Receptors
16. Which of the following parts of the body has cortical motoneurons with the largest representation on the primary motor cortex (area 4)?
- (A) Shoulder
  - (B) Ankle
  - (C) Fingers
  - (D) Elbow
17. Which of the following has a much lower concentration in the cerebrospinal fluid (CSF) than in cerebral capillary blood?
- (A)  $Na^+$
  - (B)  $K^+$
  - (C) Osmolarity
  - (D) Protein
18. Which of the following is a step in photoreception in the rods?
- (A) Light converts all-trans retinal to 11-cis retinal
  - (B) Metarhodopsin II activates transducin
  - (C) Cyclic guanosine monophosphate (cGMP) levels increase
  - (D) Rods depolarize
  - (E) Glutamate release increases
19. Pathogens that produce fever cause
- (A) decreased production of interleukin-1 (IL-1)
  - (B) decreased set-point temperature in the hypothalamus
  - (C) shivering
  - (D) vasodilation of blood vessels in the skin
20. When a person moves from a supine position to a standing position, which of the following compensatory changes occurs?
- (A) Decreased heart rate
  - (B) Increased contractility
  - (C) Decreased total peripheral resistance (TPR)
  - (D) Decreased cardiac output
21. Which of the following statements about the olfactory system is true?
- (A) The receptor cells are neurons
  - (B) The receptor cells are sloughed off and are not replaced
  - (C) Axons of cranial nerve (CN) I are A-delta fibers

- (D) Axons from receptor cells synapse in the prepiriform cortex
22. If the ejection fraction increases, there will be a decrease in
- (A) cardiac output
  - (B) end-systolic volume
  - (C) heart rate
  - (D) pulse pressure
23. A lesion of the chorda tympani nerve would most likely result in
- (A) impaired olfactory function
  - (B) impaired vestibular function
  - (C) impaired auditory function
  - (D) impaired taste function
24. The tendency for edema to occur will be increased by
- (A) arteriolar constriction
  - (B) increased venous pressure
  - (C) increased plasma protein concentration
  - (D) muscular activity
25. Which of the following would produce maximum excitation of the hair cells in the right horizontal semicircular canal?
- (A) Hyperpolarization of the hair cells
  - (B) Bending the stereocilia away from the kinocilia
  - (C) Rapid ascent in an elevator
  - (D) Rotating the head to the right
26. Complete transection of the spinal cord at the level of T1 would most likely result in
- (A) temporary loss of stretch reflexes below the lesion
  - (B) temporary loss of conscious proprioception below the lesion
  - (C) permanent loss of voluntary control of movement above the lesion
  - (D) permanent loss of consciousness above the lesion
27. During exercise, total peripheral resistance (TPR) decreases because of the effect of
- (A) the sympathetic nervous system on splanchnic arterioles
  - (B) the parasympathetic nervous system on skeletal muscle arterioles
  - (C) local metabolites on skeletal muscle arterioles
  - (D) local metabolites on cerebral arterioles
28. Sensory receptor potentials
- (A) are action potentials
  - (B) always bring the membrane potential of a receptor cell toward threshold
  - (C) always bring the membrane potential of a receptor cell away from threshold
  - (D) are graded in size, depending on stimulus intensity
29. The greatest pressure decrease in the circulation occurs across the arterioles because
- (A) they have the greatest surface area

