

SECTION A: CHOOSE THE ONE BEST ANSWER

1. Regarding Cerebellar Cortex:
 - (a) After lesions, disturbances are contralateral to the lesion
 - (b) It coordinates somatic motor activity and regulates muscle tone
 - (c) Sensory information received by the cerebellum is acted upon at a conscious level by this structure
 - (d) Speech is rarely disrupted after cerebellar damage
 - (e) **All are correct ***
2. The dermatome rule is used:
 - (a) Clinically by physicians to determine level of pain perception
 - (b) **To explain referred pain ***
 - (c) To discern the slow pain response
 - (d) To determine the extent of Cutaneous tissue damage
 - (e) A and C are correct
3. Which of the following are **not** part of the analgesia system?
 - (a) Periaqueductal gray matter
 - (b) Periventricular nuclei of the hypothalamus
 - (c) Raphe magnus nucleus
 - (d) Lateral spinothalamic tract
 - (e) **A and C are correct ***
4. The stretch reflex:
 - (a) The receptor organ is the extrafusal muscle fibre
 - (b) It does not normally respond to very minor degrees of stretch
 - (c) The muscle spindles involved in this reflex are most plentiful in the large antigravity muscles
 - (d) The gamma-efferent fibres that supply the spindles are unmyelinated
 - (e) **None of the above ***
5. The primary motor cortex:
 - (a) Receives no sensory input
 - (b) **Is active in the adjustment of motor activity to current sensory input ***
 - (c) Is not necessary for fine motor movement
 - (d) Gives rise to the extrapyramidal tract
 - (e) Is localized only in the frontal lobe
6. The functions of the basal ganglia include:
 - (a) The inhibition of muscle tone if they are all stimulated
 - (b) Coordinate fine movements of the digits
 - (c) The globus pallidus is not involved in setting background muscle tone
 - (d) The caudate nucleus and putamen inhibit gross motor movement
 - (e) **B and D are correct ***

7. The pyramidal tract:
- (a) Is composed solely of axons from pyramidal cells
 - (b) Is a crossed pathway
 - (c) Projects solely to the thalamus
 - (d) Originates from several areas of the cortex including area 4, frontal lobe, and the parietal lobe
 - (e) **B and D are correct ***
8. Which of the following functions are not attributable to the level of the spinal cord and/or lower brain?
- (a) Walking motions
 - (b) Reflex control of blood vessels
 - (c) Equilibrium
 - (d) Subconscious activities
 - (e) **None of the above ***
9. Which of the following are not located in the anterior horn of the spinal cord?
- (a) Anterior motor neurons
 - (b) **Interneurons ***
 - (c) Gamma motor neurons
 - (d) Alpha motor neurons
 - (e) None of the above
10. A lesion of which of the following structures may result in incoordination, reduced postural tone, and pendular phasic stretch reflexes?
- (a) Midbrain locomotor system
 - (b) Motor cortex
 - (c) Premotor cortex
 - (d) **Cerebellum ***
 - (e) Superior colliculus
11. An alpha- motoneuron that innervates a postural muscle such as the soleus muscle:
- (a) Is excited mono synaptically by Golgi tendon organ afferents
 - (b) Forms endplates on 3 to 6 skeletal muscle fibers
 - (c) Contributes to the patellar reflex
 - (d) Belongs to a fast fatigable motor unit
 - (e) **Is inhibited disynaptic when the antagonist muscle is stretched ***
12. Raising the skin temperature to 52°C activates:
- (a) Meissners corpuscles
 - (b) Merkel's cell endings
 - (c) **Nociceptors ***
 - (d) Panician corpuscles
 - (e) Ruffini endings

