

Test Code: RZI/RZII (Objective and Short Answer type) 2006

### Junior Research Fellowship in Psychology

The candidates for Junior Research Fellowship in Psychology are required to take objective and short answer type tests – Research methodology in the forenoon and Psychology in the afternoon session.

The syllabus and the sample questions for both tests are given below.

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### Syllabus for Research Methodology

1. Introduction: Meaning and characteristics of scientific research. Steps in research, Report writing for publishing, Hypothesis testing, Interpretation of data, Ethical issues in Psychological research.
2. Methods in Psychological research: Types of Variables,. Cross sectional and longitudinal methods, Observation, Applied behaviour analysis, Experimental, Quasi- experimental, Case study, survey research, Interview, Content analysis, Projective techniques.
3. Sampling: Kinds of samples, sample size determination, probability and non-probability sampling methods.
4. Psychological Assessment: Characteristics and classification of tests, Item writing, Item analysis, Methods of Reliability and Validity, Norms.
5. Statistical analysis: Normal probability curve, non parametric tools, ANOVA, Correlation, Partial and multiple regression, Data reduction techniques - Factor analysis, Cluster analysis.

*Sample Questions for Research Methodology*

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1. What is item analysis? Discuss various steps of item analysis. Suppose you have noticed that few subtest scores of one test are not significantly correlated with the total test score. How do you increase correlation coefficients of those subtests with total test score?
2. The score distribution in an examination of 100 marks is known to be normal with mean score = 55 and SD of scores =7.  
What percentage of students is expected to score in the range of 50-60?  
In a group of 500 students taking this test, how many are expected to have scored between 50-60?  
Determine the 90<sup>th</sup> percentile point of the score distribution.  
Given  $p(Z < 0.33) = 0.6293$        $p(Z < -1.28) = 0.10$
3. Suppose you are asked to conduct doctoral work on the school children? Write a comprehensive research proposal. Is the proposal suitable for doctoral work? Give reasons.

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Syllabus for Psychology

1. Cognitive processes: Information processing model, Intelligence and measurement, Types and assessment of aptitudes.
2. Personality: Determinants, Type and trait theories of personality, psychoanalytic, social learning and humanistic theories of personality, Erikson's stages of psychosocial development, Self-efficacy.
3. Industrial and Organizational psychology: Job analysis, selection, methods of training, supervision and leadership, organizational climate, group morale, job satisfaction, structure of organization, organizational health and techniques of organizational development.
4. Educational psychology: Learning theories, class room climate. Teacher-pupil interaction programmed learning, reading and writing motivation.
5. Developmental psychology: Theories of development, Maturation and scales for measuring maturation, Concept development and Piaget's theory, Language development, Social development, measurement of children's attitudes and values, Emotional development, Moral development, Measurement of children's motivation and affect, Personality development and appraisal to assess personality, Parent child relationship in development of personality, Children with special needs and exceptional children.
6. Social and health psychology: Stress and coping strategies, Pain and management, Quality of life, Culture and health, Pro-social behaviour, Violence in society and community care, Chronic and terminal illness, Gerontological problems and adjustment in old age, Psychotherapy and counseling.

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Group-A

1. What is memorizing process? Discuss different experimental methods for memory study.
2. Sharukh is anxious for his repeated failure in the school level examination though he answers well. Besides reading the textbooks, he studies reference books and prepares notes. Once, his teacher has told him that his standard of answering is above his educational level. So, it is better to answer at his own level following the textbook. – Explain Sharukh's self-conflict using the humanistic model of personality.
3. How do Intelligence tests differ from Aptitude tests ? What are the aptitudes you feel suitable for a good researcher and why ? Develop few items to assess those aptitudes.

Group-B

4. Draw a sociogram of one hypothetical group and explain the pattern of interpersonal relations within the group.
5. Organizational climate depends on the styles of leadership – Discuss. Write 10 items to assess authoritarian style of leadership.
6. Is counseling important in school? State the difference between Directive and Non-directive counseling.
7. Socialization process depends on cognitive development of children – Explain.