NIEPID INDIAN TEST OF INTELLIGENCE

Examiner Manual

All enquiries regarding this test:
visit our website : www.niepid.nic.in
e-mail : nimh.director@gmail.com
          rehabpsydept@gmail.com

Project Advisory Team

Shri. B. V. Ram Kumar, Director (Offg.), NIEPID

Dr. Saroj Arya, Principal Advisor

Project Investigators

Dr. G. Sri Krishna, Principal Investigator (2016-2022)

Dr. Binapani Mohapatra, Principal Investigator (2016-2021)

Dr. R. Shilpa Manogna, Principal Investigator (2021-2023)

Mr. Dashrath Choudhari, Principal Investigator (2022-2023)

Ms. Keertisudha Rajput, Co-Investigator (2022-2023)

Dr. Ambady, K. G., Co-Investigator (2022-2023)

Dr. Sunita Devi, Co-Investigator (2022-2023)

Research Staff

- Mr. Rahul Ghosh, Research Officer (July, 2016 - July, 2017)

- Ms. Venkata Naga Gayatri, Research Officer (March 2017- Sep. 2017)

- Ms. Ruchi Srivastava, Research Officer (April 2019 - June 2020)

- Ms. Aparna. M, Asst. Research Officer (April 2019 - June 2020)

- Ms. Saila Kumari, Asst. Research Officer (July, 2016 - July, 2017)

- Mr. Raja Mohan Kandukuri, Asst. Research Officer (June 2016 - May 2017)

- Ms. Annapurna Medapalli, Asst. Research Officer (Feb. 2017- Sep. 2017)

- Ms. Venkata Subhashini, Asst. Research Officer (May 2019 - June 2020)

- Dr. Vijaya Vardhana Raju, Asst. Research Officer (June 2022 - Dec 2022)

IV

डॉ. वीरेन्द्र कुमार
DR. VIRENDRA KUMAR
सामाजिक न्याय और अधिकारिता मंत्री
भारत सरकार
MINISTER OF
SOCIAL JUSTICE AND EMPOWERMENT
GOVERNMENT OF INDIA

सत्यमेव जयते

आज़ादी का
अमृत महोत्सव

कार्यालय : 202, सी विंग, शास्त्री भवन,
नई दिल्ली–110115
Office : 202, 'C' Wing, Shastri Bhawan,
New Delhi-110115

Tel. : 011-23381001, 23381390, Fax : 011-23381902
E-mail : min-sje@nic.in
दूरभाषः 011-23381001, 23381390, फैक्सः 011-23381902
ई-मेलः min-sje@nic.in

संदेश

'आत्मनिर्भर भारत' के सिद्धांत से प्रेरित और "मेक इन इंडिया" की प्रतिबद्धता के साथ, हमारी सरकार दिव्यांग व्यक्तियों, हाशिए पर रहने वाले और पीछे छूट गए हैं, ऐसे सभी लोगों को सशक्त बनाकर जीवन की गुणवत्ता में सुधार लाने के लिए समर्पित है। हम उन्हें स्वतंत्र बनने के लिए सशक्त बनाने और पूर्ण समावेशन को बढ़ावा देने की दिशा में काम कर रहे हैं। कई उपाय और योजनाएं शुरू की गई हैं। दिव्यांगों के प्रबंधन के लिए बेहतर उपकरण और तकनीक विकसित करने के लिए अत्याधुनिक प्रौद्योगिकियों को अपनाने की आवश्यकता है। मंत्रालय "बौद्धिक संपदा" पर अपना ध्यान केंद्रित करते हुए, नए विचारों के सृजन और उत्पादों, प्रक्रियाओं और सेवाओं में इसके प्रसार   का समर्थन के लिए हमेशा तैयार है।