13. The sensation of high-frequency vibration is signaled by:
- (a) Golgi tendon organs
 - (b) Meissners corpuscles
 - (c) Muscle spindles
 - (d) Nociceptors
 - (e) Pacinian corpuscles *
14. The cell type that forms cerebrospinal fluid is the:
- (a) Ependymal cell*
 - (b) Neuron
 - (c) Oligodendroglial cell
 - (d) Satellite cell
 - (e) Schwann cell
15. The cerebrospinal fluid (CSF):
- (a) Has a higher concentration of glucose than blood
 - (b) Contains more protein per unit volume than blood
 - (c) Is formed at a rate that is proportional to the CSF pressure
 - (d) Is absorbed at a rate that is proportional to the CSF pressure*
 - (e) Is removed largely through dural sleeves of the spinal nerve roots
16. This question concerns peripheral and central neurotransmitters and neuromodulators, which statement is most appropriate?
- (a) Noradrenaline is not found in neurons in the central nervous system
 - (b) Glutamate is an inhibitory transmitter
 - (c) The peptide substance P is found in peripheral motor nerve axons
 - (d) Somatostatin, vasointestinal peptide and cholecystokinin are peptides which are found both in the gut and in neurons of the brain*
 - (e) GABA receptors are found in the peripheral tissues
17. Which one of the receptors is responsible for monitoring the rate of muscle stretch?
- (a) Nuclear bag intrafusal fibers
 - (b) Nuclear chain intrafusal fibers*
 - (c) Golgi tendon organs
 - (d) Pacinian corpuscles
 - (e) Ruffinis corpuscles

18. Which one of the following statements best describes cold receptors?
- (a) Cold receptors produce a sensation of warmth when their firing frequency is very low
 - (b) Sudden decreases in temperature always increase the firing frequency *of cold receptors
 - (c) Cold receptors are tonic receptors that slowly increase their firing rate when the temperature is decreased
 - (d) Cold receptors do not fire at skin temperatures above body temperature
 - (e) Cold receptors produce a sensation of pain when their firing frequency is very high
19. Which one of the following statements about pain sensation is correct?
- (a) Painful sensations can be elicited by any sensory neuron if its firing frequency is high enough
 - (b) Painful sensation arising from a particular area of the skin occur only when pain fibers from that area of the skin are stimulated
 - (c) Cutting the anterolateral tract or both sides of the spinal cord will permanently eliminate painful sensations arising from skin region innervated by sensory neurons located below the site of the lesion
 - (d) Pain fibers conduct impulses to the spinal cord and to skin regions surrounding the site of a painful stimulus
 - (e) All the above are correct *
20. Which one of the following sensory systems uses unmyelinated fibers to convey information to the central nervous system (CNS)?
- (a) Proprioception
 - (b) Vision
 - (c) Vibration
 - (d) Temperature *
 - (e) Pressure
- 21) Which of the statement is Correct regarding the blood supply to brain:
- a. Irreversible brain damage occurs if the blood flow is 50ml/100gm/min
 - b. The vertebral artery is always a branch of first part of subclavian artery
 - c. Cerebral blood flow is greater in the white matter than in the gray matter
 - d. The posterior cerebral artery supply most of the lateral surface of cerebral hemisphere
 - e. The anterior cerebral artery supply medial surface of the cerebral hemisphere to the parieto-occipital sulcus *

22) Occlusion of the left middle cerebral artery can produce the following signs EXCEPT:

- a. Ipsilateral deafness
- b. **Aplasia.***
- c. Contralateral hemiparesis and hemisensory loss of the face and arm.
- d. Change in personality.
- e. Agraphia and alexia.

23) Which of the following statements regarding to the intracranial blood vessel is Correct:

- a. Posterior Communicating normally carry blood from the internal carotid to the posterior cerebral artery.
- b. **Occlusion of the labyrinth in the artery can cause vertigo.***
- c. The two Anterior Cerebral Artery may arise by a common stem.
- d. Bleeding from an aneurysm in the circle cause subdural hemorrhage.
- e. The anterior communications connect the anterior and middle cerebral arteries.

24) Which of the following statements regarding to the Anterior Choroidal Artery Correct:

- a. Branch of Anterior Cerebral Artery.
- b. It is of wide caliber and hence rarely thrombosis.
- c. It anastomoses with the Posterior Choroidal Artery which is a branch of the middle Cerebral Artery.
- d. **It supplies the hippocampus Formation.***
- e. The thrombosis causes ipsilateral blindness because it supplies the optic nerve.

25) Which of the following statements regarding to the Posterior Cerebral Artery Correct:

- a. Its blockage can cause Contralateral Blindness.
- b. **Its choroidal branch supplies the choroid plexus.***
- c. Its central branches pass through the Posterior perforated substance to supply parts of thalamus and lentiform nucleus.
- d. It also supplies the choroid plexus.
- e. It is always a branch of the basilar artery.

