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17/sci05/011

pharmacology

Pha 308 mocktest

**PHA 308**

**NEUROPHARMACOLOGY**

**Mock test**

**Fill in the gaps with the most appropriate answer(s)**

1. The two barrier systems in the brain are blood cerebrospinal fluid barrier and blood retina barrier
2. Neurotransmission processes are neurons receives signals,threshold is reached, Neuron fires action potential, DEPOLARIZATION occurs AND Action potential (electrical charge) travels down axon to axon terminals.
3. **α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) and N-methyl-d-aspartate (NMDA) are examples of ionotropic receptors**
4. The inhibitory neurotransmitters [**Ionotropic receptors**](https://en.wikipedia.org/wiki/Ionotropic_receptors)**(also known as ligand-gated ion channels)** and [Metabotropic receptors](https://en.wikipedia.org/wiki/Metabotropic_receptors), often G-protein-coupled receptors opens  the ion channel and  an intracellular domain that binds to [G-protein](https://en.wikipedia.org/wiki/G-protein) resulting in very fast postsynaptic actions within a couple of milliseconds of the presynaptic terminal receiving an action potential while metabotropic slow postsynaptic responses (from milliseconds to minutes) and can be activated in conjunction with ionotropic receptors to create both fast and slow postsynaptic potentials at one particular synapse.
5. The neurotransmitter which causes psychosis in excess and Alzheimer’s disease when lacking is acetylecholine
6. The neurotransmitter which causes psychosis in excess and Parkinson’s disease when lacking is dopamine
7. Tyrosine-derived neurotransmitters are dopamine and norepinephrine
8. A disease characterized by an imbalance between dopaminergic and cholinergic system in the brain is **Parkinson's disease**
9. Sedative is a drug that reduces excitement and produces calming effect without inducing sleep, while hypnotic is a drug that induces and or maintains sleep.
10. Pharmacological actions of benzodiazepines include insomnia,muscle relaxant,panic disorder, procedural sedation,sezuires and anxiety
11. The monoamine theory of depression states that The monoamine hypothesis of depression predicts that the underlying pathophysiologic basis of depression is a depletion in the levels of serotonin, norepinephrine, and/or dopamine in the central nervous system.

**Indicate “TRUE/T” or “FALSE/F” in front of each statement contained in letter A-D**

1. Centrally acting drugs act via the following broad mechanisms
2. Transmitter-specific action true
3. Neuron-specific action true
4. Signal-specific action true
5. All of the above true
6. These targets is/are of significance in the treatment of depression
7. Selective serotonin reuptake inhibitors TRUE
8. Serotonin-noradrenaline reuptake inhibitors TRUE
9. NMDA receptor antagonists TRUE
10. Calcium channel blockers TRUE
11. Match the following antidepressants with their respective groups
12. Tricyclic antidepressant e.g. amitriptyline TRUE
13. Irreversible monoamine oxidase inhibitor e.g. mianserin FALSE
14. Monoamine receptor antagonist e.g. phenelzine TRUE
15. Tricyclic antidepressant e.g. imipramine TRUE
16. The differences between brain and peripheral capillary bed includes:
17. Brain capillaries have tight junctions while peripheral capillaries have fenestrated junctions TRUE
18. Brain capillaries have fenestrated junctions while peripheral capillaries have tight junctions FALSE
19. Brain capillaries have fewer mitochondria than peripheral capillaries TRUE
20. Brain capillaries have more mitochondria than peripheral capillaries FALSE