CP FOR CHAPTER-7: CONTROL AND COORDINATION.

Number of period	Sub-Topics
1	What is coordination, what is stimuli, whatis animal nervous system. Structural and functional unit of nervous system., Transmission of nerve impulse.
2	Spinal cord, Reflex Action, Reflex arc
3	Human Nervous System, Protection of brainand spinal cord, Brain structure, Forebrain and its function Brain and its function, Hind Brain and its function
4	Anterior pituitary- GH, PRLH, TSH, ACTH, FSH, LH, Posterior pituitary -VP OR ADH, OT, intermediate pituitary-MSH, Feedback Mechanism, Explain with the help of an example or define feedback mechanism.
5	Coordination in plants-Immediate Responseto Stimulus, Nastic movement, Photo nastic movement, Thermonastic movement, Seis monastic movement,Nyctinastic movements
6	Coordination in plants-Movement Due to Growth,Phototropism,Geotropism,Chemotr opism,Hydrotropism,Phytohormone,Auxins, Gibberellins,Cytokinins,Abscisic acid,Ethene
7	Recapitulation of the Chapter

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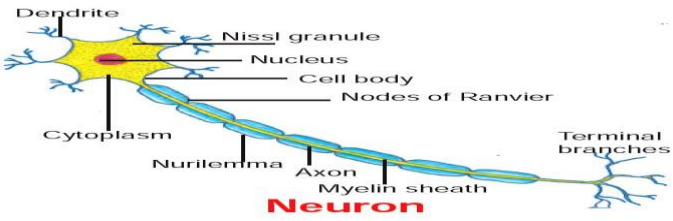
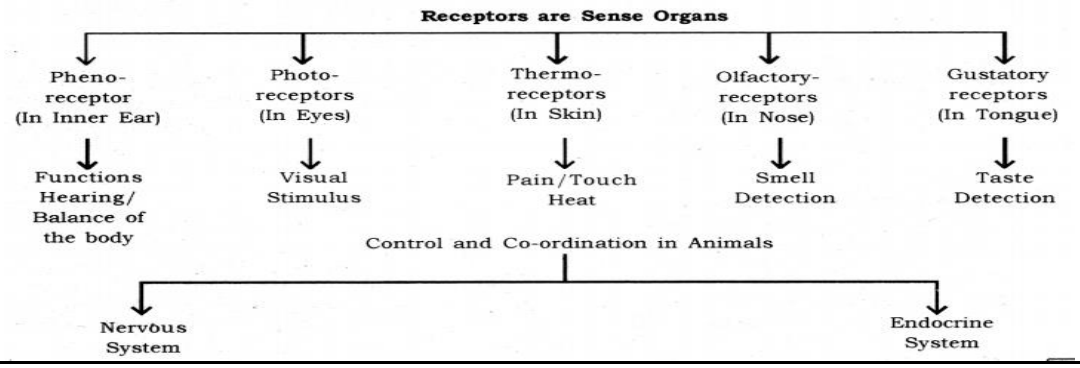
Class	X	**Subject**	BIOLOGY
Period.	1	**Chapter-7**	CONTROL AND COORDINATION.
Sub- Concepts	What is coordination, what is stimuli, whatis animal nervous system. Structural and functional unit of nervous system., Transmission of nerve impulse		
Teaching AidTo be used	Smart Class, PowerPoint presentation, classroom objects, charts.		
Learning Outcome.	On completion of this topic, students will be able to • Define coordination. • List the different types of senses. • Categorize the receptors. • Identify the nerve impulses and how they transmit.		
Sl. No	**Step Wise (What to be done)**		
1. **Introduction.**	➢ What is coordination.		

coordination, stimuli,	➢ Stimuli ➢ Movement and locomotion ➢ Coordination in plants ➢ Coordination in anlmals.
2. whatis animal nervous system	 ➢ Nervous system

3. Structural and functional unit of nervous system	➢ Cell body ➢ Dendrite ➢ Axon
4. Transmission of nerve impulse.	➢ Nerve impulse ➢ Direction of nerve impulse ➢ Transmission of nerve impulse ➢ Chemical transmission. ➢ 
5.Home Assignment	1.which part of a neuron receives stimuli from other neurons? what is the direction of the nerve impulses? 2. Why is the response of a plant to a stimulus not observed immediately? 3. Explain the function of electrical impulses

