

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
MID SEMESTER EXAMINATION-2015
M.PHARM IV SEMESTER

COURSE CODE: 14M1WPY431

MAX. MARKS: 30

COURSE NAME: Cellular and Molecular Neuropharmacology

COURSE CREDITS: 3

MAX. TIME: 2HRS

Note: All questions are compulsory. Draw diagram where ever necessary

Section A

(Marks: 6)

1. What is the function of myelin sheath around nerve cells?
2. Define refractory period?
3. What is dendrotoxin?
4. Why Na^+ - K^+ pump is said to be electrogenic?
5. Explain ATPase pumps?
6. Depolarization indicates?

Section B

(Marks: 9)

1. Diagrammatically explain the experimental arrangement for examining the local flow of electrical current in an axon. Is there any relation between amplitude of the potential response and distance?
2. What are the functional states of voltage gated Na^+ and K^+ channels under hyperpolarization, depolarization and prolonged depolarization.
3. How ionic movements produce electrical signals in neurons? Enlist few ion channels associated with neurological disorders?

Section C

(Marks: 15)

1. How would you evaluate the functioning of ion channels? Diagrammatically explain the experimental set up?
2. Write short notes on (a) stretch and heat activated channels, (b) neural circuit.
3. What are the consequences of demyelination? Does demyelination directly related to multiple sclerosis? What is the role of action potential in this disorder?