

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**  
**Model Paper**

**Total No. of MCQs 45**

**Marks: 45**

**Time 45 minutes**

**Topic Specification:** General Pharmacology (MCQ 1 – 3)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

**01. 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.
- e. Duadrupling the rate of infusion.

**Key: b**

**02. 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.
- e. Occur at the same rate in adults and the new born.

**Key: c**

**03. 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. Rate of absorption through GIT.
- e. Time to get the steady state.

**Key: e**

**Topic Specification:** Autonomic Nervous System (MCQ 4 – 6)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

**04. 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.
- e. Increased urinary frequency.

**Key: c**

**05. Epinephrine does not cause increase concentrations of:**

- a. Glucose in blood.
- b. Lactate in blood.
- c. Free fatty acids in blood.
- d. cAMP in heart muscle.
- e. Triglycerides in fat cells.

**Key: e**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**  
**Model Paper**

- 06. 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.
  - e. Supraventricular tachycardias.
- Key: b**

**Topic Specification:** Sedative-Hypnotics/ Anxiolytics (MCQ 7 – 9)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

- 07. 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.
  - e. Phenobarbital.
- Key: b**

- 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.
  - e. They are direct-acting GABA receptor agonists in the CNS.
- Key: d**

- 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.
  - e. Zolpidum.
- Key: a**

**Topic Specification:** Skeletal Muscle Relaxants & Drug Acting on CNS  
(MCQ 10 – 12)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**  
**Model Paper**

- 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.
  - e. Stimulation of autonomic ganglia.

**Key: c**

- 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.
  - e. Baclofen.

**Key: b**

- 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.
  - e. Gabapentin.

**Key: d**

**Topic Specification:** Analgesics; NSAIDS (MCQ 13 – 15)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

- 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 colon cancer.
  - e. Selectively inhibit the COX-2 enzyme.

**Key: b**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**  
**Model Paper**

- 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.
  - e. More likely to prevent further acute attacks.

**Key: b**

- 15. Which of the following drugs is used in the treatment of rheumatoid arthritis?**
- a. Naproxen.
  - b. Allopurinol.
  - c. Colchicine.
  - d. Sulfipyrazone.
  - e. Leflunomide.

**Key: a**

**Topic Specification:** Analgesics; Opioids (MCQ 16 – 18)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

- 16. The most dangerous adverse effect by using Fentanyl patches is:**
- a. Diarrhea.
  - b. Relaxation of respiratory muscles.
  - c. Hypertension.
  - d. Respiratory depression.
  - e. Skin reactions.

**Key: d**

- 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.
  - e. Adrenal insufficiency.

**Key: b**

- 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.
  - e. Amphetamine.

**Key: c**

**Topic Specification:** Local Anesthetics (MCQ 19 – 21)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**  
**Model Paper**

- 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.
  - e. Lidocaine.
- Key: b**

- 20. Which of the following drugs can cause methemoglobinemia when used in larger doses for regional anesthesia?**
- a. Cocaine.
  - b. Lidocaine.
  - c. Bupivacaine.
  - d. Procaine.
  - e. Prilocaine.
- Key: e**

- 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.
  - e. Decrease the heart rate when absorbed.
- Key: c**

**Topic Specification:** General Anesthetics (MCQ 22 – 24)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

- 22. Which of the following inhalational anesthetic agents is having fastest onset of action?**
- a. Nitric oxide.
  - b. Isoflurane.
  - c. Nitrous oxide.
  - d. Enflurane.
  - e. Nitrogen dioxide.
- Key: c**

- 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. Bradycardia.
  - e. Analgesia.
- Key: e**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**

**Model Paper**

24. Which of the following drugs produces respiratory depression and so reversed by flumazenil?
- Fentanyl.
  - Propofol.
  - Ketamine.
  - Midazolam.
  - Enflurane.

**Key: d**

**Topic Specification:** Antimicrobial Agents (MCQ 25 – 27)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

25. Cephalosporins show their antimicrobial action by:
- Binding to cytoplasmic receptor proteins.
  - Inhibition of beta-lactamases.
  - Inhibition of transpeptidation reactions.
  - Interference with the synthesis of ergosterol.
  - Inhibition of the synthesis of precursors of peptidoglycans.

**Key: c**

26. The most appropriate drug regimen for empiric treatment of Gram-negative bacilli in blood is:
- Ampicillin plus sulbactam.
  - Aztreonam.
  - Cefazolin.
  - Imipenem plus cilastatin.
  - Ticarcillin plus clavulanic acid.

