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18/MHS07/055

PHA308

NEUROPHARMACOLOGY MOCK TEST

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

1. The two barrier systems in the brain are Blood brain barrier and Blood CSF barrier.
2. Neurotransmission processes are Impulse conduction, transmitter release, transmitter action on post-junctional membrane and post junctional activity, termination of transmitter action.
3. Glutamate NMDA receptors and GABA-receptors are examples of ionotropic receptors
4. The inhibitory neurotransmitters opens voltage gated potassium ion and voltage gated chloride ion channels, resulting in post synaptic target hyper polarization.
5. The neurotransmitter which causes psychosis in excess and Alzheimer’s disease when lacking is acetylcholine.
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 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:-
11. Sedation (calming effect): It decrease excitement and moderates hyperexcitability.
12. Hypnotic (sleep-inducing): Benzodiazepines induce drowsiness and the promote and maintain sleep. They relieve insomnia by decreasing sleep latency and increasing total sleep time
13. Anxiolytic (anti-anxiety)
14. Anticonvulsant
15. Skeletal muscle relaxation: It performs this but the inhibition of inter-neuronal activity in the spinal cord; Diazepam inhibits monosynaptic reflex pathways without inducing sedation
16. Amnesic: (promotes forgetfulness)
17. The monoamine theory of depression states that depression is caused by a functional deficit of the monoamine transmitters, noradrenaline and 5-hydroxytryptamine (5-HT) at certain sites in the brain.

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

a. Transmitter-specific action (TRUE)

b. Neuron-specific action (TRUE)

c. Signal-specific action (TRUE)

d. All of the above (TRUE)

1. These targets is/are of significance in the treatment of depression

a. Selective serotonin reuptake inhibitors (TRUE)

b. Serotonin-noradrenaline reuptake inhibitors (TRUE)

c. NMDA receptor antagonists (TRUE)

d. Calcium channel blockers (FALSE)

1. Match the following antidepressants with their respective groups

a. Tricyclic antidepressant e.g. amitriptyline (TRUE)

b. Irreversible monoamine oxidase inhibitor e.g. mianserin (FALSE)

c. Monoamine receptor antagonist e.g. phenelzine (FALSE)

d. Tricyclic antidepressant e.g. imipramine (TRUE)

1. The differences between brain and peripheral capillary bed includes:

a. Brain capillaries have tight junctions while peripheral capillaries have fenestrated junctions (TRUE)

b. Brain capillaries have fenestrated junctions while peripheral capillaries have tight junctions (FALSE)

c. Brain capillaries have fewer mitochondria than peripheral capillaries (FALSE)

d. Brain capillaries have more mitochondria than peripheral capillaries. (TRUE)