

Reg. No.										
----------	--	--	--	--	--	--	--	--	--	--

MANIPAL UNIVERSITY
MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)
MBBS PHASE – I STAGE – II DEGREE EXAMINATION – SEPTEMBER 2017
SUBJECT : PHARMACOLOGY – PAPER I (ESSAY)

Monday, September 11, 2017

Time : 9.00 a.m.- 11.00 a.m.

Max. Marks : 60

1. A 5-year-old child accidentally consumes 15-20 tablets of paracetamol. He was brought to the emergency department with complaints of vomiting and abdominal pain. On examination, there was liver tenderness.

1A. Explain the pharmacological basis for above complications.

1B. Mention the antidote used to treat this complication and explain how it is useful.

(2+2 = 4 marks)

2A. List two advantages and two disadvantages of sublingual route of drug administration.

2B. Define plasma half-life and list its two clinical significance.

2C. Enumerate two types of drug antagonism with suitable examples.

(2+2+2 = 6 marks)

3A. Explain the mechanism of action of warfarin.

3B. List two uses and adverse effects of loperamide.

3C. List two proton pump inhibitors and explain the drug interaction between them and sucralfate.

3D. List two selective beta-2 agonists used in bronchial asthma and mention their two adverse effects.

3E. Mention four measures to be taken to minimize HPA axis suppression with glucocorticoid therapy

3F. Explain the mechanism of action of ^{131}I and list its two advantages.

(2+2+3+2+2+3 = 14 marks)

4A. List two drugs useful in grand mal epilepsy and explain the mechanism action of any one of them.

4B. List two each peripherally acting and centrally acting skeletal muscle relaxants. List two uses of centrally acting skeletal muscle relaxants.

4C. Explain the pharmacological basis for using scopolamine in motion sickness

4D. Describe two advantages of combining levodopa and carbidopa.

(3+3+2+2 = 10 marks)

- 5A. Explain the antimalarial action of chloroquine.
- 5B. List two uses of albendazole and explain its mechanism of action.
- 5C. List three groups of antiretroviral drugs with an example for each group.
- 5D. List two anticancer drugs and list four general toxicities of anticancer agents.
- 5E. Explain the mechanism of action of erythromycin and mention its one use with causative organism
(2+3+3+3+3 = 14 marks)

- 6A. List three groups of drugs with an example for each used in heart failure.
- 6B. Explain the mechanism of action of amlodipine and list its two uses.
- 6C. List two uses of nitrates along with the route by which they are administered.
(3+3+2 = 8 marks)

7. A 28 year old female was administered drug 'X' to terminate her pregnancy, followed by an adjuvant drug misoprostol.
- 7A. Identify drug 'X' and explain how it is useful in the above case.
- 7B. List two other therapeutic uses of drug 'X'.
(3 + 1 = 4 marks)



Reg. No.

--	--	--	--	--	--	--	--	--	--	--

Rama

MANIPAL UNIVERSITY

MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)

MBBS PHASE – I STAGE – II DEGREE EXAMINATION – SEPTEMBER 2017

SUBJECT : PHARMACOLOGY – PAPER II (MTF)

Monday, September 11, 2017

Time : 11.30 a.m. - 12.30 a.m.

Max. Marks : 120

INSTRUCTIONS

1. For each statement, select T (True) or F (False) as your choice.
2. Indicate your choice by darkening the appropriate circle in the answer sheet provided.
3. Use only HB or 2B pencils to darken the circle.
4. Leave blank for Don't Know response.
5. Scoring systems is as follows :
 - For every **Correct** response 1 mark is awarded
 - For every **Wrong** response 0.5 mark is deducted
 - For every **Don't Know** response No mark is deducted
6. Indicate your Roll Number (Registration Number) clearly and correctly.
7. Do not write anything in the question paper.
8. The true/false statements are numbered 101 to 160 and 201 to 260 (Total 120 statements).
9. This question paper contains **04 pages**. Please make sure that the question paper provided to you has all the pages.

Regarding plasma protein binding of drugs

101. Highly plasma protein bound drugs have short duration of action
102. Highly plasma protein bound drugs can be easily removed by hemodialysis
103. Two or more drugs can bind to the same plasma protein
104. Drug with low affinity will displace the drug with high affinity

Regarding non-receptor mediated drug action

105. Activated charcoal binds to many materials in the body due to its astringent like action
106. Neutralization is an example of chemical action
107. Osmosis is an example of physical action
108. Chelation is the false incorporation of a drug in metabolic pathway

Following terms regarding antimicrobials are correctly matched with their descriptions

109. Spectrum of action: variety of microorganisms against which a drug is active
110. Bactericidal: an antimicrobial agent that suppresses growth of microorganisms at therapeutic concentration
111. Definitive therapy: choosing an antimicrobial agent based on culture reports
112. MIC: the highest antibiotic concentration that prevents the growth of microorganism after 24-hour incubation period

2nd generation antihistaminics

113. Can cause severe sedation
114. Have short duration of action
115. Have anticholinergic effects
116. Are used in allergic reactions

Atorvastatin

117. Acts by stimulating lipoprotein lipase
118. Can cause liver dysfunction
119. Can cause cutaneous flushing
120. Acts synergistically with ezetimibe

