

PHARMACOLOGY AND THERAPEUTICS; FACULTY OF MEDICAL SCIENCES, COLLEGE OF MEDICINE,
UNIVERSITY OF NIGERIA, ENUGU CAMPUS
SECOND CLASS ASSESSMENT / MOCK 3RD MBBS EXAMINATION
(3RD MB BS, 2018 CLASS) THURSDAY 13TH APRIL 2017

PAPER I. MULTIPLE CHOICE QUESTIONS (OBJECTIVE)

INSTRUCTIONS

You must write your registration number and your serial number / examination number on every answer sheet that you submit for marking. You must use this same serial/examination number on all assessment and examination scripts during your pharmacology posting.

Answer **ALL** questions. There is **ONE SINGLE BEST CORRECT ANSWER** for each question. You score one mark for single correct answers. You score zero marks for wrong or multiple answers.

Time allowed: 90 minute

1. Which of the following does not reduce gastric acid secretion

- A Roxatidine
- B misoprostol
- ☒ C sucralfate
- D pirenzepine
- E pantoprazole

2. Which of the following is not used in the eradication of *Helicobacter pylori*

- A tetracycline
- B Metronidazole
- C Amoxicillin
- D Tinidazole
- ☒ E Chloramphenicol

3. Which of the following is an ulcer protective drug

- ☒ A Colloidal bismuth subcitrate
- B misoprostol
- C Sodium citrate
- D Lansoprazole
- E Ranitidine

4. One of the following drugs has antiandrogenic action

- ☒ A Cimetidine
- B Ranitidine
- C Roxatidine
- D Fomatidine
- E Tinidazole

5. One of the following drugs is not used in the treatment of Gastroesophageal reflux disease (GERD)

- A Cisapride
- B Metoclopramide
- C Omeprazole
- D Ranitidine
- ☒ E Tinidazole

6. The most effective class of drugs for symptomatic relief and healing of esophageal lesions is

- A pro kinetic drugs
- B H₂ blockers
- C Antacids
- ☒ D Proton pump inhibitors
- E Sodium alginate

7. One of the following drugs is not used in the neutralization of gastric acids

- A sodium citrate
- B sodium bicarbonate
- ☒ C colloidal bismuth subcitrate
- D calcium carbonate
- E magnesium trisilicate

8. One of the following is not a mechanism for drug resistance

- A Drug inactivation
- B Drug modification
- C Alteration of target site
- D Reduced drug accumulation
- ☒ E Increased drug accumulation

9. which of the following is not true concerning drug resistance

- A Drug resistance occurs naturally
- B Drug resistance can be acquired by pathogens
- C drug resistance is inherited by pathogens
- ☒ D only microorganisms can develop drug resistance
- E multi drug treatment can be used to combat drug resistance

10. One of the following is not true concerning drug resistance

- A multi drug therapy is used to combat drug resistance
- B reduced drug accumulation is involved in drug resistance

C Single drug therapy is used to combat drug resistance

D sulfonamide resistant bacteria achieve resistance by alteration of metabolic pathways

E Penicillin G resistant organisms become so by drug inactivation

11. Macrolides can have the following pharmacological effects EXCEPT

- a. Antibiotic
- ☒ b. Antifungal
- c. Immunologic
- d. Toxic
- e. Antiviral

12. Clarithromycin and Erythromycin are known to be be

- ☒ a. Potent inhibitors of Cytochrome P450
- b. Passive inhibitors of Cytochrome P450
- c. Potent activators of Cytochrome P450
- d. Passive activators of Cytochrome P450
- e. None of the above

13. Nausea caused by macrolides is associated to its commonly associated phenomenon known as

- a. Enterohepatic revolving
- ✓ ☒ b. Enterohepatic recycling
- c. Portocaval irritation
- d. Retroperistalsis
- e. Gastrointestinal dumping

14. Therapeutic macrolides cause toxicity when taken with

- a. Plasticine
- ☒ b. Colchicine
- c. Paracetamol
- d. Vitamin C
- e. Methotrexate

15. The distinct antibiotic member of the macrolide family due to its Cytochrome P450 activity is

- ☒ a. Erythromycin
- b. Streptomycin
- c. Azithromycin

- d. Clarithromycin
- e. Telithromycin

16. Antiemetics were assumed to cause which symptom in pregnant women?

- a. Prolonged labour
- b. Mood swings
- c. Birth defects
- ☒ d. Sleeping disorders
- e. Preterm contractions

17. 5-HT₃ antagonists include the following except

- ☒ a. Domperidone
- b. Ondansetron
- c. Tropisetron
- d. Dolasetron
- ☒ e. Mirtazapine