मुझे यह जानकर खुशी हुई कि दिव्यांगजन सशक्तिकरण विभाग के तहत राष्ट्रीय बौद्धिक दिव्यांगजन सशक्तिकरण संस्थान (एनआईईपीआईडी), सिकंदराबाद ने नया स्वदेशी एनआईईपीआईडी भारतीय बुद्धिमत्ता टेस्ट विकसित किया है, जो भारतीय जनसंख्या पर मानकीकृत है। यह परीक्षण भारत की सामाजिक-सांस्कृतिक पृष्ठभूमि को ध्यान में रखते हुए विकसित किया गया है। यह एक मील का पत्थर है, जो दर्शाता है कि भारत है बौद्धिक दिव्यांगता वाले व्यक्तियों की जरूरतों को पूरा करने में आत्मनिर्भर। मुझे उम्मीद है कि इस परीक्षण का उपयोग न केवल भारत में बल्कि अन्य दक्षिण एशियाई देशों में भी ।Q के मूल्यांकन के लिए किया जाएगा।

मुझे यकीन है कि इस उपकरण का आगे से ।Q मूल्यांकन और प्रमाणन में बड़े पैमाने पर उपयोग किया जाएगा। मैं ऐसे महत्वपूर्ण अनुसंधान परियोजना को प्रोत्साहित करने और वित पोषित करने के लिए एनआईईपीआईडी, सिकंदराबाद की पूरी अनुसंधान टीम और दिव्यांगजन सशक्तिकरण विभाग की गहरी सराहना करता हूं।

शुभकामना सहित

(डॉ. वीरेंद्र कुमार)

राजेश अग्रवाल, भा.प्र.से.
सचिव
Rajesh Aggarwal, IAS
Secretary

भारत सरकार
सामाजिक न्याय और अधिकारिता मंत्रालय
दिव्यांगजन सशक्तिकरण विभाग
Government of India
Ministry of Social Justice & Empowerment
Department of Empowerment of Persons with Disabilities
(Divyangjan)

FOREWORD

Intelligence is most commonly thought of as mental ability and quickness of understanding. Many psychologists, clinicians, teachers and researchers have shown keen interest over the years in measurement of intelligence. The testing of these capabilities can be challenging according to the race and culture of the individual under assessment, consequently controversy regarding the viability of IQ tests has raged incessantly. The concept of intelligence and the attempts to measure the intelligence by standardised tests have increased greatly resulting into many standardised verbal and non-verbal tests.

Department of Empowerment of Persons with Disabilities, MSJ&E, Govt. of India has taken many initiatives to improve the availability of Rehabilitation services for Persons with Disabilities. Keeping inline with the UNCRPD principles and the RPWD Act, the department has issued certification guidelines for all major disabilities. The need for indigenous test of intelligence has been conceptualised for many years but has not led to fruitful outcomes.

I am happy that under the DEPwD's Central Sector Scheme of Research and Development, a new indigenous tool by name NIEPID Indian Test of Intelligence has been developed, which is conceptually built on strong theoretical foundations, and has been developed keeping in view the Indian cultural context. I congratulate the project team and wish NIEPID all the success in its future endeavours. I hope that this test will be helpful in resolving all formidable challenges faced by rehabilitation professionals and policy makers.

I urge the rehabilitation professional community and researchers to use the test with a larger purpose of assessment of IQ followed by rehabilitation where required. I also hope that this test serves as a reminder that every child should be able to afford with equitable assessment in order that each learner will reach the heights and depths of intellectual prowess.

With Best Wishes,

Rajesh Aggarwal, IAS
Secretary
Department of Empowerment of Persons with Disabilities
Ministry of Social Justice and Empowerment

5वां तल, पं. दीनदयाल अंत्योदय भवन, सी.जी.ओ. कॉम्प्लेक्स, लोदी रोड, नई दिल्ली–110 003
5th Floor, Pt. Deendayal Antyodaya Bhavan, CGO Complex, Lodhi Road, New Delhi-110 003
Tel. : 011-24369067, 24369055 E-mail : secretaryda-msje@nic.in
🌐 http://depwd.nic.in 🐦 @socialpwds

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VII

श्री राजीव शर्मा, आईएफओएस,
सयुंक्त सचिव

Shri Rajeev Sharma, IFoS,
Joint Secretary

MESSAGE

Psychological testing is in state of rapid change. The last millennium has seen tremendous progress in psychological assessments. There are vast number of tests available for measuring IQ which are mostly developed in Western Countries and adapted to Indian conditions. Intelligence testing has always aided Psychologists, School Counselors and Clinicians in determining the strengths, individual differences and identifying the limitations. To keep abreast of the current developments, DEPwD has entrusted NIEPID to develop an indigenous test to measure IQ.

