

Birla Institute of Technology and Science, Pilani, Pilani Campus, Rajasthan
Mid Sem. Examination, First Sem-2019-2020: Closed Book
Pharmacology-1

Corse Code: PHA F311

Max. Marks:30

Date: 13/10/2023

Duration: 90 Minutes

Q-1: Explain the following with suitable example. 6.0 M

- a. Agonist and inverse agonist
- b) Non- proprietary and proprietary name of drug
- c) Schedule H and Schedule H1 drugs
- d) Excitatory and inhibitory neurotransmitter

Q-2: A 32 year IT executive working woman taking oral contraceptive regularly. She was diagnosed with TB infection. She started taking combination of anti-TB agents including Isoniazid, Rifampin and Pyrazenamide . After 1 months, she was conceived despite regular use of oral contraceptive 2.5 M

- a) What could be the reason for oral contraceptive failure?
- b) Why dose of rifampin doses not need to adjusted in renal failure?

Q-3: Anxiety, depression and stress may be a strong contributor for respiratory distress and CVS disorders. A 52 years old cardiac patients (CHF) with history of bronchial asthma was treated with beta blockers. After 2 days, patient reported difficulty in breathing, coughing, sneezing and asthmatic symptoms after taking the drugs.

- a) Which beta blocker drug may be given to the patient that may be given to this patient and why it increased - difficulty in breathing, coughing, sneezing and asthmatic symptoms? 1.5 M
- b) How does papillary muscle damage may have resulted cardiac failure? 1.5 M
- c) What, PR interval, QRS complex and T wave represent on ECG? For Myocardial infarction and 2nd degree heart blockage, make representative ECG? 3.0 M
- d) Suggest the class (s) of drugs with their MOA that can prevent and dissolve the clot. 2.5M

Q-4: Comment on the followings: 6.0 M

- a) For Glyceryl trinitrate, sublingual route is the prefer route to treat angina patients?
- b) In alcohol metabolism, a constant fraction of a drug is being eliminated per unit time?
- c) Some drug action prolonged if they metabolized by glucuronidation reaction?
- d) How does aspirin interact with warfarin protein binding that may result adverse rxn?

Q-5:Write therapeutic uses (with example) of alpha -1 and Ang-II receptor blocker. 2.0 M

Q-6: Chronic use or high dose of gentamicin, may sometime resulted kidney failure. Ms. anupuri, a 48 years old worker was treated with gentamicin for UTI infection. Her weight =65, height =150 cm, serum creatinine=1.7 mg/dl. Calculate the Creatinine clearance and based on the result what would be the condition, and the suggestion to be given to patient? 2.0 M

Q-7: Following are the observation of two formulations in normal healthy volunteer. 3.0 M

Drug	Dose (mg/kg)	AUC (mg/l)
I.V Sol	1.4	400
Oral Sol	5	820
Oral Capsule	5	720
Oral SR Tab	8	1020

- ii) Calculate Absolute and relative bioavailability for both capsule and SR tablet.
- iii) Based on the results suggest whether both solid formulation is bioequivalent or not and why
