

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce,
Baramati
Autonomous
Course Structure for MA-I First Year

Semester	Paper Code	Title of Paper	No. of Credits
I	PSY4101	Cognitive Psychology	4
	PSY4102	Advance Psychological Testing	4
	PSY 4103	Statistical Methods	4
	PSY 4104	Psychology Practical: Tests	4
II	PSY4201	Learning and Memory	4
	PSY4202	Psychological Testing: Applications	4
	PSY 4203	Research Methods	4
	PSY 4204	Psychology Practical: Experiments	4

SEMESTER-I

TITLE OF PAPER: COGNITIVE PSYCHOLOGY

PAPER CODE: (PSY-4101)

A) Learning Objectives

1. To acquaints the students with the processes of sensation and Perception.
2. To develop insights into one's own and others behavior and mental processes.
3. To enrich students understanding of major concepts, theoretical perspectives and empirical findings of cognitive Psychology.

B) Learning Outcomes

The importance outcome of the course the students known his/her own thinking and behavior.

CREDIT-I INRODUCTION TO COGNITIVE PSYCHOLOGY (10)

- 1.1 Nature, Definition and Domains of Cognitive Psychology
- 1.2 History and methods of Cognitive Psychology
- 1.3 Theories of Cognitive Development: Piaget, Vygotsky
- 1.4 Modern theories of Cognitive Psychology
- 1.5 Application: Recent Trends in Artificial Intelligence

CREDIT-II SENSATION, ATTENTION AND PERCEPTION (10)

- 2.1 Sensation - Introduction to psychophysics: Basic concepts and methods.
- 2.2 Attention: (a) Functions of attention: Divided attention, selective attention (b) Theories of attention process (c) Signal Detection Theory and vigilance.
- 2.3 Perception-approaches: Gestalt, Bottom-Up (feature analysis, template matching, prototypes), Top-Down and Pandemonium
- 2.4. Depth Perception and Movement

CREDIT-III LANGUAGE (10)

- 3.1 Understanding Languages
- 3.2 Speaking
- 3.3 Reading
- 3.4 Multilingualism and Neuropsychological basis of Language

CREDIT-IV PROBLEM SOLVING, CRETIVITY&DECISION MAKING (10)

- 4.1 Problem solving: Definition, types, cycle, obstacles and aid
- 4.2 Approaches to problem solving
- 4.3 Meaning, process and theories of Creativity
- 4.4 Decision making and reasoning
- 4.5 Application: How to Enhancing Creativity

Reference Books

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 (6th 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 (2nd ed)* NJ: Prentice Hall.
13. Reed, S.K. (1988). *Cognition: Theory and applications (3rd ed)*. California: Brooks/Cole Pub.Co.
14. Best, J. B. (1999). *Cognitiv 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 (3rd ed)*. California: Brooks/Cole Pub. Company
18. Cohen G. (1983). *Psychology of cognition (2nd 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.
21. Groome, D., Eysenck, M.W., Baker, K., et al., (2016). *An introduction to applied Cognitive Psychology,(2nd ed.)*. New York: Routledge.

ADVANCE PSYCHOLOGICAL TESTING (PSY 4102)

A) Learning Objectives

1. To acquaint them with the characteristics of standardized tests.
2. To developed occupational skills in students related with Psychological test.

B) Learning Outcomes

The importance outcomes of the course students acquire administration skills of the Psychological Tests, Scales, Questionnaires and Inventories.

CREDIT-I NATURE AND SCOPE OF PSYCHOLOGICAL TESTING (10)

- 1.1 Definition, Nature and characteristics of Psychological tests
- 1.2 Classification, Uses and types of Psychological tests
- 1.3 Theories of measurement: (Stevens, Campbell)
- 1.4 General steps in test construction
- 1.5 Characteristics and ethical issues in Psychological tests

CREDIT-II NORMS AND THE MEANING OF THE TEST SCORE (10)

- 1.1 Basis statistical concepts in Psychological testing
- 1.2 Definition, Nature of Norms
- 1.3 Developments Norms
- 1.4 Within groups norms
- 1.5 Importance of Computerized Testing

CREDIT-III RELIABILITY (10)

- 3.1 Definition and meaning of Reliability
- 3.2 The correlation coefficient
- 3.3 Types of Reliability
- 3.4 Classical test theory
- 3.5 Factor Influencing Reliability

CREDIT-IV VALIDITY (10)

- 4.1 Meaning and Source of validity
- 4.2 Content-description validation procedures
- 4.3 Criterion-prediction procedures
- 4.4 Construct-Identification Procedures
- 4.5 Test validity and decision theory

Reference Books

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 Behavioral 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. 3rd ed. (1965). Psychological testing. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
9. Cronbach, L. J. 5th 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

STATISTICAL METHODS (PSY4103)

A) Learning 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.