**Key: b**

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.
  - During treatment tendinitis and tendon rupture may occur.

**Key: a**

**Topic Specification:** Antimicrobials Inhibitors Protein Synthesis (MCQ 28 – 30)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

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.
  - Formation of acetyl transferase that inactivates macrolides.

**Key: b**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**

**Model Paper**

**29. Doxycycline is:**

- a. Bactericidal.
- b. Not excreted in the feces.
- c. Having a short elimination half-life.
- d. Not effective in lyme disease.
- e. Not as effective as tetracycline against H.pylori.

**Key: e**

**30. Neomycin, an aminoglycoside is:**

- a. Least nephrotoxic.
- b. Metabolized by hepatic enzyme.
- c. Used in hepatic coma.
- d. A drug of choice in Rocky Mountain Spotted fever.
- e. An adjunct in treatment of tuberculosis.

**Key: c**

**Topic Specification:** Antifungals/ Antivirals/ Anticancers (MCQ 31 – 33)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

**31. The toxic effect of amphotericin B which definitely require reduction of dose is:**

- a. Myelosuppression.
- b. Hepatitis.
- c. Renal Toxicity.
- d. Hypotension.
- e. Infusion-related adverse effects.

**Key: c**

**32. Which of the followings is useful topically for genital herpes infection?**

- a. Acyclovir.
- b. Amantadine.
- c. Ritonavir.
- d. Trifluridine.
- e. Foscarnet.

**Key: a**

**33. Acute hemorrhage cystitis is a common toxic effect seen with:**

- a. Vincristine.
- b. Tamoxifen.
- c. Doxorubicin.
- d. Cyclophosphamide.
- e. Fluorouracil.

**Key: d**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**

**Model Paper**

**Topic Specification:** Drugs Acting on CVS/ Blood; Diuretics (MCQ 34 – 36)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

- 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.
  - e. Magnesium sulfate.

**Key: c**

- 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.
  - e. Vit. K<sub>2</sub>.

**Key: a**

- 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.

**Key: d**

**Topic Specification:** Drugs Acting on GIT/Respiratory System (MCQ 37–39)

**Reference:** Lippincott's Pharmacology, 3<sup>rd</sup> Ed.

- 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.
  - e. Clarithromycin.

**Key: b**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**

**Model Paper**

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?
- Dexamethasone.
  - Levodopa.
  - Apomorphine.
  - Sucrulfate.
  - Omeprazole.

**Key: a**

39. Which of the following is a prophylactic antiasthmatic agent that stabilizes mast cells:
- Ipratropium.
  - Prednisone.
  - Terbutaline.
  - Cromolyn.
  - Aminophyllin.

**Key: d**

**Topic Specification:** Dental Antiseptics & Disinfectants (MCQ 40 – 42)

**Reference:** Pharmacology and Therapeutic for Dentistry by Yagiela, Dowd, Neidle, 5<sup>th</sup> Ed.

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.
  - Kanamycin.

**Key: d**

41. Peppermint is least useful in:
- Gingivitis.
  - Periodontitis.
  - Young children.
  - Dental gum.
  - Antiseptic gel.

**Key: c**

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.
  - Can not be used as mouth rinse.

**Key: d**

**BDS SECOND PROFESSIONAL EXAMINATION 2007**  
**PHARMACOLOGY AND DENTAL MATERIA MEDICA (MCQs)**  
**Model Paper**

**Topic Specification:** Desensitizing Agents, etc. (MCQ 43 – 45)

**Reference:** Pharmacology and Therapeutic for Dentistry by Yagiela, Dowd, Neidle, 5<sup>th</sup> Ed.

**43. Eugenol when sealed in a root canal preparation leads to severe tissue damage:**

- a. Without pain as it has analgesic effect.
- b. Without pain as it has local anesthetic effect.
- c. Because it has corrosive effect.
- d. With local bleeding also.
- e. With severe pain so needs an oral analgesic also.

**Key: a**

**44. Which of the following statements is least related to Chlorhexidine (0.2%)?**

- a. It is useful in reducing plaque formation.
- b. It can cause staining of the teeth.
- c. There is increased formation of calculi.
- d. Alteration in taste perception is also observed.
- e. It is not effective in gingivitis.

**Key: e**

**45. Which of the following statements is rarely seen with Azadirachta Indica (Neem):**

- a. Can be used in toothpaste.
- b. Shows antimicrobial activity.
- c. Has mild abrasive effects.
- d. Can not inhibit plaque formation.
- e. Can have some antiseptic effects also.

**Key: d**