

**UNIVERSITY OF PUNE, PUNE 7  
PSYCHOLOGY**

**SYLLABUS FOR M.A. PART I & II  
(Semester Credit-point system to be implemented from 2009-10 at  
University Department)**

\*The present programme will consist of four semesters, each semester carrying 16 credits.

*Syllabus for M.A. Part I*  
**Semester I**

<b>Paper No.</b>	<b>Credit points</b>	<b>Paper title</b>
EP 101	PSY 01 to PSY 04	Cognitive Processes
EP 102	PSY 05 to PSY 08	Psychological Testing: Theory
EP 103	PSY 09 to PSY 12	Statistical Methods
EP 104	PSY 13 to PSY 16	Psychology Practical: Tests

**Semester II**

<b>Paper No.</b>	<b>Credit points</b>	<b>Paper title</b>
EP 201	PSY 17 to PSY 20	Learning and Memory
EP 202	PSY 21 to PSY 24	Psychological Testing: Applications
EP 203	PSY 25 to PSY 28	Research Methodology
EP 204	PSY 29 to PSY 32	Psychology Practical: Experiments

## SEMESTER I

### EP 101: COGNITIVE PROCESSES

(Credits 4: PSY 01 to PSY 04)

#### OBJECTIVES:

1. To acquaint the students with the processes involved in sensation and perception
  2. To develop insight into one's own and others' behaviour and underlying mental processes,
  3. To enrich students' understanding of major concepts, theoretical perspectives, and empirical findings in cognitive psychology
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#### PSY 01: NATURE AND IMPORTANCE OF COGNITIVE PSYCHOLOGY [09]

1. Cognitive Psychology: Definition and domains
2. History and methods of cognitive psychology
3. Theories of cognitive development – Piaget, Vygotsky
4. Current paradigms of cognitive psychology – Information processing approach, ecological approach
5. Application: Cognitive style and cognitive map

#### PSY 02: SENSATION, ATTENTION AND PERCEPTION [11]

1. Sensation - Introduction to psychophysics: Basic concepts and methods.
2. Attention: (a) Functions of attention: Divided attention, selective attention (b) Theories of attention process (c) Signal Detection Theory and vigilance.
3. Perception-approaches: Gestalt, Bottom-Up (feature analysis, template matching, prototypes), Top-Down and Pandemonium
4. Perception: Cross-cultural studies
5. Application: Subliminal perception, perceptual defence, and extra-sensory perception.

#### PSY 03: LANGUAGE AND RELATED COGNITIVE PHENOMENA [11]

1. Understanding spoken language: Speech perception, constituent structure, transformational grammar and factors affecting comprehension
2. Reading: Perceptual process; theories of word recognition, reading and comprehension
3. Speaking: Selecting the content of speech, speech errors, gestures, social context of speech
4. Writing: Comparing speaking and writing, cognitive tasks involved in writing
5. Application: Development in reading ability, Multilingualism.

#### **PSY 04: PROBLEM SOLVING, CREATIVITY AND DECISION MAKING [09]**

1. Problem: Definition, problem solving cycle, types, obstacles and aids
2. Problem solving approaches – Algorithm; heuristics: means-end analysis computer simulation, and analogy
3. Definition of creativity, measurement creativity
4. Reasoning and decision making: Types of reasoning – Syllogistic and Conditional; factors influencing decision making.
5. Application: Artificial intelligence