B) Learning Outcome

The main outcome of this course is to acquaint students with initial description of the data as part of a more extensive statistical analysis by using some elementary statistical methods.

CREDIT I. BASICS STATISTICS AND PROBABILITY [10]

- 1.1 Aims and Applications of Statistics in Social Sciences
- 1.2 Measures of Central Tendency and Graphical Representation of Data
Percentiles, percentile ranks and standard scores
- 1.3 Probability: Concept, definition, and approaches
- 1.4 Characteristics and Applications of normal distribution curve

CREDIT-II CORRELATION AND REGRESSION [10]

- 2.1 Meaning and Types of correlation
- 2.2 Pearson's Product-Moment Correlation
- 2.3 Other Types of Correlation (Point – Biserial Correlation and Phi-coefficient, serial and tetra choric correlation, Partial and Multiple Correlations)
- 2.4 Regression and its Types Difference between Correlation and Regression

CREDIT-III INFERENCE STATISTICS [10]

- 3.1 Inferences: Standard error of mean and other statistics
- 3.2 Significance of difference for means variances and correlation coefficients.
- 3.3 Assumptions of Analysis of Variance, and One-way ANOVA- Independent, concept of repeated measures
- 3.4 Two-way ANOVA - Independent, concept of repeated measures
- 3.5 Analysis of Covariance: Concept.

CRDIT-IV NON-PARAMETRIC STATISTICS AND STATISTICAL SOFTWARES [10]

- 4.1 Difference between Parametric and Non-parametric statistics
- 4.2 Chi Square tests
- 4.3 Non-parametric tests for correlated and uncorrelated data
- 4.4 Statistical software: An introduction – SPSS, Excel
- 4.5 Statistical Software R in Psychology and its Uses

Reference Books

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* (6th ed) McGraw - Hill
3. Howell D.C. (1997). *Statistical Methods for Psychology* (4th 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*(3rd 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 Publication.

PSYCHOLOGY PRACTICAL – TESTS (PSY-4104)

A) Learning Objectives:

1. The administration of psychological tests, interpretation of scores and report Writing,
2. The evaluation procedures and evaluation of psychological tests,

B) Learning Outcome:

The importance outcome of the course students developed certain skills of psychological counseling on the basis of psychological test results.

CREDIT-I GENERAL ABILITY TESTS (any two):

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

CREDIT-II SPECIAL ABILITY TESTS (any two):

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

CREDIT-III PERSONALITY AND TESTS (any three):

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

CREDIT-IV CLINICAL AND 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

Important notes:**A. General Instructions:**

1. Each batch of practical will consist of maximum 8 students.
2. A separate batch will be formed if this number exceeds even by one.
3. Workload for each batch will be equivalent to 8 lecture periods.
4. Students will be required to maintain a journal for this course and obtain the completion certificate from the teacher in-charge and certified by H.O.D. Without this certificate, the students will not be allowed to appear for the Internal Examination and End Semester Examination (ESE) as per the rules of credit system.

Conduct of practical Examination of Credit System.**[B] Evaluation of Practical-(Total 4 Credits)**

1. **There will be 50 marks for continuous (internal) assessment (2 credits) and 50 marks for End of Semester Examination (ESE, 2 Credits).**

a) Continuous (Internal) Assessment of practical -50 marks (2 Credits)

There will be internal practical examination after completion of five practical's and the division of 50 internal marks like following:

Items	Marks
Instruction& Conduction	10
Oral	10
Report writing of the given Practical	15
report of five Practical's and Punctuality	15
Total	50

Internal examination will be conducted at departmental level and subject teacher and one expert appointed by H.O.D. will conduct the examination:-

1. Each batch of practical examination will consist of maximum 8 students.
2. Subject teacher and expert appointed by H.O.D. will jointly set question paper.
3. Each question paper will have two subsets i.e. A and B.
4. Duration of the internal examination of practical will be 4 hours per batch.
5. Marks are given by both examiners; average of the same will be calculated and considered as final marks of the students under the given heading.
6. Final mark list will be submitted to the H.O.D.

b) End of Semester Examination (ESE)-50 marks (2 Credits).

