

**SS/MBBS-II/PHAR-I/03-24**

**2024**

**(March)**

**PHARMACOLOGY**

**Paper-I**

**Full Marks: 100**

**Time: 3 hours**

**The figures in the margin indicate full marks for the questions**

**Answer all questions**

1. Choose the appropriate answer from the choices given below : 1×10=10

(i) Drug causing gynaecomastia is

- (a) spironolactone
- (b) rifampicin
- (c) penicillin
- (d) bumetanide

(ii) Thiazide diuretics cause all of the following, except

- (a) hypokalemia
- (b) hyponatremia
- (c) hyperglycaemia
- (d) hypocalcemia

(iii) Which of the following is a local route of drug administration?

- (a) Sublingual

(b) Intraarticular

(c) Oral

(d) Intravenous

(iv) Which drug is contraindicated in glaucoma?

(a) Latanoprost

(b) Phenylephrine

(c) Atropine

(d) Pilocarpine

(v) All are true of salbutamol, except

(a) it causes down regulation of beta 2 receptor on prolonged use

(b) it causes ankle oedema

(c) it acts better on the receptors of the larger airways than the receptors of bronchioles

(d) it can be given by inhalational route also

(vi) All of the following nutraceuticals contribute to cartilage health, except

(a) glucosamine

(b) chondroitin sulfate

(c) diacerein

(d) PUFA

(vii) Most common indication for therapeutic monitoring is

(a) hit and run drugs

(b) drugs with irreversible action

(c) narrow therapeutic range

(d) failure of response

(viii) Actions of adrenaline include all, except

(a) bronchoconstriction

(b) increased force of contraction

(c) increased heart rate

(d) calorogenesis

(ix) Which of the following antihypertensives is not given in pregnancy?

(a) Enalapril

(b)  $\alpha$ -Methyldopa

(c) Labetalol

(d) Nifedipine

(x) Which is not true of clinical trials?

(a) Safety is the primary concern

(b) Efficacy is the primary concern

(c) The 4th phase of trial is carried out post-marketing

(d) The principles of good clinical practice are to be followed in conducting clinical trials

2. Name oral and parenteral anticoagulants. What are their mechanisms of anticoagulant effect? What are their adverse effects in overdose and what are their specific antidotes? 3+4+3=10

3. Classify the antianginal drugs. Explain the mechanism of action, therapeutic uses and adverse effects of organic nitrates (Glyceryl trinitrate). 3+3+2+2=10

**4. Write short notes on the following :****5×4=20**

- (a) Role of leukotriene antagonist in bronchial asthma
- (b) Uses of alpha-blockers
- (c) Furosemide
- (d) Clinical importance of microsomal enzyme induction

5. Classify drug receptors. Write the transducer mechanism of intracellular receptors. Give one example of cytosolic and nuclear receptors. 3+5+2=10

**6. Explain why :****2×5=10**

- (a) Urine alkalizer is given in barbiturate poisoning
- (b) Ramipril can cause persistent brassy cough in susceptible individuals
- (c) Concomitant use of salicylates increases warfarin toxicity
- (d) An amphetamine addict likes to take  $\text{NaHCO}_3$  as well
- (e) Atropine is not given in narrow angle glaucoma

7. Mr. Choudhury, a 45-year-old patient of cirrhosis of liver with oedema, attended hospital for his treatment. Both loop diuretics and thiazide diuretics failed to control oedema when used individually. (2+2)+2+2+2=10

- (a) Explain why these two diuretics failed to respond. Which diuretic is to be used in this case and why?
- (b) Can acetazolamide be used in this case? Justify.
- (c) What adverse effects the patient may develop if your choice of diuretic is continued for prolonged period in this patient? Explain your answer.
- (d) Why is the diuretic effect of furosemide blunted by indomethacin?

**8. Distinguish between :****3×5=15**

- (a) First-order kinetics and zero-order kinetics
- (b) Dietary supplements and nutraceuticals
- (c) Hyoscine and scopolamine
- (d) Adrenaline and Noradrenaline
- (e) Labetalol and Metoprolol

9. Describe the role of beneficence as a guiding principle in patient care.

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