



## **Hemwati Nandan Bahuguna Uttarakhand Medical Education University**

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### **Ph.D. ENTRANCE EXAMINATION - 2020**

Subject : Pharmacology

Date : 06.01.2020

Max Marks: 60

Duration: 01:30 Hrs.

Place : Dehradun

Student Name:

Invigilator Name:

Signature:

Signature:

- O1. The steady-state concentration of a drug can be double by:**
- a. Doubling the both rate of infusion and concentration of drug.
  - b. Doubling the rate of infusion only.
  - c. Doubling the loading dose but maintaining the infusion rate.
  - d. Tripling the rate of infusion.
- O2. Phase II reactions of a drug biotransformation:**
- a. Decreases its water solubility.
  - b. Includes activity of cytochrom P-450.
  - c. Usually leads to inactivation of the drug.
  - d. Does not include acetylation.
- O3. Half-life of a drug may be helpful to determine:**
- a. Dosage schedule of the drug.
  - b. Level of absorption.
  - c. Distribution into different body systems.
  - d. Time to get the steady state.
- O4. A 3 year old child has been admitted to emergency with suspicious of atropine overdose as there are:**
- a. Abdominal cramps.
  - b. Increased gastric secretion.
  - c. Increased cardiac rate.
  - d. Papillary constriction.
- O5. Epinephrine does not cause increase concentrations of:**
- a. Glucose in blood.
  - b. Lactate in blood.
  - c. Free fatty acids in blood.
  - d. Triglycerides in fat cells.
- O6. A 50 year old patient is having propranolol due to his cardiac problems but his physician now wants to stop this drug; which of the following is the most important reason for this step?**
- a. Familial tremor.
  - b. Partial AV heart block.
  - c. Mild hypertension.
  - d. Angina pectoris.
- O7. A young man of 24 years is suffering from Generalized Anxiety Disorder; which drug may be preferred for his problem?**
- a. Zolpidem.

- b. Buspiron.
  - c. Midazolam.
  - d. Triazolam.
08. Which of the following statements best describes the mechanism of action of benzodiazepines?
- a. Benzodiazepines activate GABA<sub>B</sub>-receptors in the spinal cord.
  - b. They inhibit GABA-transaminase leading to increased levels of GABA.
  - c. They block glutamate receptors in hierarchical neuronal pathways in the brain.
  - d. Benzodiazepines increase the frequency of Cl<sup>-</sup>-channels opening which are coupled to GABA<sub>A</sub> receptors.
09. Which of the following drugs when used for prolonged period in the maintenance treatment of tonic-clonic seizures can lead to increased metabolism of warfarin like drugs?
- a. Phenobarbital.
  - b. Meprobamate.
  - c. Chlordiazepoxide.
  - d. Triazolam.
10. Characteristics of non-depolarizing neuromuscular blockade include which of the following?
- a. Block of post-tetanic potentiation.
  - b. Histamine blocking action.
  - c. Poorly sustained tetanic tension.
  - d. Significant muscle fasciculations during onset of block.
11. Which of the following drugs given preoperatively is used to prevent postoperative pain caused by succinylcholine?
- a. Dantrolene.
  - b. Tubocurarine.
  - c. Diazepam.
  - d. Lidocaine.
12. With prolonged use in seizure states, which of the following drugs can cause coarsening of facial features, hirsutism, gingival hyperplasia and osteomalacia?
- a. Valproic acid.
  - b. Carbamazepine.
  - c. Ethosuximide.
  - d. Phenytoin.
13. Only Aspirin can:
- a. Reduce fever.
  - b. Irreversibly inhibit its target enzyme.

- c. Prevent episodes of gouty arthritis with long term use.  
d. Reduce the risk of colorectal cancer.
14. **Indomethacin is preferred over Colchicine for Acute Attack of Gout because it is:**  
a. Less likely to cause gastrointestinal bleeding.  
b. **Less likely to cause diarrhea.**  
c. Less likely to cause acute renal failure.  
d. More likely to reduce inflammation.
15. **Which of the following drugs is used in the treatment of rheumatoid arthritis?**  
a. **Naproxen.**  
b. Allopurinol.  
c. Colchicine.  
d. Sulfapyrazole.
16. **The most dangerous adverse effect by using Fentanyl patches is:**  
a. Diarrhea.  
b. Relaxation of respiratory muscles.  
c. Hypertension.  
d. **Respiratory depression.**
17. **Morphine should be used with extreme caution in all of the following conditions but not in:**  
a. Biliary tract surgery.  
b. **Pulmonary edema.**  
c. Last stage of labor.  
d. Hypothyroidism.
18. **A 35 year old patient complaining of severe pain along the right side of the jaw and face; the best choice for this neuralgic pain is:**  
a. Methadone.  
b. Ibuprofen.  
c. **Carbamazepine.**  
d. Lorazepam.
19. **Which of the following local anesthetics is used exclusively for its good surface activity and low toxic potential:**  
a. Cocaine.  
b. **Benzocaine.**  
c. Bupivacaine.  
d. Procaine.
20. **Which of the following drugs can cause methemoglobinemia when used in larger doses for regional anesthesia?**  
a. Cocaine.  
b. Lidocaine.

