Batch 29

Reg. No.										

MANIPAL UNIVERSITY

MBBS PHASE I STAGE II DEGREE EXAMINATION – AUGUST 2013

SUBJECT: PHARMACOLOGY – I (ESSAY)

Saturday, August 10, 2013

Time: 09:00 – 11:00 Hrs. Max. Marks: 60

1. Explain the following terms:

1A. Competitive antagonism.

1B. On-off effect with levodopa therapy.

1C. First pass metabolism.

(2×3 = 6 marks)

2A. Mention two tetracyclines and explain their mechanism of action.

2B. Describe one clinical consequence each for enzyme induction and enzyme inhibition with the help of suitable examples.

2C. Explain the advantages of large once-daily dosing regimen over multiple small daily dosing regimen of aminoglycosides.

(3+3+2 = 8 marks)

3. Explain the pharmacological basis for the following:

3A. Alkalinization of urine in salicylate poisoning.

3B. Use of enalapril in congestive cardiac failure.

3C. Morphine is contraindicated in patients with head injury.

3D. Use of cyclosporine in patients undergoing bone marrow transplantation.

3E. Alendronate is used in osteoporosis.

(2×5 = 10 marks)

4. A 10-year-old girl frequently develops episodes of impairment of consciousness associated with staring into space lasting approximately 30 seconds.
Mention two drugs useful in the above condition and explain how they are useful.

(3 marks)

5A. Explain the rationale for combining long acting nitrates with β-blockers in classical angina.

5B. Enumerate three groups of bronchodilators with an example for each group.

5C. List two glucocorticoids and mention their two endocrinal uses.

(2+3+2 = 7 marks)

6A. 50-year-old Kartik was admitted to the emergency department with a blood pressure of 250/140 mmHg. Fundoscopic examination revealed features of retinopathy.
List four drugs useful in the management of the above case.

6B. Explain any two therapeutically useful actions of aspirin.

(2+4 = 6 marks)

7. Mention one drug used in each of the following conditions and explain how it is useful:

7A. Malignant hyperthermia

7B. NSAID induced gastric ulcer

7C. Pheochromocytoma

7D. Endometriosis

(2×4 = 8 marks)

8. Write short notes on the following:

8A. Metronidazole

8B. Short acting insulin preparations

8C. Warfarin

(3×3 = 9 marks)

9. A new diuretic is being studied in human volunteers. Compared with placebo, the new drug increases urine volume, decreases urinary Ca^{2+}, increases body pH and decreases serum K^{+}. Thus, this new drug has a similar action as an already established diuretic.

9A. Which group of diuretics the new drug belongs to? What could be its mechanism of action?

9B. List two conditions where it can be used.

(2+1 = 3 marks)

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MBBS PHASE I STAGE II DEGREE EXAMINATION – AUGUST 2013

SUBJECT: PHARMACOLOGY – II (MCQs)

Saturday, August 10, 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.

Through subcutaneous route,

101. Drug gets absorbed faster compared to intramuscular route
102. Irritant drugs can be administered
103. Depot preparations can be given
104. Only a small volume of drug is administered

Following drugs are correctly matched with their routes of excretion

105. Nitrous oxide – lungs
106. Rifampicin – saliva
107. Erythromycin – bile

Therapeutic drug monitoring is useful for

108. Drugs which get activated in the body
109. Checking patient compliance
110. Drugs with low safety margin
111. Drugs with irreversible action

Teratogenic drugs include

112. Captopril
113. Thalidomide
114. Ferrous sulphate

Regarding phases of clinical trials

115. Phase I assesses safety and tolerability of the drug
116. Phase II is done in healthy volunteers
117. Phase III is conducted in 500-3000 patients
118. Phase IV detects unsuspected drug interactions

As compared to ampicillin, amoxicillin

119. Has better oral absorption
120. Causes diarrhoea more frequently
121. Is less effective against *Shigella*

Cotrimoxazole

122. Is a fixed dose combination of trimethoprim and sulfamethoxazole
123. Causes sequential blockade of folate metabolism
124. Is bacteriostatic
125. Is useful in prophylaxis of *Pneumocystis jiroveci* infection in AIDS patients

Cell-cycle specific anticancer drugs include

126. 5-Fluorouracil
127. Cisplatin
128. Cyclophosphamide

Simvastatin

129. Competitively inhibits HMG-CoA reductase
130. Decreases LDL receptor expression on liver cells
131. Causes myopathy
132. Is used in familial hypercholesterolemia

