

## Section B

### Practical

#### RAVEN'S STANDARD PROGRESSIVE MATRICES (RSFM)

##### OBJECTIVE:

To measure educative component of “g” as defined in Spearman’s Two Factor theory using Raven’s Standard Progressive Matrices.

##### BASIC CONCEPT

###### Intelligence

Oxford Dictionary explains intelligence as the power of perceiving, learning, understanding and knowing.

Binet defined intelligence as the ability to understand well, reason well and judge well.

According to Weschler, intelligence can be defined as the global and aggregate capacity of an individual to think rationally, act purposefully and to deal effectively with his environment.

Gardner and Sternberg have suggested that an intelligent individual not only adapts to the environment but also actively shapes it.

According to Robert Sternberg, Intelligence is the ability to adapt, to shape and to select environment to accomplish one's goals and those of one's society and culture. The psychometric approaches express the individual's performance in terms of a single index of cognitive abilities. On the other hand information processing approach describes the processes people use in intellectual reasoning and problem solving.

##### SPEARMAN'S TWO FACTOR THEORY OF INTELLIGENCE

In 1927, a British psychologist, Charles Spearman proposed a two factor theory of intelligence. According to him, intelligence consisted of a general factor ( g-factor) and specific factors(s factor). The g factor includes mental operations which are primary and common to all performances. S factor refers to specific abilities that help an individual to excel in specific fields, for example—singers, scientists and athletes.

##### TYPES OF INTELLIGENCE TESTS

###### I. On the basis of administration

Individual	Group
It can be administered to one person at a time	It can be administered to several, people simultaneously
It requires the test administrator to establish a rapport with the subject and be sensitive to his/her feelings, moods and expressions during the testing session.	Group tests do not allow such opportunity to be familiar with subjects feelings.
It allows people to answer orally or in written form or manipulate objects as per the tester's instructions.	Group tests generally seek written answers usually in a multiple choice format
Eg. Weschler Adult Intelligence Scale	Eg. Ravens Standard Progressive Matrices

## II. On the basis of nature of items used

Verbal	Non Verbal	Performance
It requires subjects to give verbal responses either orally or in a written form.	The nonverbal tests use pictures or illustrations as test items.	It requires subjects to manipulate objects and other materials to perform a task.
It can be administered only to literate people.	It can be administered to both literate and non literate.	It can be administered to both literate and illiterate.
Cultural bias	Culture fair	Culture fair
Eg. Group test of intelligence by Prayag Mehata	Eg. Army Beta P	Koh's Block Design

Culture Bias Test	Culture Fair Test
Show bias to the culture in which they are developed.	The test which does not discriminate against individuals belonging to different cultures.
Norms are developed for a particular culture.	It can be applied equally meaningfully in all cultures.
It mostly uses language in constructing test items.	It does not require language in item construction.
Eg. Tests developed in America and Europe represent urban and middle class cultural ethos	Eg. Koh's Block Design

## METHOD

### Preliminary Information

Name

Date of Birth

Age

Sex

Class

Date of conduction

Place of conduction

### Testing Material

RSPM Test Booklet, RSPM Answer Sheet, RSPM Manual, RSPM Scoring key, Pencil, Eraser,

## DESCRIPTION OF THE TEST

The Raven's Standard Progressive Matrices test was developed by J Raven, J.C. Raven and H. C. Court. It consists of 60 non verbal items divided into 5 sets A, B, C, D, E each comprising of 12 problems. The test was constructed to measure the eductive component of g, as defined in Spearman's theory of intelligence. The problems are simple in the beginning and become more and more difficult as one proceeds towards the last item.

## **Procedure**

### **Rapport formation**

The subject was called to the psychology and was made to sit comfortably. A friendly conversation was held by asking her about her schooling, her parents, friends and her interests in general. When the subject felt at ease, she was asked if she was ready for the test to begin. After an affirmative answer from her, she was given the following instructions.

### **Instructions**

- (i) Here is a test booklet and a separate answer sheet on which you will record your answers.
- (ii) Please ensure that you do not write anything on the test booklet.
- (iii) Please enter the required information *i.e.* Name, Age etc. in the answer sheet.
- (iv) Now open the first page of the test booklet to find problem A1. Now locate the column of the numbers 1 to 12 under the heading Set A on your answer sheet.
- (v) Now look at problem A1. The upper portion of the page has a pattern with a piece cut out of it. Select the one piece from the six options given below the pattern that you think is right as it fits into the pattern. What would be the answer? (wait for the subject to respond) Number 4 as you said is the right piece, so the answer is number 4. You will now write 4 next to the number 1 under the heading set A on the answer sheet.
- (vi) Similarly on every page of the booklet, there is a pattern with a portion missing. You have to choose the right piece out of the options given below the pattern. Immediately after deciding on the right option, you must write the option number next to the item number on the answer sheet.
- (vii) The problems are simple in the beginning and get harder as you progress. Attempt all problems. If you are not sure about a particular answer you may make a guess but don't leave any item unanswered.
- (viii) Make sure that you record the answers in the right column of the answer sheet.
- (ix) There is no time limit but try to finish as soon as possible.

