



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN BIOCHEMISTRY

SBC 306: BIOCHEMICAL PHARMACOLOGY I

DATE: Wednesday, 28th March, 2012

TIME: 11.00 a.m. – 1.00 p.m.

**INSTRUCTIONS: WRITE ALL YOUR ANSWERS IN THE EXAMINATION
ANSWER BOOKLET**

SECTION A: Answer all questions (1 mark each)

- 1) Select the drug that is used to alleviate the acute abstinence syndrome during 'drying out' of alcohol dependence.
 - a) Benzodiazepines
 - b) Benzimidazole
 - c) Phenytoin
 - d) Ethosuximide
- 2) In a prescription the latin abbreviation 'non-repet' means.
 - a) Take the drug
 - b) Let it not be repeated
 - c) Let it be labeled
 - d) Mix and divided
- 3) In the body heroin is metabolized to which pharmacologically active compound.
 - a) Morphine
 - b) Codeine
 - c) Salicylic acid
 - d) amphetamine
- 4) Identify the drug that can be administered as an eye drop.
 - a) Dorzolamide
 - b) Thiopentone

- c) Diazepam
 - d) Trimethoprim
- 5) Colchines are targets of which molecules.
- a) Immunopholins
 - b) Enzymes
 - c) Tubulins
 - d) Golgi apparatus
- 6) Which of the following is a phase II drug reaction.
- a) Reduction
 - b) Hydrolysis
 - c) Conjugation
 - d) Oxidation
- 7) Identify the activity responsible for most desensitization of receptors.
- a) Oxidation
 - b) Phosphorylation
 - c) Conjugation
 - d) Esterification
- 8) Which of the following is a kinase linked receptor.
- a) Cytokine receptor
 - b) Steroid hormone receptor
 - c) Glutamate receptor
 - d) Thyroid receptor
- 9) Which of the following is an antagonist of histamine 2 receptor.
- a) Impromidine
 - b) Mepyramine
 - c) Ranitidine
 - d) Propanolol
- 10) Select the drug that is highly concentrated in urine of pH 8.
- a) Pethidine
 - b) Chlorothiazide
 - c) Morphine
 - d) Ergometrine
- 11) Identify the drug that is a substrate for the P450 enzyme CYP2C9.
- a) Omeprazol
 - b) Taxol
 - c) Codeine
 - d) Ibuprofen
- 12) Choose the drug that undergoes substantial presystemic elimination.
- a) Pethidine

- b) Probenicid
 - c) Penicilin
 - d) Propantheline
- 13) Which of the following is NOT a pharmacological effect produced by *Cannabis sativa*.
- a) Tachycardia
 - b) Vasoconstriction
 - c) Reduced intraocular pressure
 - d) Bronchodilatation
- 14) Identify the drug responsible for causing aplastic anaemia.
- a) Vancomycin
 - b) Ciprofloxacin
 - c) Chloramphenicol
 - d) Clarithromycin
- 15) β -adrenoreceptor antagonists diminishes the activity of which drug.
- a) Ibuprofen
 - b) Indomethacin
 - c) Terbutarine
 - d) Prednisolone
- 16) Which of the following antiseptic is used for burn dressing.
- a) Cetrinide
 - b) Hydrogen peroxide
 - c) Formalin
 - d) Alcohol
- 17) Lead carbonate is also known as.
- a) Red lead
 - b) Grey lead
 - c) Brown lead
 - d) White lead
- 18) Nicotinic acetylcholine receptor has how many subunits.
- a) 6
 - b) 3
 - c) 4
 - d) 2
- 19) Which of the following drug is a psychomotor stimulant.
- a) Morphine
 - b) Barbiturates
 - c) Phencyclidine
 - d) Amphetamine
- 20) Chloroquine has high accumulation in which tissue.

- a) Thyroid
- b) Retina
- c) Kidney
- d) Oesophagus

SECTION B: Answer all questions (5 mark each)

- 1) Write short notes on pharmacokinetic antagonism.
- 2) Discuss briefly the mesolimbic dopaminergic reward pathway.
- 3) Write short notes on Cadmium poisoning.
- 4) Write short notes on sublingual administration of drugs.
- 5) Briefly describe the molecular structure of the β -adrenoreceptor.
- 6) Write short notes on induction of microsomal enzymes by drugs.

SECTION C: Answer any TWO questions (10 mark each)

1. Discuss the metabolism and toxicity of methanol.
2. Describe how gastrointestinal motility affects the absorption of drugs.
3. Discuss the process of detoxification of poisons and other foreign compounds in the body.