The End Semester Examination will be of 50 marks and division of marks like following.

Items	Marks
Instruction& Conduction	10
Oral	10
Report writing of the given Practical	15
Report of Ten Practical's and Journal	15
Total	50

The program of the End Semester Examination will be prepared by coordinator appointed by University.

1. Two examiners will be appointed by 32 (5) (a) committee, one of whom will be preferably internal examiner.
2. If no teacher from the department is eligible as internal examiner, then both examiners will be out of the given department; one will work as internal examiner and one as external examiner.
3. Duration of the End Semester Examination of will be 4 hours per batch.
4. Each batch of practical examination will consist of maximum 8 students.
5. Internal and external examiners will jointly set question papers.
6. Each question paper will have three subsets i.e. A, B, C.
6. The question paper will contain problems based on the practical conducted at the respective centers.
7. In the case where marks are given by internal as well as external examiners, average of the same will be calculated and considered as final marks of the students under the given heading.

[C] Remuneration to examiners for End Semester Examination

1. Each question paper will have three subsets i.e. A, B, C (the three subsets together will be treated as one question paper for billing purpose).
2. Remuneration will be equally divided between the two examiners.

Reference Books:-

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. 3rd ed. (1965). *Psychological testing*. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
6. Cronbach L. J. (1984). *Essentials of Psychological Testing* (4th 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* (3rd ed). NY: McGraw-Hill.
10. Aiken L.R. (1996) *Rating Scales and Checklists: Evaluating Behavior, Personality and Attitudes*.
11. Buros, O. (ed). (1965, 1972). *The mental measurement*. Year Book, NJ: Gryphon Press.
12. Ghiselli, E. E., Campbell, J. P. & Zedek, S. (1981). *Measurement theory for the behavioural sciences*. W.H. Freeman.
13. Chadha, N. K. (1996). *Theory and practice of psychometry*. N. D.: New Age International Ltd.
14. Stanley, J.C. and Hopkins, K.D. (1978). *Educational and psychological measurement and evaluation*. ND: Prentice-Hall of India.
15. Guilford, J.P. (1975). *Psychometric methods*. ND: Tata McGraw-Hill.
16. Test manuals of respective tests.

Semester-II

TITLE OF PAPER: LEARNING AND MEMORY

Paper Code: PSY-(4201)

A) Learning Objectives

1. To acquaints the students with the process of learning and memory.
2. To develop insights of neurological basis of learning and memory.
3. Application of principle of learning and memory.

B) Learning Outcomes

The importance outcome of the course to known the principles of learning and memory and it's applications.

CREDIT-I PROCESS OF LEARNING

(10)

- 1.1 Classical conditioning: concepts, types and principles
- 1.2 Operant conditioning concepts, reinforcement: types and schedules
- 1.3 Cognitive approaches to learning: Latent and observational learning
- 1.4 Cultural influence on learning
- 1.5 Application: Principles of learning to Get Fit and Stay Fit

CREDIT-II PROCESS OF MEMORY

(10)

- 2.1 Sensory Memory: Iconic and Echoic
- 2.2 Short term Memory: Research and Experiments
- 2.3 Long term memory and Everyday Memory
- 2.4 Useful steps to improving your memory
- 2.5 Application: Techniques use in Cognitive Interview

CREDIT-III MODELS& THEORIES OF MEMORY

(10)

- 3.1 Unitary and Dual theory of Waugh & Norman
- 3.2 Multi process Models: Atkinson & Shiffrin; Craik & Lockhart
- 3.3 Connectionist Model: Rumelhart & McClelland
- 3.4 Theories of Forgetting
- 3.5 Application: How psychologists study memory

CREDIT-IV NEUROLOGICAL BASIS OF LEARNING AND MEMORY (10)

- 4.1 Brain areas associated with learning and memory
- 4.2 Amnesia: Definition and types
- 4.3 Brain: studies on learning and Memory
- 4.4 Synaptic Mechanism: Synaptic Plasticity in Learning and memory
- 4.5 Application: Neuro-linguistic Programming

REFERENCE BOOKS

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 (6th 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 Tavis, 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*. 2nd 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 (3rd ed)*. California: Brooks/Cole Pub. Company
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.

