Credit Based Semester and Grading System

T.Y.B.A. Psychology Syllabi to be implemented from 2015-2016

Psychological Testing and Statistics: Parts I and II (Paper IV in old scheme)

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| Code | Sem. | Course Title | Credits | Marks |
| UAPS501 | 5 | Psychological Testing and Statistics: Part I | 4 | 100 (75 + 25) |
| UAPS601 | 6 | Psychological Testing and Statistics: Part II | 4 | 100 (75 + 25) |

Objectives -

1) To impart knowledge and understanding of the nature, uses, technical features, and the process of construction of psychological tests

2) To create awareness about measurement of intelligence and assessment of personality

3) To impart knowledge and understanding of the concepts in Statistics and the various measures of Descriptive Statistics - their characteristics, uses, applications and methods of calculation

4) To create a foundation for advanced learning of Psychological Testing, Assessment, and Statistics

Semester 5. Psychological Testing and Statistics: Part I (Credits = 4) 4 lectures per week

Unit 1. Psychological Testing and Assessment

1. Definition of testing and assessment; the process and tools of assessment
2. The parties and types of settings involved
3. How assessments are conducted; assessment of people with disabilities; Reference sources for authoritative information about tests

Unit 2. Tests, Testing and Norms

a) Various assumptions about Psychological Testing and Assessment

b) What is a ‘Good Test’; Norms – sampling to develop norms, types of norms, fixed reference group scoring systems, norm-referenced versus criterion-referenced evaluation; culture and inference

c) Concerns of the profession - Test user qualifications, testing people with disabilities, CAPA; the four rights of test-takers

Unit 3. Reliability

1. The concept of Reliability; sources of error variance
2. Reliability estimates: Test-Retest, Parallel and Alternate Forms, Split-Half, Inter-Item Consistency – Kuder-Richardson, Cronbach’s Coefficient Alpha; Inter-Scorer Reliability
3. Using and interpreting a coefficient of Reliability – purpose of the Reliability coefficient, nature of the test, the true score model of measurement and alternatives to it
4. Reliability and individual scores: SEM and SE-Difference

Unit 4. Validity

1. The concept of validity; Face and Content validity
2. Criterion-related validity and Construct validity
3. Validity, bias, and fairness

Unit 5. Types of scores, Types of scales, Frequency Distribution and Graphic representations

1. Continuous and discrete scores – meaning and difference; Nominal, ordinal, interval and ratio scales of measurement
2. Preparing a Frequency Distribution; advantages and disadvantages of preparing a frequency distribution; smoothed frequencies: method of running averages
3. Graphic representations: Frequency polygon, histogram, cumulative frequency curve, ogive, polygon of smoothed frequencies *(*Unit 5-c is *only for theoretical understanding and questions; graphs are not to be drawn in the exam.)*

Unit 6. Measures of central tendency

1. Calculation of mean, median and mode of a frequency distribution; The assumed mean method for calculating the mean
2. Comparison of measures of central tendency: Merits, limitations, and uses of mean, median and mode

**Semester 6.** Psychological Testing and Statistics: Part II (Credits = 4) 4 lectures per week

Unit 1. Test Development

1. Test conceptualization and Test construction
2. Test tryout and Item analysis
3. Test revision

Unit 2. Measurement of Intelligence and Intelligence Scales

1. What is Intelligence? - Definitions and theories; measuring Intelligence
2. The Stanford-Binet Intelligence Scales and the Wechsler Tests: WAIS, WISC, WPPSI
3. Close-up: Factor analysis

Unit 3. Assessment of Personality

1. Personality Assessment – some basic questions: who, what, where, how; Developing instruments to assess personality – logic and reason, theory, data reduction methods, criterion groups; personality assessment and culture
2. Objective methods of personality assessment
3. Projective methods of personality assessment - Inkblots as Projective stimuli - the Rorschach; Pictures as Projective stimuli – Thematic Apperception Test; Projective methods in perspective

Unit 4. Probability, Normal Probability Curve and Standard scores

1. The concept of Probability; laws of Probability; Characteristics, importance and applications of the Normal Probability Curve; Area under the Normal Curve
2. Skewness- positive and negative, causes of skewness, formula for calculation; Kurtosis - meaning and formula for calculation
3. Standard scores – z, T, Stanine; Linear and non-linear transformation; Normalised Standard scores

