

MANIPAL UNIVERSITY
MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2015
SUBJECT: PHARMACOLOGY – I (ESSAY)

Monday, February 09, 2015

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

☞ **Answer all the questions.**

- 1A. Enumerate two advantages and two disadvantages of sublingual route of drug administration.
1B. Explain how first pass metabolism affects bioavailability of the drug.
1C. Describe the role of placebo in clinical trial.
(2+2+2 = 6 marks)
- 2A. A patient suffering from subacute bacterial endocarditis caused by *Streptococcus viridans* was treated with an antibiotic along with penicillin. The patient responded well for this combination therapy.
What could be the antibiotic administered along with penicillin and explain the basis for administering them together.
- 2B. A 55 year old man developed rigidity, tremors, hypokinesia and festinating gait. He was treated with a combination of levodopa and carbidopa.
Explain the basis for administering the above drug combination in this case.
(2+2 = 4 marks)
3. A patient with deep vein thrombosis was started on heparin. During the next week, the patient was put on warfarin. After few days heparin was withdrawn and warfarin treatment was continued.
Explain the role of heparin and warfarin in the above case.
(4 marks)
4. **Explain the pharmacological basis for the use of the following:**
- 4A. Edrophonium in the diagnosis of myasthenia gravis
4B. Frusemide in acute pulmonary edema
4C. Lactulose in hepatic encephalopathy
4D. Clomiphene citrate in infertility
(2 marks × 4 = 8 marks)
5. Mention three groups of drugs with an example for each group that decreases gastric acid secretion.
(3 marks)

- 6A. A patient received succinylcholine and developed unusual apnoea which persisted for a long time. He was revived by giving artificial respiration and fresh blood transfusion.
Explain why the patient developed prolonged apnoea.
- 6B. Mention two advantages and two disadvantages of combining adrenaline and lignocaine.
- 6C. Explain the term 'second gas effect'.

(2+2+2 = 6 marks)

7. **Write short notes on the following:**

- 7A. Therapeutic uses of aspirin
7B. Acyclovir
7C. Adverse effects of corticosteroids

(3 marks × 3 = 9 marks)

- 8A. Describe the mechanism of action of montelukast.
8B. List two adrenergic agonists and mention one therapeutic use for each of them.
8C. Explain the antimanic action of lithium and mention two other drugs useful in mania.
8D. List two bisphosphonates and mention their two therapeutic uses.

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

9. A patient suffering from ischemic heart disease develops severe chest pain while climbing the steps which is relieved after taking rest.
Mention a drug used to terminate the pain during the future attacks and explain how it is useful.

(3 marks)

- 10A. Enumerate two sulfonylureas and explain their mechanism of action.
10B. Explain the antihypertensive action of enalapril and list its two adverse effects.
10C. Describe the antithyroid action of propylthiouracil.

(3+3+2 = 8 marks)



Reg. No.

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MANIPAL UNIVERSITY

MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2015

SUBJECT: PHARMACOLOGY – II (MCQs)

Monday, February 09, 2015

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.

Phase II reactions include

101. Sulfate conjugation
102. Acetylation
103. Hydrolysis
104. Oxidation

Tetracycline

105. Acts by binding to 30S ribosomal subunit
106. Has bactericidal action
107. Can be safely administered during pregnancy
108. Causes suprainfection
109. Is longer acting than doxycycline

Chloroquine

110. Inhibits parasite enzyme haem polymerase
111. Is a blood schizonticide
112. Causes blurred vision
113. Is used in hepatic amoebiasis

Following are immunosuppressants

114. Azathioprine
115. Cyclosporine
116. Levamisole
117. Tacrolimus

Albendazole

118. Prevents polymerization of β -tubulins
119. Is not useful to treat cysticercosis
120. Is effective in single dose to treat ascariasis
121. Is used for the treatment of cutaneous larva migrans

Amphotericin-B (AMB)

122. Alters the permeability of fungal cell membrane
123. Liposomal preparation has higher risk of causing nephrotoxicity compared to conventional AMB preparation
124. Is useful in treatment of invasive aspergillosis
125. Shows antagonistic action with flucytosine

Therapeutic drug monitoring is useful

126. For drugs with irreversible action
127. In case of poisoning
128. To check patient compliance
129. If individual variations are large in drug response