26) The cortical branches of the Anterior Cerebral Artery can cause all EXCEPT:

- a. **Contralateral Face weakness without sensory loss.***
- b. Paralysis and sensory deficit of the contralateral leg.
- c. Behavioral and cognitive abnormalities.
- d. Memory and emotional disturbance.
- e. Disorder of sphincter control.

27. Which of the following structures pass between the infratemporal fossa and the pterygopalatine fossa through the pterygomaxillary fissure?

- A. posterior superior alveolar nerve *
- B. maxillary nerve
- C. zygomatic nerve
- D. greater palatine nerve
- E. more than one of the above are correct

28. What type of ganglion is the pterygopalatine ganglion?

- A. sympathetic ganglion
- B. parasympathetic ganglion
- C. sensory ganglion
- D. somatic motor ganglion
- E. more than one of the above are correct *

29. Athetosis type movements are often identified with a _____ lesion.

- A. Midbrain
- B. Basal ganglia *
- C. Subthalamic
- D. Thalamus
- E. Cranial nerve VI

30. Changes in personality and judgment are often associated with a _____ lesion.

- A. Frontal lobe *
- B. Parietal lobe
- C. Broca's area
- D. Wernicke's area
- E. Visual area

31. Changes in motor aphasia are often associated with a _____ lesion.

- A. Frontal lobe
- B. Parietal lobe
- C. Broca's area *
- D. Wernicke's area
- E. Visual area

32. Changes in sensory aphasia are often associated with a _____ lesion.

- A. Frontal lobe
- B. Parietal lobe
- C. Broca's area
- D. Wernicke's area*
- E. Visual area

33. Which of the following diseases has not been directly linked with Bell's palsy?
- A. AIDS
 - B. Diabetes
 - C. Lyme disease
 - D. Alzheimer's disease***
 - E. Shingles
34. Which of the following cervical nerve roots best corresponds with activation of the triceps muscle?
- A. C5
 - B. C6
 - C. C7 ***
 - D. T2
 - E. T3
35. The trunks of the brachial plexus carry all of the following except:
- A. motor fibers
 - B. sensory fibers
 - C. sympathetic fibers
 - D. parasympathetic fibers ***
 - E. alpha fibers
36. Which of the following cranial nerves exits the brainstem via the preolivary sulcus?
- A. Abducens (VI)
 - B. Facial (VII)
 - C. Hypoglossal (XII)***
 - D. Vagus (X)
 - E. Trigeminal (V)
37. Which of the following cranial nerves passes between the posterior cerebral artery and the superior cerebellar artery as it exits the brainstem?
- A. Abducens
 - B. Oculomotor***
 - C. Optic
 - D. Trigeminal
 - E. Vestibulocochlear
38. Jerky and sudden random movements are often associated with a _____ lesion.
- A. Midbrain
 - B. Basal ganglia ***
 - C. Subthalamic
 - D. Thalamus
 - E. Frontal lobe

39. Which of the following arteries supplies Broca's area?
A. ACA
B. MCA*
C. PCA
D. Lateral striate
E. anterior communicating
40. Which of the following arteries if ruptured can cause an oculomotor palsy?
A. ACA
B. MCA
C. PCA *
D. Lateral striate
E. anterior communicating
- 41 Which of the below mentioned opioid analgesic agent might produce anxiety, dysphoria and hallucinations

A. Fentanyl
B. Pentazocine*
C. Methadone
D. Morphine
- 42 Opioid receptors are linked with

A. Euphoria, analgesia, depression in respiration and physical dependence*
B. Mydriasis, spinal analgesia, sedation and physical dependence
C. Hallucinations, dysphoria, vasomotor and respiratory stimulation
D. Euphoria, analgesia, physical dependence and respiratory stimulation
- 43 The drug of choice for myoclonic seizures is:

A. Phenobarbital
B. Carbamazepine
C. Phenytoin
D. Clonazepam*
- 44 A 20-year old patient presented with early pregnancy was admitted for Medical Termination of Pregnancy in day care facility. What will be the anaesthetic induction agent of choice?