#### **Books for Reading-**

1. Matlin, M. (1994). *Cognition*. Bangalore: Harcourt Brace Pub.
  2. Galloti, K. M. (2004). *Cognitive psychology in and out of the laboratory*. USA: Thomson Wadsworth.
  3. Sternberg, R.J. (2007). *Cognitive Psychology*. Australia: Thomson Wadsworth.
  4. Kellogg, R.T.(2007). *Fundamentals of Cognitive Psychology*. N.D. Sage Publications.
  5. Solso, R. L. (2004). *Cognitive Psychology (6<sup>th</sup> ed)*. Delhi: Pearson Education.
  6. Wade, C. and Tavris, C. (2007). *Psychology*. ND: Pearson Education.
  7. Jahnke, J. C. & Nowaczyk, R. H. (1998). *Cognition*. Upper Saddle NJ: Prentice Hall.
  8. Burne, L.E., Dominowski, R.L. & Loftus, E.E. (1979). *Cognitive processes*. NJ: Prentice-Hall.
  9. Gavin, H. (1998). *The essence of cognitive psychology*. London: Prentice-Hall.
  10. Corens, S., Ward, L.M., & Enns, J. (1994). *Sensation and perception*. NY: Harcourt Brace & Co.
  11. Messer, D. & Miller, S. (1999). *Exploring developmental psychology*. London: Arnold.
  12. Flavell, J.H. (1985). *Cognitive development (2<sup>nd</sup> ed)* NJ: Prentice Hall.
  13. Reed, S.K. (1988). *Cognition: Theory and applications (3<sup>rd</sup> ed)*. California: Brooks/Cole Pub. Co.
  14. Best, J. B. (1999). *Cognitive Psychology*. USA: Wadsworth Publishing Co.
  15. Guenther R. K. (1998). *Human Cognition*. New Jersey: Prentice-Hall.
  16. Kaplan, S. & Kaplan, R. (1982). *Cognition and environment*. N.Y.: Praeger Publishers.
  17. Reed S. K. (1998). *Cognition: Theory and application (3<sup>rd</sup> ed)*. California: Brooks/Cole Pub. Company
  18. Cohen G. (1983). *Psychology of cognition (2<sup>nd</sup> ed)*. London: Academic Press
  19. Desai, B. and Abhyankar, S. C. (2007). *Prayogik Manasashastra ani Sanshodhan Paddhati*. Pune: Narendra Prakashan.
  20. Borude, R.R. (2005). *Bodhanik manasashastra*. Chhaya Prakashan.
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## SEMESTER I

### EP 102: PSYCHOLOGICAL TESTING: THEORY

(Credits 4: PSY 05 to 08)

#### OBJECTIVES:

1. To acquaint them with the characteristics of standardised tests.
  2. To familiarize the students with psychometric theory and principles of test construction.
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#### **PSY 05: NATURE AND SCOPE OF PSYCHOLOGICAL TESTING [10]**

1. Definition and characteristics of psychological tests
2. Classification and uses of psychological tests
3. General steps in test construction
4. Item analysis
5. [A] Issues in test administration: Ethics, bias, cultural fairness  
[B] Factors influencing test performance- Examiner, situational variables and test-taker's perspective

#### **PSY 06: NORMS AND THE MEANING OF TEST SCORES [10]**

1. Basic statistical concepts in psychological testing
2. Developmental norms
3. Within-group norms- Percentiles, standard scores, the Deviation IQ
4. Relativity of norms
5. Computers and the interpretation of test scores

#### **PSY 07: RELIABILITY [10]**

1. Correlation coefficient: Meaning, statistical significance, reliability coefficient
2. Definition and types of reliability
3. Reliability of speeded tests
4. Dependence of reliability on the sample tested
5. Using reliability information

#### **PSY 08: VALIDITY [10]**

1. Validity: Definition and evolving concepts
2. Content-description validation procedures
3. Criterion-prediction procedures
4. Construct-identification procedures
5. Test validity and decision theory