- (B) they have the greatest cross-sectional area
  - (C) the velocity of blood flow through them is the lowest
  - (D) they have the greatest resistance
30. Cutting which structure causes blindness in the temporal fields of the left and right eyes?
- (A) Optic nerve
  - (B) Optic chiasm
  - (C) Optic tract
  - (D) Geniculocalcarine tract
31. Which of the following structures has a primary function to coordinate rate, range, force, and direction of movement?
- (A) Primary motor cortex
  - (B) Premotor cortex and supplementary motor cortex
  - (C) Prefrontal cortex
  - (D) Cerebellum
32. Pulse pressure is
- (A) the highest pressure measured in the arteries
  - (B) the lowest pressure measured in the arteries
  - (C) measured only during diastole
  - (D) determined by stroke volume
33. Which reflex is responsible for polysynaptic excitation of contralateral 32. extensors?
- (A) Stretch reflex (myotatic)
  - (B) Golgi tendon reflex (inverse myotatic)
  - (C) Flexor withdrawal reflex
  - (D) Subliminal occlusion reflex
34. Muscle stretch leads to a direct increase in firing rate of which type of nerve?
- (A)  $\alpha$ -Motoneurons
  - (B)  $\gamma$ -Motoneurons
  - (C) Group Ia fibers
  - (D) Group Ib fibers
35. In the sinoatrial (SA) node, phase 4 depolarization (pacemaker potential) is attributable to
- (A) an increase in  $K^+$  conductance
  - (B) an increase in  $Na^+$  conductance
  - (C) a decrease in  $Cl^-$  conductance
  - (D) a decrease in  $Ca^{2+}$  conductance
36. The reabsorption of filtered  $HCO_3^-$
- (A) results in reabsorption of less than 50% of the filtered load when the plasma concentration of  $HCO_3^-$  is 24 mEq/L
  - (B) acidifies tubular fluid to a pH of 4.4
  - (C) is directly linked to excretion of  $H^+$  as  $NH_4^+$
  - (D) is inhibited by decreases in arterial  $PCO_2$
37. In which vascular bed does hypoxia cause vasoconstriction?

- (A) Coronary
  - (B) Pulmonary
  - (C) Cerebral
  - (D) Muscle
38. To maintain normal  $H^+$  balance, total daily excretion of  $H^+$  should equal the daily
- (A) fixed acid production plus fixed acid ingestion
  - (B)  $HCO_3^-$  excretion
  - (C) titratable acid excretion
  - (D) filtered load of  $H^+$
39. 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) Intrapleural pressure is more negative than it is during expiration
40. Which of the following would produce an increase in the reabsorption of isosmotic fluid in the proximal tubule?
- (A) Increased filtration fraction
  - (B) Extracellular fluid (ECF) volume expansion
  - (C) Decreased peritubular capillary protein concentration
  - (D) Increased peritubular capillary hydrostatic pressure
41. Initial hyperpnoea in exercise is because of:
- A) Hypercapnoea
  - B) Hypoxemia
  - C) Lactic acidosis
  - D) Stimulation of cortex and proprioceptors
42. Angiotensin II causes all of the following except:
- A) Stimulation of thirst
  - B) Aldosterone secretion
  - C) Increased ADH secretion
  - D) Vasodilation
43. Isometric contraction occurs in which of the following muscle?
- a. Respiratory muscle
  - b. Extra-ocular muscle
  - c. Antigravity muscle
  - d. GIT muscle
44. The most sensitive index for renal tubular function is:
- a. Specific gravity of urine
  - b. Blood urea
  - c. GFR
  - d. Creatinine clearance
45. The cardiac output (CO) of a well trained athlete is 5.5 L/min. When exercising his CO has ability to reach a maximum value of?

- a. 12 L/min
  - b. 28 L/min
  - c. 35 L/min
  - d. 55 L/min
46. Which of the following hormone is not secreted by the kidney?
- a. Renin
  - b. Angiotensin I
  - c. Erythropoietin
  - d. 1, 25 DHCC
47. Normal gastric juice contains all except:
- a. Na<sup>+</sup>
  - b. K<sup>+</sup>
  - c. Ca<sup>++</sup>
  - d. Mg<sup>2+</sup>
48. A person who is running, the main source of energy he will be using in 1st min is:
- a. Glucose
  - b. Glycogen
  - c. Fat
  - d. Phosphagen
49. Which one of the following causes raised angiotensin in blood?
- a. Increased blood volume
  - b. Raised cardiac output
  - c. Decreased blood pressure
  - d. Increased sympathetic tone
50. Which of the following is TRUE regarding physiological changes in the brain during moderate exercise?
- a. Blood flow is decreased
  - b. Blood flow is increased
  - c. Blood flow remains unaltered
  - d. Blood flow initially increases and then decreases
51. Hypertonic urine is excreted due to absorption of water in:
- a. Collecting ducts
  - b. DCT
  - c. Ascending part of loop of Henle
  - d. Descending part of loop of Henle
52. In moderate exercise the respiratory rate is increased due to response of:
- a. Proprioception receptors in the joints
  - b. Increased PCO<sub>2</sub> in arterial blood
  - c. Increased PO<sub>2</sub> in arterial blood
  - d. J-receptor stimulation
53. Hormones exclusively secreted by placenta:
- a. HCG
  - b. Estrogen