### **Precautions**

1. The room should be well lit and well ventilated.
2. There should not be any noise in the room.
3. The seating arrangement should be comfortable.
4. There is no time limit.
5. Instructions should be made clear to the subject.
6. No item should be left unanswered.
7. Proper rapport should be established before starting the practical.

### **Test Administration**

The subject was called to the psychology lab. After the rapport was established, instructions were given and the test material was provided to her. After she completed the test, her answer sheet was taken for scoring.

### **Verbal Report**

As given by the subject

### **Behavioural observation**

Your observation of the subject

### Scoring

Scoring is done by hand, with the help of a scoring key. Right answers are given 1 mark and wrong answers are given zero. Then all the marks for each column are added. Thereafter, a single score is obtained by adding the total scores of the five columns. The percentile score and grade corresponding to this are noted down from the manual for analysis.

### Discrepancy score

The difference between the score a person obtains on each set and that normally expected for his total score is called the discrepancy score shown numerically as 0, -1, +2, -2, +1. If a person's score on one of the sets deviates by more than 2, his total score on the scale cannot be expected at its face value as a consistent estimate of his general capacity for intellectual activity. However for general purposes the total score appears to be relatively valid even when discrepancies of more than 2 points occur in the break up.

## RESULTS

### Discrepancy scores

Sets	A	B	C	D	E	Total Score
Actual						
Expected						
Discrepancy						

Raw Score	Percentile	Grade	Interpretation

## ANALYSIS AND INTERPRETATION

The raw score obtained by the subject was \_\_\_\_\_ and her score on five sets A, B, C, D and E was \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ respectively. The discrepancies corresponding to raw scores came out to be \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ respectively. Since the discrepancies are not deviating from +2, -2, the scores are accepted to be valid measures of a person's general intellectual capacity. (Even if discrepancies of more than 2 points occur in the break up, for general purposes the total score can be taken as relatively valid)

The subject obtained a percentile score of \_\_\_\_\_, corresponding to grade \_\_\_\_\_. This implies that she has \_\_\_\_\_ capacity to forge new insights and to discern meaning in confusion. She has \_\_\_\_\_ ability to perceive and identify relationships. Her ability to generate new, largely non-verbal concepts, which make it possible to think, clearly is also \_\_\_\_\_. This shows her \_\_\_\_\_ capacity to think clearly.

## CONCLUSIONS

My subject has obtained a percentile score of \_\_\_\_\_, corresponding to grade \_\_\_\_\_, which implies that she is intellectually.

## DAVID'S BATTERY OF DIFFERENTIAL ABILITIES

### PROBLEM

To assess the aptitude of the subject in different areas using David's Battery of differential abilities

## BASIC CONCEPTS

### Define Aptitude

Differentiate between aptitude, intelligence and achievement.

Refer to manual to write the different areas of aptitude.

## METHODOLOGY

Description of the test (including description of mental abilities, reliability and validity)

## PROCEDURE

Materials required

Subject details

Rapport formation

Instructions (first person)

Precautions

Conduction of the test

Behavioural note

Introspective report

**Data** (includes the answer-sheet for all the tests, psychomotor ability and the profile sheet)

## RESULT TABLE

	Dimension	Raw Score	Sten Score	Interpretation
1.	VA	13	7	Average
2.	RA	8	8	High
3.	NA	14	9	High
4.	PM	36	8	High

### Data analysis and Interpretation (based on 8 mental abilities)

1. Verbal Ability : Raw Score = 13  
Sten Score = 7

The subject has average verbal ability. It means her teachability in vocabulary development, new language and verbal instructions is functioning of average level.

2. Numerical Ability : Raw Score = 14  
Sten Score = 9

Subject has high ability on numerical operations. These is accuracy in performance and well in processing data.

3. Reasoning Ability : Raw Score = 8  
Sten Score = 8

Subject's potential is extremely high in understanding relationships and has high ability to apply induction and reasoning. Subject can do well in table involving reasoning, logical thinking, programming and engineering.

4. Psychomotor Ability : Raw Score = 36  
Sten Score = 8

Subject can perform accurately under speed the psychomotor functioning. Subject is excellent in doing manual tasks and can be successful in assembling work.