I am very happy that **NIEPID Indian Test of Intelligence** has been developed with strong psychometric properties and is culturally appropriate. I hope that this test will be a valuable tool for the study of mental development and cognitive abilities of Indian children. This test will be very useful for assessment of IQ and identification and certification of Persons with Intellectual Disabililty, planning for cognitive intervention, counselling, clinical practice, educational, vocational training and research purpose.

I urge the professionals to use the test results not only for classification of intellectual disability but also for planning appropriate intervention to bring out the best potential in the individual.

Sd/-
Shri Rajeev Sharma
JOINT Secretary, DEPwD

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PREFACE

At the heart of any science lies an unquenchable thirst for the new ways to understand the world in which we live. The needs of society drive innovation, and innovations in intelligence test development throughout the millennium reflect the social milieu in which they occurred. Recent research evince that intelligence is composed of specific mental abilities which cluster into higher order cognitive domains. The newly developed test known as **NIEPID Indian Test of Intelligence** is based on five factor model, namely Knowledge, Fluid Reasoning, Quantitative Reasoning, Visual Spatial Reasoning and Working Memory. This test will contribute to a more widespread and new informed knowledge of understanding and solving problems of identification and assessment of Persons with Intellectual Disabilities and provide positive steps to improve their quality of life.

Though Intellectual Disability is a well documented developmental disability, most of the screening and diagnostic tools for assessment and diagnosis of Intellectual Disability are intended for western population. As one cannot undermine the importance of cultural influence in the understanding of any disorder or disability, it was imperative that a tool for assessment of Persons with Intellectual Disability be developed considering the Indian socio-cultural context.

The present tool for assessment of intelligence grew out of a number of meetings and conferences of professionals specialized in the field Rehabilitation Psychology and Disability. It is a result of vigorous brain storming and work of all the experts who have achieved national and international recognition and have diligently provided wisdom and insights in the development of the tool. I sincerely appreciate the significant contribution of members of the expert committee and principal investigators who have assisted in the development of NIEPID Indian Test Intelligence.

This test is an individually administered, comprehensive instrument for assessing intelligence of children between the ages 3 -18 years. It is a valid measure with certain distinct features. The test administration is flexible to suit an individual's behavioural limitations and the test materials are interesting to assess the cognitive potential of children.

This test will be effective in assessment and evaluation of Persons with Intellectual Disability. It is a standardized tool with substantial degree of reliability and validity having sound psychometric properties. It is of national importance since it will be used for issuance of Disability Certificate for Persons with Intellectual Disability so that they can accrue the social benefits and concessions given by Government of India.

I expect this document to be of interest to students, professionals and parents concerned with understanding and assisting individuals with varying degrees of intelligence .

Shri. B. V. Ram Kumar
Director, NIEPID

ACKNOWLEDGEMENT

materials, conducted data collection during various phases of the project and documenting the progress of the project. We are thankful to them.

I am particularly grateful to the numerous examiners who assisted in collecting data for concurrent validity studies, test – retest studies and special population studies.

I wish to express my sincere gratitude to the esteemed members of DGHS for organizing a special meeting on 17th August, 2023 at New Delhi and validating NIEPID Indian Test of Intelligence and recommending the test to be added in the gazette along with the already existing tests of Intelligence. Dr. Sunita Mondal, HOD, Physiology, LHMC Chairperson of the meeting deserves a special word of gratitude for her formidable leadership.

