Psychopharmacology: A Comprehensive Review

1) The association between a chemical compound and its biological activity, pioneered by Bovet and colleagues in the 1930s is known as
   a) Symbiosis
   b) Structure-activity relationship
   c) Mechanism of Action
   d) Half-life

2) A study by Jong H. Hoon in 2013 suggests that the circuit connecting the prefrontal cortex with the ____ is a site of communication disturbance in schizophrenics.
   a) Ventral horn
   b) Basal ganglia
   c) Pons
   d) Medulla

3) The primary function of the hypothalamus is
   a) Homeostasis
   b) Balance
   c) Memory
   d) Communication

4) The thalamus plays an important role in receiving and filtering all sensory information except
   a) Visual
   b) Gustatory
   c) Olfactory
   d) Touch

5) The primary function of the Medulla is
   a) Sensory analysis and movement
   b) Short term memory
   c) Receptive language
   d) Regulation of breathing and heart rate

6) The primary function of the Pons is
   a) Sensory analysis and movement
   b) Short term memory
   c) Receptive language
   d) Regulation of breathing and heart rate
7) Which is not a main function of glial cells?
   a) Nourishing neurons
   b) Electrical signaling and synaptic communications
   c) Help in the removal of waste products from the neurons
   d) Insulate neurons

8) Which is an example of action potential which inhibits axonal transmission by blocking the excitatory channels on the postsynaptic neuron as well as lowering the rate of action potential coming from the presynaptic neuron?
   a) Alcohol
   b) Valproic acid
   c) Tetrodotoxin
   d) Amphetamine

9) Which are endogenous chemicals in the human body that are responsible for the transmission of nerve impulses between neurons and target cells across a synapse?
   a) Signal molecules
   b) Communication enzymes
   c) Generator chemicals
   d) Neurotransmitters

10) Which is the neurotransmitter that plays an important role in conditions related to stress?
    a) Acetylcholine
    b) Glutamate
    c) Serotonin
    d) Norepinephrine

11) A decreased number of norepinephrine transporter (NET) is associated with
    a) Bipolar disorder
    b) ADHD
    c) Personality disorders
    d) OCD

12) Which is the primary excitatory neurotransmitter?
    a) Acetylcholine
    b) Glutamate
    c) Serotonin
    d) Norepinephrine
13) Which refers to the movement of a drug from the site of administration to the blood circulation?
   a) Atomization  
   b) Transmigration  
   c) Absorption  
   d) Meandering  

14) What is the metabolite of Levodopa?
   a) Paliperidone  
   b) Meprobamate  
   c) Psilocin  
   d) Dopamine  

15) Which are surface proteins to which specific signaling molecules may bind?
   a) Receptors  
   b) Ion channels  
   c) Membrane carriers  
   d) Enzymes  

16) The binding of drugs with receptors which alters the 3D protein structure of the receptor to cause pharmacological effects is known as
   a) Receptor specificity  
   b) Receptor structural change  
   c) Receptor population  
   d) Receptor occupation  

17) What is an increase in the number of receptors as a compensatory response after continual absence of agonists?
   a) Up-regulation  
   b) Down-regulation  
   c) Withdrawal syndrome  
   d) Rebound effect  

18) Receptor desensitization is also known as
   a) Tachyphylaxis  
   b) Rebound effect  
   c) Withdrawal syndrome  
   d) Tolerance  

19) In general, there are three characteristic features of mental disorders that indicate the need for maintenance therapy on psychoactive medications. They include all the following except
   a) Early onset  
   b) Persistence  
   c) Genetic predisposition  
   d) Risk of relapse
20) In general, psychosis is believed to be a product of excessive ____ activation and although all antipsychotics mainly block the pathway leading to this, the atypical antipsychotics also act on the ____ receptors.
   a) Acetylcholine, Endorphin
   b) Endorphin, Dopamine
   c) Dopamine, Serotonin
   d) Serotonin, Acetylcholine

21) In 1989, the first atypical antipsychotic that gained FDA approval was
   a) Clozapine
   b) Olanzapine
   c) Quetiapine
   d) Risperidone

22) Risperidone carries an FDA black box warning because of its propensity to cause death in patients with
   a) High blood pressure
   b) Heart disease
   c) Dementia-related psychosis
   d) Diabetes

23) The antidepressant Atomoxetine is a norepinephrine reuptake inhibitor with received FDA approval for the treatment of
   a) ADHD
   b) OCD
   c) Anxiety
   d) Sleep disorders

24) Which is the only tetracyclic antidepressant to have received FDA approval for the treatment of depression?
   a) Amineptine
   b) Imipramine
   c) Mirtazapine
   d) Desipramine