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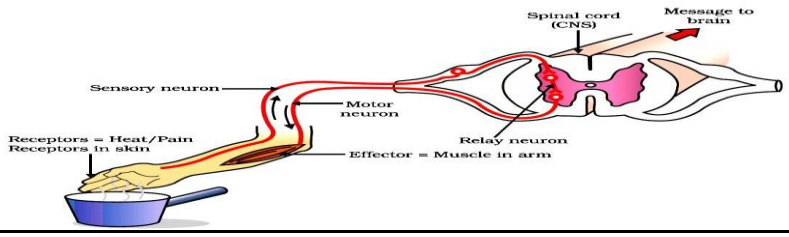
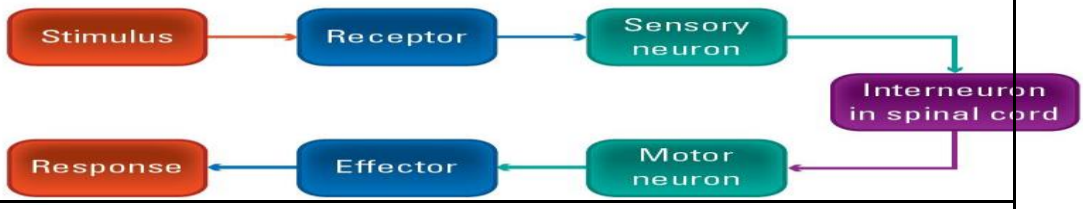
Class	X	**Subject**	BIOLOGY
Period.	2	**Chapter-7**	CONTROL AND COORDINATION.
Sub- Concepts	Spinal cord, Reflex Action, Reflex arc		
TeachingAid To be used	Smart Class, PowerPoint presentation, classroom objects, charts.		
Recapitulation.	Testing previous knowledge – 1.Draw the diagram of a neuron. 2. Why is a system of control and coordination essential in living organisms?		
Learning Outcome	On completion of this topic, students will be able to • Identify and explain reflex action. • Define reflex. • Explain spinal cord • Define reflex action • Name the basic components of a reflex arc. • Which signals will get disrupted in case of a spinal cord injury?		
Sl. No	**Step Wise (What to be done)**		
1. Spinal cord			
2. Reflex Action	Reflex action is a special case of involuntary movement in voluntary organs		
3. Reflex arc	**Reflex Arc:** The path through which nerves signals; involved in a reflex action; travel is called the reflex arc. The following flow chart shows the flow of signal in a reflex arc.		
4. components of reflex arc.			
5.Home Assignment	1.Name the basic components of areflex arc. 2What is the role of the brain in reflex action? **3.** What do you mean by reflex action? Give examples of reflex actions?		

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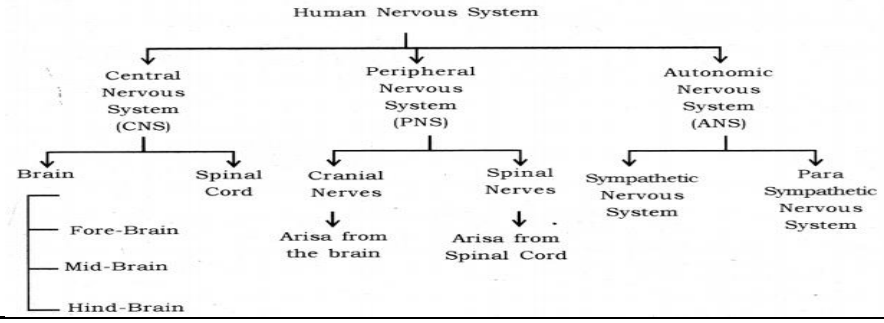
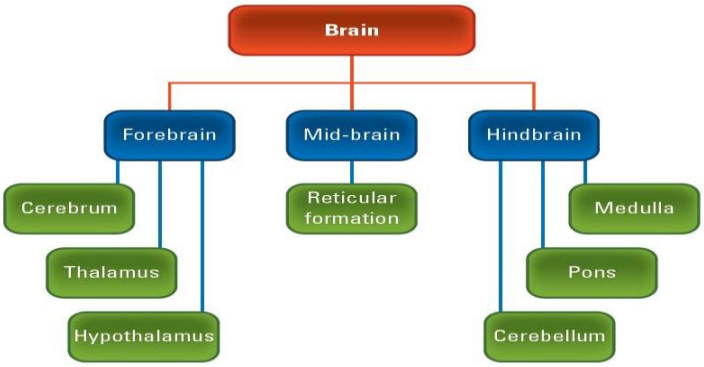
Class	X	**Subject**	BIOLOGY
Period.	3	**Chapter-7**	CONTROL AND COORDINATION.
Sub-Concepts	Human Nervous System, Protection of brainand spinal cord, Brain structure, Forebrain and its function, Hind Brain and its function		
Teaching AidTo be used	Smart Class, PowerPoint presentation, classroom objects, charts.		
Recapitulation	Testing previous knowledge – 1.What are the three types of nerves? **2.** What are receptors? **3.** What are effectors?		
Learning Outcome	On completion of this topic, students will be able to • Identify and explain major parts of human brain. • Define nervous system. • List types of neuron. • Give the role of Frontal lobe, temporal, lobe and medulla oblongata.		
Sl. No	**Step Wise (What to be done)**		
1. Human Nervous System			
2. Protection of brainand spinal cord	➢ Meninges ➢ Skull ➢ Grey matter ➢ White matter ➢ Vertebral column		