- c. Bupivacaine.  
d. **Prilocaine.**
21. **Epinephrine added to a solution of lidocaine for local anesthesia will:**
- a. Cause cyanosis locally.  
b. Increase the risk of convulsions.  
c. **Increase the duration of local anesthesia.**  
d. Increase the absorption of lidocaine.
22. **Which of the following inhalational anesthetic agents is having fastest onset of action?**
- a. Nitric oxide.  
b. Isoflurane.  
c. **Nitrous oxide.**  
d. Enflurane.
23. **To attempt reduction of a dislocated shoulder joint when Ketamine is used alone it will cause:**
- a. Respiratory depression.  
b. Skeletal muscle rigidity.  
c. Hypotension.  
d. **Analgesia.**
24. **Which of the following drugs produces respiratory depression and so reversed by flumazenil?**
- a. Fentanyl.  
b. Propofol.  
c. Ketamine.  
d. **Midazolam.**
25. **Cephalosporins show their antimicrobial action by:**
- a. Binding to cytoplasmic receptor proteins.  
b. Inhibition of beta-lactamases.  
c. **Inhibition of transpeptidation reactions.**  
d. Interference with the synthesis of ergosterol.
26. **The most appropriate drug regimen for empiric treatment of Gram-negative bacilli in blood is:**
- a. Ampicillin plus sulbactam.  
b. **Aztreonam.**  
c. Cefazolin.  
d. Imipenem plus cilastatin.

27. A BDS student while answering the question about ciprofloxacin gave various statements; which of the following statements was rejected by the examiner?
- Clinical antagonism occurs when used with Co-trimoxazole.
  - Post-antibiotic effects are similar to aminoglycosides.
  - It is active against most of the middle-ear infecting organisms.
  - It may be used for urinary tract infection.
28. The mechanism underlying the resistance of G +ve organisms to macrolides is:
- Decreased drug permeability of the cytoplasmic membrane.
  - Methylation of binding sites on the 50-S ribosomal subunit.
  - Decreased activity of uptake mechanism.
  - Formation of esterases that hydrolyze the lactone ring.
29. Doxycycline is:
- Bactericidal.
  - Not excreted in the feces.
  - Having a short elimination half-life.
  - Not as effective as tetracycline against H.pylori.
30. Neomycin, an aminoglycoside is:
- Least nephrotoxic.
  - Metabolized by hepatic enzyme.
  - Used in hepatic coma.
  - A drug of choice in Rocky Mountain Spotted fever.
31. The toxic effect of amphotericin B which definitely require reduction of dose is:
- Myelosuppression.
  - Hepatitis.
  - Renal Toxicity.
  - Hypotension.
32. Which of the followings is useful topically for genital herpes infection?
- Acyclovir.
  - Amantadine.
  - Ritonavir.
  - Trifluridine.
33. Acute hemorrhage cystitis is a common toxic effect seen with:
- Vincristine.
  - Tamoxifen.

- c. Doxorubicin.  
d. Cyclophosphamide.
34. A young girl of 20 years has taken a suicidal overdose of Digoxin, the drug of choice in her treatment will be:
- a. Lidocaine.  
b. Phenytoin.  
c. Digoxin antibodies.  
d. Potassium chloride.
35. A 45 year old patient developed severe thrombocytopenia due to unfractionated heparin so the best alternative anticoagulant will be:
- a. Lepirudin.  
b. Abciximab.  
c. Urokinase.  
d. Plasminogen.
36. A 30 year old male suffering from cerebral edema will be best treated with:
- a. Furosemide.  
b. Amiloride.  
c. Ethacrynic acid.  
d. Mannitol.  
e. Acetazolamide.
37. While prescribing a treatment to a young female patient suffering from peptic ulcer associated with H. Pylori the gastroenterologist will neglect:
- a. Tetracycline.  
b. Vancomycin.  
c. Amoxicillin.  
d. Metronidazole.
38. A 35 year old lady who is on anticancer therapy is now suffering from severe nausea and vomiting; which of the following drugs is having most effective antiemetic actions in this case?
- a. Dexamethasone.  
b. Levodopa.  
c. Apomorphine.  
d. Sucrulfate.
39. Which of the following is a prophylactic antiasthmatic agent that stabilizes mast cells:
- a. Ipratropium.  
b. Prednisone.  
c. Terbutaline.  
d. Cromolyn.

