1

What is name of the Stage 3 and 4 sleep

- fast stage
- REM stage
- Slow stage ✓

2

Tolerance is

- a nonadapted physiological state of cells or systems that develops to compensate for excessive stimulation by a drug.
- a physiological state of cells or systems that develops to compensate for excessive stimulation by a drug.
- the need for increasing doses of a drug to achieve the same effect. ✓
- the enhancement of drug responses as a result of repeated drug exposure.

3

Which enzyme is activated by Tg?

Finish

27

The rods and the cones synapse directly on to:

- . Amacrine cells
- Ganglion cells
- Bipolar cells
- Horizontal cells

28

Fill in the sentence: _____signals nutritional status to key regulatory centers in the hypothalamus.

- Dopamine
- Serotonin
- Leptin
- Ghrelin

Finish

7

Where is the primary auditory cortex found?

- Temporal lobes
- Limbic cortex
- Frontal lobes
- Parietal lobes

8

Which of the following cranial nerves does not transmit taste information to the brain?

- Trochlear (4th cranial nerve)
- Vagus (10th cranial nerve)
- Glossopharyngeal (9th cranial nerve)
- Facial (7th cranial nerve)

Finish

19

What is the first brain structure to receive input from both ears and is important in locating the direction of sound?

- ✔ The superior olive
- The medial geniculate colliculi
- The primary auditory cortex
- The trapezoid body

20

Which one of the following statements is not true?

- Psychomotor stimulants interact with the dopamine transporter (DAT) to elevate extracellular dopamine levels.
- ✔ Opiates are believed to decrease GABA transmission in the ventral tegmental area (VTA), thereby inhibiting dopamine neurons.
- Opiates, ethanol and cannabinoids are believed to decrease GABA transmission in the ventral tegmental area (VTA), thereby disinhibiting dopamine neurons.
- All reinforcing drugs increase dopamine transmission in the mesocorticolimbic dopamine system, but they use different mechanisms.

Finish

3

Which enzyme is activated by Tα?

- Protein kinase G
- cAMP dependent phosphodiesterase
- Protein kinase A
- ✔ cGMP dependent phosphodiesterase

4

The largest subcortical structure involved in visual processing (receiving approximately 10% of all ganglion cells) is the:

- Inferior colliculi
- Suprachiasmatic nucleus
- Superior olive
- ✔ Superior colliculus

Finish

Type here to search

25

The stimuli received by sensory receptors

- [x] are relayed to the spinal cord and brain
- [ ] originate exclusively inside the body
- [ ] all result in sensation
- [ ] are highly variable for most sensory receptors

26

Which of the following is not true regarding Aβ peptide?

- [ ] In addition to a physiological role for APP, the Aβ peptide itself plays an important role in synaptic physiology, regulating synaptic scaling and synaptic vesicle release.
- [ ] Aβ peptide and tau build various fibril structures that differ in number, orientation and structure of strands.
- [x] The Aβ peptide enters the protein complex to initiate the cleavage of PS1 or PS2 to form an N terminal 40-42 amino acid fragment which is critical to the γ secretase activity.
- [ ] The A β peptide starts within the ectodomain and continues into the transmembrane region.

Finish

29

Some of the many things that can cause an eardrum to rupture are an ear infection, SCUBA diving, and poking the ear with a sharp object. Which of the following might a rupture

- a. Environmental bacteria will be more likely to get into the middle ear.
- b. Loud noises will pass on to the ossicles, but soft sounds will not.
- d.Incoming sounds will be scrambled and more difficult for the brain to decode.
- c. Vibrations in the middle ear will be too violent for the bones to withstand.

30

Which of the following is true regarding sleep and wakefulness?

- Only glutamate level regulates states of sleep and wakefulness.
- Only melatonin level regulates states of sleep and wakefulness.
- None of the answers are true 5. All of the answers are true
- No single neurotransmitter or brain region regulates states of sleep and wakefulness.

Finish

5

Benzodiazepines bind at the interface of the _____ on the GABAA receptor.

- α and γ subunits
- δ and γ subunits
- β and γ subunits
- α and β subunits

6

Which of the following is true regarding transduction apparatus of mechanical transduction?

- transduction apparatus consists of two components: the transduction channel and the adaptation motor.
- transduction apparatus consists of three components: the transduction channel, the tip link, and the adaptation motor.
- adaptation motor maintains an optimal tension in the channel
- the transduction channel of transduction apparatus is a ligand gated ion channel.

Finish

23

The reticular activating system (RAS) is comprised of specific pathways primarily in the limbic system

- [x] True
- [x] False → This is the answer.
- [ ] no spesific

24

Aqueous and vitreous humours are divided by _____

- [x] Lens
- [ ] Optic nerve
- [ ] Iris
- [ ] Retina

17

The first structure which the majority of retinal ganglion cells project to, and synapse with, in the brain is the:

- Lateral geniculate nucleus
- Visual cortex
- Optic chiasm
- Superior colliculus

18

The consolidation of memories occurs during slow wave sleep within which region of the brain?

