

NEUR 0010 Questions

Topic: Brain Rhythms and Sleep

NOTE before proceeding: This last third of the class varies greatly from year to year than the previous two thirds. I don't have time to rearrange all the questions to match the ever-changing order of material, so please check the heading above for the topics covered.

2009-3

72. An EEG recording from a student in Neuro 1 will have large amplitude and low frequency if it comes from the brain

- a) while studying
- b) during the final exam and recalling the PIP2 second messenger cascade
- c) in stage 4 sleep blissfully forgetting the exam after its completion
- d) in REM sleep after the exam, having a magical dream about a vacation at NeuroLand

73. The cause of most cases of epilepsy is

- a) injury
- b) tumor
- c) infection
- d) unknown

74. In a complex partial seizure

- a) consciousness is lost and the entire brain is affected
- b) consciousness is lost and only a portion of the brain is affected
- c) consciousness is not lost and the entire brain is affected
- d) consciousness is not lost and only a portion of the brain is affected

75. The tonic phase of a grand mal seizure is characterized by

- a) an aura that may consist of a sight, sound, or smell
- b) limb stiffening
- c) jerking of the face and limbs
- d) a sense of déjà vu

76. Non-REM sleep has all of the following characteristics EXCEPT:

- a) occasional dreams
- b) little movement of the body
- c) it is the majority of time asleep
- d) sympathetic ANS activity is elevated

77. During REM sleep, which of the following transmitter systems is the most active?

- a) 5-HT
- b) ACh
- c) Histamine
- d) NE

78. Cataplexy and sleep paralysis are characteristics of

- a) REM sleep disorder
- b) night terrors
- c) narcolepsy
- d) sleep apnea

2010-3

65. Desynchronized brain activity produces EEG signals that are:

- a) low amplitude and low frequency
- b) low amplitude and high frequency
- c) high amplitude and low frequency
- d) high amplitude and high frequency

66. The cause of most cases of epilepsy is:

- a) brain injury
- b) tumor
- c) genetic mutation
- d) unknown

67. A complex partial seizure:

- a) produces unconsciousness and affects the entire brain
- b) is limited to a portion of the brain and the person remains fully conscious
- c) affects the entire brain and is preceded by a sensory aura
- d) affects a limited portion of the brain and lasts for minutes

68. REM sleep is associated with all the following EXCEPT:

- a) dreaming
- b) atonia
- c) increased heart rate
- d) decreased respiration (breathing) rate

69. The longest period of REM sleep is usually:

- a) at sleep onset
- b) just before waking
- c) in the middle of the night
- d) while you are studying for a neuro exam

70. Most cases of narcolepsy are due to degeneration of:

- a) orexin neurons in the lateral hypothalamus
- b) dopamine neurons in the substantia nigra
- c) CLK neurons in the suprachiasmatic nucleus
- d) serotonin neurons in the raphe nucleus

71. Sleep deprived rats experience all the following EXCEPT:

- a) weight loss
- b) more infections
- c) death
- d) paradoxical atonia

2011-3

65. If you compare your brain activity during the exciting neuro 1 demonstration of the action potential to the mind-numbing wait at Ben & Jerry's on free cone day, you would find that:

- a) the EEG of the more active brain has greater amplitude
- b) the EEG of the more active brain has a higher frequency
- c) both (a) and (b)
- d) the active and drowsy brains cannot be distinguished based on EEG amplitude and frequency

66. In the largest number of cases, the cause of epilepsy is:

- a) neuron degeneration
- b) brain trauma
- c) tumor
- d) unknown

67. A seizure that involves a portion of the brain in one hemisphere and consciousness is lost is best described as:

- a) petit mal
- b) grand mal
- c) simple partial
- d) complex partial

68. A tonic-clonic seizure is also known as:

- a) petit mal
- b) grand mal
- c) simple partial
- d) complex partial

69. Compared to non-REM sleep, REM sleep has all the following EXCEPT:

- a) more movements of the body
- b) more movements of the eyes
- c) higher heart rate
- d) higher respiration rate

70. Which disorder results from degeneration of hypocretin neurons in the lateral hypothalamus:

- a) fatal familial insomnia
- b) REM sleep behavior disorder
- c) narcolepsy
- d) night terrors

71. Cataplexy is:

- a) sudden paralysis while conscious
- b) sudden entry into REM sleep
- c) sudden entry into slow wave sleep
- d) tremors that result from sleep deprivation