

Question Paper

Exam Date & Time: 12-May-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

II Year Pharm D University Examination May 2023

Pharmacology-1 [PHA 2.4T-S1]

Marks: 70

Duration: 180 mins.

A: Long Answer Questions

Answer all the questions.

Draw diagrams wherever necessary

- 1) Discuss various factors that modify drug action with suitable examples (8)
- a)
- b) What is drug tolerance? Explain various mechanisms of drug tolerance? (2)
- 2) Classify antiarrhythmic drugs with examples. (3)
- a)
- b) A sales executive aged 55 years presented with palpitation that felt off and on, both during activity as well as at rest for the last month or so. He also complained of tiredness and anxiety. The pulse was irregular in volume and frequency with an average rate of 104/minute, respiration rate: 20/minute; BP: 130/84 mmHg, and apex beat was irregular with an average rate of 120/minute. Heart sounds were irregular, but there was no murmur. The ECG showed atrial fibrillation with no signs of ischemia. A diagnosis of persistent AF was made, and it was decided to electrically cardiovert him. He was put on warfarin sodium 5 mg twice daily for 2 days followed by 5 mg once daily and the dose to be adjusted to an INR between 2-2.5. This was to be maintained for 1 month before attempting cardioversion. (7)
- Why the patient has been put on warfarin therapy before attempting cardioversion?
Can some drugs be given to control and regularize his heart rate in the meantime? If so, which drugs(s)?
If electrical cardioversion fails, can some drugs be given to revert his sinus rhythm?
After cardioversion, can some drugs be given to maintain sinus rhythm and prevent the recurrence of AF?
- 3) With examples, list the drugs affecting the 5-HT system. Explain the primary action and the four clinical indications of serotonergic drugs. (6 + 4) (10)

B: Short Answer Questions

Answer all the questions.

Draw diagrams wherever necessary

- 4) Classify adrenergic drugs. Explain the uses of noradrenaline (5)
- 5) A 50-year-old type 2 diabetes mellitus patient was maintained on tab. Glibenclamide 5 mg twice daily. He developed toothache for which he took tab aspirin 650 mg 6 hourly. After taking aspirin he experienced anxiety, sweating, palpitation, weakness, ataxia and was behaving abnormally. These symptoms subsided when he was given a glass of glucose solution. (5)
- (a) What could be the explanation for these symptoms?
(b) Can you explain the drug interaction which is happening in this case with justification?

- (c) How the reoccurrence of such episodes can be prevented?
- 6) With a flow chart and examples, discuss neurohormonal control on androgen secretion and drugs modulating it. (5)
- 7) With suitable examples, classify antipsychotic drugs. What are the positive and negative symptoms of psychosis? (5)
- 8) Explain the major pharmacological actions of eicosanoids on cardiovascular and platelets. (5)
- 9) Discuss the mechanism of general anaesthetics. (5)

C. Give Reasons for the Following

Answer all the questions.

Draw diagrams wherever necessary

- 10) A person was intoxicated with digoxin. The physician wants to perform haemodialysis after all the supportive care. What would be your advice on this? Justify your answer. (2)
Note: Digoxin has V_d of 6 L/kg.
- 11) Why nonselective beta blockers are contraindicated in asthmatic and diabetic patients for the management of CHF? (2)
- 12) Indicate the drugs used in the management of hypertension during pregnancy. Also, tabulate reasons for contraindicating other major antihypertensive drugs during pregnancy (2)
- 13) What is the recommended treatment for myxoedema and toxic nodular goitre? (2)
- 14) Justifies mechanistically, which endogenous chemical mediator shows "Triple Response"? (2)

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