

DEPARTMENT OF PHARMACOLOGY
AYUB MEDICAL COLLEGE
ABBOTTABAD

Block G Assessment(Key) A
FOR 3RD YEAR MBBS STUDENTS
(HELD ON 29-04-2022) TEMPT ALL
QUESTIONS. WRITE CLASS ROLL
NUMBERS CLEARLY

MULTIPLE CHOICE QUESTIONS

(39 marks) 1) Drug metabolism can be induced by the

following factors except

- (a) Cigarette smoking
- (b) Acute alcohol ingestion
- (c) Exposure to insecticides
- (d) Consumption of charcoal boiled meat
- (e) Therapy with Anti-TB Drugs

2) A drug which does not produce any action by itself but decreases the slope of the log dose-response curve and suppresses the maximal response to another drug is a

- (a) Physiological antagonist
- (b) Competitive antagonist
- (c) Noncompetitive antagonist
- (d) Partial agonist
- (e) Chemical Antagonist

3) Kinetic processes of elimination for a large number of drugs is

- (a) First order
- (b) First order followed by zero order
- (c) Zero order followed by first order
- (d) Zero order
- (e) None of Above

4) What is the best criterion for judging the therapeutic superiority of a drug over its congeners?

- (a) Potency
- (b) Wide range of activity
- (c) Efficacy
- (d) Variability
- (e) Therapeutic Index

5) Which of the following therapeutic systems provides continuous, unattended, controlled drug input for a long period without gastrointestinal or hepatic drug inactivation prior to systemic circulation?

- (a) Parenteral
- (b) Oral
- (c) Transdermal
- (d) Inhalational
- (e) Topical

6) The following are excreted faster in acidic Urine:

- a. Weak acids
- b. Strong acids
- (c) Weak Bases
- d. Strong Bases
- e. None of the above

7) An intravenous bolus dose of thiopental usually leads to loss of consciousness within 10-15 sec. If no further drugs are administered, the patient will regain consciousness in just a few minutes. This is because thiopental is

- a. A good substrate for renal tubular secretion
 - b. Exhaled rapidly
 - c. Rapidly metabolized by hepatic enzymes
 - (d) Redistributed from brain to other body tissues
 - e. Secreted in the bile
- 8) Following compartment constitutes the largest

(b) Intestinal fluid

- (c) Intracellular fluid
- (d) Fat
- (e) Bones

9) With regard to clinical trials of new drugs, which of the following is most correct?

(a) Phase I involves the study of a small number of normal volunteers by highly trained clinical pharmacologist

(b) Phase II involves the use of the new drug in a large number of patients (100-5000) who have the disease to be treated

(c) Phase III involves the determination of the drug's therapeutic index by the cautious induction of toxicity

(d) Phase V is the most important

(e) Phase II requires the use of a positive control (a known effective drug) and a placebo

10) The earliest evidence that a drug is stored in tissues is

- (a) An increase in plasma protein binding
- (b) A large apparent volume of distribution (VD)
- (c) A decrease in the rate of formation of metabolites by the liver
- (d) An increase in the number of side effects produced by the drug
- (e) A decrease in the amount of free drug excreted in the urine

11) Jasim is a 55 KG, 38-year-old male smoker with acute exacerbation of COPD who is started on theophylline in the ward. A loading dose of 300 mg is administered over 30 minutes. Blood samples obtained 3 hours and 6 hours after the loading dose revealed serum concentrations of 12.0 mg/L and 8.1 mg/L, respectively. The elimination half-life of theophylline in this patient is:

- a. 0.53 hours
- (b) 5.33 hours
- c. 3.50 hours
- d. 6.00 hours
- e. 8.03 hours

12) All the following statements are true except:

- a. Acidic drugs generally bind to plasma albumin
- b. Basic drugs preferentially bind to alpha-1 acidic glycoprotein
- c. Plasma protein binding (PPB) is a reversible process
- d. Binding sites on plasma proteins are non-selective

