

NORTH MAHARASHTRA UNIVERSITY, JALGAON  
SYLLABUS FOR M.A. PART-I PSYCHOLOGY  
(WITH EFFECT FROM JUNE, 1987)

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Paper-I

EP-401: Cognitive Processes, Learning and Memory

Objectives : To acquaint the students with

- 1) The processes involved in Cognition, learning and memory.
  - 2) The major theories of cognition and learning.
  - 3) The relation of cognition to other psychological phenomenon.
- Contents :

- 1) Cognitive Psychology : Definition, Topics and Contemporary Cognitive Psychology
  - 1.1 Definitions and introduction to cognitive psychology.
  - 1.2 Topics of cognitive psychology.
  - 1.3 Contemporary cognitive psychology.
  - 1.4 Methods of cognitive psychology.
  - 1.5 Application of cognitive psychology.
- 2) Perception and Singnal detection :
  - 2.1 Gestalt-model of perception.
  - 2.2 Behavioristic model of perception.
  - 2.3 Functionalistic model of perception.
  - 2.4 Detection of sensory signals.
  - 2.5 Signal detection theory and its applications.
- 3) Pattern Recognition :
  - 3.1 Approaches to visual pattern recognition gestalt, feature analysis, template matching, prototype matching, bottom-up - top-down processing.
  - 3.2 Central determinants in perceptual theory.
- 4) Cognitive Phenomenon :
  - 4.1 Cognitive structure.
  - 4.2 Cognitive style.
  - 4.3 Cognitive consistency.
  - 4.4 Cognitive map.
- 5) Problem Solving and Artificial Intelligence :
  - 5.1 Types of problems.
  - 5.2 Process of problem solving.
  - 5.3 Nature of artificial intelligence language and AI.
  - 5.4 General problem solver, Robots.
- 6) Learning : Conceptual approaches
  - 6.1 Definitions, types
  - 6.2 Traditional and contemporary views of learning: associationistic, cognitive and modern approaches.
  - 6.3 Conditioning, types and extension of conditioning.

7) Theories of learning

- 10.1 Guthrie's contiguity theory.
- 10.2 Hull-pence theory.
- 10.3 Tolman's Sign - Gestalt theory.
- 10.4 Controversial issues in learning theories.

Books for Reading :

- 1) Solso R.L. (1988) Cognitive Psychology. Hapcought, Brace and Jovanvich
- 2) Best, John B (1995) 4th. edition Cognitive Psychology, New York: West Publishing Company.
- 3) Kotnurkar V.K. (1985) About learning and memory. Delhi, Bombay : Wiley Eastern Ltd.
- 4) Hilgard H.R. and Bower T.W. (1975) Theories of learning, New Delhi. Prentice - Hall of India.
- 5) Bourne L.E. Domino Wsik R.L. and Loftus E.F. (1979) - Cognitive Process, New Jercey Prentice - Hall.
- 6) Matlin M.W. Cognition (1995) Prism Books Pvt. Ltd. Bangalore.

Books for reference

- 1) Neisser U. (1964) Cognitive Psychology Appleton Century-Crofts
  - 2) Kling, J.W. & Riggs, C.A. (Eds.) (1972)- Woodworth & Schlosberg's Experimental Psychology - New Delhi, Khosla Pub. House.
  - 3) Baddeley A.D. (1976) Psychology of memory Happer International Ed., Haper & Row.
  - 4) Chaplin J.P. & Krawiec T.S. (1970) Systems theories f Psychology. New York: Holt, Rinchart eand Winston.
  - 5) Hulse, S.<N. Egeth H. and Deose, J. (1983) Psychology of learning. New Delhi, McGraw Hill.
  - 6) Hary Nelson and William Bevan Contemporary Approaches to Psychology
- 8) Memory Model
- 7.1 Unitary view - Ebbinghaus and Bartlett.
  - 7.2 A processing view of memory - Encoding, storing and retrieving.
  - 7.3 Duel process view - Hebb, Waugh and Norman.
  - 7.4 Multi process view - Atkinson and shiffrin Craik and Lockharl - Models

- 9) Organization in Memory :
  - 8.1 Traditional approach.
  - 8.2 Primary organization.
  - 8.3 Secondary organization.
  - 8.4 Coding and organization.
- 10) Neurological basis for learning and memory :
  - 10.1 Methodological approaches - Physiological changes as dependent and independent variables.
  - 10.2 Theoretical issues - Changes in synaptic function and structure, Changes in cellular chemistry.