40. A senior dental surgeon is very much concerned about the systemic effect of the topically -used drugs for plaque prevention; which of the following drugs will least be considered by him due to the same reason?
- Vancomycin.
  - Bacitracin.
  - Polymyxin – B.
  - Clarithromycin.
41. Peppermint is least useful in:
- Gingivitis.
  - Periodontitis.
  - Young children.
  - Dental gum.
42. Clove oil:
- Can not be used as temporary filling material.
  - Has no anti-inflammatory effect.
  - Can not increase bleeding when applied.
  - Has antifungal activity also.
43. Eugenol when sealed in a root canal preparation leads to severe tissue damage:
- Without pain as it has analgesic effect.
  - Without pain as it has local anesthetic effect.
  - Because it has corrosive effect.
  - With local bleeding also.
44. Which of the following statements is least related to Chlorhexidine (0.2%)?
- It is useful in reducing plaque formation.
  - It can cause staining of the teeth.
  - There is increased formation of calculi.
  - It is not effective in gingivitis.
45. Which of the following statements is rarely seen with Azadirachta Indica (Neem):
- Can be used in toothpaste.
  - Shows antimicrobial activity.
  - Has mild abrasive effects.
  - Can not inhibit plaque formation.
46. Most potent fluoroquinolone against Mycobacterium leprae is?
- Levofloxacin



- b. Ofloxacin
  - c. Moxifloxacin
  - d. Ciprofloxacin
47. The antiretroviral drug combination to be avoided is?
- a. Zidovudine + Stavudine
  - b. Zidovudine + Lamivudine
  - c. Didanosine + Abacavir
  - d. Didanosine + Zidovudine
48. Shortest acting non benzodiazepine hypnotic is?
- a. Zaleplon
  - b. Zolpidem
  - c. Zopiclone
  - d. Eszopiclone
49. Which of the following is true regarding Drotaverine?
- a. M3 selective muscarinic antagonist
  - b. Causes smooth muscle contraction
  - c. Causes anticholinergic side effects
  - d. Inhibits phosphodiesterase-4
50. Which is associated with vaginal carcinoma in female offspring?
- a. Diethylstilbestrol
  - b. Phenytoin
  - c. ACE inhibitors
  - d. Indomethacin
51. Which of the following is not an action of muscarinic antagonists?
- a. Reduce respiratory secretions
  - b. Reduce gastric secretions
  - c. Contraction of radial muscles of iris
  - d. Increase rate of conduction in the heart
52. Which of the following is not a long acting muscarinic antagonist?
- a. Glycopyrronium
  - b. Aclidinium
  - c. Indacaterol
  - d. Umeclidinium
53. Most potent fluoroquinolone against Mycobacterium leprae is?
- a. Levofloxacin
  - b. Ofloxacin
  - c. Moxifloxacin
  - d. Ciprofloxacin
54. Which of the following is not related to a drug toxicity of Atenolol?
- a. CHF
  - b. Tachycardia

- c. AV block  
d. Sedative appearance
55. Which of the following is the antidote for the toxin Benzodiazepines?
- a. Flumazenil  
b. Methylene blue  
c. Deferoxamine  
d. Alkalinize urine
56. Which of the following is considered a class IA Sodium Channel blocker?
- a. Mexiletine  
b. Aminodarone  
c. Quinidine  
d. Procainamide
57. Which of the following is not directly related to a drug toxicity of Ibuprofen?
- a. Nausea  
b. Renal dysfunction  
c. Anemia  
d. Muscle wasting
58. Which of the following is the primary site of activity for the drug Warfarin?
- a. Kidney  
b. Liver  
c. Blood  
d. Heart
59. Which of the following is not directly related to a drug toxicity of Nitroglycerin?
- a. Headaches  
b. Tachycardia  
c. Dizziness  
d. Projectile vomiting
60. A drug ending in the suffix (navir) is considered a \_\_\_\_.
- a. Antidepressant  
b. Protease inhibitor  
c. Beta antagonist  
d. H<sub>2</sub> antagonist

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