A. Thiopentone
B. Ketamine
C. Propofol *
D. Diazepam

- 45 A young boy undergoes eye surgery under day care anaesthesia with succinyl choline and propofol and after 8 hours he starts walking and develops muscle pain. What is the likely cause?
- A. Early mobilisation
 - B. Due to the effects of eye surgery
 - C. Succinyl choline *
 - D. Propofol
- 46 All of the following factors influence the rate of induction of anaesthesia with an inhaled anaesthetic EXCEPT:
- A. Aqueous solubility of the anaesthetic
 - B. Patient history of malignant hyperthermia *
 - C. Anaesthetic concentration in inspired air
 - D. Pulmonary blood flow rate
- 47 Which of these drugs is recommended for the treatment of drug induced Parkinsonism?
- A. Benztropine *
 - B. Selegiline
 - C. Haloperidol
 - D. Levodopa
- 48 Which of the following produces dissociative anaesthesia?
- A. Ketamine *
 - B. Propofol
 - C. Thiopentone
 - D. Enflurane
- 49 Which one of the following local anaesthetics is most likely to cause allergic reactions?
- A. Procaine *
 - B. Bupivacaine
 - C. Lignocaine
 - D. Mepivacaine
- 50 Which one of the following anti-bacterial agents should not be used with d-tubocurarine?
- A. Norfloxacin
 - B. Streptomycin *
 - C. Doxycycline
 - D. Cefotaxime

51 The pathophysiologic basis for antiparkinsonism therapy is:

- A. Selective loss of dopaminergic neurones*
- B. The loss of cholinergic neurones
- C. The loss of glutaminergic neurones
- D. Increased GABA activity

52 Thiopentone is a “short-lasting” barbiturate because

- A. It is metabolised rapidly by brain and liver
- B. It is rapidly distributed throughout the body *
- C. It is administered by intravenous injection
- D. It induces tachyphylaxis

53 Which of the following is a dopamine-receptor agonist?

- A. Metoclopramide
- B. Bromocryptine *
- C. Fluphenazine decanoate
- D. Amantidine

54 Phenytoin

- A. Has a wide therapeutic index
- B. Inhibits hepatic microsomal enzymes
- C. Exhibit first order elimination kinetics at high doses
- D. Exhibit zero order elimination kinetics at usual therapeutics doses *

55 Which of the following drugs is least likely to cause seizures?

- A. Amitriptyline *
- B. Lithium
- C. Pethidine
- D. Acetazolamide

56 Which of the following drugs would you recommend for absence seizures?

- A. Valproate *
- B. Phenobarbital
- C. Carbamazepine
- D. Gabapentin

57 Which of these opioid analgesics would you recommend for relieving the acute, severe pain of renal colic?

- A. Morphine
- B. Methadone
- C. Pethidine *
- D. Naltrexone

58 Which of these drugs is effective in stopping generalised tonic-clonic status epilepticus?

- A. Valproate
- B. Lorazepam *
- C. Ethosuximide
- D. Lamotrigine

59 Which of the following is a good choice to treat newly diagnosed generalized anxiety disorder in a patient who is a truck driver?

- A. Alprazolam
- B. Triazolam
- C. Buspirone *
- D. Trazodone

60 Which of the following is a potential adverse effect of clozapine?

- A. Cholestatic jaundice
- B. QT prolongation
- C. Galactorrhoea
- D. Agranulocytosis *

SECTION B. In question (61- 110) write down “T” or “F” if the statement is true or false against the letter (A, B,C, D& E) corresponding to the statement. Marks for wrong judgment will be deducted.