Unit 5. Measures of Variability, Percentiles, and Percentile Ranks

1. Calculation of 4 measures of variability: Range, Average Deviation, Quartile Deviation and Standard Deviation
2. Comparison of 4 measures of variability: Merits, limitations, and uses
3. Percentiles – nature, merits, limitations, and uses; Calculation of Percentiles and Percentile Ranks

Unit 6. Correlation

1. Meaning and types of correlation – positive, negative and zero; Graphic representations of correlation - Scatterplots
2. The steps involved in calculation of Pearson’s product-moment correlation coefficient
3. Calculation of rho by Spearman’s rank-difference method; Uses and limitations of correlation coefficient
4. Simple Regression and Multiple Regression

*(Unit 6-b is only for theoretical understanding and questions, not for calculation in the exam.)*

**Book for study**

**Cohen, J. R., Swerdlik, M. E., & Sturman, E. D. (2013). *Psychological Testing and Assessment: An introduction to Tests and Measurement.* (8th ed.). New York. McGraw-Hill International edition. (Indian reprint 2015)**

Books for reference

1. Aiken, L. R., & Groth-Marnat, G. (2006*). Psychological Testing and Assessment.* (12th ed.). Pearson. Indian reprint 2009, by Dorling Kindersley, New Delhi
2. Anastasi, A. & Urbina, S. (1997). *Psychological Testing.* (7th ed.). Pearson Education, Indian reprint 2002
3. Aaron, A., Aaron, E. N., & Coups, E. J. (2006). *Statistics for Psychology.* (4th ed.). Pearson Education, Indian reprint 2007
4. Cohen, J. R., Swerdlik, M. E., & Kumthekar, M. M. (2014). *Psychological Testing and Assessment: An introduction to Tests and Measurement.* (7th ed.). New Delhi: McGraw-Hill Education (India) Pvt Ltd., Indian adaptation
5. Gregory, R. J. (2013). *Psychological Testing: History, Principles, and Applications*. (6th ed.). Pearson Indian reprint 2014, by Dorling Kindersley India pvt ltd, New Delhi
6. Hoffman, E. (2002). *Psychological Testing at Work.* New Delhi: Tata McGraw-Hill
7. Hogan, T. P. (2015). *Psychological Testing: A Practical introduction.* (3rd ed.). John Wiley & Sons, New Jersey
8. Hollis-Sawyer, L.A., Thornton, G. C. III, Hurd, B., & Condon, M.E. (2009). *Exercises in Psychological Testing.* (2nd ed.). Boston: Pearson Education
9. Kaplan, R. M., & Saccuzzo, D. P. (2005). *Psychological Testing – Principles, Applications and Issues.* (6th ed.). Wadsworth Thomson Learning, Indian reprint 2007
10. Kline, T.J.B. (2005). *Psychological Testing: A Practical approach to design and evaluation.* New Delhi: Vistaar (Sage) publications
11. Mangal, S.K. (1987). *Statistics in Psychology and Education*. New Delhi: Tata McGraw Hill Publishing Company Ltd.
12. McBurney, D.H. (2001). Research Methods. (5th ed.). Bangalore: Thomson Learning India
13. Miller, L.A., Lovler, R. L., & McIntire, S.A., (2013). *Foundations of Psychological Testing: A practical approach.* (4th ed.). Sage publications
14. Minium, E. W., King, B. M., & Bear, G. (2001). Statistical Reasoning in Psychology and Education. Singapore: John-Wiley
15. Urbina, S. (2014). Essentials of Psychological Testing. (2nd ed.). John Wiley & Sons, New Jersey

Pattern of question paper of the Class test

The class test will be on any 1 unit taught in that Semester. If the unit is of Psychological Testing, the Pattern can be any one of the following types.

1. Write short notes. (Any 4 out of 6, each having 5 marks)
2. Explain the terms in brief. (Any 10 out of 14, each having 2 marks)
3. Fill in the blanks (Any 20 out of 24, each having 1 mark)
4. Multiple choice question with 4 options (Any 20 out of 24, each having 1 mark)
5. Two questions of 10 marks each; any possible combination of questions of any 2 of the above 4 types – e.g.

* 2 Short Notes out of 4 and 10 out of 14 Fill in the blanks
* 5 out of 10 terms in brief and 2 out of 4 short notes or
* 10 out of 14 Fill in the blanks and 10 out of 14 Multiple choice question with 4 options

If the class test is on a unit of Statistics, the Pattern will be as follows -

A) 8 marks Theoretical question on the unit - Fill in the blanks or Multiple choice question (8 out of 10) or Explain the terms in brief (Any 4 out of 6).