I am most grateful to Dr. Rupali Roy, ADG (RR), DGHS, Nirman Bhawan, Dr. Amita Vohra Bali, DDG (P), DGHS, . Dr. Rahul Saha, Dept of Psychiatry, SJH, Dr. Sheffali Gulati, Prof, Dept. of Paediatric, AIIMS, Delhi, Dr. Sharmila B. Mukherjee, Prof, Dept. of Paediatric, LHMC, Dr. Om Sai Ramesh V, Prof. Dept. of Psychiatry, LHMC, Dr. Bhavuk Garg, Asso. Prof. Dept. of Psychiatry, LHMC, Dr. Parul Srivastav, Joint Director, NIPCCD, Dr. Sumit Kr. Kansotia, CMO (NFSG), Dte.GHS, Dr. Kuber Nath Ram, SMO, DGHS for offering several useful insights and recommendations. The invaluable inputs and constructive suggestions given by the revered members of DGHS have been an inexhaustible source of inspiration for the entire team of the project.

Data collection was a huge task as NIEPID Indian Test of Intelligence is an individually administered test and each administration took around 60 to 120 minutes. The sample size for the final phase was 4070 which was a large number for an individually administered test. Many senior faculties, staff and trainees of long-term courses have participated in PAN India data collection and the mindful entry of the data in excel sheet during the last phase of the study. They have also shared their experiences and observations from the field which have added value while making changes in the final test material. We express our sincere gratitude to all of them for their active participation, genuine and timely efforts in carrying out the research work of DITI project.

Any psychological test cannot be developed without voluntary, active and genuine involvement and cooperation of the participants. Various Government and Non- Government officials, Assistant Directors of Composite Regional Centers, Officer In-charge of Regional Centers, school Principals, Education Officers, Social Welfare Officers, Women and Child Welfare Officers, staff members of various organisations from various states across nation have

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Chapter 1
Introduction

The realm of psychological science relies heavily on increased precision of assessment and testing. Intelligence testing began as a scientific pursuit to study individual differences in human intellect. The assessment of general intellectual ability is a complex task because of its potential effects on lives of human beings.

The field of intelligence testing is currently in a stage of significant progress. In the last decade, new models of intelligence have emerged which have altered the landscape of cognitive science. Recent research indicates that intelligence is composed of specific abilities that appear to cluster higher order cognitive functions.

As we embark upon the 21st century of assessment of intelligence, there is an opportunity and reason for a fresh perspective and new approach to the science of intelligence testing. The needs of the society drive innovations in test construction which formulates the rationale for the development of NIEPID Indian Test of Intelligence.

Description of NIEPID Indian Test of Intelligence

NIEPID Indian Test of Intelligence is an individually administered test of intelligence. The age range for this test is 3 years to 18 years. The complete scale consists of 112 items under 5 factors with 11 dimensions. It can also be used for testing intelligence of individuals suspected with Intellectual Disability.

NIEPID Indian Test of Intelligence is developed deriving five

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factor model by reviewing Catell-Horn-Carrol (CHC) theory's 16 factors and Standford Binet's 5 five factors. The extensive research findings provide evidence for these five factors to be having higher 'g' factor loadings. This theory has been taken as a basis for the construction of NIEPID Indian Test of Intelligence as it is the most researched, empirically supported and comprehensive hierarchical psychometric framework of the structure of cognitive abilities. Most of the currently popular tests have also revised their assessment tools utilizing C-H-C theory.

Factor Structure of NIEPID Indian Test of Intelligence

The five factors used in NIEPID Indian Test of Intelligence are given below:

1. **Knowledge** (Gc) (Crystallized Intelligence)
2. **Fluid Reasoning** (Gf) (Fluid Intelligence)
3. **Quantitative Reasoning** (QR) (Quantitative Reasoning)
4. **Visual Spatial Reasoning** (Gv) (Visual Processing)
5. **Working Memory** (Ggsm) (Short Term Memory)

Definition of Five Factors

1. **KNOWLEDGE (Gc) :** Knowledge is an individual's collected reservior of general information acquired through interaction with one's environment in daily life. These settings may be home, school or work place. This factor is equivalent to crystallized intelligence proposed by Cattell (1940) and revised by McGrew (2021). It comprises of acquired content like vocabulary stored in long term memory. The Knowledge factor in NIEPID Indian Test of Intelligence has three dimensions namely, Information, Vocabulary and Comprehension.

