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Pharmacology & Therapeutics  
MCQ's (Send up examination)

2019

Max Marks: 60

Time allowed: 60 mins

- Variation in the sensitivity of a population of individuals to increasing doses of a drug is best determined by which of the following?  
a. Efficacy  
**c. Quantal dose response curve**  
b. Potency  
d. Graded dose response curve
- The dose which produces toxic effect in 50% of the population is:  
a. ED50  
**b. TD50** *TD50!*  
c. TD99  
d. ED1
- All of the following are 2<sup>nd</sup> messengers EXCEPT:  
a. IP3  
**c. Adenyl cyclase** *(Adenyl cyclase)*  
b. cAMP  
d. DAG
- The phenomenon of decrease in intensity of response to a given dose of a drug after repeated administration so that greater amount of drug is required to produce the same previous effect is called:  
a. Allergy  
**c. Tolerance** *(Tolerance)*  
b. Dependence  
d. Idiosyncrasy
- Chronic use of an antagonist over a long period of time may cause an increase in the number of receptors. This is called:  
a. Desensitization  
**d. Up regulation**  
b. Down regulation  
c. Tolerance
- What is the situation when failure to continue administering the drug results in serious psychological and somatic disturbances called?  
**a. Abstinence/withdrawal syndrome**  
b. Idiosyncrasy  
c. Tachyphylaxis  
d. Antagonism
- Select a receptor which itself has enzymatic property:  
**a. Insulin receptor**  
b. Steroid receptor  
c. Thyroxine receptor  
d. Spare receptors
- A man is given a drug to reduce thyroid gland size and vascularity before surgical thyroidectomy. Which mechanism is responsible for its use in this setting?  
**b. Inhibition of thyroperoxidase**  
a. Inhibition of the sodium/iodide symporter  
c. Inhibition of TSH secretion  
d. Inhibition of thyroid hormone release
- Insulin secretagogues are used widely in the treatment of diabetes type 2. Which of the following drugs acts by increasing insulin secretion?  
**b. Sulfonylureas** *(Sulfonylureas)*  
a. biguanides  
c. Acarbose  
d. thiazolidenidions

10. A patient comes to emergency department in a confused state. He has fruit smelly breath upon examination. His blood sugar is 250mg/dl. Ketones are present in urine. Which of the following insulin preparation will be useful in this case:

- a. Regular insulin
- b. NPH insulin

- b. Lente insulin
- d. Glargine insulin

11. A 50 years old lady having breast cancer may be treated with which of the following drugs having effects on estrogen receptors

- a. Ethinyl estradiol
- c. Leuprolide

- b. Flutamide
- d. Tamoxifen

12. Glucocorticoids have been proved to be effective in the treatment of all the following except:

- a. Addison's disease
- c. Anaphylaxis

- b. Bronchial Asthma
- d. Peptic ulcer

13. Which of the following drug is a potent inhibitor of corticosteroid synthesis and is used in severe Cushing's disease?

- a. Dexamethasone

- c. Ketoconazole
- b. Hydrocortisone
- d. Prednisone

14. Which of following is best drug to distinguish between myasthenic crises and cholinergic crises?

- a. Atropine
- c. Physostigmine

- b. Edrophonium
- d. Pralidoxime

15. Which of the following may precipitate an attack of glaucoma if instilled into the eye

- a. Physostigmine
- c. Pilocarpine

- b. Atropine
- d. Echothiophate

16. A 60 year old man who was smoker is diagnosed with chronic pulmonary disease and suffers from occasional bronchospasm. Which of following would be effective in treating him?

- a. Ipratropium aerosol
- c. Mecamylamine

- b. Scopolamine patches
- d. Propranolol

17. Atropine is antidote for

- a. Organophosphate poisoning
- c. Mushroom poisoning

- b. Physostigmine poisoning
- d. All of above

18. A patient with Anaphylactic shock is brought to emergency. Which of following drugs is most appropriate to treat this patient:

- a. Phenylephrine

- c. Epinephrine

- b. Dobutamine
- d. Norepinephrine

19. A young boy experiences headache, vertigo and nausea after climbing to Mountain. Select a drug that is useful in preventing high altitude sickness.