(e) Drugs bound to PPB sites have faster effects at target organs

13) Excipients are

- (a) Pharmacologically inert substances
- (b) Used to mask an unpleasant taste
- (c) Used to increase solubility or stability to the agent
- (d) Employed to add bulk to the active agent used in small quantities

(e) All the above

14) Phocomelia is a known teratogenic effect of

- (a) Anticancer drugs
- (b) Antiviral drugs
- (c) Antiepileptic drugs
- (d) Thalidomide
- (e) Methyl Dopa

15) For the drugs which follow first order kinetics, after 4 half life the elimination will be approximately

- (a) 40%
- (b) 94%
- (c) 25%
- (d) 4%

16) One mechanism for the tolerance produced by repeated drug administration is a

- b. increased plasma level of the drug.
 c. increased number of receptors in the brain.
d. reduced number of receptors for the drug.
 e. increased number of ion channel openings in response to receptor activation.
- 17) A 25 year old young woman is started on 'Chloramphenicol' tablets for Enteric fever. What is the mechanism of this drug?
 (a) Inhibition of 30s ribosome
b. Inhibition of 50s ribosome
 (c) Inhibition of bacterial cell wall synthesis
 (d) Inhibition of RNA synthesis
 (e) Inhibition of DNA gyrase
- 18) Regarding termination of drug action
 (a) Drug must be exerted from the body to terminate their action
 (b) Metabolism of drugs always increases their water solubility
 (c) Metabolism of drugs always abolishes their pharmacologic activity
d. Hepatic metabolism and renal excretion are the two most important mechanisms involved
 (e) Distribution of a drug out of the bloodstream terminates the drug's effect
- 19) Which of the following most accurately describes the transmembrane signaling process involved in steroid hormone action?
 (a) Action on a membrane spanning tyrosine kinase
 (b) Activation of a G protein which activates or inhibits adenylyl cyclase
c. Diffusion into the cytoplasm and binding to an intracellular receptor
 (d) Diffusion of "STAT" molecules across the membrane
 (e) Opening of transmembrane ion channels
- 20) Which of the following terms best describes an antagonist that interacts directly with the agonist and not at all or only incidentally, with the receptor?
 (a) Pharmacological antagonist
 (b) Partial agonist
 (c) Physiological antagonist
d. Chemical antagonist
 (e) Noncompetitive antagonist
- 21) Which of the following 'anti-malarials' is used to eradicate the liver forms of *pl. vivax* & *malariae*?
 (a) Chloroquine
 (b) Quinine
 (c) Mefloquine
 (d) Pyrimethamine
c. Primaquine
- 22) Which of the following antibiotics act by inhibiting protein synthesis?
 (a) Cephalosporins
b. Azithromycin
 (c) Rifampicin
 (d) Amoxicillin
 (e) Flucloxacillin
- 23) A 36 year old man taking 'Co-trimoxazole' for the last 2 months and now presents due to pallor & fatigue. His haemoglobin was 8 g/dL with a megaloblastic picture. What is the most likely cause?
 (a) Iron deficiency
 (b) Vitamin B-12 deficiency
 (c) Liver dysfunction due to co-trimoxazole
 (d) Sideroblastic anemia due to co-trimoxazole
c. Folate deficiency
- 24) Which of the following is a drug of choice to treat 'syphilis'?
a. Benzathine penicillin G
 (b) Penicillin G
 (c) Penicillin V
 (d) Sulphamethoxazole
 (e) Bacitracin
- 25) The following is used for antibiotic associated colitis?
 (a) Fosfomycin
 (b) Methacillin
c. Vancomycin
 (d) Levofloxacin
 (e) Streptomycin
- 26) Levofloxacin, a Fluoroquinolone, is a widely used Anti-Microbial. Its exact mechanism of action is:
 (a) Inhibition of microsomal protein synthesis
 (b) On microsomal metabolic functions
 (c) Reversible binding to 50s of bacterial ribosome
 (d) Interference with the initiation complex of peptide formation
e. Inhibit synthesis of DNA by inhibiting bacterial enzyme topoisomerase 2 (DNA gyrase)
- 27) Cephalosporins with methyltetrazole ring causes hypoprothrombemia by blocking
a. vitamin k epoxide
 b) warfarin
 c) platelet aggregation
 d) heparin
 e) coagulation pathways
- 28) A patient is suffering from Infective endocarditis, is being treated with Gentamicin in combination with nafcillin after 1 month therapy patient suddenly develops difficulty in breathing and muscle weakness. This condition can be treated with
d. Neostigmine or calcium.
 (b) Adrenaline or Potassium.
 (c) Non-Adrenaline or Sodium.
 (d) Phenytoin or Magnesium.
 (e) None of Above.
- 29) Sulphonamides, a widely used group of anti-bacterials acts by the following mechanism:
 a. inhibit synthesis of DNA by inhibiting bacterial enzyme topoisomerase 2 (DNA gyrase)
b. inhibit growth of those microorganisms which synthesize their own folic acid from PABA
 c. inhibit protein synthesis by binding with 30 S ribosomes
 d. Inhibit 50 S ribosomes and inhibit protein synthesis
 e. prevent synthesis of cell wall and activate autolytic enzymes in cell wall
- 30) A 10 yrs old boy has developed discolouration of teeth following a course of antimicrobial. Which drug is responsible for this...
 (a) chloramphenicol
 (b) neomycin
c. doxycycline
 (d) imipenem
 (e) co trimoxazole
- 31) Which of the following antimicrobial is safely used in a pregnant patient, first trimester of pregnancy, suffering from enteric fever
 (a) ciprofloxacin
 (b) cefixime
 (c) co trimoxazole
 (d) levofloxacin
a. amoxicillin
- 32) Mechanism of action of which of the following antimicrobials involve inhibition of topoisomerase enzymes
a. sparfloxacin

