Lecture #12 Limbic System

Question 1: What type(s) of deficit(s) most likely result(s) from amygdala damage?

a) Loss of Spatial memory and maze learning

b) Failure to recognize facial expressions of fear

c) Uncontrolled anger and loss of sexually motivated responses

d) Loss of Spatial orientation and awareness of compass directions

e) Failure to recognize familiar faces (prosopagnosia)

Lecture #12 Limbic System

Question 2: Which structure has the stria terminalis (or terminal stria) as one of its prominent outputs?

a) Orbitofrontal cortex

b) Amygdala

c) Bed nucleus

d) Lateral nucleus of the hypothalamus

e) Hippocampus

Lecture #12 Limbic System

Question 3: What is the ultimate destination of most entorhinal cortex projections?

a) Anterior thalamus

b) Fornix

c) Parahippocampal cortex

d) Dentate gyrus

e) Amygdala

Lecture #12 Limbic System

Question 4: Which best matches, respectively - declarative memory: emotional memory?

a) Amygdala : hippocampus

b) Amygdala : amygdala

c) Hippocampus : hippocampus

d) Spatial memory : fact memory

e) Hippocampus : amygdala

Lecture #12 Limbic System

Question 5: Which projection is thought to be responsible for expression of innate fears?

a) Entorhinal cortex to hippocampus

b) Amygdala to lower motor neurons

c) Sensory thalamus to amygdala

d) Amygdalofugal fibers to amygdala

e) Amygdala to lateral geniculate nucleus

Lecture #12 Limbic System

Question 6: Which neurological problem is most likely to be present after a person suffers damage to the amygdala?

a) psychic blindness

b) agraphia

c) inability to understand the spoken voice

d) flat affect with little emotional response to upsetting events

e) inability to remember driving directions to an unfamiliar location

Lecture #12 Limbic System

Question 7: Which best matches, respectively - spatial memory : declarative memory?

a) Event memory : specific relay thalamic nuclei

b) Hippocampus : amygdala

c) Amygdala : amygdala

d) Amygdala : hippocampus

e) Hippocampus : hippocampus

Lecture #12 Limbic System

Question 8: Which neurological problem is most likely to be present after a person suffers damage to the hippocampal limbic loop?

a) psychic blindness

b) agraphia

c) inability to understand the spoken voice

d) flat affect with little emotional response to upsetting events

e) inability to remember driving directions to an unfamiliar location

Lecture #12 Limbic System

Question 9: What is the main destination of the fornix?

a) Parahippocampal cortex

b) Anterior thalamus

c) Mammillary body

d) Stria terminalis

e) Entorhinal cortex

Lecture #12 Limbic System

Question 10: Animals subjected to large, bilateral lesions of the temporal lobes exhibit which behavior (Kluver-Bucy syndrome)?

a) Diminished sexual activity

b) Loss of discrimination learning

c) Emotional over-reaction

d) Aversion to oral stimulation and eating

e) Loss of rank in social hierarchy

Lecture #12 Limbic System

Question 11: Which part of cerebral cortex outside the temporal lobe relates most closely to the amygdala?

a) Parietal cortex

b) Occipital cortex

c) Insular cortex

d) Posterior cingulate cortex

e) Anterior cingulate cortex

Lecture #12 Limbic System

Question 12: What is the main output of the dentate gyrus?

a) Mammillary bodies

b) Ventral thalamus

c) Parahippocampal cortex

d) Cerebellar cortex

e) Hippocampus proper (CA1-CA3)

Lecture #12 Limbic System

Question 13: What is the main output of the anterior thalamic nucleus?

a) Cingulate gyrus

b) Mammillary body

c) Entorhinal cortex

d) Parahippocampal cortex

e) Fornix

Lecture #12 Limbic System

Question 14: Which neurological deficit is revealed in animals after lesions of the hippocampus?

a) inability to recognize a previously learned object or task

b) failure to respond to social cues

c) inability to learn a new spatial discrimination

d) inability to detect odors

e) loss of sexual behaviors

Lecture #12 Limbic System

Question 15: Which was a deficit in the famous hippocampal patients H.M. and R.B.?

a) Wernicke's aphasia

b) Forgotten childhood events

c) Failure to recognize the scientists studying them

d) Loss of visuomotor skills

e) Loss of social skills in conversation

Lecture #12 Limbic System

Question 16: Where is the subiculum interposed in the limbic circuitry?

a) Between wide areas of cortex and the cingulate gyrus

b) Between the amygdala and the anterior thalamus

c) Between the hippocampus and fornix or cortex

d) Between the dentate gyrus and CA1-CA3

e) Between the amygdala and the dorsolateral thalamus

Lecture #12 Limbic System

Question 17: Which part of cerebral cortex outside the temporal lobe relates most closely to the hippocampus?

a) Parietal cortex

b) Anterior cingulate cortex

c) Occipital cortex

d) Posterior cingulate cortex

e) Insular cortex

Lecture #12 Limbic System

Question 18: What is most directly a part of the ventral striatum?

a) Dorsal pallidum

b) Lateral dorsal (dorsolateral) nucleus

c) Dentate nucleus

d) Anterior nucleus (of thalamus)

e) Nucleus accumbens

Lecture #12 Limbic System

Question 19: Fear memory is to amygdala as\_\_\_\_\_\_is to\_\_\_\_\_\_?

a) Face recognition : amygdala

b) Fear memory : hippocampus

c) Spatial memory : amygdala

d) Spatial memory : hippocampus

e) Face recognition : hippocampus

Lecture #12 Limbic System

Question 20: What is the main output of the mammillary body?

a) Anterior thalamus

b) Entorhinal cortex

c) Fornix

d) Parahippocampal cortex

e) Cingulate gyrus

Lecture #12 Limbic System

Question 21: Which kind of memory formation is not much affected by hippocampal damage?

a) Maze learning

b) Newly met people

c) Drawing while viewing through a mirror (mirror drawing)

d) World events

e) Spatial locations

Lecture #12 Limbic System

Question 22: Which nuclei of the amygdala are regarded as its input and processing center?

a) Denticulate

b) Central

c) Medial

d) Dentate

e) Basolateral