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MANIPAL UNIVERSITY

MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2013

SUBJECT: PHARMACOLOGY – I (ESSAY)

Monday, February 11, 2013

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

1. Explain the pharmacological basis for the following:

- 1A. Adrenaline is used in anaphylactic shock
- 1B. Glipizide is not useful in type 1 diabetes
- 1C. Prednisolone should not be stopped abruptly after a long term administration
- 1D. Hydrochlorothiazide is useful in hypertension
- 1E. Omeprazole is used in peptic ulcer

(2×5 = 10 marks)

- 2A. A patient with deep vein thrombosis was discharged from the hospital with an advice to continue treatment with warfarin. Explain the role of warfarin in this patient.
- 2B. A patient with pharyngitis was treated with the combination of amoxicillin and clavulanic acid. Explain how the above combination is useful in this patient.
- 2C. List four drugs from different groups useful in MRSA.

(2+2+2 = 6 marks)

3. Write short notes on the following:

- 3A. Ciprofloxacin
- 3B. Succinylcholine
- 3C. SERMs

(3×3 = 9 marks)

4. A patient with falciparum malaria was treated with drugs 'A' and 'B'. The drug B was added to the drug A to prevent the recrudescence associated with drug 'A'.

- 4A. Identify drugs 'A' and 'B'.
- 4B. Explain 'terminal prophylaxis' in malaria.

(1+2 = 3 marks)

5. Explain the following terms with an example:

- 5A. Pharmacogenetics
- 5B. First dose phenomenon
- 5C. Receptor down regulation

(2×3 = 6 marks)

6. A patient with levodopa therapy for the treatment of Parkinsonism was administered metoclopramide to control nausea induced by levodopa.
- 6A. Comment on the use of metoclopramide in the above patient.
- 6B. Explain the advantages of combining levodopa with carbidopa.

(2+2 = 4 marks)

- 7A. A patient with oral candidiasis was prescribed a topical cream. List two drugs useful topically to treat the above patient and explain the mechanism of action of any one of them.
- 7B. Mr. Rama was operated for abdominal hernia under general anaesthesia using a combination of N₂O and halothane. Within half an hour after the surgery he was administered i.v pethidine and bethanechol after few hours. Explain the pharmacological basis for using pethidine and bethanechol in the above patient.

(3+4 = 7 marks)

- 8A. Explain the pharmacological basis for using adenosine in PSVT.
- 8B. Explain the antithyroid action of carbimazole.
- 8C. Explain clinical importance of drug redistribution with an example.
- 8D. List two aminoglycosides and describe their four common properties.

(2+2+2+3 = 9 marks)

9. A patient suffering from bronchial asthma was prescribed a MDI with fixed dose combination of two bronchodilators for the prophylaxis bronchial asthma.
- 9A. What could be the bronchodilators present in the MDI?
- 9B. Describe the bronchodilator action of any one of them.

(1+2 = 3 marks)

10. A 60 year old patient suffering from acute CCF with pulmonary congestion was managed with the iv frusemide and an ACEI along with other measures. List two ACEIs and describe the role of frusemide in the above case.

(3 marks)



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MANIPAL UNIVERSITY
MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2013
SUBJECT: PHARMACOLOGY – II (MCQs)

Monday, February 11, 2013

Time: 11:30 – 12:30 Hrs.

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 **03** pages. Please make sure that the question paper provided to you has all the pages.

A 25 year old primi is in premature labour. Following drugs are useful in the prevention of preterm delivery

101. Ergometrine
102. Ritodrine
103. Nifedipine
104. Dinoprostone

Drugs useful in dry cough include

105. Codeine
106. Dextromethorphan
107. Bromhexine
108. Budesonide

If a drug is highly bound to plasma proteins, it

109. Has large volume of distribution
110. Is a likely candidate for drug interaction
111. Is easily filtered in glomerulus
112. Readily crosses placenta

Following drugs inhibit microsomal enzymes

113. Ketoconazole
114. Rifampicin
115. Erythromycin
116. Ceftriaxone

A drug concentration in the plasma reaches steady state after 8 - 10 hrs and it follows first order kinetics of elimination. Hence

117. Half-life of this drug is 2 hrs
118. The drug completely gets eliminated from the body in 10 hrs of iv injection
119. Slight increase in the dose may cause disproportionate increase in plasma concentration

Following drugs are teratogenic

120. Mebendazole
121. Ethinylestradiol
122. Dicyclomine
123. Ferrous sulfate

Following drugs are useful in the treatment of gonorrhoea

124. Azithromycin
125. Ceftriaxone
126. Doxycycline
127. Tinidazole

Cotrimoxazole

128. Is a fixed dose combination of three drugs
129. Is useful in typhoid
130. Is useful in respiratory tract infection caused by Gram positive cocci