61. The ankle jerk reflex is exaggerated:
- (a) When the muscles are voluntarily contracted F
 - (b) Immediately after complete spinal cord transaction at the cervical level T
 - (c) In extrapyramidal system disorders such as Parkinsonism T
 - (d) When cerebellar function is lost F
62. Sensory disturbance consisting of:
- (a) Pain, sensory loss and paraesthesiae in one leg suggests a spinal cord lesion F
 - (b) Loss of pain, temperature but not touch sensation suggests a lesion in the thalamus F
 - (c) Loss of all sensations in the skin region suggests a peripheral nerve or posterior root lesion T
 - (d) Loss of two-point discrimination but not touch sensation suggests a lesion in the thalamus F
63. Posterior damage in the spinal cord may impair:
- (a) The ability to stand steadily with the eyes closed F
 - (b) Touch sensation T
 - (c) The flexor plantar response to stimulation of the sole T
 - (d) Vibration sense T
64. Lower motor neuron disease:
- (a) Causes loss of voluntary movements but not of reflex movements F
 - (b) Causes eventual wasting of muscles concerned T
 - (c) Does not affect ventilation of the lungs T
 - (d) Is associated with involuntary twitching of small fasciculi in the affected muscles F
65. The cerebellum receives its information concerning muscle movement from the:
- (a) Cortex F
 - (b) Muscle spindles T
 - (c) Golgi tendon apparatus T
 - (d) Medulla T

66. In the descending tracts in the spinal cord:
- (a) The lateral corticospinal tract extends laterally to the surface of the spinal cord T
 - (b) The vestibulospinal tract is a major crossed tract from the opposite vestibular nuclei F
 - (c) The vestibulospinal tract predominantly inhibits extensor motoneurons F
 - (d) Reticulospinal fibres are scattered throughout the anterior white columns T
67. The ascending tracts in the spinal cord:
- (a) The fasciculus gracilis and cuneatus contain fibres that mediate tactile discrimination T
 - (b) The lateral spinothalamic tract carries vibration and pressure modalities F
 - (c) The spinocerebellar tracts convey impulses from Golgi tendon organs T
 - (d) All afferent fibres cross the midline at some stage in the spinal cord F
68. Sensory nerves terminating in the grey matter of the spinal cord:
- (a) Elicit reflex responses F
 - (b) Enter the cord through the sensory roots T
 - (c) Enter the cord through the corticospinal tracts F
 - (d) Have facilitatory functions F
69. The primary sensory endings of a muscle spindle in a voluntary muscle is stimulated by:
- (a) Shortening of an antagonist muscle F
 - (b) Relaxation of the muscle when under load F
 - (c) Shortening of the extrafusal fibers of the muscle F
 - (d) Stimulation of the gamma efferents to the muscle spindle T
70. In which of the following tracts in the spinal cord do second-order sensory neurons with cell bodies in the dorsal horn ascend to more rostral spinal segments or to the brain?
- (a) Ventral corticospinal tract F
 - (b) Lateral spinothalamic tract T
 - (c) Anterior vestibulospinal tract T
 - (d) Ventral spinothalamic tract T
71. Pain receptors in the gut and urinary tract may be stimulated by:
- (a) Distension T

- (b) Inflammation of the wall T
 - (c) Acid fluid T
 - (d) Vigorous rhythmic contractions behind an obstruction T
72. General sensory pathways:
- (a) The anterior spinothalamic tracts transmit pain and crude touch F
 - (b) The pain receptors are free nerve endings T
 - (c) Information from the muscle spindle and golgi tendon organ does not reach consciousness F
 - (d) Both the spinothalamic and dorsal column pathways are highly discrete T
73. The pyramidal system:
- (a) Destruction causes weakness and clumsiness F
 - (b) Has fibres which originate from the pre-motor area T
 - (c) Is also concerned with gross movements T
 - (d) Controls posture T
74. Volume and composition of cerebro-spinal fluid (CSF):
- (a) About half of the CSF is in the ventricles at any one time F
 - (b) CSF has similar composition to plasma except for protein F
 - (c) CSF protein levels are about half that in plasma F
 - (d) CSF glucose falls dramatically in tuberculous meningitis F
75. In reflex actions:
- (a) The interval between the stimulus and the final effect is chiefly determined by the length of the afferent and efferent nerves F
 - (b) Spatial summation refers to simultaneous threshold stimulation of two or more nearby afferent nerves F
 - (c) Synapses are the first part of a reflex to become fatigued T
 - (d) Flexor reflexes are probably the most primitive of all reflexes T
76. In the transmission of painful stimuli:
- (a) Pain receptors are polymodal in nature T
 - (b) Sharp, rapid, intense pain is carried by heavily myelinated fibres T
 - (c) Unmyelinated C fibres only carry slow, dull, diffuse, aching pain T
 - (d) Some pain fibres remain uncrossed in the spinal cord T
77. Thermoperception:
- (a) The end organs of Krause and Ruffini subserve cold and heat F
 - (b) Thermoreceptors that respond to cold (cold spots) are more plentiful than those that respond to heat (hot spots) T
 - (c) Maximal discharge from 'hot spots' is between 40 and 45°C T

