Please choose the best answer:

1. The recurrent laryngeal nerve is part of which cranial nerve?
   a. oculomotor
   b. trigeminal
   c. vagus
   d. spinal accessory

2. Which ganglion supplies the parotid salivary gland?
   a. submandibular
   b. ciliary
   c. otic
   d. pterygopalatine

3. Which cranial nerve does not innervate the taste buds?
   a. facial
   b. trigeminal
   c. glossopharyngeal
   d. vagus

4. Which muscles are innervated by the spinal accessory nerve?
   a. facial and obicularis oculi
   b. masseter and temporalis
   c. buccinator and levator palpebra
   d. trapezius and sternocleidomastoid

5. The motor cranial division of the spinal accessory nerve begins in the
   a. inferior salivatory nucleus
   b. nucleus ambiguus
   c. nucleus solitarius
   d. dorsal motor nucleus of XI

6. Which is not true about visceral afferent neurons?
   a. they are found in some cranial nerve ganglia
   b. they are found in the sympathetic chain
   c. they are in the dorsal root ganglion like somatic afferent cells
   d. their axon can go to the lateral horn in the spinal cord segment
7. Prevertebral ganglia are found close to
   a. thoracic aorta branches
   b. common iliac arterial branches
   c. renal artery branches
   d. abdominal aortic branches

8. Which is not a target for parasympathetic postganglionic fibers
   a. smooth muscle
   b. cardiac muscle
   c. skeletal muscle
   d. glands

9. The preganglionic fibers from the superior salivatory nucleus accompany which cranial nerve?
   a. X
   b. XI
   c. IX
   d. VII

10. The postganglionic fibers from the ciliary ganglion innervate the
    a. radial fibers of the iris
    b. lacrimal gland
    c. SA node
    d. constrictor muscles of the iris and ciliary body

11. The cornus ammonis refers to the
    a. olfactory bulb
    b. fornix
    c. hippocampus
    d. stria terminalis

12. In Alzheimer’s disease plaques and tangles are not found initially primarily in the
    a. entorhinal cortex
    b. hippocampus
    c. frontal lobe
    d. occipital lobe
13. Which terms are not commonly associated with the hippocampal complex?
   a. neurogenesis in the adult brain
   b. schizophrenia and the developing brain
   c. rich in steroid receptors
   d. temperature regulation

14. Axons in the olfactory tract arise from
    a. bipolar nerve cells
    b. mitral and tufted cells
    c. basal cells
    d. sustentacular cells

15. What is unusual about the granule cells in the olfactory bulb?
    a. they have no dendrites
    b. they have no axons
    c. they are pseudobipolar cells
    d. they send their axons to the contralateral olfactory bulb

16. What is not correct about the olfactory nerve axons?
    a. they enter the skull via the cribriform plate of the ethmoid bone and are thus subject to severe trauma from a strong blow on the occipital bone
    b. they are the shortest cranial nerves
    c. they are the longest cranial nerves
    d. they participate in the formation of glomeruli in the olfactory bulb

17. The anterior commissure is formed by
    a. dendrites from tufted cells
    b. axons from the neurons in the anterior nucleus of the olfactory tract
    c. axons from mitral cells
    d. dendrites from granule cells
18. The diagonal band of Broca connects the amygdala with the
   a. septal area
   b. hippocampus
   c. hypothalamus
   d. entorhinal cortex

19. The olfactory cortex consists of the
   a. amygdala and the septal area
   b. periamygdaloid area and the prepyriform cortex
   c. anterior perforated substance and the olfactory tubercle
   d. orbital frontal cortex and the olfactory tubercle

20. What is not correct about the nucleus of Edinger Westphal?
   a. it accompanies the oculomotor nerve
   b. it provides the preganglionic parasympathetic fibers to the ciliary ganglion
   c. it is found rostral to the oculomotor nucleus in the midbrain
   d. it is found ventral to the inferior colliculus

21. The posterior end of the superior temporal sulcus is
   a. area 39 or the angular gyrus
   b. area 40 or the supramarginal gyrus
   c. area 5 or the superior parietal area
   d. area 41 or Heschl’s gyrus

22. Injury to the angular gyrus can display these symptoms.
   a. difficulty in speaking
   b. difficulty in handling concepts and logic
   c. difficulty in hearing
   d. astereognosis
23. Which is not appropriate for the primary visual cortex?
   a. it is often called the striate cortex because of the white line of Gennari
   b. it has a well defined layer IV which receives the axons from the lateral geniculate body
   c. it is superior and inferior to the calcarine fissure
   d. it has large pyramidal cells in layer IV

24. Cortical areas 18 and 19 (V2 and V3)
   a. deal with past visual experiences
   b. deal with past auditory experiences
   c. have a white line of Gennari
   d. are only at the occipital pole of the cerebral hemispheres

25. What is correct about the neglect syndrome?
   a. it is most commonly related to the left cerebral hemisphere
   b. it is primarily in the inferior parietal area 40
   c. the right hemisphere displays the syndrome more than the left
   d. the patient fails to recognize the same side of the body as the lesion

26. What is not correct about Wernicke's area?
   a. it is classically at the posterior region of the lateral fissure
   b. more recently its location is more varied
   c. it is concerned with word understanding
   d. it is often described as being in the anterior superior temporal gyrus

27. Deep to the uncus is the
   a. hippocampus
   b. amygdaloid nucleus
   c. parahippocampal gyrus
   d. anterior perforated substance
28. The projection fibers originating in the cerebral cortex
   a. connect one hemisphere with subcortical areas
   b. connect one part of one hemisphere with the same hemisphere
   c. connect one hemisphere with the opposite hemisphere
   d. connect the frontal lobe with the occipital lobe