EP 402 : Personality, Motivation and Emotion

1. Approaches to the study of personality :
  - 1.1 Idiographic and nomothetic approaches to the study of personality.
  - 1.2 Models of personality : Type, Trait, Hierarchical, Situationistic and interactionistic.
  - 1.3 Interrelation of personality, motivation and emotion.
2. Approaches to the study of motivation and emotion :
  - 2.1 Physiological approaches to the study of motivation and emotion.
  - 2.2 Cognitive approaches to the study of motivation and emotion.
  - 2.3 Ethological approaches to the study of motivation and emotion.
  - 2.4 Social psychological approaches to the study of motivation and emotion.
3. Physiological bases of emotion :
  - 3.1 Autonomic variable and autonomic response.
  - 3.2 Hormonal and electron cortical changes.
  - 3.3 Muscle tension, tremor and physiological response pattern.
  - 3.4 Stress and adaptation.
  - 3.5 Stress and diseases.
4. Physiological bases of motivation :
  - 4.1 Peripheral factors in motivation.
  - 4.2 Schaeter's self-attribution theory.
  - 4.3 Arousal theory.
  - 4.4 Central nervous system and arousal.
5. Dimensions of personality, motivation and emotion :
  - 5.1 Old and contemporary views of anxiety.
  - 5.2 Emerging theories of anxiety.
  - 5.3 Anxiety and performance.
  - 5.4 Irard's concept of anxiety.
  - 5.5 Some social and applied correlates of introversion and extraversion.

6. Theories of personality and motivation :

- 6.1 Classical theories - Freud, Jung and Adler.
- 6.2 Neo-classical theories - Horney and Sullivan.

7. Theories of Motivation :

7.1 Atkinson's theory of motivation.

McClelland's theory of achievement motivation, Maslow's theory of motivation.

8. Theories of Emotions :

- 8.1 Theory of emotion by Frijda.
- 8.2 Pape maclean theory.

9. Theories of Personality :

- 9.1 Cattll's factor theory of personality.
- 9.2 Eysenck's dimensional theory of personality.
- 9.3 G.W. Allport's theory of personality.

10. Assessment :

- 10.1 Scales, Inventories and interview as tools of assessment.
- 10.2 Protective techniques as methods of assessment.
- 10.3 Behavioural and bio-physical assessment.

Books for Reading :

- 1. Buck, R. (1976) - Human Motivation and emotion. New York : Wiley.
- 2. Frijda N. H. (1986) The Emotions, London, Cambridge.
- 3. Hjelle, L.A. & Zeigler, D.J. (1979) Personality Theories, Basic assumptions, research and applications. New York, McGraw - Hill Book Co.
- 4. London, H & Exner, J.E. (1978) - Dimentions of Personality, New York : Wiley.
- 5. Strongman K.I. (1978) - The Psychology of emotion. New York : Wiley.

Books for Reference :

- 1. Bolles R.C. (1976) - Theory of motivation. New York : Harper and Row.
- 2. Cattell R.B. & Dreger R.M. (1977). Handbook of modern personality theory. New York : Wiely.
- 3. Fehz, A (1983) - Introduction to personality. : Macmillan.
- 4. Ferguson E. D. (1976) - Motivation : An experiments approach. : New York : Holt, Rinehart and winston.
- 5. Hall, C.S. & Lindzey, G. (1978) - Theories of Personality, New York : Wiley.