3. Brain structure	
4. Forebrain and its function , Hind Brain and its function	➢ Cerebrum ➢ Olfactory lobes ➢ Diencephalon
5.Home Assignment .	1.How are the brain and spinalcord protected in the humanbody? 2.Which is the largest and most prominent part of the brain. **3.** What are the functions of cerebellum?

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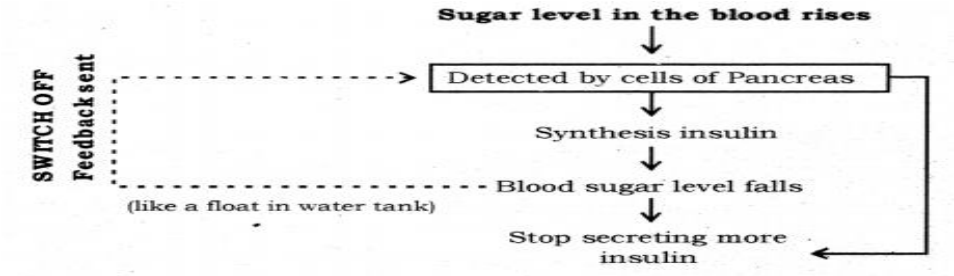
Class	X	**Subject**	BIOLOGY.
Period.	4	**Chapter-7**	CONTROL AND COORDINATION.
Sub-Concepts	Anterior pituitary- GH,PRLH,TSH,ACTH,FSH,LH,Posterior pituitary -VP OR ADH, OT, intermediate pituitary-MSH,Feedback Mechanism, Explain with the help of an example or define feedback mechanism..		
Teaching Aid To be used	Smart Class, PowerPoint presentation, classroom objects, charts		
Recapitulation.	Testing previous knowledge – 1.What are the four main parts of the fore brain? Give the function of each part. **2.** What are the three parts of the mid brain and their functions? **3.** Which part of the human brain is responsible for: Intelligence and Memory, Adjustment movement and Posture, Smell?		
Learning Outcome.	On completion of this topic, students will be able to • Identify and explain major parts of pituitary. • Define hormone. • List the different types of exocrine and endocrine glands. • Categories the hormones that are produced from the different parts of the pituitary.		

Sl. No	Step Wise (What to be done)
1. Anterior pituitary- GH,PRLH,TSH, ACTH,FSH,LH	➢ Exocrine glands. ➢ Endocrine glands ➢ Anterior pituitary and their secretions
2. ,Posterior pituitary -VP OR ADH, OT	➢ Posterior pituitary and their secretions. ➢ Antidiuretic hormones ➢ Vasopressin ➢ Oxytocin
3. intermediate pituitary-MSH,	➢ Intermediate pituitary and their secretions. ➢ Melanocytic stimulating hormones.
4. Feedback Mechanism.	
5.Home Assignment	1.Name any two glands which release their secretion s outsidethe body. 2.Which endocrine gland is called master gland? Why? 3.what is the site of action of a hormone called?