## CONCLUSION

**Conclusion:** Subject has average verbal ability but high numerical, reasoning and extremely high psychomotor ability.

## MAUDSLEY PERSONALITY INVENTORY

**PROBLEM:** To assess the personality of the subject using Eysenck's Maudsley Personality Inventory.

### BASIC CONCEPTS

#### Define Personality

Explain all the trait theories

Techniques of personality assessment

### METHODOLOGY

Description of the test (including description of dimensions, reliability and validity)

### PROCEDURE

Materials required

Subject details

Rapport formation

Instructions (first person)

Precautions

Conduction of the test

Behavioural note

Introspective report

**Data** (includes the response sheet and the profile sheet)

(Neuroticism)      RAW SCORE = 39      Converted Score = 9

(Extraversion)      RAW SCORE = 39      Converted Score = 9

**Data Analysis and Interpretation** (based on 2 dimensions and profile sheet)

#### (i) *Introversion vs. Extraversion*

The subject has a raw score of 39 in extraversion, which corresponds to sten score of 9. This means that the subject is high on the scale and is an extrovert.

#### (ii) *Stability vs. Neuroticism*

The subject has a raw score of 39 in neuroticism which corresponds to a sten score of 9. This means that the subject is high on the scale and has neurotic tendencies.

## CONCLUSION

The subject is highly extrovert having high neurotic tendencies.

## TITLE: ADJUSTMENT INVENTORY FOR SCHOOL STUDENTS (AISS)

**PROBLEM/OBJECTIVE:** To measure the adjustment pattern of an individual using a standardized test of adjustment for school students by A.K.P. Sinha and R.P. Singh.

### BASIC CONCEPT

The concept of adjustment has originated from the term 'Adaptation'. Adjustment is a psychological process where an individual copes and responds to his environment operational

definition of the world adjustment signifies that if the individual masters or deals with the demand made upon him by his inner or outer environment, the person is said to be adjusted.

An individual makes efforts to deal with environmental biological, physical, social, internal and external demands. Adjustment is the outcome of such efforts.

## **CHARACTERISTICS OF ADJUSTMENT**

### **Adjustment is subjective:**

Values, prejudices, attitudes, social norms etc. make adjustments—A subjective process which is known only to the person who is adjusting.

### **Adjustment is a continuous process:**

This is a process that continues throughout the various stresses and strains of life.

Adjustment varies from culture to culture.

A person, who is considered to be well-adjusted in a particular society with a particular cultural background, may not be considered the same in another culture.

In the present test, adjustment is being measured in three different areas:

#### **(a) Social:**

Man lives in a society and needs to be accepted by it. He has to follow norms and rules of the society to be well-adjusted. He has to seek approval of the society for any activity, social adjustment in school could involve coping with pressure exerted by the peer group, accepted by the group, good inter-personal relationship with members of the opposite sex, etc.

#### **(b) Emotional:**

An individual is emotionally adjusted if he is happy with himself who realizes his own potential, stress and is happy with what he has achieved can be said to be emotionally well-adjusted.

#### **(c) Educational:**

An educationally well-adjusted person is one who has ability to think and to innovate. An individual who is contented with what he achieves academically can be called educationally well adjusted.

## **METHODOLOGY, HISTORY AND DESCRIPTION**

Adjustment inventory for school students (AISS) seeks to segregate well-adjusted secondary students (age 13-18) in three areas of adjustment.

- Social
- Emotional
- Educational

The test consists of sixty items where subject is required to answer in terms of 'yes' or 'no'. Each item in the test is scored as per instructions given in the manual. High score on any area is treated as a sign of maladjustment.

### **Reliability:**

Split Half Method—95

Test-Retest Method—93

Procedure materials Required

AISS inventory, AISS response sheet, scoring sheet and pencil.

### **Preliminaries** \_\_\_\_\_

### **Rapport Formation**

### **Instructions:**

Following are some questions covering your problems, which have two response alternatives 'yes' and 'no'. Read every question carefully and decide whether you want to answer it with

‘Yes’ or ‘No.’ If your answer is in ‘Yes’, then mark (Y) under ‘yes’ and if ‘No’ mark (N) in the cell ( ) under ‘No’. Remember your answer will not be total to any person, so please give the correct answer without hesitation you may take your own time, but try to finish as soon as possible.

### **Administration and Scoring/Conduction:**

The AISS inventory was given to the subject and was completed within 20 minutes by marking. The total score was interpreted according to the categories against the range of scores.