- c. HPL
  - d. PRL
54. Urinary concentrating ability of the kidney is increased by:
- a. ECF volume contraction
  - b. Increase in RBF
  - c. Reduction of medullary hyperosmolarity
  - d. Increase in GFR
55. The hormone that uses an enzyme receptor for its action:
- a. Insulin
  - b. Steroid
  - c. Oestrogen
  - d. Thyroxine
56. Progesterone is produced by:
- a. Granulosa luteal cells
  - b. Theca cells
  - c. Stroma of ovary
  - d. Sertoli cells
57. Hyperaldosteronism is associated with all except:
- a. Hypernatremia
  - b. Hypokalemia
  - c. Hypertension
  - d. Metabolic acidosis
58. Amount of protein undigested in small intestine is:
- a. 1-5%
  - b. 10-20%
  - c. 5-10%
  - d. 25-30%
59. Insulin mediated glucose uptake occurs through:
- a. GLUT1
  - b. GLUT2
  - c. GLUT3
  - d. GLUT4
60. True about dietary fiber:
- a. Soluble fiber increases metabolism of sugar in GIT
  - b. Increase bulk of stool
  - c. Only soluble fibers are included in diet
  - d. Increase GI transit time
61. Iron is actively absorbed in:
- a. Stomach
  - b. Duodenum and proximal jejunum
  - c. Large intestine
  - d. Ileum
62. Hormone with no change in levels in menstrual cycle:
- a. Activin



- b. Inhibin
  - c. FSH
  - d. GnRH
63. Vast majority of obese individuals have increased levels of:
- a. Adiponectin
  - b. Leptin
  - c. Ghrelin
  - d. Cortisol
64. In fetus the insulin secretion begins by:
- a. 3rd month
  - b. 5th month
  - c. 7th month
  - d. 9th month
65. Basal Metabolic Rate is closely related to:
- a. Body weight
  - b. Body surface area
  - c. Amount of adipose tissue
  - d. Amount of lean body mass
66. Ovary produces all except:
- a. Gonadotropin
  - b. Testosterone
  - c. Estrogen
  - d. Inhibin B
67. Which hormone exhibits permissive action on puberty?
- a. Insulin
  - b. GH
  - c. GnRH
  - d. Leptin
68. Insulin secretion is/are increased by all except:
- a. Gastrin
  - b. Secretin
  - c. VIP
  - d. Glucagon
69. Which gastrointestinal motor activity is most affected by vagotomy?
- a. Secondary esophageal peristalsis
  - b. Distension-induced intestinal segmentation
  - c. Oral stomach accommodation
  - d. Caudal stomach peristalsis
70. Increased LH secretion just before ovulation is due to:
- a. Positive feedback by progesterone
  - b. Positive feedback by estrogen
  - c. Positive feedback by FSH
  - d. Positive feedback by relaxin
71. During Tetany hyperexcitability is due to:

- a. Low  $\text{Ca}^{++}$  causes increase permeability to  $\text{Na}^+$
  - b. Prevent  $\text{K}^+$  release
  - c. Prevent  $\text{Na}^+$  and  $\text{K}^+$  release
  - d. Decrease  $\text{Ca}^{++}$  produce generation of AP
72. Sertoli cells in the testis have receptors for:
- a. FSH
  - b. LH
  - c. Inhibin
  - d. GnRH
73. Removal of proximal segments of the small intestine results in a decrease in:
- a. Maximal acid output
  - b. Gastric emptying of liquids
  - c. Gastric emptying of solids
  - d. Pancreatic enzyme secretion
74. Osteoclasts are inhibited by:
- a. Parathyroid hormone
  - b. Calcitonin
  - c. 1,25-dihydroxycholecalciferol
  - d. Tumor necrosis factor
75. Acidification of the duodenum will:
- a. Decrease pancreatic secretion of bicarbonate
  - b. Increase secretion of gastric acid
  - c. Decrease gastric emptying
  - d. Increase contraction of the sphincter of Oddi
76. Which volume remains in the lungs after a tidal volume ( $V_T$ ) is expired?
- a. Tidal volume
  - b. Vital capacity
  - c. Expiratory reserve volume
  - d. Functional residual capacity
77. Which of the following is the site of highest airway resistance?
- a. Trachea
  - b. Largest bronchi
  - c. Medium-sized bronchi
  - d. Smallest bronchi
78. Compared with a person who ingests 2 L of distilled water, a person with water deprivation will have a
- a. higher free-water clearance ( $C_{\text{H}_2\text{O}}$ )
  - b. lower circulating level of antidiuretic hormone (ADH)
  - c. higher tubular fluid/plasma (TF/P) osmolarity in the proximal tubule
  - d. higher rate of  $\text{H}_2\text{O}$  reabsorption in the collecting ducts
79. Compared with the apex of the lung, the base of the lung has
- a. a higher pulmonary capillary  $\text{PO}_2$
  - b. a higher pulmonary capillary  $\text{PCO}_2$
  - c. a higher ventilation/perfusion ( $V/Q$ ) ratio

- d. the same V/Q ratio
80. Which of the following would cause an increase in both glomerular filtration rate (GFR) and renal plasma flow (RPF)?
- a. Hyperproteinemia
  - b. A ureteral stone
  - c. Dilation of the afferent arteriole
  - d. Dilation of the efferent arteriole
81. Which is correctly matched
- a. Thelarche – development of breasts
  - b. Gonadarche – development of gonads
  - c. Puberche – development of axillary, pubic and scalp hair
  - d. Menarche –cessation of menstrual cycle
82. First meiotic cell division in the female gamete is completed
- a. At birth
  - b. At ovulation
  - c. At fertilization
  - d. At delivery
83. The midcycle ovulation is largely mediated by
- a. GnRH
  - b. FSH
  - c. Estrogen
  - d. LH
84. Follicular phase of the ovarian cycle corresponds with which phase of the uterine cycle
- a. Ischemic
  - b. Proliferative
  - c. Menses
  - d. Secretory
85. Concerning the corpus luteum
- a. It degenerates soon after fertilization
  - b. It produces luteinizing hormone responsible for ovulation
  - c. Supports early pregnancy by producing progesterone
  - d. Forms the corpus albicans during pregnancy
86. Pubertal growth spurt is controlled by all the following hormones EXCEPT
- a. Growth hormone
  - b. Insulin
  - c. Sex steroids
  - d. Catecholamines
87. The last event to occur during pubertal changes in females is
- a. Appearance of the breast buds
  - b. Appearance of pubic hair
  - c. Peak height spurt
  - d. Menses
88. The hormone measured to diagnose pregnancy is

