

University of Pune
Paper I: General Psychology
Syllabus for F. Y. B.Sc.
(To be implemented from 2008-09)

Objectives:

1. To provide solid foundation for the basic principles of psychology
2. To familiarize students with the historical trends in psychology, major concepts, theoretical perspectives, and empirical findings.
3. To provide an overview of the applications of psychology.

Term I

Topic 1: The Science of Psychology **(Total 11 periods)**

- 1.1 What is Psychology? – Definition, goals, types of psychological professionals
- 1.2 Historical Perspectives in Psychology
 - a. Structuralism
 - b. Functionalism
 - c. Gestalt
 - d. Psychoanalysis
- 1.3 Modern Perspectives in Psychology
 - a. Behavioural
 - b. Humanistic
 - c. Biopsychosocial
 - d. Cognitive
- 1.4 Scientific Methods
 - a. Steps in scientific methods
 - b. Descriptive methods: Naturalistic, observation, case studies, surveys, correlations
 - c. Experimental method: Laboratory experiment and field experiment
- 1.5 Application: How to enhance your academic performance?

Topic 2: Biological Foundation of Behaviour **(Total 11 periods)**

- 2.1 Neuron: Structure and function, synapse, neurotransmitters
- 2.2 Central Nervous System
 - [A] Brain
 - a. Structure and function of the brain
 - b. Cerebral hemispheres
 - [B] Spinal Cord: Structure and function
- 2.3 Peripheral Nervous System: Structure and function
 - a. Autonomous Nervous System
 - b. Somatic Nervous System
- 2.4 Glandular System: Pituitary, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads.
- 2.5 Application: Peeking inside the brain – Clinical studies; EEG, CT, MRI, and PET Scan

- Topic 3: Sensation and Perception** (Total 10 periods)
- 3.1 Sensation: Definition, sensory receptors, sensory threshold, subliminal perception, habituation & sensory adaptation
 - 3.2 Definition of perception and perceptual constancies (size, shape and brightness)
 - 3.3 Gestalt principles of perception
 - 3.4 Perceptual illusion: Geometrical, movement
 - 3.5 Application: Thinking about extra-sensory perception

- Topic 4: Motivation and Emotion** (Total 10 periods)
- 4.1 Definition of motivation, concept of homeostasis, Maslow's hierarchy of needs
 - 4.2 Types of motives
 - a. Physiological- Hunger, thirst, sleep and sex
 - b. Social- Achievement, affiliation, power, and aggression & hostility
 - 4.3 Frustration and conflict
 - 4.4 Emotion
 - 4.4.1 Definition
 - 4.4.2 Elements of emotion
 - a. Physiology of emotion
 - b. Behavioural expression of emotion
 - c. Subjective experience
 - 4.5 Application: Being happy

Term - II

- Topic 5: Personality** (Total 11 periods)
- 5.1 Personality: Definitions
 - 5.2 Theories of personality
 - a. Freud's Psychoanalytic Theory
 - b. Allport's Theory
 - c. Cattell's Theory
 - d. The Big Five Model
 - 5.3 Assessment of personality (I)
Personality inventories
 - a. 16 PF
 - b. MMPI
 - c. NEO-PI
 - 5.4 Assessment of personality (II)
 - 5.4.1 Behavioural assessment
 - a. Observation
 - b. Rating
 - 5.4.2 Projective techniques
 - a. TAT
 - b. Rorschach's Ink Blot Test
 - c. Sentence Completion Test
 - 5.5 Application: Increasing self efficacy through goal setting

- Topic 6: Learning** (Total 11 periods)
- 6.1 Learning: Definition
 - 6.2 Classical conditioning- Pavlov's experiment, extinction, spontaneous recovery,

- generalization, discrimination, higher-order conditioning.
- 6.3 Operant conditioning- Thorndike's Laws of learning, Skinner's experiment, positive reinforcer, negative reinforcer, schedules of reinforcement, shaping
 - 6.4 Cognitive learning theories (Tolman, Kohler); Observational learning theory (Bandura).
 - 6.5 Applications of classical and operant conditioning

Topic 7: Memory (Total 10 periods)

- 7.1 Memory: Definition and process
- 7.2 Types of memory
 - a. Sensory memory
 - b. Short term memory
 - c. Long term memory
- 7.3 Types of long term memory- Procedural, Declarative (episodic, semantic), Explicit and implicit
- 7.4 Forgetting: Course of forgetting (Ebbinghaus' forgetting curve); and causes of forgetting (encoding failure, decay of memory traces, interference, motivated forgetting).
- 7.5 Application: Improving memory - Keyword technique, method of loci, encoding specificity, organization of test material, organization of lecture notes, practice and rehearsal.