2. **FLUID REASONING (Gf) :** Fluid Reasoning refers to mental operations using inductive and deductive reasoning that an individual uses when faced with a relatively novel task that requires thinking, reasoning and analysis. These mental operations may include forming and recognizing concepts, perceiving relationships among patterns, drawing inferences, comprehending implications and problem solving. The Fluid Reasoning factor in this test includes two dimensions namely, Verbal Analogies and Object Series.

3. **QUANTITATIVE REASONING (QR) :** Quantitative Reasoning represents the ability to reason inductively and deductively when solving quantitative problems. It is the fundamental skill to understand the concepts and solve the problems in quantitative terms. It does not include higher computational skill or refined store of quantitative knowledge. This factor includes Arithmetic as its dimension.

4. **VISUAL SPATIAL REASONING (Gv) :** Visual Spatial Reasoning is the ability to think, generate, perceive, analyse, synthesize, store, retrieve, manipulate and transform visual and spatial patterns and stimuli. It is the ability to make use of simulated mental imagery to solve problems. These abilities are measured frequently by tasks that require the perception and manipulation of visual shapes and forms usually of a figural or geometric nature. To assess this ability, NIEPID Indian Test of Intelligence includes Spatial Concepts and Square Construction as its dimensions.

5. **WORKING MEMORY (Ggsm) :** Working Memory is the ability to apprehend and hold information in immediate awareness. Ggsm is limited capacity system, as most individuals can retain up to seven 'chunks' ($\pm$ 2) of information in this system at one time. Given the limited amount of information that can be held in short-term memory, information is typically retained for only few seconds before it is either lost or transferred to long term memory. This ability has a significant role in processing and systematizing information. In this test, Working Memory factor is designed to assess through the dimensions of Digit Span Forward, Digit Span Backward and Number-Name Sequence.

Factor Structure of NIEPID Indian Test of Intelligence

Knowledge	Fluid Reasoning	Quantitative Reasoning	Visual Spatial Reasoning	Working Memory
Vocabulary	Verbal Analogies	Arithmetic	Spatial Concepts	Digit Span Forward
Information	Object Series		Square Construction	Digit Span Backward
Comprehension				Number Name Sequence
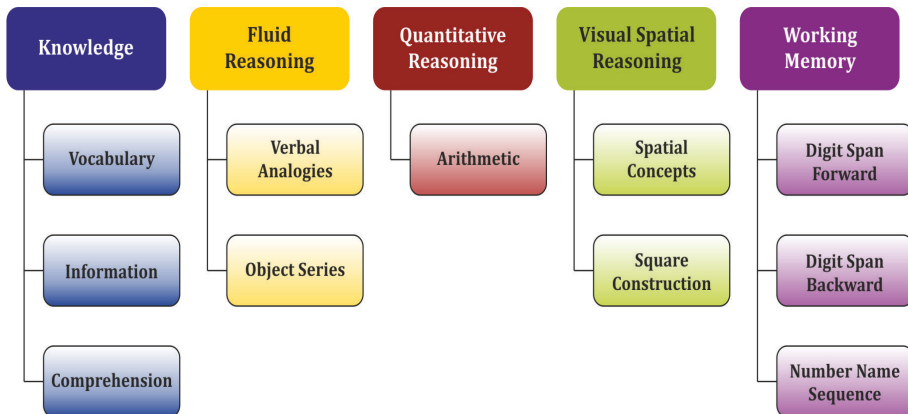
Test Materials

NIEPID Indian Test of Intelligence comprises of the following test materials.

1. Test Booklet
2. Record Form
3. Examiner Manual
4. Technical Manual
5. Square Construction Puzzle: Eight Square shaped wooden frames, triangular wooden pieces of four different sizes. Largest size is 'A', next 'B', 'C' and Smallest size is 'D' in two colors, White and Red
6. Blocks (10 wooden cubes)
7. Stopwatch

FACTOR 1 - KNOWLEDGE

Dimension – 1

VOCABULARY: This test consists of 9 pictures which the subject is required to tell the name and its use. It also comprises of 12 words which the subject needs to define in terms of its properties and use. This dimension measures subject's verbal concept formation and word knowledge.