- a. Acetazolamide *Acetazolamide*

- b. Amiloride

- d. Furosemide

- c. Ethacrynic acid

20. Which of the following drug increases the formation of dilute urine and is used to reverse SIADH (syndrome of inappropriate ADH secretion).
- Desmopressin.
  - Conivaptan *Conivaptan*
  - mannitol.
  - Furosemide
21. Which of the following drugs slows conduction through AV node and has its primary action on  $\text{Na}^+/\text{K}^+$  ATPase?
- Diltiazem.
  - Propranolol
  - digoxin *digoxin*
  - Quinidine
22. Which one of the following is most likely to contribute to the arrhythmogenic effect of digoxin?
- Increased extracellular potassium
  - Decreased renin release
  - Increased intracellular calcium
  - Vagal stimulation
23. Select the proposed mechanism of antihypertensive effect of propranolol.
- It blocks muscarinic receptors
  - It causes reduction in both cardiac output and renin release.
  - It inhibits entry of calcium into blood
  - It blocks alpha<sub>1</sub> receptors.
24. Persistent dry cough may occur as a side effect of the following antihypertensive drug *(enalapril)* :-
- Enalapril
  - Atenolol
  - Diltiazem
  - Methyldopa
25. Which of the following antihypertensive is used topically to treat alopecia areata (Baldness)
- Hydralazine
  - Prazosin
  - Minoxidil *(antivascular)*
  - Guanethidine
26. Which of the following antiarrhythmic drugs has longest half life?
- Adenosine
  - Quinidine
  - Amiodarone *(Amiodarone)*
  - Lidocaine
27. A patient of hyperlipidemia is started on simvastatin. Which of the following is a major mechanism of this drug
- Increased excretion of bile acid
  - Increased secretion of VLDL by the liver
  - Inhibition of HMG CO A reductase
  - Increased binding with bile acid
28. Which of the following drugs is fibrinolytic? *(Streptokinase)*
- Ticlopidine
  - Streptokinase
  - Aspirin
  - Warfarin
29. Which of the following drugs is GP IIb / IIIa inhibitor
- Clopidogrel
  - Ticlopidine
  - Aspirin
  - Abciximab
30. The drug forming a physical barrier/coating to HCL and Pepsin of stomach is:
- Ranitidine
  - Sucralfate
  - Omeprazole
  - Pirenzepine