### **Books for Reading-**

1. Anastasi, A. & Urbina, S. (1997). *Psychological testing*. N.D.: Pearson Education.
2. Kaplan, R.M. & Saccuzzo, D.P. (2007). *Psychological Testing: Principles, Applications, and Issues*. Australia: Thomson Wadsworth.
3. Gregory, R.J. (2005). *Psychological testing: History, principles and applications*. New Delhi: Pearson Education.
4. Singh, A.K. (2006). *Tests, Measurements and Research Methods in Behavioural Sciences*. Patna: Bharati Bhavan.
5. Anastasi, A. (1988). *Psychological testing*. NY: Macmillan.
6. Nunnally, J.C. (1981). *Psychometric theory*. NY: Tata McGraw-Hill
7. Ghiselli, E.E. and Campbell, J.P., Zedek, S. (1981). *Measurement theory for the behavioral sciences*. W.H. Freeman.
8. Freeman, F.S. 3<sup>rd</sup> ed. (1965). *Psychological testing*. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
9. Cronbach, L. J. 5<sup>th</sup> ed. (1990). *Essentials of psychological testing*. New York: Harper Collins Publishers:
10. Anastasi A. (1988). *Psychological Testing*. New York: McMillan
11. Murphy, K. R., Davidshofer, R. K. (1988): *Psychological testing: Principles and applications*. New Jersey: Prentice Hall Inc.
12. Aiken L.R. (1996) *Rating Scales and Checklists: Evaluating Behavior, Personality and Attitudes*.
13. Ghiselli, E. E., Campbell, J. P. & Zedek, S. (1981). *Measurement theory for the behavioural sciences*. W.H. Freeman.
14. Chadha, N. K. (1996). *Theory and practice of psychometry*. N. D.: New Age International Ltd.
15. Kline, P. (1983). *Personality measurement and theory*. Hutchinson.

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## SEMESTER I

### EP 103: STATISTICAL METHODS

(Credits 4: PSY 09 to PSY 12)

#### OBJECTIVES:

1. To acquaint the students and make them understand the different statistical methods with their uses and interpretations,
2. To develop computational skills in students,
3. To enable them to analyze the data of practical and project work.

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#### PSY 09: OVERVIEW OF DESCRIPTIVE STATISTICS AND PROBABILITY [10]

1. Overview of measures of Central tendency, variability, curves and graphs
2. Percentiles, percentile ranks and standard scores
3. Probability: Concept, definition, and principles
4. Characteristics of normal distribution curve
5. Applications of normal distribution curve.

#### PSY 10: CORRELATION AND REGRESSION [10]

1. Concept and meaning of correlation
2. Pearson's Product-Moment Correlation
3. Point – Biserial Correlation and Phi-coefficient
4. Bi-serial and tetra choric correlation
5. Partial and Multiple Correlation
6. Simple Linear Regression: Concept and uses

#### PSY 11: INFERENCE STATISTICS [10]

1. Inferences: Standard error of mean and other statistics
2. Significance of difference for means, variances and correlation coefficients.
3. Assumptions of Analysis of Variance, and One-way ANOVA-Independent, concept of repeated measures
4. Two-way ANOVA - Independent, concept of repeated measures
5. Analysis of Covariance: Concept.

#### PSY 12: NON-PARAMETRIC STATISTICS [10]

1. Difference between Parametric and Non-parametric statistics
2. Chi Square tests
3. Non-parametric tests for correlated data- Rank Difference Correlation, Sign Test, Wilcoxon Signed Rank test
4. Non-parametric tests for uncorrelated data - Mann-Whitney U-test and Kruskal-Wallis Test
5. Statistical software: An introduction – SPSS, Excel

**NOTE-**

- 1) Students can use non-scientific calculator during examination.
- 2) Calculation exercises in the question paper shall be restricted to the following:
  - a. Percentile, Percentile Ranks and Standard Scores
  - b. Application of Normal Probability Curve
  - c. Product Moment Correlation
  - d. Scatter-Diagram
  - e. t-test
  - f. One-way and Two-way ANOVA
  - g. Chi-square Tests

