

# control & coordination

## Quick Study Guide

## HOW TO USE THIS GUIDE

HIGHLIGHTED TEXT SHOWS IMPORTANT POINTS

- ★ MARKS HIGH-FOCUS TOPICS
- 📝 INDICATES EXAM TIPS
- ⚠️ SHOWS COMMON ERRORS
- 💡 GIVES QUICK TIPS

### NERVOUS SYSTEM BASICS

Mnemonic: "DIMAG WALA"

**D** Detect stimulus  
**I** Information carry  
**M** Message transfer  
**A** Action created  
**G** Generate response

**W** Work coordination  
**A** Action planning  
**L** Linking nerves  
**A** Alert system

**Remember As:**  
 \* Like Mobile Network  
 \* Stimulus + Incoming call  
 \* Nerves + Network cables  
 \* Brain + Control tower  
 \* Response + Reply message

**Common Errors:**  
 \* Mixing stimulus/response  
 \* Forgetting nerve path  
 \* Wrong response type  
 \* Incomplete process

### BRAIN PARTS

Mnemonic: "CRICKET MATCH"

**C** Cerebrum (Captain)  
**R** Reflex actions  
**I** Intelligence center  
**C** Cerebellum (Balance)  
**K** Knowledge storage  
**E** Emergency control  
**T** Thinking process

**M** Medulla (Manager)  
**A** Automatic functions  
**T** Team coordination  
**C** Consciousness  
**H** Heartbeat control

**Functions Flow:**  
**BOSS LOG**  
 \*S\*: Brain controls all  
 \*O\*: Orders given  
 \*S\*: Signals sent  
 \*S\*: Stimulus received  
 \*L\*: Life functions  
 \*O\*: Organ control  
 \*G\*: General management

### REFLEX ACTIONS

Mnemonic: "GARAM PLATE"

**G** Going fast  
**A** Automatic action  
**R** Rapid response  
**A** Avoid danger  
**M** Muscle movement

**P** Protection  
**L** Lightning fast  
**A** Action quick  
**T** Touch sensor  
**E** Emergency response

**Enzymes Chart:**  
**STEAM**  
 \*S\*: Stimulus (touch)  
 \*T\*: Thermoreceptor  
 \*E\*: Effector muscle  
 \*A\*: Action response  
 \*M\*: Movement away

**Daily Examples:**  
 1. Hot plate touch  
 2. Knee-jerk  
 3. Eye blinking  
 4. Sneezing  
 5. Coughing

### NEURON STRUCTURE

Mnemonic: "MOBILE TOWER"

**M** Message carrier  
**O** One-way signal  
**B** Brain connection  
**I** Information flow  
**L** Long axon  
**E** Electrical signal

**T** Transmission  
**O** Organize signals  
**W** Work together  
**E** Energy use  
**R** Receive & send

**Parts Remember As:**  
**DAD**  
 \*D\*: Dendrites (receivers)  
 \*A\*: Axons for growth  
 \*A\*: Axon (cable)  
 \*D\*: Dendron (processor)  
 \*A\*: Like phone antenna  
 \*A\*: Like charging wire  
 \*D\*: Like phone processor

### PLANT HORMONES

Mnemonic: "PLANT GURU"

**P** Plant growth  
**L** Light response  
**A** Auxins work  
**N** Natural hormones  
**T** Tropisms all

**G** Growth control  
**U** Upward movement  
**R** Root growth  
**U** Understanding light

**Main Hormones:**  
**MAGIC SHOW**  
 \*M\*: Movement control  
 \*A\*: Auxins for growth  
 \*G\*: Gibberellins  
 \*I\*: Important growth  
 \*C\*: Cytokinins  
 \*S\*: Stem growth  
 \*H\*: Height increase  
 \*O\*: Overall growth  
 \*W\*: Water movement

### PLANT MOVEMENTS

Mnemonic: "DANCE PARTY"

**D** Direction change  
**A** Away from touch  
**N** Natural movement  
**C** Chemical control  
**E** Environmental

**P** Phototropism  
**A** Away/Towards  
**R** Response type  
**T** Touch response  
**Y** Yes/No movement

**Types Remember As:**  
**PHOTO KHICHO**  
 \*P\*: Phototropism (light)  
 \*H\*: Hydrotropism (water)  
 \*O\*: Opposite movements  
 \*T\*: Thigmotropism  
 \*O\*: Overall growth  
 \*K\*: Know direction  
 \*H\*: Hormone based  
 \*I\*: Important moves  
 \*C\*: Chemical based  
 \*H\*: Help growth  
 \*L\*: Light based  
 \*O\*: Observe growth



## COORDINATION IN ANIMALS

Mnemonic: "TEAM WORK"

T Together working  
E Endocrine system  
A All connected  
M Message system

W Work together  
O Organ systems  
R Response quick  
K Keep balance

### Hormone Control:

#### BODY BOSS

- \*B\*: Blood carries
- \*O\*: Organ targets
- \*D\*: Direct action
- \*y\*: Yearly growth
- \*B\*: Balance all
- \*O\*: Organize work
- \*S\*: Specific action
- \*S\*: Slow but long

## QUICK REVISION CHECKLIST

### Before Exam:

- ✓ Nervous system parts
- ✓ Brain functions
- ✓ Reflex actions
- ✓ Neuron structure
- ✓ Plant hormones
- ✓ Movement types
- ✓ Practical examples

### Scoring Tips:

1. Draw labeled diagrams
2. Show process flows
3. Give daily examples
4. Write proper steps
5. Include real examples

100%

### HIGH FOCUS AREAS

1. Brain & Functions (5 marks)
2. Nervous System (5 marks)
3. Neuron Structure (4 marks)
4. Plant Hormones (4 marks)
5. Practical based (3 marks)