31. Following drugs decrease acid secretion of stomach except.  
 a. H<sub>2</sub> receptor antagonists  
 b. Proton pump inhibitors  
 c. Antacids  
 d. Laxatives (salts)
32. A 16 yrs old girl treated for asthma develops skeletal muscle tremors that is drug induced. Which of following is the most likely cause?  
 a. Salbutamol  
 b. Beclomethasone  
 c. Cromolyn  
 d. Ipratropium
33. A 35 years old patient complaining of severe pain along the Rt. Side of jaw and face. The best choice of this neuralgic pain is:  
 a. Methadone  
 b. Ibuprofen  
 c. Carbamazepine  
 d. Lorazepam
34. An 18 years old college boy was taking morphine for the last 1 year. He now presents in emergency department with complaints of drowsiness, disorientation, cyanosis, pupils constricted, yellow clammy skin and shallow breathing. His BP is 90/60mmHg. Which one of the following drugs is given to overcome the effects of morphine:  
 a. Flumazenil  
 b. Buspirone  
 c. Naloxone  
 d. Ketamine
35. A 51 years old patient with parkinsonism is being maintained on levodopa-carbidopa with adjunctive use of low doses of entacapone but continues to have off periods of akinesia. The most appropriate drug to rescue the patient but that will only provide temporary relief is:  
 a. Apomorphine  
 b. Carbidopa  
 c. Ropinirole  
 d. Selegiline
36. A patient is having severe muscle spasms. He is given a spasmolytic that is also used in the management of seizures caused by overdose of a local anesthetic. Which of the following drugs is it most likely?  
 a. Baclofen  
 b. Cyclobenzaprine  
 c. Dantrolene  
 d. Diazepam
37. A 31 years old man is diagnosed with schizophrenia. He is treated with a neuroleptic drug and now he becomes rigid confused and develops fever of 105 F. Therapy with neuroleptic is stopped and supportive measures are taken. Which of the following drugs should also be given?  
 a. Amoxapine  
 b. Dantrolene  
 c. Fluoxetine  
 d. Lithium
38. In which of the following conditions would aspirin be contraindicated?  
 a. Myalgia  
 b. Fever  
 c. Peptic ulcer  
 d. Rheumatoid arthritis
39. A 25-year-old woman with an upper respiratory tract infection caused by H. influenza is treated with trimethoprim-Sulfamethoxazole. Which bacterial process is inhibited by this combination, and accounts for the antibacterial effect.  
 a. Cell-wall synthesis  
 b. Protein synthesis  
 c. Folic acid synthesis  
 d. DNA gyrase
- Folic acid synthesis*

Telem Test  
CVS + CNS + ANS + Gene

Pharmacology & Therapeutics  
Total Marks: 30

MCQ's Type  
Time Allowed: 30 Min

- 1) Which one of the following drug is associated with positive inotropic effect?  
a) Losartan      b) Verapamil       c) Dobutamine      d) Propranolol
- 2) A 51 years old man is started on lisinopril after being found to have an average blood pressure of 154/93 on ambulatory blood pressure monitoring. After starting treatment he presents with dry cough. Accumulation of which one of following protein is responsible for it?  
a) Adenosine      b) Histamin       c) Bradykinin      d) Acetylcholine
- 3) Best choice for a patient who has history of vasospastic angina?  
a) ACE inhibitors      b) Beta blocker       c) Nifedipine      d) Thiazide diuretic      e) Verapamil
- 4) Which of the following drugs is commonly used topically in the treatment of glaucoma?  
a) Esmolol       b) Timolol      c) Silodosin      d) Yohimbine
- 5) Following is inverse agonist of benzodiazepine receptors?  
a) Flumazenil       b)  $\beta$ -Carbolines      c) Chlordiazepoxide      d) Glutethimide
- 6) Which of the following agents is associated with high incidence of disorientation, sensory and perceptual illusions and vivid dreams during recovery from anesthesia?  
a) Diazepam      b) Fantanyl       c) Ketamine      d) Midazolam
- 7) Epinephrine added to a solution of lidocaine for a peripheral nerve block will cause following effects?  
a) Increase the risk of convulsions  
 b) Increase the duration of anesthetic action of the local anesthetic  
c) decrease the risk of convulsions      d) decrease the duration of action of local anesthetics
- 8) Bio-transformation of the drugs is to render them  
 a) Less lipid soluble      b) More protein bound      c) Less ionized      d) Less protein bound
- 9) Which of the following drugs is a volatile substance that is administered by inhalation?  
a) Thiopental       b) Halothane      c) Alprazolam      d) Buspirone      e) Phenytoin
- 10) Which of the following antihypertensive drug is renin inhibitor?  
 a) Propranolol      b) Verapamil      c) Chlomidine      d) Prazosin      f) Lisinapril
- 11) Which of the following adverse effect can be caused by Thiazide diuretics?  
a) Hyperkalemia       b) Hypokalemia      c) Hypermotremia      d) Hypoglycemia
- 12) A good example of chemical antagonism is?  
 a) Heparin & Protamine      b) Protamine & Zinc      c) Heparin & Prothrombin      d) All the above
- 13) Acidic drugs mainly bind to following substance?  
 a) Albumin      b) Alpha1 acidic glycoprotein      c) Myoglobin      d) Mannitol
- 14) The loading dose of a drug is usually based on the following characteristic?  
a) Total body clearance of the drug      b) Percentage of drug bound to plasma proteins  
c) Fraction of drug excreted unchanged in the urine  
 d) Apparent volume of distribution (VD) and desired drug concentration in plasma
- 15) Alkalinization of urine hastens the excretion of  
a) Weakly basic drugs       b) Weakly acidic drugs      c) Strong electrolytes      d) Both a & b