6. Peck, D. & Whitlow D, (1975) - Approaches to personality theory, Methues.
7. Kline, p. (1983) - Personality measurement and Theory, Hutchinson.
8. Parvin, L.A. (1984) - Personality theory and research, New York: Wiley.
9. Sarason, I.G. (1972) - Personality : An objective approach, New York : Wiley.
10. Spielberger C. D. (1972) - Anxiety : Current trends, New York : Volume I & II, Academic Press.

Syllabus : M.A. Part I

EP-403 : Statistics and Psychological Testing

Objectives :

1. To make the students understand the different statistical methods with their uses and interpretations.
2. To develop computational skills in students to enable them to analyse the data of practicals, project work and dissertation.
3. To acquaint the students with psychometric theory, the various types of psychological tests and their applications in various fields.

Contents :

1) Elementary statistics and probability :

- 1.1 Meaning and uses of statistics.
- 1.2 Frequency distribution, measures of central tendency and variability.
- 1.3 Percentile scores, percentile ranks and standard scores.
- 1.4 Elementary principles of probability.
- 1.5 Binomial and normal distribution.
- 1.6 Areas under normal probability curve.
- 1.7 Applications of normal distribution.

2) Correlation :

- 2.1 Meaning and types of correlation.
- 2.2 Product moment correlation.
- 2.3 Rank difference correlation.
- 2.4 Biserial and point biserial correlation, tetrachoric correlation, phicoefficient.
- 2.5 Partial and multiple correlation.

3) Analysis of variance :

- 3.1 Assumptions of analysis of variance.
- 3.2 One way and two way ANOVA.
- 3.3 Analysis of covariance (ANCOVA)

4) Statistical estimations and inferences :

- 4.1 Principles of sampling.
- 4.2 Inferences regarding average and some other statistics.
- 4.3 Significance of differences between statistics, means, variances, proportions, frequencies, correlation coefficients.

5) Non parametric or distribution free statistics :

- 5.1 Chi square and its various applications.
- 5.2 Test of differences with correlated and uncorrelated data.
- 5.3 Test of similarity of frequency distributions.
- 5.4 Brief information on different non parametric tests.

- 6) Nature of Psychological tests :
  - 6.1 Principle characteristics of Psychological test.
  - 6.2 Uses and types of Psychological tests.
  - 6.3 Test construction.
  - 6.4 Norms and their types.
  - 6.5 Item analysis.
- 7) Reliability and Validity :
  - 7.1 Types of reliability.
  - 7.2 Types of validity.
  - 7.3 Reliability of speed test.
- 8) Measurement of intelligence :
  - 8.1 Binet's contribution.
  - 8.2 Individual tests and group tests.
  - 8.3 Performance tests and non language tests.
- 9) Personality tests :
  - 9.1 Projective techniques.
  - 9.2 Self report inventories.
  - 9.3 Situational tests.
  - 9.4 Interest and attitude measurement.
- 10) Ability tests :
  - 10.1 Multiple aptitude tests.
  - 10.2 Special aptitude tests.
  - 10.3 Educational and occupational tests.

Books for study :

1. Guilford J.P. and Fruchter B. (1973) - Fundamental statistics in Psychology and education ( 5th edition) : McGraw Hill.
2. Henry E. Garrett - Statistics in Psychology and Education.
3. Anastasi A (1988) - Psychological Testing : Macmillan.
4. Cronbach L. J. (1984) - Essentials of Psychological Testing. (4th edition) Harper and Row.
5. Psychometric methods - Freeman Tata McGraw Hill.

Books for Reference :

1. Ferguson G. A. (1976) Statistical analysis in Psychology and education. McGraw Hill.
2. Glass G. V. and Stanley J. C. (1970) - Statistical methods in education and Psychology.
3. Brown F. G. (1970) Principles of educational and Psychological testing. Dryden.
4. Guilford J. P. (1954) Psychometric methods. McGraw Hill.