18. Which of the following is not a class of antiemetics?

- ☒ a. Dopamine agonists
- b. 5-HT₃ antagonists
- c. H₁ receptor antagonists
- d. Cannabinoids
- e. Benzodiazepines

19. Ginger has some antiemetic effect because of its content of some antiemetic compounds belonging to which class?

- a. Anticholinergics
- b. Dopamine antagonists
- ☒ c. 5-HT₃ antagonists
- d. Steroids
- e. Benzodiazepines

20. The commonest opioid used for its sole antiemetic function is

- a. Morphine
- b. Indapamide
- c. Codeine
- ✓ ☒ d. Loperamide
- ☒ e. None of the above

21. Which venom is best known for causing rhabdomyolysis?

- ☒ a. sea snake venom
- b. terrestrial snake (viperidae) venom
- c. bee sting

- d) scorpion bite
e) tarantula bite
22. Which is not an anticonvulsant?
a) clonazepam
b) haloperidol
c) lamotrigine
d) sodium valproate
e) phenytoin
23. Which are amongst the venomous animals?
a) cnidarians
b) hymenopterans
c) spiders
d) bees
e) all of the above
- 24). Which is most important and most urgent in the treatment of snake bite?
a) immobilize the bitten limb
b) cut down on the bite and suck out the venom
c) run to the nearest medical centre
d) administer polyvalent antivenom
e) dress the wound and apply a compression bandage to occlude venous and lymphatic drainage, but not the arterial blood supply
- 25). Plasma clearance of a drug refers to:
a) volume of extracellular fluid from which drug is eliminated per unit time
b) amount of drug eliminated per unit time
c) rate of decrease of plasma drug concentration per unit time
d) dose administered divided by area under the plasma concentration versus time curve
e) the portion of the apparent volume of distribution from which drug is eliminated in the urine
- 26). Which does not inhibit the 50S ribosomal subunit?
a) chloramphenicol
b) azithromycin
c) streptomycin
d) clindamycin
e) clarithromycin
- 27). Which is a non-nucleoside reverse transcriptase inhibitor?
a) efavirenz
b) didanosine
c) enfuvirtide
d) ritonavir
e) lamivudine
- 28). Which would not be a treatment of choice for congestive cardiac failure in sinus rhythm
a) digoxin
b) oxygen
c) frusemide
d) lisinopril
e) losartan
- 29). Which would be a treatment of choice to control rapid ventricular response in a patient with cardiac failure and atrial fibrillation?
a) digoxin
b) verapamil
c) atenolol
d) frusemide
e) lisinopril
- 30). Which is inappropriate in the treatment of Acute Coronary Syndrome?
a) dual antiplatelet therapy
b) fondaparinux
c) digoxin
d) nitrates
e) metoprolol
- 31). Which is a combined alpha and beta adrenergic blocker?
a) propranolol
b) labetalol
c) pindolol
d) metoprolol
e) atenolol
- 32). Which would not be suitable for ventricular tachyarrhythmias?
a) flecainide
b) amiodarone
c) lignocaine
d) verapamil
e) normalize serum electrolyte concentrations
33. The least hepatotoxic tetracycline is:
a) Tetracycline
b. Doxycycline
c. Minocycline
d. Methacycline
e. Demeclocycline
34. Chloramphenicol is primarily bacteriostatic, but may be bactericidal to some species such as
a) Haemophilus influenzae
b. Brucella Spp
c. Vibrio cholerae
d. Pseudomonas aeruginosa
e. E. coli

35. Poisoning by ethylene glycol is characterized by one of the following:

- a. CNS depression
- b. Sedation
- c. Hypnosis
- d. Anaesthesia
- ☒ e. Staggering

36. Which of these statements is NOT an effect of oestrogens?

- ☒ a. Increases prolactin secretion
- b. Exhibits positive and negative feedback in the secretion of FSH and LH
- c. Synergistic role with progestins in libido
- d. It helps in the growth and development of ducts in mammary glands
- e. It helps in the growth and development of the vagina

37. Which of these statements is true for progestins?

- a. They act as aldosterone antagonists
- b. They increase plasma concentration of hormone binding globulins
- c. They have weak diabetogenic actions
- d. They help in protection against atherosclerosis
- ☒ e. They predispose people to thromboembolic phenomena

38. Contraindications of androgens include the following EXCEPT:

- a. Asthmatic patients
- b. Severe cardiac disease
- c. Carcinoma of the prostate
- d. Carcinoma of the breast
- ☒ e. Hypercalcaemia

Questions 39 to 42 are based on the following statements:

- I. A potent androgen receptor antagonist
- II. A potent antiandrogen used for prostatic carcinoma
- III. Inhibits both androgen receptors and 17-alpha-hydroxylase
- IV. Inhibits mid-cycle surge of LH and FSH, thus preventing ovulation
- V. Inhibits aromatase, an enzyme required for oestrogen synthesis

39. Which of the above statements closely relates to Danazol?

- a. I
- b. II

- c. III
- ☒ d. IV
- e. V

40. Which of the above statements closely relates to Anastrozole?

- a. I
- b. II
- c. III
- d. IV
- ☒ e. V

41. Which of the above statements closely relates to Bicalutamide?

- a. I
- ☒ b. II
- c. III
- d. IV
- e. V

42. Which of the above statements closely relates to Flutamide?

- a. I
- ☒ b. II
- c. III
- d. IV
- e. V

43. The only bactericidal agent in the following drugs is

- a. Tetracycline
- b. Sulphonamide
- c. Linezolid
- d. Clindamycin
- ☒ e. Rifampicin

44. The only topical sulphonamide in the following is

- a. Sulphasalazine
- b. Sulphisoxazole
- ☒ c. Mafenide
- d. Sulphamethoxypyridazine
- e. Sulphadimidine

45. Melioidosis eradication can be achieved using

- a. 3 months of ciprofloxacin + augmentin
- b. 3 months of Penicillin + Rifampicin
- c. 3 months of levofloxacin
- ☒ d. 3 months of cotrimoxazole ± doxycycline
- e. 2 months of pyrimethamine

46. This antibiotic is not bound to plasma proteins and do not enter the cells or cross barriers – mostly remain in the vasculature.
- Chloramphenicol
 - Sulphadoxine
 - Clarithromycin
 - Levofloxacin
 - ☒ Gentamicin
47. Select the odd one out
- Butaconazole
 - Oxiconazole
 - Sulconazole
 - ☒ Ravuconazole
 - Sertaconazole
48. The drug of choice for a mixed infections of *Candida albicans*, *Histoplasma capsulatum*, *Cryptococcus neoformans*, *Aspergillosis* and *Blastomyces dermatitis* is
- Econazole
 - Miconazole
 - Caspofungin
 - ☒ Amphotericin B
 - Hamycin
49. This drug is a tetrahydrofuran
- Nikkomycin
 - Micafungin
 - ☒ Azasordarins
 - Ravuconazole
 - Amorolfine
50. This drug has the following properties : half-life 15 days, metabolized in the liver (slowly), 90% of the drug is bound to plasma proteins.
- Fluconazole
 - Emetine
 - ☒ Amphotericin B
 - Clotrimazole
 - Posaconazole
51. Select the odd one out
- Malathion
 - ☒ Sumithion
 - Dyflos
 - Propoxur
 - Diazinon
52. This drug is effective against *Malassezia furfur* and *Candida dermatophytes*
- 5-flucytosine
 - Itraconazole
 - ☒ Ciclopirox olamine
 - Potassium iodide
 - Tolnaftate
53. Considering clinical mechanism of action, choose the odd drug
- Procainamide
 - Quinidine
 - Amiodarone
 - ☒ Sotalol
 - Disopyramide
54. Which is not a mechanism of action of anti-arrhythmic drugs
- Calcium channel blockade
 - ☒ Activation of chloride ion channel
 - Activation of outward potassium ion flow
 - Beta blockade
 - Inhibition of Na-K ATPase
55. Major adverse side effects of quinidine include
- Hypertension
 - Diarrhea
 - Vomiting
 - None of the above
 - ☒ All of the above
56. In the first phase of clinical trials the following applies except
- ☒ Animals and humans are used
 - Only healthy humans are used
 - Duration up to 1 year
 - All of the above
 - None of the above
57. Which of the following is true about the 3rd phase of clinical trials,
- Number of participants >1000