- a) Progesterone
  - b) Human chorionic gonadotropin
  - c) Estrogen
  - d) oxytocin
89. The process of meiosis produces
- a) two diploid daughter cells that are identical
  - b) Four haploid daughter cells that are not identical
  - c) Four diploid daughter cells that are identical
  - d) Two haploid daughter cells that are not identical
90. An organism with two of the same alleles for a particular trait is called
- a) Homozygous
  - b) Heterozygous
  - c) Dominant
  - d) Recessive
91. Which one is TRUE regarding the resting membrane potential?
- a.  $\text{Na}^+/\text{K}^+$  ATPase pumps out  $2\text{Na}^+$  and pumps in  $3\text{K}^+$
  - b.  $\text{Na}^+/\text{K}^+$  ATPase hydrolyses ADP to ATP
  - c. The cell membrane is more permeable to  $\text{K}^+$  than  $\text{Na}^+$
  - d.  $\text{Na}^+/\text{K}^+$  ATPase is an example of peripheral cell membrane protein
92. Which one of the following is NOT a graded potential?
- a. Receptor potential
  - b. Generator potential
  - c. Excitatory post-synaptic potential
  - d. Effector potential
93. An action potential initiated from several simultaneous subthreshold graded potentials, from different locations is known as?
- a. Temporal summation
  - b. Subthreshold summation
  - c. Post-synaptic summation
  - d. Spatial summation
94. Which one is TRUE regarding muscarinic receptors?
- a. M1 is found in the autonomic ganglia
  - b. Muscarine is an exogenous antagonist
  - c. They are ligand gated ion channel receptors
  - d. Atropine is a muscarinic agonist
95. The following are TRUE about glutamate except?
- a. It is re-uptaken into glia via glutamate re-uptake transporter
  - b. It is released into synaptic cleft via  $\text{Ca}^{2+}$  dependent exocytosis
  - c. It is converted to ketoglutarate in the glia
  - d. It is re-uptaken directly into pre-synaptic nerve terminal by membrane transporters
96. Which one CORRECTLY states the biosynthesis and storage of monoamines?
- a. Phenylalanine is a precursor for tyrosine
  - b. Tyrosine uptake into cytosol is via  $\text{K}^+$  dependent transporter

- c. DOPA is converted to dopamine by DOPA dehydrogenase
  - d. Norepinephrine is converted to epinephrine in the storage vesicles
97. Which one is FALSE concerning autonomic modulation?
- a. Sympathetic stimulation causes constriction of the eye pupil
  - b. Parasympathetic stimulation causes contraction of the ciliary muscle
  - c. Sympathetic stimulation of sweat glands is via Acetylcholine
  - d. Parasympathetic stimulation causes little or no effect on blood vessels
98. Which one is TRUE regarding the sarcoplasmic reticulum?
- a. It's the rough endoplasmic reticulum found in myocytes
  - b. Its stores and pumps calcium
  - c. Dihydropyridine receptors are located on the sarcolemma
  - d. Ryanodine receptors are located on the T-tubules
99. Which one is FALSE according to excitation – contraction coupling (E-C) contraction?
- a. Exposure of actin binding site for myosin allows formation of myosin/actin cross-bridges
  - b. Termination involves pumping  $Ca^{2+}$  into sarcoplasmic reticulum using ATP
  - c. Contractions are short-lived than action potentials
  - d. Cardiac muscle doesn't undergo tetany because of absolute refractory period
100. Which one is NOT true about neospinothalamic pathway?
- a. Fast pain
  - b. Terminate in laminae I (lamina marginalis)
  - c. Second order neurons decussate
  - d. GABA involved
101. One of the following is NOT a sensory tract?
- a. Posterior column tract
  - b. Spinothalamic tract
  - c. Spinocerebellar tract
  - d. Medial tectospinal tract
102. One of the following is incorrect about the tympanic membrane?
- a. Thin connective tissue membrane that vibrates in response to sound
  - b. Equalizes pressure in the middle ear cavity with the external air pressure
  - c. Transfers sound energy to the middle ear ossicles
  - d. Boundary between outer and middle ears
103. Which one is FALSE concerning dorsal spinocerebellar tract?
- a. Primary function is to relay proprioceptive input
  - b. First order neurons project contralaterally to nucleus dorsalis of Clarke
  - c. Second-order neurons arise from the dorsal nucleus of Clarke ascend ipsilaterally to the inferior cerebellar peduncle
  - d. Third order neurons are passed to the cerebellum as 'mossy fibres