- (d) Cold spots show a rapid discharge when the temperature exceeds 45°C T

78. In the upper motor neurone lesion affecting one side of the body, the following abnormalities occur in the affected limb:

- a) Wasting of muscles F
- b) Increased response to phasic stretch reflex T
- c) Greater weakness in the flexor muscles of the affected arm than extensors T
- d) Increased firing in the type of afferent fibres from the muscle T

79. What are the results of unilateral damage to the cerebellum in man

- a) Disturbances of posture and disorganization of voluntary movement T
- b) Hemiplegia on the same side F
- c) Hemiplegia on the opposite side F
- d) Loss of sense of position on the same side of the body causing uncoordinated movements if the eyes are shut T

80 Drugs used in the treatment of insomnia include:

- A. Zolpidem T
- B. Phenobarbitone F
- C. Buspirone T
- D. Nitrazepam F

81 Drugs likely to increase the effects of benzodiazepines include:

- A. Ethanol T
- B. Cimetidine F
- C. Rifampicin T
- D. Flumazenil F

82 Flumazenil:

- A. Blocks the actions of zolpidem T
- B. Blocks the actions of phenobarbital F
- C. Is a benzodiazepine antagonist T
- D. Is used as a muscle relaxant F

83 Concerning zolpidem:

- A. Is used in the management of epilepsy F
- B. Has higher risk of development of dependence compared to benzodiazepines F
- C. Risk of seizures limits its clinical use F
- D. Is agonist on benzodiazepine receptors T

84 Anti-seizure drugs that act by enhancing GABA-mediated neuronal inhibition include:

- A. Ethosuximide F
- B. Carbamazepine F
- C. Clonazepam T
- D. Phenobarbital T

85 Anti-seizure drugs that have an inhibitory effect on T-type calcium channels in the thalamic neurones include:

- A. Carbamazepine F
- B. Lamotrigine F
- C. Ethosuximide T
- D. Valproate T

86 Which of these drugs are used in the management of absence seizures?

- A. Valproate T
- B. Carbamazepine F
- C. Ethosuximide T
- D. Tiagabine F

87 Features of amitriptyline overdose may include:

- A. Cardiac arrhythmias T
- B. Respiratory depression T
- C. Seizures T
- D. Hypotension T

88 Which of these are dose-related adverse effects of phenytoin?

- A. Mental confusion F
- B. Hirsutism T
- C. Sedation T
- D. Hepatitis F

89 Which of these anti-seizure drugs induce hepatic microsomal enzymes?

- A. Carbamazepine T
- B. Valproate F
- C. Clonazepam F
- D. Phenytoin T

90 Pethidine:

- A. Causes less miosis than morphine T
- B. Is metabolised to active substances with analgesic properties F
- C. Has a longer duration of action than morphine F
- D. Possesses atropine-like activity F

91 Concerning tardive dyskinesia:

- A. The condition can be caused by haloperidol T
- B. Is due to hypersensitivity of dopamine receptors T
- C. Anticholinergic drugs are a useful therapy F
- D. The lesion is in the cerebellum F

92 Which of the following drugs are hepatotoxic?

- A. Valproate T
- B. Isoflurane T
- C. Halothane T
- D. Chlorpromazine T

93 In patients on monoamine oxidase inhibitors, avoid:

- A. Nitrous oxide F
- B. Pethidine T
- C. Amphetamine T
- D. Phenylephrine T

94 Carbamazepine

- A. Is an anticonvulsant T
- B. Induces liver enzymes T
- C. Is a benzodiazepine F
- D. Is used to treat trigeminal neuralgia T

95 Side effects of chlorpromazine include:

- A. Diarrhoea T
- B. Parkinsonism T
- C. Postural hypotension T
- D. Bradycardia F

96 When levodopa is used to treat Parkinson's disease it

- A. Has useful anti-emetic activity F
- B. May be combined with carbidopa to reduce peripheral metabolism of levodopa T
- C. Is converted into a false transmitter F
- D. Can cause psychotic behaviour T