Scoring: Each item is scored 2, 1 or 0.

Dimension – 2

INFORMATION: It measures the individual's factual knowledge about persons, places, and common concepts. This test includes 11 questions pertaining to general information which the subject is required to answer.

Scoring: Each item is scored 1 or 0.

Dimension – 3

COMPREHENSION: This test consists of 12 questions to assess comprehension where the subject is required to answer based on his or her understanding of general principles and social situations. It assesses the individual's conceptualization, verbal reasoning and verbal expression.

Scoring: Each item is scored 2, 1 or 0.

Materials Required
- ✓ Test Booklet
- ✓ Record Form
- ✓ Response Sheet

Timing: No time limit

FACTOR 2 - FLUID REASONING

Dimension – 1

VERBAL ANALOGIES: It helps in understanding the individual's ability to logically analyse the relationship between the given word pair. This test consists of 8 items where first word pair is given and in second word pair, only one word is given and for the other word blank is given. The subject has to analyse the relationship between the given word pair and give the word for incomplete pair or blank.

Scoring: Each item is scored 1 or 0.

Dimension – 2

OBJECT SERIES: It measures the analytical ability of an individual leading to a logical conclusion or solution for a problem. In this subtest a series of geometric shapes, images or objects are presented like circles, squares, rectangles, triangles or other objects such as arrows, cats, flowers, moons, stars, and the like. The subject is

required to complete the series by selecting appropriate response from the given options.

Scoring: Each item is scored 1 or 0.

Materials Required
- ✓   Test Booklet
- ✓   Record Form
- ✓   Response Sheet

Timing: No time limit

FACTOR 3 - QUANTITATIVE REASONING

Dimension – 1

ARITHMETIC: In this test, individual is expected to answer 13 day-to-day numerical-word problems.

Scoring: Each item is scored 1 or 0.

Materials Required
- ✓   Test Booklet
- ✓   Record Form
- ✓   Response Sheet
- ✓   Wooden Blocks (10)

Timing: No time limit

FACTOR 4 - VISUAL SPATIAL REASONING

Dimension – 1

SPATIAL CONCEPT: This test consists of 8 questions related to left right orientation and direction. It measures an individual's capacity to understand, reason and remember the visual and spatial relations among objects, space and directions.

Scoring: Each item is scored 1 or 0.

Material Required
- ✓ Test Booklet
- ✓ Record Form
- ✓ Response Sheet

Timing: No time limit

Dimension – 2

SQUARE CONSTRUCTION: In this test, the individual is provided a wooden frame and few triangular wooden pieces in red and white colour. A design is presented from the test booklet to the examinee who is expected to make the same design using the given wooden pieces within the given wooden frame. This test has time limit.
Scoring: Each item is scored 2, 1 or 0.

Materials Required
- ✓ Test Booklet
- ✓ Square Board and triangular pieces in White and Red colour
- ✓ Record Form
- ✓ Response Sheet
- ✓ Stop Watch

Timing: 45 seconds to 180 Seconds based on item difficulty level.

FACTOR 5 - WORKING MEMORY

It measures the auditory short term-working memory. It has three dimensions: Digit Span Forward, Digit Span Backward and Number Name Sequence.

Dimension – 1

DIGIT SPAN FORWARD : The examiner will read aloud numbers at the speed of one number per second and the examinee has to repeat the numbers in the same order.

Dimension – 2

DIGIT SPAN BACKWARD : The examiner will read aloud numbers at the speed of one number per second and the examinee has to repeat the numbers in the reverse order.

Dimension – 3

NUMBER NAME SEQUENCE : The examiner will read aloud some numbers and names at the speed of one number-name per second in jumbled order and the examinee will repeat the numbers first in ascending order and then names.

Scoring: Each item is scored 1 or 0

Materials Required
- ✓ Test Booklet
- ✓ Record Form
- ✓ Response Sheet

Timing: No time limit

Applications of NIEPID Indian Test of Intelligence

This test can be used for a broad range of purposes as indicated below.

