# PSYCHOLOGY

## ADVANCED LEVEL

**AIMS**

This syllabus aims to provide candidates with an opportunity to:

1. acquire a basic knowledge of psychological theories and research;
2. consider the applications of this knowledge to daily life; and
3. develop skills of analysis and evaluation of psychological theories and research.

**THE EXAMINATION**

The examination will consist of two three-hour papers which will carry equal marks. Each paper will be divided into six sections and candidates will be required to answer one out of two questions from each section. Questions may require application of psychological principles to daily life. All questions will carry equal marks.

**THE SYLLABUS**

Paper 1

*Section 1 Nature of Psychology*

1.1 Approaches in psychology: biological, behavioural, cognitive, psychoanalytic and humanistic

1.2 Fields of modern psychology: experimental, physiological, developmental, social, personality, clinical, counselling, educational, industrial-organizational psychology

1.3 Research methodology
- (a) Experimental approach, non-experimental approach (correlational studies), case study approach
- (b) Data collection methods: observation, survey (questionnaires and interviews)
- (c) Strengths and weaknesses of different kinds of research methods
- (d) Ethical problems

*Section 2 Learning*

2.1 Associative learning

(a) Classical conditioning: Pavlov's experiments; meaning of conditioned stimulus, unconditioned stimulus, conditioned response and unconditioned response; meaning of acquisition, reinforcement and extinction; discrimination and generalization; measures of strength of conditioning; higher order conditioning

(b) Operant conditioning: Skinner's experiments; meaning of reinforcement, stimulus and response; discrimination, generalization, and extinction; shaping; positive and negative reinforcements, primary and conditioned reinforcements, difference between negative reinforcement and punishment; avoidance and escape learning and punishment; primary and secondary reinforcements; schedules of reinforcement; Premack's principle

(c) Cognitive explanation of conditioning

2.2 Observational learning

2.3 Complex learning: latent learning and insight learning

*Section 3 Remembering and Forgetting*

3.1 Encoding, storage and retrieval of information in memory

3.2 Multiple memory systems
Short-term memory, working memory (Baddeley), long-term memory: declarative (episodic and semantic), procedural

3.3 Factors affecting memory: decay, interference, motivated forgetting, cues, context, organization, elaboration, displacement and mnemonics

3.4 Constructive memory: stereotypes, schemata and inferences

*Section 4 Sensation, Perception and Attention*

4.1 Sensation
The senses: general properties, sensory coding, absolute and difference thresholds

4.2 Visual system: theories of colour vision

4.3 (a) Perception: theories of pattern recognition (word and letter recognition), Gestalt principles of perceptual organization, distance perception, perceptual constancies and illusions

(b) Top-down versus bottom-up approaches to perception, connectionist approach to perception.

4.4 Attention: selective attention, theories of selective attention (Broadbent's filter model, Treisman's attenuation model)

*Section 5 Child and Adolescent Development*

5.1 Basic issues in developmental psychology: nature versus nurture, stage versus continuous processes

5.2 Cognitive and moral development

(a) Piaget's theory of cognitive development

(b) Kohlberg's theory of moral development

5.3 Social and emotional development

(a) Early experiences and their effects: theories of attachment (ethological theory, psychoanalytic theory)

(b) Identity formation in adolescence (Erikson, Marcia)

*Section 6 Personality*

6.1 (a) Definitions of personality

(b) Personality theories: psychoanalytic theory (Freud), learning theories (Skinner, Bandura) and humanistic theories (Rogers, Maslow)

6.2 The Big Five factors (Costa and McCrae)

<u>Paper 2</u>

*Section 1 Scientific Methods of Psychology*

1.1 Experimental methods

Steps in conducting an experiment: hypothesis setting, selection and operationalization of independent and dependent variables, levels of measurement, sampling, choice of design (between-subject, within-subject), methods of control (standardization, randomization, matching, balancing or counterbalancing)

1.2 Statistical analysis

(a) Descriptive statistics: measures of central tendency, dispersion, correlation

(b) Inferential statistics: normal distribution, levels of significance, statistical and psychological significance

*Section 2 Motivation and Emotion*

2.1 Motivation: approaches to motivation (instinctive, drive reduction, incentive, social-cognitive), basic motives [hunger, sex, aggression, achievement motivation (McClelland)]

2.2 Emotion

(a) Physiological responses

(b) Theories of emotion: James-Lange theory, Cannon-Bard theory, Schachter's cognitive-physiological theory

*Section 3 Biological Processes and Consciousness*

3.1 Basic understanding of the nervous system and other biological processes: nervous system, basic structure of the brain, functions of the brain (localization and specialization)

3.2 States of consciousness

(a) Sleeping: stages and functions of sleep, sleep disorders

(b) Dreaming: functions of dreaming (REM deprivation and other relevant studies), psychoanalytic and psychophysiological theories of dreaming (Freudian approach, Evans' cognitive approach, Crick and Mitchison's neurobiological approach)

*Section 4 Individual Differences*

4.1 Assessing individuality

Requirements of a good test: types of reliability (test-retest, split-half, equivalent form, inter-rater), types of validity (construct, content, criterion-related: concurrent and predictive), uniform testing procedures, establishment of group norms

4.2 Intelligence

(a) definitions and measurement of intelligence (IQ): factorial approach, multiple intelligence, information processing approach

(b) factors affecting intelligence (nature versus nurture)

4.3 Personality assessment: interviews, inventories (MMPI, CPI), projective techniques (inkblot, TAT)

*Section 5 Social Influences*

5.1 Social influences on behaviour
- (a) Conformity: Asch's experiments, factors affecting degree of conformity
- (b) Compliance: ingratiation, foot-in-the-door effect, door-in-the-face effect
- (c) Obedience: Milgram's experiments
- (d) Helping behaviour: victim characteristics, helper characteristics and situational factors

5.2 Group dynamics
- (a) Social facilitation and inhibition
- (b) Decision making: risky shift and group polarization

5.3 Prejudice and discrimination
- (a) Origins and maintenance of prejudice and discrimination
- (b) Ways to reduce prejudice and discrimination

*Section 6 Stress and Psychopathology*

6.1 Stress and coping
Physiological and psychological effects of stress, factors affecting severity of stress, coping strategies (problem versus emotion focused)

6.2 Causes and treatment of major disorders
- (a) Abnormal behaviour (criteria of normality and abnormality)
- (b) Anxiety disorders (panic disorders and phobias), mood disorder (depression), schizophrenic disorders
- (c) Treatment: Psychoanalysis, behaviour therapy, person-centred therapy, chemotherapy, electroconvulsive therapy, ethical issues in treatment

## APPENDIX

Practical Work

The task of carrying out practical experiments and observations can be considerably facilitated by the use of an independent laboratory manual. Several of these are available together with the minimum equipment needed to carry out experiments.

Much of the experimental equipment which is useful for teaching psychology can already be found in the school laboratories. Usually the laboratory assistants will be able to assist in making and improvising equipment for specific experiments from existing equipment. Simple equipment can also be constructed to the teacher's own design by local workshops. The schools will normally be in a position to provide basic facilities for the production of tests and questionnaires.

The following equipment would be highly desirable: personal computer, slide projector, tape recorder, stop-watch, reaction timer, simple tachistoscope, colour-mixing wheel.

A 16-mm film projector and/or video tape recorder would be very valuable and films of both specific and general psychological interest are available from film libraries in Hong Kong.