### **Behavioural Report**

Introspective Report \_\_\_\_\_

#### **Data**

Total Score	:	15
Social	:	4 Good
Emotional	:	6 Average
Educational	:	5 Average

### **Interpretation:**

The AISS manual was used to assess the adjustment of the subject on the following three areas:

- Social
- Emotional
- Educational

The subject has attained a total score of 15 in the following 3 areas:

#### **Social:**

The subject got a raw score of 4 indicating category B. Thus the adjustment of the subject in this area is **good**.

This can be ascertained by the subject’s response to the following questions:

- Do you avoid meeting your classmates?
- Are you a shy nature?
- Are you able to get friendly with everyone easily?

#### **Emotional:**

The subject got a raw score of 6 indicating category C. Thus the adjustment of the subject in this area is average. This can be ascertained by the subject’s response to the following question:

- Are you always afraid of something in your school?
- Do you angry classmates who you think better than you?
- Are your often dissatisfied with your school?

#### **Educational:**

The subject got a raw score of 5 indicating category C. Thus, the adjustment of the subject in this area is average. This can be ascertained by the subject’s response to the following questions:

- Are you afraid of examination?
- Do you forget soon what you have read?

### **CONCLUSION**

The subject’s adjustment is good in social area, average in emotional area and average in educational area.

Or, the whole adjustment level of the subject is functioning at average level.



## ANXIETY TEST

### SCAT

**Objective:** To assess the anxiety level of the subject using Sinha's Comprehensive Anxiety Test (SCAT).

**Basic Concept:** Anxiety is increased arousal accompanied by feeling of fear and apprehension.

If such feelings persist for a long period of time, they can produce harmful effect. It is a general uneasiness of ominous feeling that may get associated with anything specific and persist for a month or longer. In **Freudian** theory, anxiety is unpleasant feeling of tension experienced by individuals in reaction to unacceptable wishes or impulses.

According to Freud, there are three types of anxieties.

**Neurotic:** Which is due to Id, Ego conflict.

**Moral:** Due to conflict of Id and Super ego.

**Objective Anxiety:** Due to real external threat.

### History/Description:

**A.K.P. Sinha** and **L.N.K. Sinha** found that existing anxiety test does not cover certain facts of anxiety. There also was a good deal of agreement and confusion concerning concepts of anxiety. This test has been designed to elicit self-rating on items descriptive of anxiety reactions to following areas:

1. Health apprehension and injury.
2. Area of ambition (Success or failure in work).
3. Family anxiety.
4. Anxiety involving love and friendship.
5. Worries regarding future.
6. Worries regarding civilization, wars, virtues.
7. Guilt and share.
8. Physiological and physical manifestations.
9. Psychological aspects.

The test consists of 90 Yes/No type questions. It can be administered on people of 19-24 years of age. The administration time for test is approximately 15-20 minutes.

**Reliability:** Test-Retest Method (0.85)

**Validity:** Between SCAT and Taylor's Manifest Anxiety Scale is 0.62.

**Requirement:** Questionnaire, Manual, Pen.

Preliminaries

Name	:
Age	:
Sex	:
Class/Education Qualification	: Class XII
Place of Conduction	: Psychology Lab

## RAPPORT FORMATION

The subject was made to feel at ease with the lab conditions so he/she could carry out the experiment without hesitation.

### Instruction:

This is a SCAT booklet consisting of 3 pages with some statements concerned with your behaviour and temperament. Against each question there are two options 'Yes' and 'No'. You have to read the question and put your views by making a cross (x) on either Yes or No.

### Administration:

The SCAT booklet was given to the subject which included questions of behaviour and temperament with options 'Yes' and 'No'. The subject was asked to put his views by making a cross (x) on either 'Yes' or 'No'.

### PRECAUTION

1. Subject shouldn't skip questions.
2. No time-limit but try not to exceed more than 15-20 minutes.

### Behavioural Report

I observed that the subject-participated in the experiment willingly. He/She was concentrating while attempting the questions and finished the test in time.

### Introspective Report

'The test was really good, the questions involved good aspects, it was very interesting', said the subject about the experiment.

Pages	2	3	4	Total
Raw Scores	5	5	7	17

Percentile : 30-40

Category : BETWEEN NORMAL AND LOW ANXIETY LEVEL

Data Analysis : On left page

#### Data Interpretation

The subject was found to have anxiety between normal and low anxiety level. The percentile was between 30-40.

The subject has normal anxiety level in general. He/She doesn't get anxious in day-to-day activities. He/She doesn't get hassled with daily situations.

But as the percentile is between low and normal anxiety level so for but in some situations he/she may need some kind of motivation for arousal. He/She may be indifferent to some situations that would otherwise be anxiety-provoking.

### CONCLUSION

The subject was found to have anxiety between normal and low anxiety level.