Topic 8: Intelligence (Total 10 periods)

- 8.1 Intelligence: Definition
- 8.2 Measurement of intelligence
 - 8.2.1 Concepts in measurement of intelligence (C.A., M.A., IQ)
 - 8.2.2 Tests of intelligence – Binet, Stanford Binet, Wechsler
- 8.3 Individual differences in intelligence
 - 8.3.1 Mental retardation: Meaning, causes and classification
 - 8.3.2 Giftedness
- 8.4 Theories of intelligence – Spearman, Gardner, Sternberg
- 8.5 Application: Early childhood intervention- a means for boosting intelligence

Books for reading:

1. Feldman, R. S. (8th ed.) (2008). *Understanding psychology*. TMH.
2. Ciccarelli, S. & Meyer, G. E. (2006). *Psychology*. New Delhi: Pearson Education.
3. Passer, M. W. & Smith, R. E. (2007). *Psychology: The science of mind and behaviour*. New Delhi: Tata McGraw-Hill.
4. Coon, D. & Mitterer, J. O. (2007). *Introduction to psychology: Gateways to mind and behavior*. Singapore: Thomson Wadsworth.
5. Lahey, B.B. (2003). *Psychology: An introduction*. New Delhi: Tata McGraw-Hill.
6. Smith, E.E. and others (2003). *Atkinson Hilgard's introduction to psychology*. Thomson & Wadsworth.
7. Smith, D.B. (1908). *Psychology: Science and understanding*. Boston: McGraw-Hill.
8. Zimbardo, P. G. and Weber, A. L. (1997). *Psychology*. N.Y.: Longman.
9. Baron, R. A. (2001). *Psychology*. New Delhi: Pearson Education Pvt. Ltd.
10. Morgan & others *Introduction to Psychology*

11. Atkinson, and Hilgard (2003). *Introduction to psychology*. Thomson Wadsworth.

**Syllabus for F.Y.B.Sc.
Psychology
Paper II: Experimental Psychology & Psychological Testing**

Objectives-

- 1) To acquaint the students with the basic concepts of Experimental Psychology.
- 2) To help the students understand the different methods of Psychophysics, Reaction time, Memory and forgetting.
- 3) To make the students familiar with Psychological measurement, knowledge about tests, and types of tests.

Term - I

Topic 1: Nature and Scope of Experimental Psychology (Total 11 periods)

- 1.1- Concept of experimentation, the experimental method.
- 1.2- Psychological experiment: Experimental and Control group.
- 1.3- Concept of Variable: Independent and Dependent, Relevant and Irrelevant, Qualitative and Quantitative, Continuous and Discrete.
- 1.4- Control techniques in experimentation – Randomization, Matching and Counterbalancing .

Topic 2: Psychophysical Methods (Total 11 periods)

- 2.1- Basic concepts of Psychophysics.
- 2.2- Basic problems in Psychophysics and errors in Psychological methods.
- 2.3- Weber's law and Fechner's law.
- 2.4- Methods of Psychophysics: Method of limits, Method of constant stimuli, Method of average error.
- 2.5- Applications of Psychophysics.

Topic 3: Reaction Time: (Total 10 periods)

- 3.1- Introduction and definition of reaction time.
- 3.2- Types of reaction time.
- 3.3- Determinants of reaction time: The characteristics of the stimulus , Set and attitudes of the reactor, Individual differences among subjects.
- 3.4- Applications of reaction time.

Topic 4: Problem Solving**(Total 10 periods)**

4.1- Learning to solve problems: What is problem? How do we solve problems? Trial and error in problem-solving

4.2- Insight behaviour in problem solving, stages in problem solving

4.3- Maladjustment and problem solving

4.4- Creative problem solving

Term - II**Topic 5: Nature and Uses of Psychological Tests****(Total 10 periods)**

5.1- What is Psychological Test? Controlling the use of Psychological tests.

5.2- Characteristics of Psychological tests.

5.3- Types and uses of Psychological tests.

5.4- Social and ethical implications of testing.

Topic 6: Reliability and Validity of Psychological Tests**(Total 10 periods)**

6.1- Definition and types of Reliability.

6.2- Factors affecting reliability coefficient.

6.3- Meaning and types of Validity.

6.4- Uses and limitations of criterion related validation.

Topic 7: Measurements of Intelligence and Aptitudes**(Total 11 periods)**

7.1- Nature of Intelligence. What is measured by intelligence test?