**Books for Reading-**

1. Minium E.W., King B. M., Bear G. (1995). *Statistical Reasoning in Psychology and Education*
2. Guilford J. P. and Fruchter B. (1985). *Fundamental Statistics in Psychology and Education* (6<sup>th</sup> ed) McGraw - Hill
3. Howell D.C. (1997). *Statistical Methods for Psychology* (4<sup>th</sup> Ed)
4. Sarma K.V.S. (2001) *Statistic Made Simple : Do it Yourself on PC*
5. Welkowitz, J., Emen, R. B. and Cohen, J. (1982). *Introductory statistics for the behavioural sciences* (3<sup>rd</sup> ed.). N.Y.: Academic Press.
6. Fergusson, G. A. (1976). *Statistical analysis in psychology and education*. McGraw-Hill.
7. Glass, G. V. & Stanley, J. C. (1970). *Statistical methods in education and psychology*. Prentice-Hall.
8. Kurtz, A.K. & Mayo, S.T. (1979). *Statistical methods in education and psychology*. Narosa.
9. Lomax, R. G. (1998). *Statistical concepts: A second course for education and behavioural sciences*. N.J.: Lawrence Erlbaum Asso. Inc.
10. Mangal, S. K. (2006). *Statistics in psychology and education*. N.D.: Prentice-Hall
11. Levin, J. & Fox, J. A. (2006). *Elementary statistics in social research*. Delhi: Pearson Education.
12. Black, T.R. (1999). *Doing quantitative research in the social sciences: An integrated approach to research design, measurement and statistics*. London: Sage Pub.
13. Foster, J.J. (2001). *Data analysis: Using SPSS for windows*. London: Sage Pub.

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## SEMESTER I

### EP 104: PSYCHOLOGY PRACTICAL - TESTS

(Credits 4: PSY 13 to PSY 16)

#### OBJECTIVES:

To acquaint the students with:

1. The administration of psychological tests, interpretation of scores and report-writing,
  2. The evaluation procedures and evaluation of psychological tests,
  3. Certain skills of psychological counselling on the basis of psychological test results.
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*\* Note: Only standardized tests should be used.*

#### PSY 13: GENERAL ABILITY TESTS (any two):

1. Intelligence tests: Verbal Test
2. Intelligence tests: Performance Test
3. Creativity
4. Thinking
5. Judgment and Reasoning

#### PSY 14: SPECIAL ABILITY TESTS (any two):

1. Multiple Aptitude Test (any one)
2. Special Aptitude Test (any one)

#### PSY 15: PERSONALITY TESTS (any three):

1. Self-report inventory
2. Projective test: Verbal
3. Projective test: Pictorial
4. Interest inventory
5. Adjustment inventory
6. Attitude / Values

#### PSY 16: OTHER TESTS (any three):

1. Stress / Frustration
2. Environmental Assessment
3. Development Assessment
4. Achievement Test
5. Cognitive Style
6. Self Concept
7. Neuropsychological Assessment
8. Social Skill / Behavioural Skill

#### Note:

Departmental committee will decide the evaluation system of the students.



### **Books for Reading-**

1. Anastasi, A. & Urbina, S. (1997). *Psychological testing*. N.D.: Pearson Education.
  2. Kaplan, R.M. & Saccuzzo, D.P. (2007). *Psychological Testing: Principles, Applications, and Issues*. Australia: Thomson Wadsworth.
  3. Gregory, R.J. (2005). *Psychological testing: History, principles and applications*. New Delhi: Pearson Education.
  4. Singh, A.K. (2006). *Tests, Measurements and Research Methods in Behavioural Sciences*. Patna: Bharati Bhavan.
  5. Freeman, F.S. 3<sup>rd</sup> ed. (1965). *Psychological testing*. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
  6. Cronbach L. J. (1984). *Essentials of Psychological Testing* (4<sup>th</sup> Ed)
  7. Anastasi A. (1988). *Psychological Testing*. New York: McMillan
  8. Murphy, K. R., Davidshofer, R. K. (1988): *Psychological testing: Principles and applications*. New Jersey: Prentice Hall Inc.
  9. Nunnally, J.C. and Bernstein, I.H. (1994). *Psychometric theory* (3<sup>rd</sup> ed). NY: McGraw-Hill.
  10. Aiken L.R. (1996) *Rating Scales and Checklists: Evaluating Behavior, Personality and Attitudes*.
  11. Ghiselli, E. E., Campbell, J. P. & Zedek, S. (1981). *Measurement theory for the behavioural sciences*. W.H. Freeman.
  12. Chadha, N. K. (1996). *Theory and practice of psychometry*. N. D.: New Age International Ltd.
  13. Stanley, J.C. and Hopkins, K.D. (1978). *Educational and psychological measurement and evaluation*. ND: Prentice-Hall of India.
  14. Guilford, J.P. (1975). *Psychometric methods*. ND: Tata McGraw-Hill.
  15. Test manuals of respective tests.
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**SEMESTER II**  
**EP 201: LEARNING AND MEMORY**  
**(Credits 4: PSY 17 to PSY 20)**

