SHAMBHUNATH INSTITUTE OF PHARMACY

IIIrd YEAR: VTH SEMESTER
PHARMACOLOGY-I

2017-2018

UNIT- I

Q.1. What is Pharmacology, its branches and scope?

Q.2. Explain the different type of routes of drug administration?

Q.3. Define in brief parenteral route of drug administration?

Q.4. Give the differences between oral and parenteral route of drug administration?

Q.5. Define the merits and demerits of parenteral routes of drug administration?

Q.6. What is combined effect of drug? Explain with example.

Q.7. What is synergistic effect? Explain with example.

Q.8. Define the Receptor antagonistic effect of drug?

Q.9. Give note on-

a) Transdermal patches, b) Iontophoresis, c) i.v., s.c., i.m. routes of drug administration

d) Loading dose and maintenance dose

Q.10. Give a short note on factors modifying drug action?

Q.11. Give short note on-

a) Placebo, b) Nocebo, c) Cumulation, d) Tolerance, e) Drug resistance, f) Tachyphylaxis

g) Clinical trials

Q.12. How you discover a new drug entity?

Q.13. What is lead compound and how you perform its modification for enhancement of pharmacological action?

Q.14. Discuss the clinical trial with the help of flow chart?

Q.15. Define terms:

a) Agonist, b) Antagonist, c) Partial agonist, d) Inverse agonist, e) Competitive antagonist,

f) Non competitive antagonist, g) Receptor down regulation, h) Bioavailability.

Q.16. What is therapeutic index, LD50, ED50 and how are they determined?

Q.17. How drug are transported via passive diffusion across biological membrane?

Q.18. Explain the process of absorption via carrier transport?

Q.19. Define the terms

a) Phagocytosis, b) Pinocytosis, c) volume of distribution- Vd, d) Clearance, e) Plasma protein binding, f) Renal clearance, g) Plasma protein binding, h) First pass metabolism

Q.20. Define the name of reaction and the processes of Phase I and Phase II biotransformation.

Q.21. What is bioassay, give a brief note on it and also define the term multiple point bioassay.

Q.22. Give a short note on principle of drug action.

Q.23. Define receptor, its type and example.

Q.24. Define structure and pathway of following receptor

a) GPCR

(i) Adenylyl cyclase- cyclic AMP pathway

(ii) PLc- IP3- DAG pathway

c) Ionic channels

d) Enzymatic receptor

e) Steroidal/cytoplasmic receptor

UNIT- II

Q.1. Explain how the neurotransmitter act on neuromuscular or neuroeffector (NMJ or NEJ) junction.

Q.2. Give differences between Parasympathetic and Sympathetic action.

Q.3. Define the nicotinic and muscarinic receptor, its type and pathway.

Q.4. Write the classification of:

a) Cholinergic/ parasympathetic/ parasympathomimetic/ sympatholytic

b) Anticholinergic

c) Ganglion stimulant and ganglion blockers

d) Adrenergic/ sympathomimetic/ sympathetic/ parasympatholytic

e) Antiadrenergic/ sympatholytic

Q.5. Discuss mechanism of action and pharmacological action, adverse effects and uses of-

a) Acetylcholine, b) Atropine, c) Neostigmine, d) Propranolol, e) Adrenaline

Q.6. What is Myasthenia gravis and Glaucoma?

UNIT- III

Q.1. What are Skeletal muscle relaxants? Discuss mechanism and pharmacological action of neuromuscular blocker?

Q.2. Classify- a) Local anesthetics, b) Peripheral skeletal muscle relaxant, c) Centrally acting muscle relaxant

Q.3. Discuss mechanism of action, pharmacological action, adverse effects and uses of-

a) Procaine, b) d-tubocurarine, c) Dantrolene

Q.4. Define the methods for administration of local anesthetic. Specifically mention spinal and epidural method.

Q.5. Differentiate-

a) General and local anesthetics, b) Centrally acting muscle relaxant and peripherally acting muscle relaxant

Q.6. How the local anesthetic work, explain with diagram.

Q.7. Discuss following drug interaction-

a) Neostigmine and pancuronium

b) Verapamil and d- tubocurarine

UNIT- IV

Q.1. Classify

a) General anaesthetic

b) Sedative and hypnotics

c) Antiepileptic drugs

d) Opioid analgesic and their antagonists

e) Antianxiety

f) Antipsychotic

g) Antidepressant

Q.2. Explain mechanism of action (MOA), pharmacological action, uses, interaction and adverse effects of-

a) Ketamine, nitrous oxide, halothane, thiopentone sodium.

b) Disulfiram, c) Phenobarbitone, d) Amitriptyline, e) Phenytoin, f) Morphine, g) Diazepam

h) Antipsychotic drug, i) Antidepressant drug

UNIT- V

Q.1. What is poison, classify it and discuss general principles of treatment of a poisoned patient?

Q.2. Discuss causes, symptoms and treatment of-

a) Opioid poisoning

b) Barbiturate poisoning

c) Organophosphorous poisoning

d) Atropine poisoning

Q.3. Discuss in detail heavy metal poisoning.