104. One of the following DOES NOT contain first order neurons of gustatory pathway
- Mandibular branch of trigeminal nerve
  - Corda tympani branch of facial nerve
  - Glossopharyngeal nerve
  - Vagus nerve
105. Which one is TRUE regarding olfactory receptors?
- They are ligand gated ion channels
  - They have no specific ligand
  - They inhibit adenylyl cyclase
  - Vomer nasal organ is well developed in humans
106. Regarding the primary motor area, which one is FALSE?
- Lies in the first convolution of the frontal lobes anterior to the central sulcus
  - Controls the musculature of the opposite side of the body
  - Face is unilaterally represented
  - Face and mouth are represented near the sylvian fissure
107. In conditioned reflex:
- The stimulus that normally produces a particular innate response is called conditioned stimulus.
  - In conditioned Stimulus, a relationship between an action by an animal and an external stimulus is an instinct thus never learned.
  - There is a response to a stimulus that previously elicited little or no response, acquired by repeatedly pairing the stimulus with another stimulus that normally produces the response.
  - Once conditioned reflex is developed it becomes permanent even in absence of further stimulation
108. Wernicke's area:
- The area in the brain concerned with word formation.
  - Is located in the cerebellum.
  - In absence of visual stimulation, words cannot be interpreted.
  - Is the area of language comprehension
109. Angular gyrus area:
- Responsible for making meaning of perceived words into a language.
  - Does not associate with other parts of the brain in learning of a language.
  - In its absence, a person will not be able to learn words.
  - Is responsible for interpretation of faces
110. Uncorrectable loss of visual acuity that is not directly due to organic disease of the eye.
- Amblyopia
  - Strabismus
  - Diplopia
  - Hyperopia

111. Axons carry information from?
- The terminal dendrites to Cell body
  - The cell body to the axon terminals
  - Axon terminals to synapse
  - Synapse to terminal dendrites
112. Depolarization is?
- Returning to the RMP from either direction.
  - An increase in the potential difference between the inside and outside of the cell.
  - A decrease in the potential difference between the inside and outside of the cell.
  - When the inside of the cell becomes positive due to the reversal of the membrane potential polarity.
113. A graded potential hyperpolarization is?
- An inhibitory postsynaptic potentials
  - An excitatory postsynaptic potential
  - An action potential
  - A resting membrane potential
114. Which factor does not favor turbulent flow in a blood vessel
- Large-diameter vessels
  - High flow velocity
  - Low blood viscosity
  - High capacitance vessel
115. Which one truly occurs during the phases of an action potential?
- Repolarisation =  $K^+$  efflux
  - Hyperpolarisation =  $Na^+$  influx
  - After-hyperpolarisation =  $Ca^{2+}$  and  $Na^+$  channels open completely
  - Depolarization =  $K^+$  influx
116. Neuronal speed of conduction is determined by all except?
- Temperature
  - Length
  - Myelination
  - Diameter
117. This neuronal circuit is subject to facilitation or inhibition.
- Reverberatory
  - Parallel
  - Convergence
  - Divergence
118. Which is NOT TRUE of cardiac muscle?
- Cells are multinucleated
  - Are striated
  - Are under autonomic control
  - Control is achieved by pacemakers

119. Compared with the cardiac and skeletal muscles, the smooth muscle have:
- a. Have a lower oxygen consumption rate
  - b. The force of contraction is much weaker than in the skeletal muscle
  - c. Can sustain contractions for extended periods without fatiguing
  - d. Cannot exhibit tonic contraction and maintain tension when there is a continued load.
120. About the functions of the cerebellum:
- a. Orientation tremor results in an individual with intact cerebellum
  - b. Orientation tremor refers to the ability of the pendulous limb to gain the intended position after several attempts of oscillation back and forth following damage to the cerebellum.
  - c. Unintended overshooting of movement of a limb is common even in intact cerebellum.
  - d. It is one of centers for speech.