Prazosin

130. Is a non-selective alpha blocker
131. Is useful in benign prostatic hyperplasia

132. Causes postural hypotension
133. Is used in Raynaud's disease

Following drugs are correctly matched with their therapeutic uses

134. Timolol – glaucoma
135. Ipratropium – bronchial asthma
136. Benzhexol – Parkinson's disease
137. Atropine – xerostomia
138. Bethanechol – postoperative urinary retention

Antifibrinolytics include

139. Aminocaproic acid
140. Abciximab
141. Aprotinin
142. Clopidogrel

Idiosyncrasy

143. Is rapid development of tolerance
144. Develops due to antigen antibody reaction
145. Is dose related

Spinal anesthesia

146. Is produced by injecting the drug between T5 and L1 vertebrae
147. Is used to anesthetize lower abdomen
148. Causes hypotension
149. Causes headache

Cotrimoxazole

150. Has bacteriostatic action
151. Is useful in *Pneumocystis jiroveci* infection
152. Causes megaloblastic anemia
153. Causes Stevens-Johnson syndrome

Sodium valproate

154. Inhibits GABA transaminase
155. Is useful in generalized tonic-clonic seizures
156. Is an enzyme inducer
157. Causes spina bifida

Morphine

158. Decreases pain threshold
159. Produces mydriasis
160. Poisoning is treated with naloxone
201. Causes respiratory depression
202. Can cause physical dependence

Drugs used in the treatment of depression include

- 203. Imipramine
- 204. Haloperidol
- 205. Moclobemide
- 206. Fluoxetine

In rheumatoid arthritis, methotrexate

- 207. Is the first choice DMARD
- 208. Acts by inhibiting thymidylate synthetase
- 209. Is administered three times a week
- 210. Causes megaloblastic anemia

Propranolol

- 211. Is a non-selective β -blocker
- 212. Is used in variant angina
- 213. Should not be used in bronchial asthma patients
- 214. Is used in thyrotoxic crisis

Metoclopramide

- 215. Acts as a D_2 receptor antagonist
- 216. Is useful in postoperative vomiting
- 217. Relieves diabetes associated gastric stasis
- 218. Causes muscle dystonia

Digoxin

- 219. Increases the force of myocardial contraction
- 220. Causes arrhythmias
- 221. Provides relief from dyspnea by reducing pulmonary congestion
- 222. Toxicity is aggravated by hyperkalemia

Expectorants include

- 223. Ammonium chloride
- 224. Bromhexine
- 225. Noscapine
- 226. Carbocysteine

Metronidazole

- 227. Is a luminal amoebicide
- 228. Causes metallic taste
- 229. Is not useful in treating anaerobic bacterial infections
- 230. Shows disulfiram like reaction with alcohol
- 231. Is used in *H.pylori* infection

Ethambutol

- 232. Acts by inhibiting bacterial DNA dependent RNA polymerase
- 233. Causes retrobulbar neuritis
- 234. Is tuberculocidal
- 235. Precipitates gouty arthritis
- 236. Causes hepatotoxicity

Short acting insulin preparations include

- 237. Insulin aspart
- 238. Regular insulin
- 239. Semilente
- 240. Neutral protamine Hagedorn

Following are the therapeutic uses of mifepristone

- 241. As contraceptive
- 242. Endometriosis
- 243. Induction of labor
- 244. Dysfunctional uterine bleeding

Following drugs are correctly matched with their mechanism of action

- 245. Danazol : 5- α reductase inhibitor
- 246. Sildenafil : phosphodiesterase-5 inhibitor
- 247. Finasteride : androgen receptor antagonist
- 248. Tamoxifen : selective estrogen receptor modulator
- 249. Nafarelin : GnRH antagonist

Compared to liothyronine, l-thyroxine

- 250. Produces less sustained action
- 251. Has longer half-life
- 252. Has a higher risk of causing cardiac arrhythmias

Drugs used in prophylaxis of migraine are

- 253. Sumatriptan
- 254. Amitriptyline
- 255. Ergotamine
- 256. Ibuprofen

Therapeutic uses of first generation antihistaminics include

- 257. Allergic rhinitis
- 258. Urticaria
- 259. Atopic dermatitis
- 260. Motion sickness