Regarding parenteral iron preparations

121. Iron dextran is an example
122. They are used when there is non-compliance to oral iron
123. Can cause scar formation at the site of injection
124. Is indicated in pernicious anemia

Morphine is contraindicated in

125. Head injury
126. Myocardial infarction
127. Hypertensive patients
128. Hypertrophy of prostate

Regarding cephalosporins

129. Cefazolin is used in the treatment of skin infections caused by *S. aureus*
130. Cefepime is a second generation cephalosporin
131. Cefamandole can cause coagulation disorders
132. They are bacteriostatic

Vancomycin

133. Acts by inhibiting bacterial protein synthesis
134. Can cause pseudomembranous enterocolitis
135. Is effective against MRSA infection
136. With gentamicin is useful in the treatment of enterococcal endocarditis

Following drugs and their therapeutic uses are correctly matched

- 137. Tropicamide: Fundoscopic examination
- 138. Glycopyrrolate: Preanaesthetic medication
- 139. Dicyclomine: Parkinson's disease
- 140. Neostigmine: Glaucoma

Regarding adrenergic agonists

- 141. Salbutamol is an example of vasoconstrictor
- 142. Adrenaline is contraindicated in cardiac arrhythmias
- 143. Oxymetazoline is an example of nasal decongestant
- 144. Noradrenaline is used to prolong the duration of local anaesthetic action

Thiopentone sodium is

- 145. Used as an inducing anesthetic agent
- 146. A benzodiazepine
- 147. Poorly lipid soluble
- 148. Contraindicated in acute intermittent porphyria

Selective serotonin reuptake inhibitors

- 149. Have additional antimuscarinic activity
- 150. Are useful in panic disorders
- 151. Do *not* have lag time to produce antidepressant effect
- 152. Cause sexual dysfunction

The following drugs are correctly matched with their mechanism of action

- 153. Cromolyn sodium: Stabilizes mast cells
- 154. Budesonide: dilates bronchus by acting on β_2 receptors
- 155. Montelukast: Blocks the synthesis of leukotrienes
- 156. Ipratropium: Blocks muscarinic receptors

Bromhexine

- 157. Is an antitussive
- 158. Depolymerizes mucopolysaccharides of mucus
- 159. Is used in the treatment of bronchial asthma
- 160. Has addiction liability

Domperidone

- 201. Blocks 5HT₃ receptors
- 202. Is a prokinetic
- 203. Does not produce extrapyramidal side effects
- 204. Is contraindicated in children

Osmotic purgatives include

- 205. Magnesium sulfate
- 206. Liquid paraffin
- 207. Poly ethylene glycol (PEG)
- 208. Bisacodyl

Ciprofloxacin

- 209. Is used in bacterial diarrhea
- 210. Acts by inhibiting cell wall synthesis
- 211. Can damage cartilage in children
- 212. Can cause headache

Aminoglycosides

- 213. Exhibits post antibiotic effect
- 214. Are active against anaerobic bacteria
- 215. Can cause ototoxicity
- 216. Are administered orally to treat systemic infections

Therapeutic uses of angiotensin receptor blockers include

- 217. Hypertension
- 218. Ventricular arrhythmias
- 219. Myocardial infarction
- 220. Angina pectoris

Following groups of drugs are correctly matched with their site of action in nephron

- 221. Thiazide diuretics - distal convoluted tubules
- 222. Potassium sparing diuretics - loop of Henle
- 223. Carbonic anhydrase inhibitors - proximal convoluted tubules
- 224. Osmotic diuretics: glomerulus

Regarding selective estrogen receptor modulators

- 225. Tamoxifene has agonistic effect on estrogen receptors located in the breast tissue
- 226. Raloxifene increases the risk of deep vein thrombosis
- 227. Clomiphene citrate is used to treat infertility
- 228. They are used in endometriosis

Regarding tetracyclines

- 229. They are active against *Mycoplasma pneumoniae*
- 230. Their absorption is reduced by antacids
- 231. Doxycycline is *not* safe in renal disease
- 232. They act by inhibiting protein synthesis

Drugs used in genital herpes include

- 233. Acyclovir
- 234. Valacyclovir
- 235. Ritonavir
- 236. Penciclovir

Risk factors for drug interactions include

- 237. Drugs with narrow safety margin
- 238. High plasma protein binding
- 239. Drugs affecting regulated body functions
- 240. Drugs following first order kinetics

Enzyme inhibitors include

- 241. Sodium valproate
- 242. Erythromycin
- 243. Chloramphenicol
- 244. Phenytoin

Regarding antileprotic drugs

- 245. Clofazimine is used in the treatment of paucibacillary leprosy
- 246. Dapsone acts by disrupting mitochondrial electron transport chain
- 247. Ofloxacin is an example
- 248. Multidrug therapy makes the patient non-contagious

Insulin lispro

- 249. Controls post-prandial hyperglycaemia
- 250. Can be used in insulin pumps
- 251. Is administered subcutaneously
- 252. Structure is similar to human insulin

Nafarelin

- 253. Causes down regulation of GnRH receptors on continuous administration
- 254. Is contraindicated in patients with uterine fibroids
- 255. Is administered along with flutamide in prostatic carcinoma
- 256. Is used in post-partum bleeding

Following drugs are used in gout

- 257. Aspirin
- 258. Allopurinol
- 259. Methotrexate
- 260. Prednisolone