**OBJECTIVES:**

To acquaint the students with:

1. Various types, models and theories of learning and memory,
  2. Neurological basis of learning and memory,
  3. Applications of the principles of learning and memory
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**PSY 17: LEARNING: THEORIES AND APPLICATIONS [10]**

1. Classical Conditioning: Concepts, types and applications
2. Operant Conditioning: Reinforcement, types, schedules of reinforcement, shaping and applications
3. Cognitive approaches to learning: Latent learning, observational learning, and applications
4. Cultural influences on learning
5. Application: Prevention of AIDS and HIV, and awareness of media and violence.

**PSY 18: TYPES OF MEMORY [10]**

1. Sensory memory- Iconic and echoic
2. Short Term Memory
3. Long Term Memory: Types
4. Determinants of memory
5. Applications: Memory improvement techniques

**PSY 19: MODELS AND THEORIES OF MEMORY [10]**

1. Unitary and dual process view: Waugh and Norman
2. Multi-process view: Atkinson and Shiffrin; Craik and Lockhart
3. Connectionist model: Rumelhart and McClelland
4. Theories of forgetting: Psychoanalytical, Trace, Trace Decay, Interference, and recent trends.
5. Application: Distortion of memory

**PSY 20: NEUROLOGICAL BASIS OF LEARNING AND MEMORY [10]**

1. Brain areas associated with learning and memory
2. Types of Amnesia- Amnesia after concussion (Anterograde, Retrograde), Korsakoff, Alzheimer's disease
3. Studies on role of brain in learning and conditioning
4. Synaptic mechanisms and synaptic plasticity of learning and memory
5. Application: Neuro-linguistic programming.

## BOOKS FOR READING-

1. Matlin, M. (1994). *Cognition*. Bangalore: Harcourt Brace Pub.
2. Sternberg, R. J. (2007). *Cognitive Psychology*. Australia: Thomson Wadsworth.
3. Galloti, K. M. (2004). *Cognitive psychology in and out of the laboratory*. USA: Thomson Wadsworth.
4. Kellogg, R. T. (2007). *Fundamentals of Cognitive Psychology*. N.D. Sage Publications.
5. Solso, R. L. (2004). *Cognitive Psychology (6<sup>th</sup> ed.)*. Delhi: Pearson Education.
6. Carlson, N. R. (2007). *Foundations of physiological psychology*. N.D.: Pearson Edu.
7. Pinel, J.P.J. (2007). *Biopsychology*. N.D.: Pearson Edu.
8. Horn, G. (1985). *Memory imprinting and the brain*. Oxford: Clarendon Press.
9. Kothurkar, V. K. (1985). *About learning and memory*. ND: Wiley Eastern.
10. Wade, C. and Tavris, C. (2007). *Psychology*. Pearson Education.
11. Best, J. B. (1999). *Cognitive Psychology*. USA: Wadsworth Publishing Co.
12. Kaplan, S. & Kaplan, R. (1982). *Cognition and environment*. N.Y.: Praeger Publishers.
13. Flavell, J.H. (1985). *Cognitive development*. 2<sup>nd</sup> ed. N.J.: Prentice-Hall.
14. Guenther R. K. (1998). *Human Cognition*. New Jersey: Prentice-Hall.
15. Reed S. K. (1998). *Cognition: Theory and application (3<sup>rd</sup> ed)*. California: Brooks/Cole Pub. Company
16. Cohen G. (1983). *Psychology of cognition (2<sup>nd</sup> ed.)*. London: Academic Press.
17. Rosenzweig, M.R., Leiman, A.L. & Breedlove, S.M. (1996). *Biological psychology*. Massachusetts: Sinauer Associates Publishers.
18. Emilien, G., Durlach, C., Antoniadis, E., Linden, M. Vd. & Maloteaux, J.M. (2004). *Memory*. NY: Psychology Press.
19. Jahnke, J.C. & Nowaczyk, R.H. (1998). *Cognition*. Upper Saddle NJ: Prentice Hall.
20. Malim, T. (1994). *Cognitive processes*. London: MacMillan.
21. Horton, D. L. and Turnage, T. W. (1976). *Human learning*. ND: Prentice-Hall
22. Desai, B. and Abhyankar, S. C. (2007). *Prayogik manasashastra and sanshodhan paddhati*. Pune: Narendra Prakashan.
23. Borude, R.R. *Bodhanik manasashastra*. Chhaya Prakashan.

