

B.Sc., PHYSICIAN ASSISTANT
NEUROLOGY PUZZLE

UNIT - 1

TOPIC - NEUROMUSCULAR JUNCTION

TOTAL MARKS - 10 MARKS

Puzzle: Sequence Scramble (Order the Events)

The NMJ signal transmission is a chain of events, but the Disruptor scrambled them! Arrange the steps in the correct order to fire a muscle action potential. Select the correct sequence by choosing the letter (A-D) of the proper order.

Scrambled Steps:

- i. End-plate potential triggers muscle membrane depolarization
- ii. Acetylcholine binds to nicotinic receptors
- iii. Action potential arrives at presynaptic terminal
- iv. Sodium ions enter muscle cell, causing end-plate potential
- v. Calcium triggers acetylcholine release into the cleft

Options: A) iii, v, ii, iv, i B) iii, ii, v, iv, i C) v, iii, ii, i, iv D) ii, iv, iii, v, i

Rules: Choose the correct sequence (A-D).

Clue Hint: Start with the nerve's spark and end with the muscle's zap—follow the signal flow!

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RUBRICS:

Criterion	Marks (out of 10)
Accuracy	4
Logical reasoning / Applying	3
Conceptual understanding	2
Presentation	1
Total Marks	10 Marks