Chloroquine

133. Is a rapidly acting erythrocytic schizontocide
134. Kills hypnozoites
135. May damage retina on prolonged use
136. Is useful in lepra reaction

In paucibacillary leprosy

137. Multidrug therapy is administered for 12 months
138. Rifampicin is given at a dose of 600 mg once a month
139. Clofazimine is given at a dose of 300 mg once a month
140. ROM regimen is recommended for patients with solitary lesion

β- blockers are preferred over miotics in the treatment of glaucoma because they do not cause

141. Fluctuations in intraocular pressure
142. Systemic adverse effects
143. Stinging of the eye
144. Myopia

Regarding treatment of organophosphorus poisoning

145. Atropine reverses the effects mediated through nicotinic receptor
146. Pralidoxime reactivates cholinesterase
147. Diazepam controls convulsion

Allopurinol

148. Is useful in over producers of uric acid
149. Promotes the degradation of 6-mercaptopurine
150. Is not useful in secondary hyperuricaemia due to cancer chemotherapy
151. Causes hypersensitivity reactions

Lithium

152. Prevents degradation of IP_3
153. Is indicated in bipolar disorder
154. Causes polyuria
155. Is safe during pregnancy
156. Can be given safely with thiazide diuretic

Regarding antiviral drugs

157. Zidovudine acts by inhibiting viral protease
158. Nevirapine causes hepatotoxicity
159. Acyclovir is used in *Herpes simplex* encephalitis

Ketamine

160. Is an inhalational general anaesthetic
201. Causes dissociative anaesthesia
202. Can be safely administered in hypertensive patients
203. Is used for burn dressing

Regarding local anaesthetics

204. Bupivacaine is used as continuous epidural infusion during vaginal delivery
205. Overdosage of lignocaine can cause convulsions
206. Their coadministration with adrenaline enhances wound healing

Following antihelminthic drugs are correctly matched with their therapeutic uses

207. Mebendazole – mixed worm infestation
208. Ivermectin – strongyloidosis
209. Niclosamide – thread worm infestation

Expectorants include

210. Potassium iodide
211. Ambroxol
212. Diphenhydramine

Following drugs retard disease progression in heart failure patients

213. Dobutamine
214. Losartan
215. Spironolactone

Digoxin

216. Activates Na^+ K^+ ATPase pump
217. Is used in congestive cardiac failure
218. Causes cardiac arrhythmia
219. Toxicity is treated by administering KCl

Therapeutic uses of verapamil include

220. Classical angina
221. Hypertension
222. Congestive heart failure
223. Diabetic nephropathy

Following prostaglandins are correctly matched with their therapeutic uses

224. Carboprost – postpartum haemorrhage
225. Latanoprost – glaucoma
226. Gemeprost – peptic ulcer

Following are tuberculocidal drugs

227. Isoniazid
228. Ethambutol
229. Pyrazinamide

Sodium cromoglycate

230. Inhibits the release of inflammatory mediators from mast cell
231. Inhibits Ag:Ab reaction
232. Is given orally
233. Is used in allergic conjunctivitis

Sumatriptan

234. Is a selective 5-$HT_{1B/1D}$ receptor antagonist
235. Suppresses neurogenic inflammation of cranial vessels
236. Causes coronary vasospasm

Adverse effects of cortisol include

237. Avascular necrosis of head of femur
238. Hypercalcemia
239. Myopathy
240. Delayed wound healing

In thyrotoxicosis, ^{131}I

241. Is administered intravenously
242. Acts by emitting beta rays
243. Is safe during pregnancy
244. Has long latent period of response

Metformin

245. Reduces hepatic glucose production
246. Causes weight gain
247. Is useful in type 1 diabetes
248. Is contraindicated in patients with COPD

In patients with benign hypertrophy of prostate, finasteride

249. Increases peak urinary flow rate
250. Does not retard disease progression
251. Is given along with α_1 blockers

In hormone replacement therapy, transdermal estradiol offers the following advantages over oral estrogens

252. Better improvement in serum lipid profile
253. Less elevation of clotting factors
254. Milder systemic side effects

Nafarelin

255. Inhibits FSH and LH secretion after 2 weeks of treatment
256. Is effective in treating uterine fibroids
257. Is used in osteoporosis

Drugs used in erectile dysfunction are

258. Transdermal testosterone
259. Sildenafil
260. Danazol