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**SEMESTER II**  
**EP 202: PSYCHOLOGICAL TESTING: APPLICATIONS**  
(Credits 4: PSY 21 to PSY 24)

**OBJECTIVES:**

To acquaint the students with:

1. Various psychological assessment techniques
2. Application of psychological tests in different fields.

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**Notes: -**

- *While teaching these tests in the context of the specified area, teachers are supposed to acquaint the students with their applications in other areas, too.*
- *Teachers are supposed to familiarize the students with Indian adaptation of tests.*

**PSY 21: TESTING IN EDUCATIONAL SETTING [09]**

1. General mental ability tests: Group tests – SPM, Cattell’s Culture-fair Test of Intelligence
2. General mental ability tests: Individual tests- Binet - Kamath test, WISC, WAIS, Malin’s Intelligence Scale for Indian Children (MISIC)
3. Differential Aptitude Test (DAT)
4. Personality and interest inventories- CPQ, CAT, HSPQ, SVIB
5. School and college entrance tests- SAT, GRE

**PSY 22: TESTING IN CLINICAL SETTING [11]**

1. Testing based on the logical-content strategy- Woodworth Personal Data Sheet, Mooney Problem Checklist
2. Tests based on the Criterion-Group Strategy- MMPI, California Psychological Inventory
3. Tests based on the Factor-Analytic Strategy- 16 PF, NEO-PI R, EPQ-R
4. Tests based on the Theoretical Strategy- EPPS, self concept inventories, Jackson Personality Inventory
5. Projective and neuropsychological testing

**PSY 23: TESTING IN INDUSTRIAL AND BUSINESS SETTING [11]**

1. The selection of employees- Concepts of base rates and hit rates; Taylor Russell tables; Utility theory and decision analysis; incremental validity.
2. Personality tests used for personnel selection- MBTI
3. Dexterity tests - O’Conner Finger Dexterity Test, Bennett Hand-Tool Dexterity Test, Minnesota Manual Dexterity Test, Mechanical Reasoning Test
4. Situational testing (games, role play) and in-basket exercises
5. Measuring interpersonal relationship – FIRO-B and leadership assessment.

**PSY 24: TESTING IN COUNSELING SETTING**

[09]

1. General ability testing: Individual tests, and group tests (SPM, NVTI, Passi Creativity Tests)
2. Multiple aptitude tests - DAT, GATB
3. Strong Vocational Interest Blank (SVIB)
4. Anxiety and adjustment test- STAI, STAXI, Bell's Adjustment Inventory, Moos' Family Environment Scale (FES)
5. Sack's Sentence Completion Test

**BOOKS FOR READING-**

1. Kaplan, R.M. & Saccuzzo, D.P. (2007). *Psychological Testing: Principles, Applications, and Issues*. Australia: Thomson Wadsworth.
2. Anastasi, A. & Urbina, S. (1997). *Psychological testing*. N.D.: Pearson Education.
3. Gregory, R.J. (2005). *Psychological testing: History, principles and applications*. New Delhi: Pearson Education.
4. Freeman, F.S. 3<sup>rd</sup> ed. (1965). *Psychological testing*. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
5. Cronbach, L. J. 5<sup>th</sup> ed. (1990). *Essentials of psychological testing*. New York: Harper Collins Publishers:
6. Anastasi A. (1988). *Psychological Testing*. New York: McMillan
7. Murphy, K. R., Davidshofer, R. K. (1988): *Psychological testing: Principles and applications*. New Jersey: Prentice Hall Inc.
8. Nunnally, J.C. (1981). *Psychometric theory*. ND: Tata McGraw-Hill.
9. Kline, P. (1983). *Personality measurement and theory*. Hutchinson.
10. Aiken L.R. (1996) *Rating Scales and Checklists: Evaluating Behavior, Personality and Attitudes*
11. Ghiselli, E. E., Campbell, J. P. & Zedek, S. (1981). *Measurement theory for the behavioural sciences*. W.H. Freeman.
12. Chadha, N. K. (1996). *Theory and practice of psychometry*. N. D.: New Age International Ltd.

