

UNIT 3 PSYCHOLOGY

BOOK 1 – AREA OF STUDY 1

How does the Nervous System Enable Psychological Functioning?

Section 1: Unit 3 Overview

Area of Study 1: How Does the Nervous System Enable Psychological Functioning?

Key Skills

Section 2: Area of Study 1 – Topic 1 – Nervous System Functioning

The Nervous System

The Central Nervous System (CNS)

The Brain

The Structure of the Cerebral Cortex

The Brain and Nervous System

The Human Nervous System

The Neuron

Transmission of Nerve Impulses

The Synapse

Types of Neurons

Propagation of an Action Potential

The Peripheral Nervous System (PNS)

Activities of the Sympathetic and Parasympathetic Nervous System

Branches of the Autonomic Nervous System and Bodily Functions

The Reflex Arc

The Spinal Reflex

The Role of Neurotransmitters in the Transmission of Neural Information

Excitatory & Inhibitory Neurotransmitters

Excitatory & Inhibitory Interneurons

Lock & Key Process of Neural Transmission

Parkinson's Disease

What is Parkinson's Disease?

Causes of Parkinson's Disease

Symptoms of Parkinson's Disease

Australian Parkinson's Statistics

Section 3: Area of Study 1 – Topic 2 – Stress as an Example of a Psychobiological Process

What is Stress?

Types of Stress

Stressors

How Do Biological, Psychological and Social Factors Contribute to Stress and Affect the Stress Response?

Recognising Signs of Stress

Psychological Responses to Stress

Stress and the Biopsychosocial Framework

Sources of Stress

Daily Pressures

Life Events

Life Events: Social Readjustment

The Social Readjustment Rating Scale (SRRS)

Acculturative Stress

Migration and Acculturation
Racial Discrimination and Equity
Language Acquisition
The Refugee Experience
Major Stressors
Catastrophes

Post-Traumatic Stress Disorder

Physiological Responses to Stress

1. The Fight-Flight-Freeze Response
 - The HPA Axis
 - How is the Fight-Flight-Freeze Response Adaptive?
 - The Role of Cortisol
2. The General Adaptation Syndrome (GAS)
 - Selye's General Adaptation Syndrome

The Relationship Between Stress and Disease

The Stress Response

Psychological Responses to Stress

Lazarus and Folkman's Transactional Model of Stress and Coping

Coping with Stress

Coping Strategies
Strategy Selection
Coping Flexibility
Coping Ability
Factors that Improve Coping Ability
Successfully Coping with Stress
Context-Specific Effectiveness
Types of Coping Strategies
Using Exercise as Stress Management
Other Stress Management Strategies

Section 4: Practice VCE Exam Questions

Additional Questions from the VCE Exams (2010 – 2016)

Topic 1: Nervous System Functioning

Topic 2: Stress as an Example of a Psychobiological Process

BOOK 2 – Area of Study 2

Section 1: Area of Study 2 – How Do People Learn and Remember?

VCE Study Design: Area of Study 2 – How Do People Learn & Remember?

Key Knowledge

Key Skills

Memory & Learning

The Neural Basis of Learning

What is Learning? How Does it Happen?

The Neural Mechanisms and Pathways Involved in Memory and Learning

Neural Basis of Learning and Memory

Neural Basis of Learning and Memory (Neural Plasticity)

Long-Term Potentiation

Hebbian Theory

Long-Term Depression

Processes Involved in Memory

Information Processing Model
The Role of the Neuron in Memory Formation

Short and Long Term Memory

Atkinson and Shiffrin's Multi-Store Model
Short-Term Memory
Capacity and Duration
Extending the Duration of STM
Long-Term Memory
Organisation of Long-Term Memory
Declarative Memory (Explicit Memory)
Procedural Memory (Implicit Memory)
Atkinson & Shiffrin Multi-Store Model of Memory
Evidence Supporting the Atkinson & Shiffrin Multi-Store Model of Memory
Criticisms of the Atkinson & Shiffrin Multi-Store Model of Memory

Key Structures of the Brain Involved in Memory and Learning

Neurohormones
Role of Hippocampus in Memory
Role of Amygdala in Memory
Reliability of Memory
Consolidation Theory
Serial Position Effect
Amnesia
Dementia
Alzheimer's Disease
Factors Influencing a Person's Ability & Inability to Remember Information
Manipulating Memory – Reconstructive Nature of Memory

Section 2: Practice VCE Exam Questions

Additional Questions from the VCE Exams (2010 – 2016)

Topic 1: LTP, LTD & Consolidation
Topic 2: The Amygdala & Hippocampus
Topic 3: Measures of Retrieval
Topic 4: Multi-Store Model of Memory (Atkinson & Shiffrin)
Topic 5: The Reconstructive Nature of Memory (Loftus)
Topic 6: Amnesia
Topic 7: Types of Memory
Topic 8: Serial Position Effect

Section 3: Area of Study 2

Learning & Models to Explain Learning

What is Conditioning?
Types of Conditioning

Learning Model 1: Classical Conditioning

The Development of the Classical Conditioning Theory
What Pavlov Found
The Theory of Classical Conditioning
The Elements in Classical Conditioning
The Three Phases of Classical Conditioning
The Five Key Processes in Classical Conditioning
Factors that Affect Classical Conditioning
The Impact of Pavlov's Research

Ethical Considerations in Psychological Research

Roles of the Ethics Committee
Professional Conduct and the Responsibilities of the Researcher

Participants' Rights

Using Non-Humans in Research

Case Study: Junk Food Can Be Addictive, an Australian Study Shows

Watson and the Little Albert Experiment

Can We Teach Fear? Little Albert and Classical Conditioning

Little Albert Experiment and Ethical Breaches

Conditioned Fear Response and the Brain

Neurotransmitters, Neurohormones and Learning

Brain Structures and Learning

Long Term Potentiation and Long-Term Depression

Learning Model 2: Operant Conditioning

B.F. Skinner, Edward Thorndike & Studies of Human & Animal Behaviour

What is Operant Conditioning?

The ABC of Operant Conditioning

The Skinner Box

Acquiring an Operant Response

Consequences

Reinforcers

Schedules of Reinforcement

Continuous Reinforcement

Partial Reinforcement

Effects of Delays Between Reinforcements

Punishment

Unintended Outcomes of Punishment

Conditions Necessary for Punishments to be Effective

Factors that Influence the Effectiveness of Reinforcement & Punishment

Processes in Operant Conditioning

Shaping Desired Behaviours

Similarities and Differences Between Classical and Operant Conditioning

Learning Model 3: Observational Learning

Bandura's Social Learning Theory

Observational Learning

Vicarious Learning

Benefits of Vicarious & Observational Learning

Vicarious Conditioning

The 5 Stages of Observational Learning

Types of Reinforcement that Motivate Behaviour

Factors that Increase the Likelihood that a Behaviour Will Be Imitated

Characteristics of Models Which Increase the Likelihood of Imitation

Summary of the 5 Stages of Observational Learning

Bandura's Bo-Bo Doll Experiment

Consolidation of Learning Theories

Revisiting the Three Models of Learning

Mixed Questions in Learning Theories