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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Program: MSc Clinical Research **Semester:** II
Course: Pharmacology and Toxicology-II **Duration:** 03 hours
Course Code: HSCR7011 **Max. Marks:** 100

Instructions: All questions are compulsory

	SECTION A (Type the answers in test box)	**(20Q x1.5M= 30 Marks)**	**CO**
	MCQs, One or two line answers, True/False, Fill in the blanks	**1.5**	
Q1	What is LD_{50}?	**1.5**	**CO3**
Q2	Write names of hormones secreted from posterior pituitary gland	**1.5**	**CO3**
Q3	Nitrates in classical angina act by dilating- **a. Veins** b. Aorta c. capillaries d. Coronary sinus	**1.5**	**CO1**
Q4	An increase in heart rate and renin release seen in patient of CHF can be overcome by which of the following drugs- a. Minoxidil b. **Metoprolol** c. Metolazone d. Milrinone	**1.5**	**CO1**
Q5	Side effects of thiazide diuretics are all except- a. Hyponatremia b. Hypokalemia c. Erectile dysfunction **d. Hypocalcemia**	**1.5**	**CO3**
Q6	Main difference between ACE inhibitors and ARBs is that ARBs- a. Can be used in pregnancy b. Does not cause hyperkalemia **c. Does not cause cough** **d.** All of the above	**1.5**	**CO1**
Q7	Digoxin toxicity is increased by all except- a. Renal impairment **b. Hyperkalemia** c. Hypercalcemia d. Hypomagnesemia	**1.5**	**CO1**
Q8	The advantage of second generation antihistaminic- a. Absence of CNS depressant property b. High H-1 selectivity c. Additional anti-allergic effect **d. All of the above**	**1.5**	**CO2**

Q9	The 5-HT_3 antagonist drugs are clinically used as _____	**1.5**	**CO1**
Q10	Testosterone is inactive orally due to _____	**1.5**	**CO4**
Q11	In patients taking oral contraceptive, the chance of pregnancy increases after taking any of the following drugs except- a. Phenytoin b. Griseofulvin c. Ampicillin **d. Cimetidine**	**1.5**	**CO5**
Q12	Effect of estrogen are all of the following except- **a. Reduces HDL** b. Reduces LDL c. Reduces bone resorption d. Increase triglyceride	**1.5**	**CO2**
Q13	A patient develops hypoglycemia. He was on insulin and acarbose. For treatment of above what should be given? **a. Glucose** b. Maltose c. Sucrose d. Starch	**1.5**	**CO5**
Q14	Define minimum inhibitory concentration of antibiotics		**CO2**
Q15	Multiple drug resistance is transferred through a. Transduction b. Transformation **c. Conjugation** d. Mutation	**1.5**	**CO4**
Q16	Drug used in breast cancer is- a. Testosterone b. **Tamoxifen** c. Chlorambucil d. Cyproterone	**1.5**	**CO3**
Q17	Active metabolite of azathioprine is- a. 6-thioguanine b. 6-thiouracil c. **6-mercaptopurine** d. 6-mercaptoguanine	**1.5**	**CO3**
Q18	Which of the following immunosuppressive agent requires monitoring of renal function on regular basis- a. Azathioprine b. Mycophenolate mofetil c. Methotrexate d. **Cyclosporine A**	**1.5**	**CO3**
Q19	Your 60 year old male hypertensive patient who had an myocardial infarction a year ago is now showing signs of CHF. You therefore add spironolactone to his drug regimen. What side effect should you warn him about?	**1.5**	**CO3**
Q20	Which of the following toxicity can occur due to single exposure? **a. Acute toxicity** b. Sub-acute toxicity c. Sub-chronic toxicity d. Chronic toxicity	**1.5**	**CO4**

	SECTION B Short Answer Type Question (Word limit 250)	**(4Qx5M=20 Marks)**	**CO**
Q1	Discuss the procedure for sub-chronic oral toxicity.	5	CO2
Q2	Explain drug resistance and its type.	**5**	**CO2**
Q3	Write a note on anti-histaminic agents	**5**	**CO2**
Q4	What are clinical application of Immunosuppressants and Immunostimulants.	**5**	**CO3**
	SECTION C	**(2Qx15M=30 Marks)**	**CO**
	Please answer the questions to the point.		
Q1	Describe pharmacology of insulin in body. Classify and discuss the Oral hypoglycemic agents.	(5+10)	**CO3, CO4**
Q2	Discuss the differences between pathophysiology and therapy for heart attack, heart failure and cardiac arrest.	(5+5+5)	**CO3 CO4**
	SECTION- D Long Answer type Question (word limit 500)	**(2Qx10M=20 Marks)**	**CO**
Q1	Elaborate the mechanism of action of antimicrobials with examples.	(10)	CO1 CO4
Q2	Briefly discuss regulatory requirements for toxicity studies in animals.	10	CO1 CO4