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**SEMESTER II**  
**EP 203: RESEARCH METHODOLOGY**  
(Credits 4: PSY 25 to PSY 28)

**OBJECTIVES:**

To acquaint the students with:

1. The basic research concepts,
  2. Steps in research process,
  3. The basic terminology of advanced research techniques so that they can follow the research reports and papers in different branches of psychology,
  4. Some commonly used research designs and the APA style of preparing research proposal and writing research report.
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**PSY 25: OVERVIEW OF RESEARCH PROCESS AND SURVEY RESEARCH[09]**

1. Overview of basic research concepts (problem, hypothesis, variables and operational definitions)
2. Sampling techniques
3. Methods of data collection: Observation, mail surveys (questionnaires), personal interviews, telephone interviews, and internet surveys
4. Survey research designs- Cross-sectional, successive independent samples, longitudinal
5. Problems, issues, and applications of survey research

**PSY 26: EXPERIMENTAL DESIGNS**

[11]

1. Experimental designs: Definition, principles and functions
2. Between-group designs: Randomised group designs
3. Between-group designs: Block designs- a) two group designs, b) randomized block designs with more than two groups
4. Factorial designs: Simple factorial designs, factorial designs with covariate, randomized block factorial designs
5. Conceptual distinction among between group designs, repeated measures designs, and mixed designs.

**PSY 27: QUASI-EXPERIMENTAL DESIGNS AND SCALING**

[10]

1. Characteristics and types of quasi-experimental designs: Single-group designs, pre test-post test designs
2. Non-equivalent control group designs, discontinuity promotion designs, time series designs, cohort designs
3. Application of quasi-experimental designs in program evaluation research.
4. Scaling: Purpose, psychophysical scaling
5. Scaling: Psychological scaling: Thurstone-type scales (i.e. differential), and Likert-type scales (i.e. Summated)

## PSY 28: OTHER MULTIVARIATE DESIGNS AND REPORT WRITING [10]

1. Factor analysis: Basic terms, overview of extraction methods
2. Overview of rotation methods, higher order factor analysis
3. Confirmatory factor analysis
4. Other multivariate techniques: Multiple regression, multivariate analysis of variance, discriminant functions analysis, canonical correlations, and path analysis and structural equation.
5. APA style of preparing research proposal and writing research report.