- B. Participants must be patients
C. Duration > 3years
☒ D. All of the above
E. None of the above
58. In clinical trials the following are true about placebo except
A. It is an active compound different from the trial drug
B. All the participants must take placebo
C. It usually has no effects at all
D. None of the above
✓ ☒ E. All of the above
59. In carrying out clinical trials which of the following is untrue
A. It must have social value
B. Participants must know about the trial drug
☒ C. It must always be carried out double blind
D. All of the above
E. None of the above
60. Parasympathetic nervous system innervates the following except
a. Ganglia
☒ b. Skeletal muscle
c. Cardiac muscle
d. Smooth muscle
e. Glands
61. The rate limiting step in the synthesis of adrenaline is
a. Conversion of phenylalanine to tyrosine
☒ b. Conversion of tyrosine to dopa
c. Conversion of dopa to dopamine
d. Conversion of dopamine to noradrenaline
e. None of the above
62. Tyrosine hydroxylase is inhibited by
☒ a. Metyrosine
b. Carbidopa
c. Benztropine
d. Reserpine
e. Orphenadrine
63. Neuronal reuptake can be inhibited by
a. Reserpine
☒ b. Tricyclic antidepressants
c. Tetrabenazine
d. Alpha-methyldopa
e. Aspirin
64. The following are direct acting sympathomimetic drugs except
a. Phenylephrine
b. Metaraminol
☒ c. Amphetamine
d. Mephentermine
e. Methoxamine
65. Direct acting alpha agonists have the following uses except
☒ a. Relieve of bronchoconstriction and mucosal congestion associated with bronchial asthma
b. Nasal decongestion
c. Blood pressure elevation during spinal anaesthesia
d. Management of hypotension due to drug overdose
e. None of the above
66. Beta-Adrenoceptor antagonists may not be used in
a. Pheochromocytoma
b. Hypertensive emergencies
c. Chronic hypertension
☒ d. Asthma
e. Angina pectoris
67. The following are non-selective β -adrenoceptor antagonists except
a. Propranolol
b. Timolol
☒ c. Esmolol
d. Pindolol
e. Labetalol
68. One of the following drugs blocks α_2 adrenoceptor
a. Prazosin
b. Doxazosin
c. Trimazosin
☒ d. Yohimbine
e. Terazosin
69. Which one of the following is a β_2 agonist
a. Metaraminol
b. Methoxamine
☒ c. Isoprenaline
d. Phenylephrine
e. Dobutamine

70. A 30 year old man with cerebral oedema following a traumatic head injury is best treated with:
- Frusemide
 - Amiloride
 - Dexamethasone
 - Mannitol
 - ☒ Options (c) and (d) are correct
71. A young girl of 20 years has taken a suicidal overdose of Digoxin, the drug of choice in her treatment will be:
- Lidocaine.
 - Phenytoin.
 - ☒ Digoxin antibodies.
 - Potassium chloride.
 - Magnesium sulfate.
72. Autacoids differ from hormones in that:
- Autacoids are involved only in the causation of pathological states
 - Autacoids do not have a specific cell/tissue of origin
 - Autacoids generally act locally at the site of generation and release
 - ☒ Both 'B' and 'C' are correct
 - None of the above
73. The cyclooxygenase isoenzymes COX-1 and COX-2 differ from each other in that:
- They catalyse different pathways in prostanoid biosynthesis
 - COX-1 is inhibited by aspirin but not COX-2
 - COX-2 is inhibited by ibuprofen but not COX-1
 - ☒ COX-1 is constitutive while COX-2 is largely inducible
 - Cox-1 is inactive while Cox-2 is the active receptor
74. The following 5-HT receptor is not a G protein coupled receptor:
- 5-HT₁
 - 5-HT₂
 - ☒ 5-HT₃
 - 5-HT₄
 - None of the above
- Ligand gated cation channel (Na⁺, K⁺)*
75. The following is a selective 5-HT_{1D} receptor agonist:
- Buspirone
 - Ondansetron
 - ☒ Sumatriptan
 - Methylsergide
 - Fentanyl
76. Low doses of aspirin prolong bleeding time by selectively inhibiting synthesis of the following mediator in the platelets:
- ☒ Thromboxane A₂
 - 5-Hydroxytryptamine
 - Platelet activating factor
 - Prostacyclin
 - Prostaglandin
77. Inhibition of prostaglandin synthesis does not underlie the following action of aspirin:
- Analgesia
 - Closure of patent ductus arteriosus
 - ☒ Hyperventilation
 - Bleeding tendency
 - Antipyrexia
78. In the treatment of chronic inflammatory diseases, the most important limitation of aspirin is:
- Acid-base and electrolyte disturbances
 - Hypersensitivity and idiosyncratic reactions
 - ☒ Gastric mucosal damage
 - Salicylism
 - Reye's syndrome.
79. Choose the correct statement about nonsteroidal antiinflammatory drugs (NSAIDs):
- NSAIDs attenuate hypoglycaemic action of sulfonylureas
 - NSAIDs potentiate antihypertensive action of ACE inhibitors
 - Serum lithium levels are lowered by concurrent administration of NSAIDs
 - Combined therapy with prednisolone and NSAIDs carries higher risk of gastric bleeding
 - ☒ All of the above.
80. N-acetyl cysteine is beneficial in acute paracetamol poisoning because:
- It reacts with paracetamol to form a nontoxic complex
 - It inhibits generation of the toxic metabolite of paracetamol
 - It is a free radical scavenger
 - ☒ It replenishes hepatic glutathione which in turn binds the toxic metabolite of paracetamol
 - All of the above

