

Date: 10-12-2024

1224 E427

Second Year MBBS Examination

II MBBS Pharmacology Paper 2

Time: 3 hours

Max Marks: 100

Instructions:

1. Answer to the points.
2. Figure to the right indicates marks.
3. Use separate answer books for each section.
4. Draw diagrams wherever necessary.
5. Write legibly.

Section 1

1. Answer any one

(10)

a) What is antibiotic stewardship program (ASP). Discuss WHO AWaRe classification of Antibiotics
Enumerate the Goals of ASPs.

b) Classify Antimicrobials (3+4+3=10)
interferine with protein synthesis.

Describe mechanism of action,
Indications and Adverse effects of
Oxazolidinones.

2. Answer Any Two of the following (2x6=12) (12)

a) A hospital X, extensively used vancomycin for Surgical prophylaxis of wound infection. The antibiogram of the institution depicts emergence of Vancomycin resistant Staph, aureus and Enterococcus. What is Drug resistance. Explain types and causes of the phenomena.

b) A 40 Years old female leukemia patient was undergoing Chemotherapy with antineoplastic drugs. During treatment she developed systemic infection. A white vaginal discharge was observed.

After obtaining appropriate specimens, empirical antibiotic therapy was started but no improvement was observed.

Additionally, she developed sore throat with white plaques in her

pharynx. Blood and urine culture grew out *Candida albicans*. At this point.

What is the best course of action.

What is the mechanism of action and adverse effects of the medication you choose.

c) A 30 Years old sexually active female has 4 one week of a moderate vaginal discharge having a afcefishya odor. She has no complaints of vaginal pruritus or burning. On examination the discharge appears gray, homogenous and malodorous. A diagnosis of bacterial vaginosis is made. Prescribe appropriate treatment for this lady. What is the mechanism of action of Metronidazole?

3. Write short notes on Any three of the following

(3x6=18) (18)

- a)** Use of Antimicrobial combinations.
- b)** Bedaquiline.
- c)** Protease Inhibitors.

d) Artemisinin derivatives.

4. Answer any five of the following briefly

(2x5=10) (10)

- a)** Why is cilastatin combined with Imipenem.
- b)** Why low dose Ritonavir is combined with other protease inhibitors
- c)** Why Tazobactam is combined with piperacillin.
- d)** Why Rifampin coadministration can lead to oral contraceptive failure
- e)** Why sulfamethoxazole is selected for combining with trimethoprim
- f)** Why aminoglycosides can potentiate neuromuscular blockade

Section 2

5. Answer any one

(10)

- a)** Classify anti diabetic drugs. Explain mechanism of action of insulin.

~~Discuss types insulin preparation and~~

insulin analogues (3+3+4=10)

b) Describe the mechanisms of action, pharmacological actions, adverse effects and interactions methylxanthines. (4+24+24+2=10)

6. Answer Any Two of the following

(2x6=12) (12)

a) A 16-year-old patient is in the emergency department receiving nasal oxygen. She has a heart rate of 125 bpm, respiratory rate of 40 breaths/min, and a peak expiratory flow <50% of the predicted value. Wheezing 1) and rales are audible without a stethoscope. How will this patient be managed? Classify bronchodilators and discuss the role of inhaled corticosteroids.

b) Mr X is an otherwise healthy 45-year-old male who works in a high stress job as an air traffic controller at a major airport. He reports 2 weeks of a€œburning stomach pain, sometimes accompanied by a€œindigestion and bloating. The

pain initially occurred several times a day, usually between meals, and sometimes awakened him at night, but it has increased in frequency during the past week. Physical examination is normal except for epigastric tenderness on palpation of the upper abdomen. Mr X. underwent upper GI endoscopy, which revealed a single 0.5-cm ulcer in the duodenal bulb. The ulcer base was clear without evidence of active bleeding. Antral gastritis was biopsy positive for *H. pylori*. What is the treatment plan for Mr X. Discuss the role and mechanism of action of Proton Pump Inhibitors.

c) Mrs Y, a 28-year-old primigravida, is admitted to the labor and delivery suite for labor induction. She is at 42 weeksä€™ gestation by dates and ultrasound and has a normal obstetric examination. Cervical examination reveals an unfavorable cervix for labor induction; Bishop score is 4..

What pharmacologic agents can be used for cervical ripening? Her Bishop score is now 9 but she has not developed a consistent pattern of uterine contractions, What drug therapy should be initiated at this point and why?

7. Write short notes on Any three of the following

(3x6=18) (18)

- a) Thyroid inhibitors.
- b) 5-HT₂ antagonists
- c) Calcineurin inhibitors
- d) Desferrioxamine

8. Answer any five of the following briefly

(2x5=10) (10)

- a) Cisapride predisposes to torsades de pointes
 - b) NSAIDs are contraindicated in patients of Bronchial asthma.
 - c) Bisphosphonates are advised to be taken empty stomach with lots of water.
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d) COVAXIN

e) Oxytocin may cause water intoxication.

f) Centchroman

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