### BOOKS FOR READING-

1. Shaughnessy J.J. and Zechmeister E.B. (1997). *Research Methods in Psychology* (4<sup>th</sup> ed)
2. Kerlinger F.N. (1994). *Foundations of behavioral research* (3<sup>rd</sup> ed)
3. Zechmeister J.S., Zechmeister E.B. & Shaughnessy J.J. (2001). *Essentials of research methods in psychology*.
4. Robinson, P.W. (1976). *Fundamentals of experimental psychology*. Prentice-Hall.
5. Edwards, A.L. (1969). *Techniques of attitude scale construction*. Vakil, Feffer & Simons.
6. Edwards, A.L. (1985). *Experimental designs in psychological research*. Harper & Row.
7. Broota, K.D. (1989). *Experimental design in behavioural research*. Wiley Eastern.
8. Singh A.K. (2006). 5<sup>th</sup> ed. *Tests, Measurement and Research Methods in Behavioural Sciences*. Patna: Bharati Bhavan.
9. Christensen. *Experimental methodology*.
10. Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3<sup>rd</sup> ed. NY: McGraw-Hill.
11. Hair, J.F., Anderson, R. E., Tatham, R.L., & Black, W.C. (2003). *Multivariate data analysis* (5<sup>th</sup> ed). ND: Pearson Education, Inc.
12. Smith, R.A., & Davis, S.F. (1997). *The psychologist as detective: An introduction to conducting research in psychology*. Upper Saddle River NJ: Prentice-Hall.
13. Locke, L.F., Sliverman, S.J. & Spirduso, W.W. (2004). *Reading and understanding research* (2<sup>nd</sup> ed). Thousand Oaks: Sage Publications.
14. Bhattacharya, D. K. (2003). *Research Methodology*. New Delhi: Excel Books.
15. Mason E.J. and Bramble W.J. (1989). *Understanding and conducting research: Applications in education and behavioral sciences* (2<sup>nd</sup> ed)
16. Goode, W.J. & Hatt, P.K. (1952). *Methods in social research*.
17. Tabachnick B.G. and Fidell L.J. (2001). *Using Multivariable statistics* (4<sup>th</sup> ed)
18. Gursuch R.L. (1983). *Factor analysis* (2<sup>nd</sup> ed)
19. Kothari, C. R. (1985). *Research methodology: Methods and techniques*. New Delhi: Wiley Eastern Ltd.
20. Howitt, D. and Crammer, D. (2005). *Introduction to Research Methods in Psychology*. Pearson Education.

21. Ranjit Kumar (2006). *Research methodology: A step-by-step guide for beginners*. N.D.: Pearson Education.
  22. Rosnow, R.L. & Rosenthal, R. (1999). *Beginning behavioral research: A conceptual primer (3<sup>rd</sup> ed)*. Upper Saddle River NJ: Prentice-Hall
  23. Borude, R.R. (2005). *Sanshodhan Paddhatishastra*. Pune: Pune Vidyarthi Gruha
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**SEMESTER II**  
**EP 204: PSYCHOLOGY PRACTICAL: EXPERIMENTS**  
(Credits 4: PSY 29 to PSY 32)

**OBJECTIVES:**

To acquaint the students with:

1. The different areas of experimentation in psychology,
  2. Various skills of conducting experiments in psychology,
  3. Applications of experimental design,
  4. Report writing style.
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**PSY 29: COGNITIVE PROCESSES (ANY 3):**

1. Signal Detection - ROC
2. Perceptual Defence
3. Concept Formation
4. Problem Solving
5. Study of Mental Imagery
6. Peterson's Test of Rational Learning
7. Stroop Effect in Visual Perception
8. Illusion
9. Time perception

**PSY 30: LEARNING (ANY 3):**

1. Learning by Insight (Bolt Head Maze)
2. Interference
3. Paired Associate Learning
4. Serial Learning
5. Verbal Conditioning
6. Transfer of training in maze learning

**PSY 31: MEMORY (ANY 2):**

1. Short Term Memory
2. Effect of Mnemonic Strategy on Memory
3. Immediate Memory Span: Meaningful Vs. Meaningless Material
4. Organization in Memory
6. Memory for Unattended Material
7. Memory for Associated and Un-associated Pairs of Words- Najma

**PSY 32: MOTIVATION AND EMOTION (ANY 2):**

1. Zeigarnik Effect
2. Effect of Anxiety on Performance
3. Feedback / KoR
4. Goal Setting
5. Level of Aspiration

**Note: Departmental committee will decide the evaluation system of the students.**

**BOOKS FOR READING:**

1. Rajamanickam, M. (2005). *Experimental Psychology: with Advanced Experiments*, Volume 1 & 2. New Delhi: Concept Publishing Company.
2. Mohsin, S. M. (1975). *Experiments in psychology*. Orient Longman.
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17. Kuppawamy, B. (1952). *Elementary Experiments in Psychology*. London: Oxford University Press.
18. Nunn, J. (1998). *Laboratory psychology: A beginner's guide*. Hove: Psychology Press Ltd.
19. Kothurkar, V.K. (1985). *About learning and memory*. ND: Wiley Eastern.

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