(b) rifampicin
 (c) azithromycin
 (d) trimethoprim
 (e) neomycin
 33) The following is used for antibiotic associated colitis?
 (a) Fosfomycin
 (b) Methacillin
 (c) Vancomycin
 (d) Levofloxacin
 (e) Streptomycin

- (b) rifampicin
- (c) azithromycin
- (d) trimethoprim
- (e) neomycin

33) The following antibiotic can be prescribed safely in Patients having renal impairment?

- (a) Amikacin
- (b) Vancomycin
- (c) Gentamycin
- (d) Doxycycline
- (e) Cephazolin

34) Which of the following drugs is used along with penicillins to prolong the duration of action of penicillin.

- a) clavulanic acid
- b) sulbactam
- (c) probenecid
- d) tazobactam
- e) all of the above

35) A 20 year old male suffered from moderate Aspirin toxicity; he may be managed by promoting its excretion by giving him:

- (a) Ascorbic acid
- (b) Acid citrate.ium choliride.
- (c) Quinidine sulphate.
- (d) Sodium bicarbonate

36) Histamine-1 receptor antagonists include

a-Ranitidine

b-nizatidine

c-famotidine

(d) terfenadine

e-cimetidine

37) Paracetamol (Acetaminophen):

- a) Has an active metabolite
- b) Interferes with renal blood flow
- (c) Does not cause gastric irritation
- d) Causes methaemoglobinaemia
- e) Has anti-inflammatory effects

38) Amphotericin B has the following unwanted effects:

- a) Psychosis
- (b) Renal impairment, anemia
- c) Hypertension, cardiac arrhythmia
- d) Bone marrow toxicity
- e) GI disturbance

39) All of the following are undesirable effects of aspirin EXCEPT:

- a) Gastritis with focal erosions
- (b) Tolerance and physical addiction
- c) Bleeding due to a decrease of platelet aggregation
- d) Reversible renal insufficiency
- e) Mild headache