

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course: Pharmacology and Toxicology I
Program: M. Sc Clinical Research
Course Code: HSCC7010

Semester: I
Time: 03 hrs.
Max. Marks: 100

Instructions: Attempt All the Sections

SECTION A

S. No.	MCQs or Fill in the blanks (1.5 marks each)	30 Marks	CO
1	The rate of absorption of drug is affected by..... a. Routes of drug administration b. Solubility of drug c. Site of administration d. All of the above	1.5	CO1
2	What is "OECD"?	1.5	CO2
3	_____ is an agent, which activates a receptor to produce an effect in the opposite direction to that of the agonist.	1.5	CO3
4	Define the term "Bioequivalence".	1.5	CO1
5	_____ teratogenic effect is caused by thalidomide drug.	1.5	CO2
6	Name the receptors involved in cholinergic transmission.	1.5	CO3
7	_____ adrenergic drug is used in the treatment of Bronchial Asthma.	1.5	CO1
8	Toxins that get passed up the food chain in increasing amounts	1.5	CO2
9	Which statement is true about LD50? A) Dose of a substance to which 50% of animal do not show any response B) Dose of a substance which kills 50% of animals exposed C) 50% dose of a substance which kill an animal D) Dose of a substance which kill 50 animals	1.5	CO3
10	Which antidote is used for the treatment of anticholinesterase poisoning?	1.5	CO1
11	Define "nootropic agents".	1.5	CO2
12	What is the source of "Opium"?	1.5	CO3
13are the protein structures that are expressed within the cell membranes and interact with endogenous signalling molecules or some drugs to initiate an intracellular response.	1.5	CO1

	a) Enzymes b) Hormones c) Ligands d) Receptors		
14	Which of the following is NOT a neurotransmitter category? A) Monoamines B) Peptides C) Amino acids D) Adenosines	1.5	CO2
15 neurotransmitter affects mood regulation, sleep/wake cycles, temperature regulation, sexual activity, and aggression. A) Norepinephrine B) Dopamine C) Epinephrine D) Serotonin	1.5	CO3
16	The state of “general anesthesia” usually includes: A) Analgesia B) Loss of consciousness, inhibition of sensory and autonomic reflexes C) Amnesia D) All of the above	1.5	CO1
17	What is the greatest risk factor for Alzheimer's disease? A) Gender B) Genetics C) Ethnicity D) Increased age	1.5	CO2
18	What did you understand by “NOAEL” in toxicity assessment?	1.5	CO3
19	Excessive use of any drug (legal or illegal) constitutes A) Drug tolerance B) Drug addiction. C) Drug abuse. D) Drug misuse.	1.5	CO1
20	Selegiline and rasagiline are members of which class of compounds: A) SSRI B) RIMA C) MAO-A inhibitors D) MAO-B inhibitors	1.5	CO2
SECTION B: 20 marks 4 questions 5 marks each, word limit-not more than 250 words			
Q	Short Answer Type Question (5 marks each) Scan and Upload 4 questions 5 marks each	20 Marks	CO
1	Discuss about the parenteral route of drug administration.	5	CO2
2	Explain principle and mechanism of JAK-STAT pathway.	5	CO3
3	Discuss in brief about “Neurohumoral transmission”.	5	CO3

4	What are Sympatholytics? Classify Sympatholytic drugs.	5	CO1
SECTION C 30 marks			
Q	Two case studies 15 marks each subsections	30 Marks	CO
1	<p>A 13-year old female presents to emergency department with her parents. She has been complaining of dizziness, headache, palpitations and a feeling of chest tightness. She claims to have taken morphine.</p> <p>Physical Examination: T: 99.4°F HR: 110 bpm RR: 19 breaths per minute BP: 153/86 mm Hg; General: Pale, agitated and crying. She is very anxious.</p> <p>Pulmonary: Clear to auscultation.</p> <p>CV: Tachycardia without murmur.</p> <p>Abdomen: Soft and non-tender.</p> <p>A) What are the effects of morphine? (3 marks)</p> <p>B) How will you manage the condition of this patient? (5 marks)</p> <p>C) Which antidote is used for the treatment of morphine poisoning? (1 marks)</p> <p>D) Name the receptors to which morphine bind and their function. (6 marks)</p>	15	CO4
2	<p>A 29-year old male pharmacy staff member self-administered 10mg intravenous atropine in the hospital with the intention of suicide. Within minutes, the patient was brought to the Emergency Department (ED). In the first examination findings in ED, the patient was conscious, nervous and tachycardic. The patient had exophthalmus and impaired accommodation. He was monitored, and blood pressure was measured as 170/110 mmHg with a heart rate of 165 beat/minute. Body temperature was normal.</p> <p>A) What is Atropine? Discuss its mechanism of action. (2+3)</p> <p>B) How will you manage the condition of this patient? (5 marks)</p> <p>C) Which antidote is prescribed in this type of poisoning? (1 marks)</p> <p>D) What pharmacological effects are being observed after giving antidote for its treatment? (4 marks)</p>	15	CO3
SECTION- D 20 marks			
Q	Long Answer type Questions Scan and Upload (10 marks each); word limit-not more than 500 words	20 Marks	CO
1	<p>Write synthesis, metabolism and release of Acetylcholine at different sites in adrenergic and cholinergic neuron. (5 marks)</p> <p>Name the drugs used in the treatment of Myasthenia Gravis and explain their mechanism. (5 marks)</p>	10	CO1
2	<p>Classify Antidepressant Drugs. (5 marks)</p> <p>How selective serotonin reuptake inhibitors functions in the treatment of depression? (5 marks)</p>	10	CO2