PSYCHOLOGICAL TESTING: APPLICATIONS (PSY-4202)

A) Learning Objectives

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

B) Learning Outcomes

The importance outcome of the course to administrate psychological tests in different Settings i.e., Educational, Industrial, Clinical and Development.

CREDIT-I TESTING IN EDUCATIONAL SETTING [10]

- 1.1 General mental ability tests: Group tests – SPM, Cattell’s Culture-fair Test of Intelligence
- 1.2 General mental ability tests: Individual tests- Binet - Kamath test,
Malin’s Intelligence Bhatiya Intelligence test
- 1.3 Multidimensional Differential Aptitude Test (MATB Jackson&Chaddha)
- 1.4 Personality and Interest Inventories- CPR (Bhargava) Interest Inventory(M.N. Palsane)
- 1.5 School and college Entrance tests- SAT, GRE

CREDIT-II TESTING IN CLINICAL SETTING [10]

- 2.1 Testing based on diagnostic and intervention- (MPQ Bharatraj) (DTLD Swarup, Mehta)
- 2.2 Tests based on the Criterion-Group Strategy- MMPI, California Psychological Inventory
- 2.3 Tests based on the Factor-Analytic Strategy- 16 PF, NEO-PI R, EPQ-R
- 2.4 Tests based on the Theoretical Strategy- EPPS, self concept (SCLW Deo) Vyaktitva
Shodhika(Khire& Rajguru)
- 2.5 Projective and neuropsychological testing

CREDIT-III TESTING IN INDUSTRIAL AND BUSINESS SETTING [10]

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

CREDIT-IV TESTING IN COUNSELING SETTING [10]

- 4.1 General ability testing: Individual tests, and group tests (SPM, NVTI, Passi Creativity
Tests)
- 4.2 Multiple aptitude tests – DAT, DBDA (Sanjay Vohra)

4.3 Strong Vocational Interest Blank (SVIB)

4.4 Anxiety and adjustment test- STAI, IPAT (Krug& Cattell), Bell's Adjustment Inventory, Moos' Family Environment Scale (FES)

4.5 Sack's Sentence Completion Test

Reference Books

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. 3rd ed. (1965). *Psychological testing*. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
9. Cronbach, L. J. 5th 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*.
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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.-

RESEARCH METHODOLOGY (PSY 4203)

A) Learning 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.

B) Learning Outcomes :

The main outcome of this course is to acquaint students with initial Research Process and use of Experimental Design.

CREDIT-I OVERVIEW OF RESEARCH PROCESS AND SURVEY RESEARCH [10]

- 1.1 Basic research concepts (problem, hypothesis, variables and operational Definitions & Ideas in Research)
- 1.2 Sampling and It's Types
- 1.3 Methods of data collection: Observation, mail surveys (questionnaires), personal Interviews, telephone interviews, and internet surveys
- 1.4 Survey research: Its type problem and applications designs- Cross-sectional, successive independent samples, Longitudinal

CREDIT-II EXPERIMENTAL AND QUASI DESIGNS

[10]

- 2.1 Experimental Designs: Definition, principles and functions
- 2.2 Independent Group Designs
- 2.3 Repeated measures Designs
- 2.4 Complex Designs
- 2.5 Quasi Experimental Designs and Program Evaluations

CREDIT-III OTHER MULTIVARIATE DESIGNS AND QUALITATIVE RESEARCH

[10]

- 3.1 Factor analysis: Basic terms, overview of extraction methods Overview of rotation methods, higher order factor analysis
- 3.2 Exploratory and Confirmatory factor analysis
- 3.3 Other multivariate techniques: Multiple regressions, multivariate analysis of

variance, discriminant functions analysis, canonical correlations, and path analysis and structural equation.