- pons and medulla
- amygdala
- hippocampal circuits

19

11

How many different types of odorant receptor are believed to exist in the human nose?

- 40
- 4000
- ✓ 400
- 14,000

12

Disruptions of cognition can result from either

- Sub-cortical disconnections
- none
- ✓ Cortical Pathway disconnections

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13

The brain area that regulates activities that control the state of wakefulness or alertness of the cerebral cortex is the

- none
- pyramids
- ✔ reticular formation

14

Which neurotransmitter is responsible for learning, and memory?

- Endorphins
- Serotonine
- GABA
- ✔ Glutamate

Finish

15

35

Which of the following shows the highest activity in Cornea?

- Glycolysis
- Glutathione reductase
- Glycogenesis
- Hexose monophosphate pathway

36

How many different types of cone code for colour in the fovea of the retina?

- Two
- One
- None (there are no cones in the fovea - only rods)
- Three

Finish

9

which of the following is not a glutamate ligand gated ion channel?

- ✓ mGluRs
- kainate receptors
- AMPA receptors
- N-methyl-D-aspartate (NMDA) receptors

10

Which of the following properties could confer a high signal-to-noise ratio on the odor sensitive system?

- ✓ extremely low basal activity of ACIII is, while in its stimulated state it has a catalytic rate higher than other known cyclases.
- Extremely high catalitic activity of ACIII, higher than that of other known cyclases
- Inhibition of ACIII by Ca 2+
- large amounts of the second messenger adenosine 3'5'-cyclic monophosphate (cAMP) before odor exposure

this is the answer.

?

Finish

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37

Which of the following structures can be lesioned for the relief of pain?

- Fornix
- [redacted]
- Somatosensory cortex
- Medial thalamus → This is the answer.

38

In receptor studies no consistent changes in _____ receptor numbers have been observed in unmedicated depressed patients

- D1
- β1-adrenergic
- α1-adrenergic
- α2-adrenergic

Finish

15

Major contributor to short-term odor adaptation is

- Ca 2+/calmodulin-mediated phosphorylation of Cl- channel
- ✓ Ca 2+/calmodulin-mediated Ca 2+-dependent desensitization of the CNG channel
- Ca 2+- mediated desensitization of Cl- channel
- Protein kinase C mediated OR desensitization

16

Which of the following is true regarding Benzodiazepines?

- Benzodiazepines show no affinity for GABAA receptors containing α4 and α6 subunits with a histidine instead of an arginine residue.
- Benzodiazepines show no affinity for GABAA receptors containing β4 and β6 subunits with a histidine instead of an arginine residue.
- ✓ Benzodiazepines show no affinity for GABAA receptors containing α4 and α6 subunits with an arginine instead of a histidine residue.
- Benzodiazepines show no affinity for GABAA receptors containing β4 and β6 subunits with an arginine instead of a histidine residue.

Finish

33

In humans, making more serotonin available to brain cells typically

- ○ increases the stimulatory effects of caffeine
- ✓ produces an effect on mood
- ○ counteracts the effects of alcohol

34

Which one of the following functions of the thalamus is FALSE?

- ✓ Storage of long-term memories
- ○ Relays sensory and motor signals
- ○ Regulates arousal and awareness

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21

In the brain, _____ receptors are found in regions involved in the regulation of food intake and body weight, especially in the hypothalamic ARC nucleus

- Oxytocin
- ✓ Insulin
- PYY
- Ghrelin

22

What is the function of the increased activity of ventrolateral preoptic area (VLPO) area during a time when most of the brain is showing decreased activity(sleep)?

- the VLPO generates alpha waves necessary to enter REM
- ✓ the VLOP is involved in suppressing wakefulness
- the VLPO does not show increased activity during slow wave sleep
- the function of the VLPO is to maintain the dream state

Finish

Type here to search

21°C Sunny

39

Which of the following is referred as non-declarative memory?

- explicit memory
- semantic memory
- implicit memory ✓
- episodic memory

40

Tiny bones called _____ transmit vibrations to the inner ear.

- tympana
- ossicle ✓
- ventricles
- smiddle canals

Finish

31

The apical surfaces of hair cells are exposed to an unusual extracellular fluid called endolymph. Endolymph is relatively similar in ionic composition to cytoplasm:

- it is high in K+ (~250 mM), low in Na+ (~4 mM), and relatively low in Ca 2+ (~150 µM).
- it is high in Ca 2+ (~250 mM), low in Na+ (~2 mM), and relatively low in K+ (~150 µM).
- it is high in Na+ (~150 mM), low in K+ (~2 mM), and relatively low in Ca 2+ (~100 µM).
- ✓ it is high in K+ (~150 mM), low in Na+ (~2 mM), and relatively low in Ca 2+ (~100 µM).

32

Which of the following is a specific investigation to detect seizures

- ✓ EEG
- CT scan
- MRI scan C