131. Can cause folate deficiency

A 50 Kg female patient has Hb concentration of 6 gm/dl (Normal: 12 g/dl), if the parenteral iron administration is planned for her,

132. Total iron required is 1320 mg
133. Iron- sorbitol- citric acid complex is chosen for i.v administration
134. Using Z-tract technique reduces the pain at the site of administration
135. Continuation of treatment with oral iron for one month is required to replenish the store

A 35 year old Ronald underwent kidney transplantation. Following drugs may be used to prevent the organ rejection

136. Cyclosporine
137. Prednisolone
138. Azathioprine
139. Vincristine

A patient with leprosy has 6-7 anesthetic patches, hence following drugs are used in MDT

140. Dapsone
141. Clofazimine
142. Thalidomide
143. Prednisolone

Acyclovir is used in the treatment of

144. Genital herpes simplex
145. Herpes zoster
146. Hepatitis- B
147. Avian influenza

27 year old Manu is being treated with lithium for mania, in this patient lithium

148. Controls acute manic symptoms effectively
149. Acts by activating GABA receptors
150. Can cause polyuria
151. Toxicity symptoms appears at plasma concentration of 0.5 mEq/L

Diazepam is used in

152. Febrile convulsions
153. Drug induced convulsions
154. Grand mal epilepsy
155. Absence seizures

Drugs useful in benign prostatic hyperplasia include

156. Phenoxybenzamine
157. Finasteride
158. Flutamide
159. Neostigmine

Following drugs are correctly matched with their mechanism of anti-glaucoma action

- 160. Timolol: increase in the aqueous humor outflow
- 201. Latanoprost: increase permeability of trabecular meshwork
- 202. Acetazolamide: decrease in the production of aqueous humor
- 203. Mannitol: decrease in blood volume by osmotic action in kidney

Antihistaminics useful in motion sickness include

- 204. Promethazine
- 205. Cetirizine
- 206. Diphenhydramine
- 207. Fexofenadine

Amlodipine is

- 208. Not useful in variant angina
- 209. Longer acting than nifedipine
- 210. Used in PSVT
- 211. One of the first line drugs for hypertension

Sublingual nitroglycerine is used in

- 212. Biliary colic
- 213. Cyanide poisoning
- 214. Acute anginal attack in patient on sildenafil
- 215. Esophageal spasm

Atenolol

- 216. Is one of the first line antihypertensive drugs
- 217. Is useful in the treatment of acute attack of angina
- 218. Is preferred in hypertensive patients on antidiabetics
- 219. Dilates peripheral blood vessels through α blocking action
- 220. Inhibits the peripheral conversion of T_4 to T_3

Quinidine

- 221. Blocks resting state of Na^+ channels
- 222. Has no action on automatic fibers
- 223. Is useful in ventricular arrhythmias
- 224. Causes cinchonism

60 year old female patient received chemotherapy for metastatic breast cancer. Following drugs effectively control chemotherapy induced vomiting

- 225. Ondansetron
- 226. Tegaserod
- 227. Dexamethasone
- 228. Domperidone

Ispaghula

- 229. Is a bulk forming laxative
- 230. Used to prepare bowel before surgery
- 231. Is useful in bedridden patients to prevent constipation
- 232. Reduces blood ammonia concentration

Sulfasalazine

- 233. Acts through sulfapyridine moiety in ulcerative colitis
- 234. Is useful in rheumatoid arthritis
- 235. Causes joint pain
- 236. Is useful in drug induced diarrhea

Alendronate

- 237. Is an anabolic steroid
- 238. Enhances the apoptosis of osteoclasts
- 239. Causes esophagitis
- 240. Is useful in osteoporosis

Levonorgestrel

- 241. Is used in combined oral contraceptive pills
- 242. Can cause breast engorgement
- 243. Is not useful as a post coital contraceptive
- 244. Is useful in endometriosis

Hydrocortisone

- 245. Has only mineralocorticoid action
- 246. Is administered orally in anaphylaxis
- 247. Is used in cerebral meningitis
- 248. Is useful in acute adrenal insufficiency

Insulin lispro is

- 249. Administered 5-15 min before meal
- 250. A peakless insulin preparation
- 251. Used intravenously in diabetic ketoacidosis
- 252. Combined with intermediate acting insulin while treating diabetes

Octreotide is

- 253. Longer acting than somatostatin
- 254. Used in esophageal variceal bleeding
- 255. Used in acromegaly
- 256. Useful in endometriosis

Drugs used in the treatment of chronic gout include

- 257. Aspirin
- 258. Allopurinol
- 259. Colchicine
- 260. Probenecid