97 The following drugs by affecting dopaminergic mechanisms can have the actions indicated

- A. Neuroleptics can induce acute dyskinesias T
- B. Reserpine can alleviate the symptoms of Parkinson's disease F
- C. Chlorpromazine can bring about tardive dyskinesias T
- D. Haloperidol can be used to treat tardive dyskinesias F

98 Blockade of dopamine receptors:

- A. Can be an effective treatment for psychotic conditions T
- B. Is an effective treatment of depression F
- C. Can cause a Parkinson –like syndrome T
- D. Can lead to infertility T

99. Clinical uses of barbiturates include:

- A. Anxiolysis T
- B. Management of pilepsy T
- C. General anaesthesia T
- D. Sleep induction T

100. The following structures are part of the diencephalon?

- (A)** Caudate nucleus
- (B)** fornix
- (C)** Globus pallidus
- (D)** external capsule
- (E)** Thalamus T

101. Which of the cranial nerves exits the midbrain?

- (A)** CN I
- (B)** CN II
- (C)** CN III
- (D)** CN IV
- (E)** CN VI T

102. Which part of the ventricular system contains choroid plexus?

- (A)** Cerebral aqueduct
- (B)** Frontal horn T
- (C)** Interventricular foramen T
- (D)** fourth ventricle T
- (E)** Third ventricle T

103. A 50-year-old hypertensive woman complains of numbness and weakness in her left leg and foot. Which of the following arteries'occlusion can account for this complaint?

- (A)** Anterior cerebral T
- (B)** Anterior choroidal
- (C)** Interior carotid
- (D)** Middle cerebral

(E) Posterior

104. A 15-year-old boy is hit on the temple with a baseball and becomes unconscious. After About 10 minutes, he regains consciousness, but he soon becomes lethargic, and over the next 2 hours, he becomes stuporous. His pupils are unequal. Intracranial hemorrhage is suspected.

Which of the following arteries is most likely to be the source of the hemorrhage?

- (A)** Anterior cerebral
- (B)** Anterior communicating
- (C)** Basilar
- (D)** Middle cerebral
- (E)** Middle meningeal

105. Which artery supplies the caudate and putamen and anterior limb of the internal capsule via the medial striate artery (of Heubner)?

- (A)** Anterior cerebral
- (B)** Anterior choroidal
- (C)** Anterior communicating
- (D)** Middle cerebral
- (E)** Posterior communicating

106. Which artery supplies the cochlea?

- (A)** Anterior inferior cerebellar
- (B)** Labyrinthine
- (C)** Pontine
- (D)** Posterior cerebral
- (E)** Superior cerebellar

107. A patient has the ability to stand with open eyes but falls with closed eyes. A lesion of which pathway is likely responsible for this symptom?

- (A)** Anterior spinocerebellar tract
- (B)** Anterior spinothalamic tract
- (C)** Lateral spinothalamic tract
- (D)** Posterior column syndrome
- (E)** Posterior spinocerebellar tract

108. Which of the following nerves innervates the auricle (pinna) of the external ear?

- (A)** V1
- (B)** C2
- (C)** V3
- (D)** III
- (E)** VIII

109. A six-year-old girl has brief, irregular contractions in her feet; symptoms are suspected to be a result of an untreated strep infection. What is the diagnosis?

- (A) Chorea gravidarum
- (B) Chorea major
- (C) Ballism
- (D) Hemiballism
- (E) Sydenham chorea T

110. Otoliths are mainly involved in sensing

- A) Sound amplitude and frequency
- B) Angular velocity and acceleration
- C) Linear velocity
- D) Linear acceleration T
- E) None of the above

END OF EXAMS

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENTS OF ANATOMY AND PHYSIOLOGICAL SCIENCES
END OF ACADEMIC YEAR EXAMINATION – JUNE, 2015

NEUROSCIENCES

PGY 4110

PAPER II

DURATION:

THREE (3) HOURS

COMPUTER NO.:

[illegible]

INSTRUCTIONS TO CANDIDATES

1. Write your computer number on BOTH the question paper and the special MCQ answer sheet
2. Carefully follow the instructions pertaining to each section.