- 6) High plasma protein binding can cause following effect?  
 a) Increases the volume of distribution of the drug    b) Facilitates glomerular filtration of the drug  
 c) Generally makes the drug long acting    d) Both a & b
- 17) Which of the following diuretic would be most useful in acute treatment of comatose patient with brain injury and cerebral edema?  
 a) Mannitol    b) Acetazolamide    c) Furosemide    d) Amiloride
- 18) A Prodrug is drug which has following characteristic?  
 a) The prototype member of a class of drugs    b) The oldest member of a class of drugs  
 c) An inactive drug that is transformed in the body to an active drug  
 d) A drug that is stored in body tissues and is then gradually released in the circulation
- 19) Tachyphylaxis is a phenomenon which has following characteristic?  
 a) A drug interaction between two similar types of drugs  
 b) Rapidly developing decrease response    c) A synergism between two types of drugs  
 d) None of the above
- 20) A patient being diagnosed for myasthenia gravis would be expected to have improved neuromuscular function after being treated with  
 a) Donepezil    b) Edrophonium    c) Atropine    d) Echothiophate     e) Neostigmine
- 21) A 50 years old male farm worker is brought to emergency room. He was found confused and unconscious. His heart rate is 45 and blood pressure is 80/40mm. He is sweating and salivating profusely. Which of following treatment is indicated?  
 a) Physostigmine    b) Norepinephrine     c) Atropine    d) Edrophonium
- 22) A partial agonist can antagonize the effects of a full agonist because it has  
 a) High affinity but low intrinsic activity    b) Low affinity but high intrinsic activity  
 c) No affinity and low intrinsic activity    d) High affinity but no intrinsic activity
- 23) The first-line drug for treating an acute attack of re-entrant supraventricular tachycardia (SVT) is  
 a) Adenosine    b) Digoxin    c) Propranolol    d) Phenylephrine    e) Edrophonium
- 24) A positive Coombs' test and hemolytic anemia may follow the administration of which antihypertensive drug?  
 a) Methyldopa    b) Clonidine    c) Guanabenz    d) Prazosin    e) Atenolol
- 25) A Patient who has had attacks of paroxysmal atrial tachycardia, an ideal prophylactic drug of choice will be  
 a) Adenosine    b) Procainamide    c) Lidocaine    d) Nifedipine     e) Verapamil
- 26) The most important therapeutic indication of acetazolamide is?  
 a) Congestive heart failure    b) Renal insufficiency    c) Cirrhosis of liver     d) Glaucoma
- 27) Select the diuretic that can cause gynecomastia, hirsutism and menstrual disturbance as a side effect on long-term use.  
 a) Amiloride     b) Spironolactone    c) Metolazone    d) Acetazolamide
- 28) Down regulation of receptors can occur as a consequence of  
 a) Continuous use of agonists    b) Continuous use of antagonists  
 c) Chronic use of CNS depressants    d) Denervation
- 29) Which of the following drug act by combining with G protein coupled receptor?  
 a) Insulin     b) Epinephrine    c) Glucocorticoid receptor    d) Physostigmine
- 30) The therapeutic index of a drug is a measure of its  
 a) Safety    b) Potency    c) Efficacy    d) Dose variability