81. Aside from CNS effect of Loperamide, it is used in treatment of emesis because

- a. No antimuscarinic effect
- b. High first pass metabolism
- c. High bioavailability
- d. Effect starting from the mouth
- ☒ e. None of the above

82. Adsorbing and bulking agents include the following except

- a. Ispaghula
- ☒ b. Kaola
- c. Methylcellulose
- d. All of the above
- e. None of the above

83. ORS is ideally recommended to contain the following substances except

- a. Glucose
- b. Sodium citrate
- c. Potassium chloride
- d. Sodium chloride
- ☒ e. Sodium bicarbonate

84. The use of Oral rehydration therapy has been associated with marked reduction in

- a. Fertility
- b. Appetite
- ☒ c. Mortality
- d. Intelligence
- e. Temperature

85. In the use of ORS, the World Health Organization recommends the addition of

- a. Iron supplements
- b. Iodine supplements
- c. Calcium supplements
- ☒ d. Zinc supplements
- e. Magnesium supplements

86. One of these drugs is metabolized mainly by acetylation:

- a. Adrenaline
- b. Ampicillin
- c. Rifampicin
- d. Cocaine
- ☒ e. Isoniazid

87. Select the odd one out

- a. Rifampicin
- b. Isoniazid
- c. Streptomycin
- ☒ d. Ampicillin
- e. Pyrazinamide

88. Select the odd one out

- a. Risperidone
- b. Quetiapine
- c. Olanzapine
- d. Chlorpromazine
- ☒ e. Cetrizine

89. This drug can cause haemolysis in G6PD deficient patients

- a. Amoxicillin
- b. Beclomethasone
- c. Tetracycline
- ☒ d. Dapsone
- e. Cyanocobalamin

90. T_{max} refers to the time

- a. Required to administer the next dose of the drug
- b. The time taken to reduce the serum concentration of the drug by half.
- c. The time taken to increase the serum concentration of the drug by half.
- ☒ d. The time taken to reach the peak serum concentration of the administered drug.
- e. To estimate the bioavailability of the administered drug.

91. Half life of a drug refers to the time

- a. Required to administer the drug intravenously.
- ☒ b. The time taken to reduce the serum concentration of the drug by half.
- c. The time taken to increase the serum concentration of the drug by half.
- d. The time taken to reach the peak serum concentration of the administered drug.

- e. To estimate the bioavailability of the administered drug.
92. This drug is a choice inhaled corticosteroid for the treatment of bronchial asthma
- Lidocaine
 - Lisinopril
 - ☒ Beclomethasone
 - Ergotamine tartrate
 - Estradiol.
93. One of these is a second line anti-tuberculosis drug:
- Clofazimine
 - Liquid Paraffin
 - Olanzapine
 - Cetrixone
 - ☒ Kanamycin.
94. This route of drug administration will NOT avoid first pass metabolism in the liver
- Inhalation
 - Topical
 - ☒ Oral
 - Intravenous
 - Intramuscular.
95. Which one of these is NOT bactericidal at usual recommended doses
- ☒ Ethambutol
 - Streptomycin
 - Pyrazinamide
 - Rifampicin
 - Isonizid
96. The half-life of inhalant cocaine is
- Reduced by barriers in the pharyngeal mucosa
 - ☒ Half that of cocaine in plasma
 - Is not affected by plasma esterases
 - Twice that of cocaine in plasma
 - Extended by barriers in the pharyngeal mucosa
97. Benzoylecgonine is not
- Effective for detecting cocaine use
 - Available in body fluids, five days after cocaine use
 - A major urinary metabolite of cocaine
 - Available in body fluids, two days after cocaine use
 - ☒ Available in urine, twelve day after in heavy users
98. Adaptive immunity consists of the following except
- ☒ Natural Killer Cells
 - Immunogens
 - Immunoglobulins
 - Antigens
 - Modified serum globules
99. Vaccines can consist of
- Live, active bacteria
 - Non-specific peptides
 - ☒ Completely inactivated viruses
 - Killed viruses
 - Live, active viruses
100. Which of this is not an adult vaccine
- Yellow fever vaccine
 - Meningitis A vaccine
 - Hepatitis B vaccine
 - ☒ Malaria vaccine
 - Human Papilloma Virus vaccine