5. Helton G. B., Workman E.A. and Matuszek P.A. (1982) Psycho - educational assessment. Grune and spattoon.
6. Kurtz, A. K. and Mayo S.T. (1979). Statistical methods in education and Psychology. Narosa (springer).
7. Nunnally J.C. (1970) Introduction to Psychological measurement. McGraw Hill.
8. Stanley, J.C. and Hopkins, K.D. (1978) Educational and Psychological measurement and evaluation. : Prentice Hall of India.
9. Statistics in Psychology - Mangal, Sage Publication - New Delhi.

#### EP-404 Research Design and Methodology

##### Objectives :

The students should be acquainted with :

1. The various steps in research process.
2. The designing of the experiments and analysing the results.
3. The basic terminology of advanced research techniques so that they can follow the research reports and papers in different branches of psychology.

##### Contents :

#### 1) The Research Process :

- 1.1 Scientific research.
- 1.2 Characteristics of a good problem.
- 1.3 Characteristics of a good hypothesis.
- 1.4 Types of variables.

#### 2) Research proposal and research reports:

- 2.1 General comments on research planning and data analysis.
- 2.2 Preparing a research proposal.
- 2.3 Writing a research report.

#### 3) Types of investigations :

- 3.1 Controlled laboratory experiments.
- 3.2 Field experiments.
- 3.3 Ex post facto field studies.
- 3.4 Ex post facto Laboratory Studies.

#### 4) Sampling :

- 4.1 Simple random sampling.
- 4.2 Systematic sampling.
- 4.3 Clustered sampling.
- 4.4 Stratified sampling.
- 4.5 Other sampling procedures.
- 4.6 Adequacy of sample size.



5) Data collection procedures :

- 5.1 Observation of behaviour.
- 5.2 Questionnaire.
- 5.3 Interviewing.
- 5.4 Objective tests and scales.
- 5.5 Case study.

6) Scaling I :

- 6.1 Types of Scales : Nominal, ordinal, interval ratio.
- 6.2 Distinction between psychophysical and psychological scaling.
- 6.3 J.N.D. Scales, Fechner's Law.
- 6.4 Direct scaling method, Steven's law.

7) Scaling II :

- 7.1 Thurstone's law of comparative judgment.
- 7.2 Indirect scaling methods : Ranking, paired comparisons, equal appearing intervals and successive intervals.

8) Experimental designs I :

- 8.1 Controlling secondary variance.
- 8.2 Quasi - experimental designs.
- 8.3 Single group designs.
- 8.4 Two group designs.

9) Experimental designs II :

- 9.1 Multi group designs with single independent variables.
- 9.2 Factorial designs.
- 9.3 Graphical representations : Elementary conceptual introduction to curve fitting and least square method.

10) Multivariate analysis :

- 10.1 Factor analysis : Basic terms and concepts.
- 10.2 Factor extractions : Overview of methods.
- 10.3 Computer analysis and precaution in computer use.

Books for Reading :

- 1. Robinson, P.W. (1976) - Fundamentals of experimental Psychology, Prentice Hall.
- 2. D' Amato M.R. (1970) Experimental Psychology : Methodology, Psychophysics and learning. McGraw Hill, International student edition.
- 3. Nunnally J.C. (1981) Psychometric theory. Tata McGraw Hill edition.
- 4. Kerlinger, F.N. (1986) Foundations of behaviour research, Holt, Rinehart and Winston.

Books for Reference :

1. Guldford J. P. (1975) Psychometric methods. Tata McGraw Hill.
2. Edwards, A.L. (1985) Experimental design in Psychological research. Harper and Row.
3. Plutchik R. (1983) Foundation of experimental research. Harper and Row.
4. Mc Guigan, F.J. (1984) Experimental Psychology Prentice Hall.
5. Kothari C.R., (1990) Research methodology, methods and techniques, Wiley Estan Limited.
6. Research methodology - by Singh A.K. Concept Publication, New Delhi.