7.2- Intelligence tests

a) Individual tests - Stanford-Binet Scale, Wechsler's Intelligence Scale for Children (WISC)

b) Group tests – SPM, Cattell's Culture Fair Test

7.3- Concept of Aptitude, basic assumptions about aptitudes.

7.4- Aptitude tests – DAT, GATB

7.5- Applications of intelligence and aptitude tests.

Topic 8: Measurement of Personality and Interest**(Total 11 periods)**

8.1- Nature and definition of personality and interest

8.2- Personality tests:

a) Self report inventories – HSPQ, 16 PF

b) Projective tests – TAT, sentence completion test

8.3- Interest tests - The Strong Cambell Interest Inventories, Kuder Preference Record.

8.4- Applications of personality and interest tests.

Books for Reading-

- 1) Anne Anastasi and Susana Urbina (2005) “ Psychological Testing” (7th Edn)
Prentice-Hall , New Delhi.
- 2) Dandekar W.N. and Rajguru (2001) “An introduction to Psychological Testing and
Statistics” Seth Publications Pvt. Ltd.
- 3) Dandekar W.N. (1994) “Fundamentals of Experimental Psychology” Anmol
Prakashan, Pune.
- 4) D’Amato (2004) “Experimental Psychology: Methodology, Psychophysics and
Learning ”
- 5) Kaplan, R.M. & Saccuzzo, D.P. (2007). Psychological Testing: Principles,
Applications, and Issues. Australia : Thomson Wadsworth.
- 6) Rajamanickam, M. (2005). Experimental Psychology: with Advanced
Experiments, Volume 1 & 2. New Delhi: Concept Publishing Company.
- 7) Myers A and Hansen (2002) “Experimental Psychology ” Wadsworth
- 8) Postman L and Eagan J.P. (1949) “Experimental Psychology – An Introduction”
Kalyani Pub.
- 9) Sharma Ramnath & Sharma (2000) “Experimental Psychology” Atlantic Publication.
- 10) Snodgrass J. G., Levy-Berger, Hyden (1985) “Human Experimental Psychology”
Oxford University Press – New York

Syllabus for F.Y.B.Sc. Psychology**PAPER III : EXPERIMENTAL PSYCHOLOGY AND
PSYCHOLOGICAL TESTING: PRACTICAL****Objectives:**

1. To acquaint the students with Experiments & Tests Psychology.
2. To give practical experience to the students for experiments and administering the
tests.
3. To make the familiar the students with the use of Elementary Statistics.

Term I - Experiments

(Any six practicals should be performed in the first term)

1. Method of limits – RL / DL
2. Method of constant stimuli – RL / DL
3. Method of average error
4. Measurement of illusion
5. Measurement of RT

6. Recall and Recognition
7. Retroactive inhibition
8. Manual dexterity or finger dexterity
9. STM
10. KOR

Term II – Psychological Testing

1) General Ability / Special Ability Testing-

Any two standardized tests

2) Interest Inventories-

Any two standardized tests

3) Personality and Adjustment testing-

- Any one standardized personality test and
- Any one standardized adjustment test

STATISTICS-

First Term – Measurement of central tendency – Mean, Median, Mode

Second Term – Standard Deviation, Rank Order Correlation Coefficient

Note –

1. Practical Examination will be conducted by respective Colleges at the end of the Academic Year.
2. Distribution of marks – 80 marks for assigned to practical
20 marks for internal examination.
(10 marks journal 10 marks for oral)
3. Simple Statistical problems are set for annual practical examination

Reference Books:-

- 1) Anastasi, A. and Susana Urbina (2005) “ Psychological Testing” (7th Edn) Prentice-Hall, New Delhi.
- 2) Choube S. P. (1985) “Some Psychological Experiments” L.N.A.Education Publication,Agra.
- 3) D’Amato (2004) “Experimental Psychology: Methodology, Psychophysics and Learning ”
- 4) Das, G. “Experimental Psychology” King Books New Delhi.

- 5) Garrett H E (1979) “Statistic in Psychology & Education”
- 6) Jalota (1985) “Experiments in Psychology”
- 7) Kothurkar and Vanarase (1985) “Experiments in Psychology a systematic introduction”
- 8) Mohanty, G. 1997 “Experiments in Psychology” Kalyani Publication New Delhi
- 9) Mohsin, S. M. “Experiments in Psychology”
- 10) Parmeshwaran, E. G. (1998) “Manual of Experimental Psychology” Lavani Publication House New Delhi.
- 11) Postman, L. and Eagan, J.P. (1960) “Experimental Psychology – An Introduction” Kalyani Pub.
- 12) Snodgrass, J. G., Levy-Berger, Hyden (1985) “Human Experimental Psychology” Oxford University Press – New York