B) 12 marks, depending on the unit –

* Prepare a Frequency Distribution of given scores or
* Calculate of Mean, Median and Mode of a Frequency Distribution (5, 5, and 2 marks) or
* Calculate QD or SD (9 marks) and 1 Percentile or 1 Percentile Rank (3 marks) or
* Calculate rho by Spearman’s rank-difference method (11 marks for Calculation, 1 mark for interpretation)

Pattern of question paper for Semester-end examination at T.Y.B.A. Semesters 5 and 6

For the courses in Psychological Testing and Statistics: Parts I and II

Duration of examination = 2 1/2hours Marks = 75 (per semester)

All 5 questions carry 15 marks and are compulsory. There will be internal choice in each Question. The first 4 questions will be on the first 4 units.

Q. 1 will have 2 essay-type questions A and B of 15 marks on any 2 different units out of the 4 units covered in the semester, in any combination like 1 and 2, 1 and 4, 2 and 4, and so on.

Q. 2 will have 2 essay-type questions A and B on the other 2 units out of the 4 units which are not covered in Q. no. 1. Students can answer either A or B of question no. 1 and 2.

Q. no. 3 will be - Write any 3 short notes out of 6, based on any 2 different units out of the 4 units covered in the semester, with 3 notes from each of the 2 units.

Q. no. 4 will be - Explain the terms in brief, based on the other 2 units out of the 4 units which are not covered in Q. no. 3., any 5 terms out of 8; 4 terms from each of the 2 units)

Q. no. 5 will be based units 5 and 6 which are of Statistics. Part A in Q. no. 5 will be on unit 5 and part B on unit 6 of the semester. There will be a theoretical question for 3 marks and 12 marks will be for preparing a frequency distribution or for various calculations according to the topics in the unit.

Semester 5 - One Example – (questions 1, 2, 3 and 4 on Psychological Testing; q. 5 on Statistics)

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| Q. 1 | On units 1 and 3 | Attempt either A or B.  A. Essay-type on Unit 1.  B. Essay-type on Unit 3. |
| Q. 2 | On units 2 and 4 | Attempt either A or B.  A. Essay-type question on Unit 2.  B. Essay-type question on Unit 4. |
| Q. 3 | On units 2, 3 | Write short notes (any 3 out of 6; three short notes from unit 2 and three short notes from unit 3) |
| Q. 4 | On units 1, 4 | Explain the terms in brief. (Any 5 terms out of 8; 4 terms from on unit 1 and 4 terms from unit 4) |
| Q. 5 | On units 5 and 6; Statistics | Attempt either A or B.  A. i) Theoretical question for 3 marks on unit 5. \*  ii) Prepare a Frequency Distribution of given scores - 12 marks  B. i) Theoretical question for 3 marks on unit 6.  ii) Calculate of Mean, Median and Mode of a Frequency Distribution.  (12 marks; 5, 5, and 2 marks respectively) |

\* Note - Only theoretical questions will be asked on frequency polygon, histogram, cumulative frequency curve, ogive and smoothing a frequency polygon; questions of drawing these graphs will not be asked in the class test or in the Semester End exam.

Semester 6 - One Example

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| Q. 1 | On units 1 and 3 | Attempt either A or B.  A. Essay-type on Unit 1.  B. Essay-type on Unit 3. |
| Q. 2 | On units 2 and 4 | Attempt either A or B.  A. Essay-type question on Unit 2.  B. Essay-type question on Unit 4. |
| Q. 3 | On units 2, 3 | Write short notes (any 3 out of 6; three short notes from unit 2 and three short notes from unit 3) |
| Q. 4 | On units 1, 4 | Explain the terms in brief. (Any 5 terms out of 8; 4 terms from on unit 1 and 4 terms from unit 4) |
| Q. 5 | On units 5 and 6  Statistics | Attempt either A or B.  A. i) Theoretical question for 3 marks on unit 5.  ii) Calculate QD or SD (9 marks) and 1 Percentile or 1 Percentile Rank (3 marks).  B. i) Theoretical question for 3 marks on unit 6. ii) Calculate rho by Spearman’s rank-difference method  (11 marks for Calculation, 1 mark for interpretation) |