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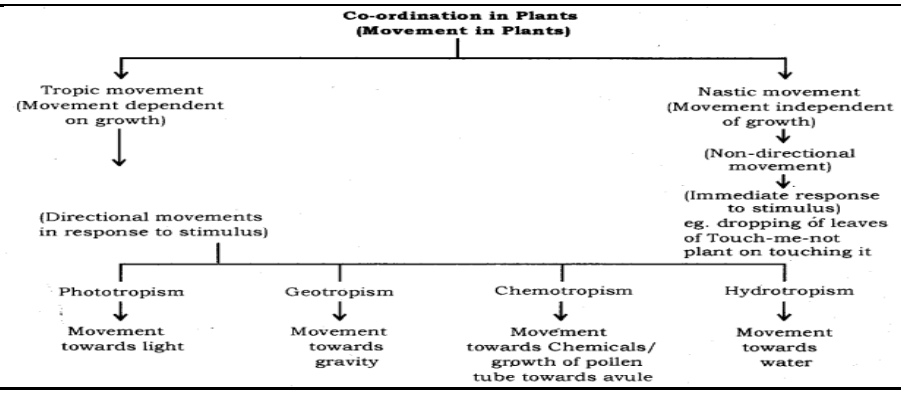
Class	X	**Subject**	BIOLOGY.
Period.	5	**Chapter-7**	CONTROL AND COORDINATION.
Sub-Concepts	Coordination in plants-Immediate Response to Stimulus, Nastic movement, Photo nastic movement, Thermotactic movement, Seis monastic movement, Nyctinastic movements		
Teaching Aid To be used	Smart Class, PowerPoint presentation, classroom objects, charts		
Recapitulation .	Testing previous knowledge – 1.Which endocrine gland is called master gland? Why? 2.what is the site of action of a hormone called?		
Learning Outcome .	On completion of this topic, students will be able to • Explain coordination plants. • Define stimulus. • List the different types of movement in plants.		

Sl. No	Step Wise (What to be done)
1. Coordination in plants-	
2. Stimulus, Nastic movement, Photo nastic movement	➢ Stimulus ➢ Nastic movement ➢ Photo nastic movement
3. Photonastic movement, Thermonastic movement	➢ Photo nastic movement ➢ Thermonastic movement
4. Seis monastic movement,Nyctinastic movements	➢ Seis monastic movement ➢ Nyctinastic movement.
5.Home Assignment	1.what would happen if the rootsof a plant become negatively geotropic? 2. Give an example of chemotropism? With the help of diagram **3.** Roots can grow against the law of gravity. When does this happen?

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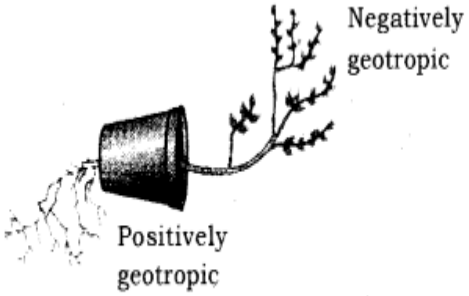
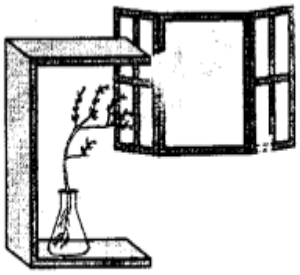
Class	X	**Subject**	BIOLOGY.
Period.	6	**Chapter-7**	CONTROL AND COORDINATION.
Sub-Concepts	Coordination in plants-Movement Due to Growth,Phototropism,Geotropism,Chemotr opism,Hydrotropism,Phytohormone,Auxins, Gibberellins,Cytokinins,Abscisic acid,Ethene		
Teaching Aid To be used	Smart Class, PowerPoint presentation, classroom objects, charts		
Recapitulation .	Testing previous knowledge – 1.Name the Scientific terms for Bending of shoot towards sunlight **2.** Name the Scientific terms for Growing of root towards the earth 3.Name any growth inhibiting phytohormone. 4.What makes a stem bend towards sunlight?		
Learning Outcome .	On completion of this topic, students will be able to • Identify and explain different types of plant hormones. • Define auxin and gibberellin. • Explain the bending of plant root away from light by the action of auxin hormones		

Sl. No	Step Wise (What to be done)
1 Coordination in plants	➢ Phototropic movement (light dependent) ➢ Geotropic movement (gravity dependent) ➢ Chemotropic movement (chemical dependent) ➢ Hydrotropic movement (water dependent) ➢ Thigmotropic movement (touch dependent)
2. Phototropism,Geotropism,	 Plant showing geotropism.  Plant showing phototropism
3 Chemotropism,Hydrotropism,	➢ Chemotropism ➢ Hydrotropism.
4 phytohormones.	➢ Auxin: (Synthesized at shoot tip). Function: Helps in growth. Phototropism: more growth of cells towards the light. ➢ Gibberellin: Helps in the growth of the stem. ➢ Cytokinins: Promotes cell division. ➢ Abscisic acid: Inhibits growth, cause wilting of leaves. (Stress hormone)
5.Home Assignment	1.How do auxins promote the growth of a tendril around asupport? 2. What is the function of Gibberellins, Ethene and Auxins? **3.** What are Phytohormones? Name any two.