3.4 Qualitative research design

3.5 Analysis of Qualitative data

CREDIT-IV WRITING RESEARCH PROPOSAL AND REPORT

[10]

4.1 Ethical Issues in Psychological Research

4.2 Collecting and Review of Literature

4.3 Research Proposal and Report Writing (APA Styles)

4.4 Displaying Results (Graphs, Figures, Charts, Tables)

Reference Books:

1. Shaughnessy J.J. and Zechmeister E.B. (1997). *Research Methods in Psychology* (4th ed)
2. Kerlinger F.N. (1994). *Foundations of behavioral research* (3rd 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). 5th 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* (3rd ed. NY: McGraw-Hill.
11. Hair, J.F., Anderson, R. E., Tatham, R.L., & Black, W.C. (2003). *Multivariate data analysis* (5th 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.
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PSYCHOLOGY PRACTICAL: EXPERIMENTS :(PSY-4203)

A) Learning Objectives

1. The different areas of experimentation in psychology,
2. Various skills of conducting experiments in psychology

B) Learning Outcome

The importance outcome of the course students know the Applications of experimental Design and conduct the experiments.

CREDIT-I 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. Effect of feedback on Illusion
9. Time perception

CREDIT-II LEARNING (ANY 3):

1. Learning by Insight (Bolt Head Maze)
2. Interference: Retroactive / Proactive
3. Paired Associate Learning
4. Serial Learning
5. Verbal Conditioning
6. Transfer of training in maze learning (Finger Maze with two Subjects)

CREDIT-III 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-

CREDIT-IV MOTIVATION AND EMOTION (ANY 2):

1. Zeigarnik Effect
2. Effect of Anxiety on Performance

3. Knowledge of Result
4. Goal Setting
5. Level of Aspiration- Steadiness Tester or Tower Building

Important notes:

General Instructions:

1. Each batch of practical will consist of maximum 8 students.
2. A separate batch will be formed if this number exceeds even by one.
3. Workload for each batch will be equivalent to 8 lecture periods.
4. Students will be required to maintain a journal for this course and obtain the completion certificate from the teacher in-charge and certified by H.O.D. Without this certificate, the students will not be allowed to appear for the Internal Examination and End Semester Examination (ESE) as per the rules of credit system.

Conduct of practical Examination of Credit System.

[B] Evaluation of Practical-(Total 4 Credits)

1. *There will be 50 marks for continuous (internal) assessment (2 credits) and 50 marks for End of Semester Examination (ESE, 2 Credits).*

a) Continuous (Internal) Assessment of practical -50 marks (2 Credits)

There will be internal practical examination after completion of five practical's and the division of 50 internal marks like following:

Items	Marks
Instruction& Conduction	10
Oral	10
Report writing of the given Practical	15
Report of Five Practical's and Punctuality	15
Total	50

Internal examination will be conducted at departmental level and subject teacher and one expert appointed by H.O.D. will conduct the examination:-

7. Each batch of practical examination will consist of maximum 8 students.
8. Subject teacher and expert appointed by H.O.D. will jointly set question paper.
9. Each question paper will have two subsets i.e. A and B.
10. Duration of the internal examination of practical will be 4 hours per batch.
11. Marks are given by both examiners; average of the same will be calculated and considered as final marks of the students under the given heading.
12. Final mark list will be submitted to the H.O.D.

b) End of Semester Examination (ESE)-50 marks (2 Credits).

The End Semester Examination will be of 50 marks and division of marks like following.

Items	Marks
Instruction & Conduction	10
Oral	10
Report writing of the given Practical	15
Report of Ten Practical's (Journal)	15
Total	50

The program of the End Semester Examination will be prepared by coordinator appointed by University.

1. Two examiners will be appointed by 32 (5) (a) committee, one of whom will be preferably internal examiner.
2. If no teacher from the department is eligible as internal examiner, then both examiners will be out of the given department; one will work as internal examiner and one as external examiner.
3. Duration of the End Semester Examination will be 4 hours per batch.
4. Each batch of practical examination will consist of maximum 8 students.
5. Internal and external examiners will jointly set question papers.
6. Each question paper will have three subsets i.e. A, B, C.
6. The question paper will contain problems based on the practical conducted at the respective centers.
7. In the case where marks are given by internal as well as external examiners, average of the same will be calculated and considered as final marks of the students under the given heading.

[C] Remuneration to examiners for End Semester Examination

1. Each question paper will have three subsets i.e. A, B, C (the three subsets together will be treated as one question paper for billing purpose).
2. Remuneration will be equally divided between the two examiners.

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