

**Birla Institute of Technology and Science, Pilani, Pilani-Campus
Rajasthan**

Comprehensive- Examination, Ist- Semester 2022-23

Course Title : PHA F 311

Course Title : Pharmacology-1

Max. Marks: 17 +23 (40)

Open and Closed Book

Date: 28/12/22

Duration: 3.0 hrs

Instructions: Short and precise answer with flowchart will be preferred.

PART-A -Open Book

Max Marks: 17

Max Time: 70 Minutes

Q-1: a) What do you mean by ROS and pro-inflammatory cytokines ? How does body managed to quench/neutralize the harmful effects of ROS? 1.5 M

b) Why does basal ganglia region may prone to free radicals induced damage ? 0.5 M

c) How does autoreceptor modulation be used clinically in CNS disorder?. Discuss any clinical problem with the help of suitable example. 1.5 M

Q-2: Why do negative symptoms of schizophrenia not well controlled by ist generation anti-psychotic agents? 1.0 M

Q-3: During covid -19 pandemic, most of the patients have been associated with depressive symptoms post covid infection. Sometime a depressed patient may start consuming alcohol to overcome stress and anxiety, why the person walks clumsily (careless) after consuming alcohol? Which part of brain and NT does most likely alcohol affect? 1.0 M

ii) How does base on alcohol metabolism , alcohol addiction be clinically managed? Discuss with suitable molecular mechanism based -explanation. 1.5 M

Moreover, some patients have been diagnosed with neurological problem after Covid infection. If there is an excess neuronal abnormal firing have been identified in the brain due to ischemic/hypoxic or metabolic derangement might involved

iii) -suggest the different approaches (with example) to modulate the neuronal activity for getting benefit in clinical condition. You can take any clinical problem and with the help of each class example, discuss it. 3.0 M

iv) Why during covid -19 infection, Montkast/ Montair -LC was in very much use while NSAIDs other than PCM, advised not used/ be avoided? 1.0 M

Q-4: Why does aspirin not advised in dengue fever despite pain and inflammation are common symptoms in dengue? 1.0 M

Q-5:Isoniazid widely used to treat TB infection with other antimicrobial agents, but unexpectedly serious toxicity has been found in few patients, why? 1.0 M

Q-6: Comments on the following: 4.0 M

i) TCAs should not be used in patients with Glaucoma?

ii) Non-microsomal enzyme are not inducible but why some drugs that are metabolized by non microsomal enzyme may have toxicity or therapeutic failure ?.

iii) Some PD patients when treated with anti-Parkinson agents, may be prone to have hypertensive crises?

iv) Chronic use of reserpine induces depression like symptoms, why?

v) Many Antidepressant drugs/classes of drugs -not attained immediate therapeutic response and take 3-4 weeks, why?

.....Best of luck.....

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Open and Closed Book

Date: 28/12/22

Duration: 3.0 hrs

Instructions: Short and precise answer with flowchart will be preferred.

PART-A: Closed Book

Max Marks: 23

Max Time: 110 Min.

Q-1: Comment on the following with suitable reasoning: 2.0 M

- i) Repeated administration of stimulants like amphetamines and cocaine can increase the risk of schizophrenia?
- ii) Cholinomimetic agents can be used to treat Alzheimer's Disease?

Q-2: Why is NMJ (muscle relaxant) blocker -Atracurium can be used in liver failure while others drugs dose need to be adjusted? 1.0 M

Q-3: Differentiate between 4.0 M

- a) Ganglia and Plexus and Neuromuscular Junction
- b) Mydriatics and Cycloplegics
- c) Tolerance and Tachypylaxis
- d) Cox-2 and LOX-inhibitor agents

Q-4: Write the name of part of the brain comprise basal ganglia? Why does MPTP selectively damage dopaminergic neuron? 2.0 M

Q-5: Write a note on the following with the help of suitable example: 6.0 M

- i) GABA a and GABA b Receptors modulators
- ii) Alpha and Beta receptor agonist applications
- iii) 3rd Generation Beta Blockers
- iv) Alpha receptor agonist and Opioids antagonist applications

Q-6: Malignant hyperthermia and its management? 1.0 M

Q-7: What do you mean by chemical warfare nerve agents and how do they work? What are the clinical management in case of nerve gases toxicity? 2.0 M

Q-8: Write the therapeutic use and MOA of the following drugs: 3.0 M

- a) Mianserine and Mirtazapine b) Tiagabine and Vigabatrin c) Baclofen and succinylcholine

Q-9: What are the problem associated with cimetidine (Anti- androgenic/ CYP 450 inhibitor) and the ist Generation Histamine receptor antagonist? How, these problem circumvented? 1.5 M

*****Best of luck.*****