25) All the following are uses mentioned for SNRIs EXCEPT
   a) Smoking cessation
   b) Neuropathic pain
   c) Fibromyalgia
   d) Appetite suppression
26) SNRIs carry the black box warning that cautions patients about its propensity to precipitate
   a) Suicidal thoughts
   b) Weight gain
   c) Stroke
   d) Heart palpitations

27) Bupropion is contraindicated in
   a) High blood pressure
   b) Pregnant women
   c) The elderly
   d) Seizure disorders

28) Which is NOT a tricyclic antidepressant?
   a) Thorazine
   b) Wellbutrin
   c) Tofranil
   d) Norpramin

29) Individuals taking MAOIs, should avoid all the following food EXCEPT
   a) Ice cream
   b) Pepperoni
   c) Aged cheddar
   d) Rice with soy sauce

30) The non-selective beta blockers such as propranolol controls
   a) Hunger cravings
   b) Anxiety symptoms
   c) Compulsions
   d) Delusions

31) Amphetamine derivatives are the most commonly prescribed psychostimulants for the management of ADHD. They mimic NDRI's mode of action by increasing the levels of
   a) Dopamine and Oxytocin
   b) Oxytocin and Histamine
   c) Histamine and Norepinephrine
   d) Norepinephrine and Dopamine

32) Which natural remedy used in the treatment of insomnia, anxiety, depression and migraines is also known as All-Heal, Baldrian, and Garden Heliotrope?
   a) Kava
   b) St. John’s Wort
   c) Valerian
   d) Ephedra
33) When antipsychotics are combined with alcohol, TCAs, benzodiazepines, and antihistamine, the result is
   a) Symbiotic treatment
   b) Sudden death
   c) A rebound effect
   d) Additive sedation

34) Clozapine causes ____ damage in some patients.
   a) Kidney
   b) Heart
   c) Liver
   d) Thyroid

35) Which is commonly used to assess motor movements and the severity of symptoms?
   a) Abnormal Involuntary Movement Scale
   b) Patient Gate Assessment
   c) Range of Motion Inventory
   d) Ambulatory Task List

36) A psychotropic agent implicated in serotonin syndrome is
   a) SSRIs
   b) Lithium
   c) St. John’s Wort
   d) All the above

37) One of the main problems associated with sedative use are their ____ and abuse potential.
   a) Addictive properties
   b) High costs
   c) Interaction with other medications
   d) Food restrictions

38) The FDA database that allows individuals to report adverse events is
   a) WATTO
   b) REVAN
   c) FAERS
   d) EWOK

39) Which are the two main sets of criteria used for classifying mental health disorders worldwide?
   a) TMB and ICD
   b) ICD and DSM
   c) DSM and WAG
   d) WAG and TMB
40) Which is a psychiatric condition that occurs most frequently in the elderly and involves a preoccupation with one or more semi-systematized delusions?
   a) Psychotic disorder due to a medical condition
   b) Paraphrenia
   c) Brief psychotic disorder
   d) Shared psychotic disorder

41) Which personality disorders are characterized by anxious and fearful thinking?
   a) Cluster A
   b) Cluster B
   c) Cluster C
   d) Cluster D

42) Dysthymic disorder is a chronic form of depression lasting for ____ and more.
   a) 6 months
   b) 9 months
   c) 1 year
   d) 2 years

43) Sublingual medications are placed
   a) In a muscle
   b) Under the skin
   c) Under an eyelid
   d) Under the tongue

44) The usual dose of lithium required to maintain desired serum levels is between ____ daily.
   a) 900 mg to 1200 mg
   b) 1500 mg to 1800 mg
   c) 2000 mg to 2400 mg
   d) 2600 mg to 3000 mg

45) What demonstrates the relationship between a drug’s toxic dose and effective dose?
   a) Target dose
   b) Dosage spread
   c) Therapeutic index
   d) Safety zone

46) A higher risk for persistent pulmonary hypertension in the newborn has been linked to the use of ____ during the last trimester of pregnancy.
   a) Atypical antipsychotics
   b) MAOIs
   c) Tricyclics
   d) SSRIs
47) Which has the highest fatality rate among all SSRIs?
   a) Sertraline
   b) Fluvoxamine
   c) Paroxetine
   d) Citalopram

48) People with which diagnoses are most likely to be capable to make treatment decisions?
   a) Dementia
   b) Personality disorders
   c) Psychosis
   d) Delirium

49) Which is a symptom of overdose for narcotics?
   a) Pinpoint pupils
   b) Loss of memory
   c) Rapid pulse rate
   d) Hallucinations

50) What is the FDA requirement to demonstrate that an investigational antidepressant is better than placebo in order to approve it?
   a) Placebo is beat in greater than 65% of trials
   b) Placebo is beat in greater than 75% of trials
   c) Placebo is beat in greater than 85% of trials
   d) 2 positive clinical trials