

**Birla Institute of Technology and Science, Pilani, Rajasthan)**  
**Mid Sem. Examination, First Sem-2022-2023**

**Course Code:** PHA C 311

**Course Name:** Pharmacology

**Max. Marks:** 30

**Closed Book**

**Date:** 04/11/22

**Duration:** 90 Minutes

**Instructions:** Answer all the questions.

Be crisp and answer to the point. Flow chart can be accepted wherever needed.

**Q-1:** Comment on the followings: 10.0 M

- i) What happens when nicotinic receptor (Nm) are blocked?
- ii) Why, twitching and fasciculation are commonly observed with -depolarizing NMJ blockers (muscle relaxant) agents ?
- iii) If you are late in exam and start getting anxiety, panicking and enter in examination hall in rush, What changes happens to the physiological response? Write the name of hormone /neurotransmitter and its receptor involved for the observed response.
- iv) Adrenaline is not synthesized and present in brain while NA is main neurotransmitter, why?.
- v) Propranolol should be avoided in bronchial asthmatic patients?
- vi) Oral route is very convenient and prefer route for Insulin to treat Diabetes Mellitus?
- vii) Anti-cholinesterase inhibitor -neostigmine does not work in Alzheimer's Disease, why?

Q-2 a): What do you mean by Myasthenia Gravis ? What are the clinical approaches for its treatment and management? 2.5 M

b) Why does thymectomy be needed in some patient?

Q-3: How, PGs and LTs are generated? Why, the pain sometime sharp, faster, localized and sometimes dull, slow, not properly localized? (1.5 +1.5 M)

**Q-4:** What do you mean by parasympathomimetic agents? Explain with the help of suitable examples. 2.0 M

**Q-5:** Explain the followings with the help of suitable example: 4.5 M

- i) Nuclear and enzyme linked receptor
- ii) Ionotropic and metabotropic receptor
- iii) GPCR-activation and its signaling pathway

Q-6: Drug metabolism is a crucial aspect in which most of the pharmaceutical drugs undergo biotransformation /chemical alteration, so that they can be eliminated more easily. Sometime-the generated metabolite may be useful or harmful based on the metabolic enzyme system (microsomal and non-microsomal-CYP 450) that may be varying due to pharmacogenetic. 4.5 M

- a) Write the mechanism and treatment of Paracetamol toxicity.
- b) Drug-isoniazid has toxicity in fewer patients, why?
- c) How does biliary recycling enterohepatic recirculation affect the elimination half-life of drugs?

Q-7: a) What are warfare nerve gases? How is organophosphate (AChE-inhibitor) poisoning treated? (3.5M)

b) What do you mean by Half life of drug? How many half lives of a drug does it take to eliminate 100 % of the drug from the body?

c) What do you mean by Relative and absolute bioavailability?

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