Lecture #12 Limbic System

Question 1: Which best matches, respectively - declarative memory: emotional memory?

a) Amygdala : amygdala

b) Hippocampus : hippocampus

c) Amygdala : hippocampus

d) Hippocampus : amygdala

e) Spatial memory : fact memory

Lecture #12 Limbic System

Question 2: Which neurological problem is most likely to be present after a person suffers damage to the hippocampal limbic loop?

a) inability to understand the spoken voice

b) flat affect with little emotional response to upsetting events

c) psychic blindness

d) inability to remember driving directions to an unfamiliar location

e) agraphia

Lecture #12 Limbic System

Question 3: Where is the subiculum interposed in the limbic circuitry?

a) Between the dentate gyrus and CA1-CA3

b) Between the amygdala and the anterior thalamus

c) Between the hippocampus and fornix or cortex

d) Between the amygdala and the dorsolateral thalamus

e) Between wide areas of cortex and the cingulate gyrus

Lecture #12 Limbic System

Question 4: What is most directly a part of the ventral striatum?

a) Dentate nucleus

b) Dorsal pallidum

c) Lateral dorsal (dorsolateral) nucleus

d) Anterior nucleus (of thalamus)

e) Nucleus accumbens

Lecture #12 Limbic System

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

a) Amygdala to lower motor neurons

b) Entorhinal cortex to hippocampus

c) Amygdala to lateral geniculate nucleus

d) Sensory thalamus to amygdala

e) Amygdalofugal fibers to amygdala

Lecture #12 Limbic System

Question 6: Which kind of memory formation is not much affected by hippocampal damage?

a) Spatial locations

b) World events

c) Maze learning

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

e) Newly met people

Lecture #12 Limbic System

Question 7: What is the main output of the anterior thalamic nucleus?

a) Cingulate gyrus

b) Mammillary body

c) Fornix

d) Parahippocampal cortex

e) Entorhinal cortex

Lecture #12 Limbic System

Question 8: What is the main output of the dentate gyrus?

a) Hippocampus proper (CA1-CA3)

b) Mammillary bodies

c) Ventral thalamus

d) Cerebellar cortex

e) Parahippocampal cortex

Lecture #12 Limbic System

Question 9: Which part of cerebral cortex outside the temporal lobe relates most closely to the amygdala?

a) Parietal cortex

b) Anterior cingulate cortex

c) Occipital cortex

d) Posterior cingulate cortex

e) Insular cortex

Lecture #12 Limbic System

Question 10: Which nuclei of the amygdala are regarded as its input and processing center?

a) Basolateral

b) Central

c) Medial

d) Dentate

e) Denticulate

Lecture #12 Limbic System

Question 11: What type(s) of deficit(s) most likely result(s) from amygdala damage?

a) Failure to recognize facial expressions of fear

b) Loss of Spatial memory and maze learning

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 12: What is the main destination of the fornix?

a) Parahippocampal cortex

b) Entorhinal cortex

c) Mammillary body

d) Anterior thalamus

e) Stria terminalis

Lecture #12 Limbic System

Question 13: Which was a deficit in the famous hippocampal patients H.M. and R.B.?

a) Wernicke's aphasia

b) Loss of social skills in conversation

c) Loss of visuomotor skills

d) Forgotten childhood events

e) Failure to recognize the scientists studying them

Lecture #12 Limbic System

Question 14: What is the ultimate destination of most entorhinal cortex projections?

a) Fornix

b) Parahippocampal cortex

c) Amygdala

d) Anterior thalamus

e) Dentate gyrus

Lecture #12 Limbic System

Question 15: Which neurological deficit is revealed in animals after lesions of the hippocampus?

a) inability to learn a new spatial discrimination

b) inability to recognize a previously learned object or task

c) failure to respond to social cues

d) inability to detect odors

e) loss of sexual behaviors

Lecture #12 Limbic System

Question 16: Animals subjected to large, bilateral lesions of the temporal lobes exhibit which behavior (Kluver-Bucy syndrome)?

a) Loss of discrimination learning

b) Diminished sexual activity

c) Emotional over-reaction

d) Loss of rank in social hierarchy

e) Aversion to oral stimulation and eating

Lecture #12 Limbic System

Question 17: What is the main output of the mammillary body?

a) Fornix

b) Cingulate gyrus

c) Entorhinal cortex

d) Parahippocampal cortex

e) Anterior thalamus

Lecture #12 Limbic System

Question 18: Which structure has the stria terminalis (or terminal stria) as one of its prominent outputs?

a) Lateral nucleus of the hypothalamus

b) Bed nucleus

c) Hippocampus

d) Orbitofrontal cortex

e) Amygdala

Lecture #12 Limbic System

Question 19: Which part of cerebral cortex outside the temporal lobe relates most closely to the hippocampus?

a) Occipital cortex

b) Parietal cortex

c) Insular cortex

d) Posterior cingulate cortex

e) Anterior cingulate cortex

Lecture #12 Limbic System

Question 20: Fear memory is to amygdala as\_\_\_\_\_\_is to\_\_\_\_\_\_?

a) Face recognition : amygdala

b) Fear memory : hippocampus

c) Face recognition : hippocampus

d) Spatial memory : hippocampus

e) Spatial memory : amygdala

Lecture #12 Limbic System

Question 21: Which best matches, respectively - spatial memory : declarative memory?

a) Hippocampus : hippocampus

b) Amygdala : amygdala

c) Amygdala : hippocampus

d) Event memory : specific relay thalamic nuclei

e) Hippocampus : amygdala

Lecture #12 Limbic System

Question 22: Which neurological problem is most likely to be present after a person suffers damage to the amygdala?

a) flat affect with little emotional response to upsetting events

b) psychic blindness

c) inability to remember driving directions to an unfamiliar location

d) agraphia

e) inability to understand the spoken voice