29. Which fibers in the auditory pathway do not cross?
   a. dorsal acoustic stria
   b. axons from the nucleus of the lateral lemniscus
   c. brachium of the inferior colliculus
   d. fibers between the two inferior colliculi

30. The olivocochlear bundle is an inhibitory connection between the
    a. inferior olivary nucleus and the Purkinje cell dendrites
    b. superior olivary nucleus and the dorsal cochlear nucleus
    c. superior olivary nucleus and the ventral cochlear nucleus
    d. superior olivary nucleus and the organ of Corti

31. A lesion in the left Heschl’s gyrus will cause
    a. complete deafness on the left side
    b. complete deafness on the right side
    c. a diminution of hearing in the left ear
    d. no alteration in hearing because of the many crossing fibers

32. Injury to the nerve cells in the Gasserian ganglion in Meckel’s cave might cause
    a. loss of proprioception in the muscles of mastication
    b. loss of touch in the face and oral/nasal cavities
    c. loss of pain and temperature in the upper extremities
    d. inability to chew

33. The motor nucleus of the facial nerve is found in the
    a. tegmentum of the mesencephalon
    b. tegmentum of the pons
    c. reticular formation of the medulla
    d. periaqueductal grey of the midbrain
34. A lesion in the rostral part of the right facial nucleus will show
   a. paralysis of facial muscles on the contralateral side
   b. no paralysis of facial muscles
   c. inability to close right eye
   d. inability to open the right eye

35. The cingulum within the cingulate gyrus does not connect
   a. the frontal and parietal cortex with the parahippocampal gyrus
   b. areas dealing with emotional and sexual behavior
   c. the orbital frontal cortex with the occipital cortex
   d. the frontal cortex with the entorhinal cortex

36. The arcuate association fibers connect the
   a. occipital lobe with the frontal lobe
   b. frontal lobe with the anterior temporal pole
   c. orbital frontal with the occipital
   d. corticospinal with the corona radiata

37. Which is not an accurate subdivision of the hypothalamus?
   a. preoptic
   b. suprachiasmatic
   c. tuberal
   d. mammillary

38. The hypothalamus guarantees homeostasis and reproduction by not regulating responses
   a. endocrine
   b. autonomic
   c. behavioral
   d. motor

39. Oxytocin is functionally related to
   a. contraction of the vas deferens
   b. ovulation
   c. collecting urine
   d. secreting adrenal cortical hormones
40. A lesion in the ventromedial nucleus of the hypothalamus abolishes the
   a. desire to eat
   b. desire to drink
   c. desire to think
   d. desire to memorize

41. The arcuate nucleus in the hypothalamus regulates hormonal output through the hypothalamic-hypophyseal portal system to the _________.
   a. median eminence
   b. mammillary bodies
   c. fornix
   d. anterior pituitary

42. The sexual dimorphic nucleus is
   a. larger in females than males
   b. smaller in females and homosexual males than in heterosexual males
   c. absent in homosexual females
   d. only present for two years

43. The anterior nucleus of the hypothalamus does not
   a. play a role in temperature regulation
   b. slow the heart
   c. carry out autonomic functions
   d. produce antidiuretic hormone

44. The mammillary bodies
   a. regulates the sympathetic division of the ANS
   b. integrates limbic and midbrain functions
   c. receives fibers from the median forebrain bundle
   d. are not affected by alcoholism

45. The stria terminalis
   a. provides emotional content to behavior
   b. connects the hippocampus to the hypothalamus
   c. influences motor function via the thalamus
   d. projects to motor areas of the cerebral cortex
46. Shaffer collaterals
   a. branch from the Purkinje axons
   b. branch from the pyramidal cell dendrites in dentate gyrus
   c. serve as recurrent collaterals from the hippocampal pyramidal cell axons to the hippocampal pyramidal cell dendrites.
   d. stimulate the dentate gyrus granule cells via the entorhinal cortex possibly affecting memory processing

47. Which of these cell types are excitatory neurons in the cerebellar cortex?
   a. basket cells
   b. Purkinje cells
   c. stellate cells
   d. granule cells

48. A growing pituitary tumor can first cause _______ in the visual system.
   a. bitemporal hemianopsia
   b. complete blindness
   c. binasal hemianopsia
   d. blindness only in the left eye

49. The posterior limb of the internal capsule is of great clinical importance because it is the most frequent site of cerebral hemorrhage or "stroke". (lateral striate of middle cerebral) Moreover, when posterior limb of internal capsule is damaged the signs and symptoms are more widespread than those associated with a lesion of comparable size anywhere in the nervous system.

   What symptom would not occur from a stroke in the posterior limb of the internal capsule?
   a. contralateral spastic hemiplegia (corticospinal tract)
   b. contralateral hemianesthesia (spinothalamic tracts)
   c. contralateral lower facial paralysis (corticobulbar tracts)
   d. partial blindness (optic tract, homonymous hemianopsia)
50. A fifteen year old girl became obese and listless during the past year. She also had episodes of high fever without apparent cause and cessation of her menstrual period for several months. She drank copious amounts of water because she was always thirsty and she urinated excessively.

Locate which structure is not apparently involved.
   a. preoptic area
   b. tuberal area
   c. supraoptic and paraventricular nuclei
   d. mammillary area

THREE SATISFYING WORDS FOR SPRING:

KINDNESS, TRUTH AND BEAUTY