- • It can be used for assessing intelligence of children in the age range of 3-18 years.

- • It can be used for identification, classification and diagnosis of Persons with Intellectual Disabilities.

- • It can also be used as part of assessment to identify intellectual giftedness, learning difficulties, cognitive strengths and weaknesses.

- • It aids in career counselling and personnel selection.

- It can be used for personal, educational and vocational guidance.

- NIEPID Indian Test of Intelligence results can serve as a guide for treatment planning and placement decisions in Clinical and Educational settings.

- It can be used for planning cognitive intervention programs and research purpose.

Chapter 2
Test Administration

This chapter provides general guidelines for adminstering NIEPID Indian Test of Intelligence. It is essential for the Examiner to become well-versed with these guidelines to ensure a valid test administration and interpretable scores.

Advance Preparation of the Examiner

The examiner should have a thorough familiarity with the test items, test instructions, test materials, recording and scoring. Guidelines for recording scores on NIEPID Indian Test of Intelligence should be adhered to as per the Examiner's Manual. It is advisable to practice test administration to understand subtle cues and observing examinee's behaviour. Standard testing conditions, administration, recording and scoring of the test items should follow uniform conditions. Physical surroundings should be conducive to testing. Give the tests in a natural manner. Talk to subject in his/her own dialect as much as possible. Follow specific instructions for discontinuing each test. The criterion for discontinuing most of the tests is a certain number of consecutive failures. When in doubt, continue to present more items to ascertain that child cannot perform on failed items. If a child expresses his/her dislike to a particular test item, discontinue that test temporarily and the examiner may come back to the test after some time.

NIEPID Indian Test of Intelligence may be administered in any quiet and distraction free locations such as school, class room, office room, clinic, or any other such locale. When testing young children, it may be necessary to have a parent or caregiver present

as an observer only. The examiner should instruct the parent or caregiver not to give any cue to the child in any way or express any verbal or non-verbal reactions during the testing.

General Guidelines

NIEPID Indian Test of Intelligence should be administered under standard testing conditions as given below.

• Examinee's physiological condition need to be healthy since fatigue, sleep deprivation, sickness/illness or any other state changes may hamper the optimal performance of the subject.

• The milieu in which the test is administered is important. The testing room need to have adequate ventilation and well-lit. It is better to avoid dim lighted and dark rooms.

• The sitting arrangement need to be comfortable both for the examinee and examiner.

• The examiner should face the examinee so that the examinee's performance can be clearly observed. The test booklet should be placed in such a way that it is clearly visible to the subject. The examiner should keep the materials ready needed to test each item.

• The test materials must be organized systematically for smooth flow of testing. Layout the test materials sequentially so that it is easily accessible to the examiner during the testing session, but it should be out of child's view. Since the response sheet contains correct responses for some subtest, it is important to cover the text from the subject's view.

• Certain subtests may involve fairly complex administration situations. To illustrate, for Square Construction subtest, the examiners must present the wooden triangular pieces and picture design in a standard manner for all subjects and then read the instructions and begin timing with a stop watch. When

the subject has finished the given design, the examiner must stop timing, record the performance and the time taken, award the appropriate score, and be ready to present the requisite wooden triangular pieces for the next test item.

• The manner and ease which these activities are accomplished by the examiner will influence the child's interest and motivation level to continue the next design or become distracted or bored.

• For timed tests, it is imperative to record accurate time taken by the subject to finish a particular test item. Handling stop watch also needs practice. The stop watch should be operated quietly.

• Examiner should be flexible in order to get the optimal response from the examinee. It is essential to be patient and not to hurry to finish the test.

• Examiners should practice all test times until it becomes smooth flow of testing.

• Environmental and cultural influences of examinee while testing should be considered.

• Examiner should possess the skills to tap the best potential of the subject.

Testing Time

Time required for testing will vary according to the number and complexity of test items and child's alacrity in responding. For tests with time limit, record timings carefully with the help of a stopwatch. If a child stops a test item before the time limit, gently urge him /her to proceed. If the child has not completed within the time limit but still insists on continuing, allow to continue or finish it in order to avoid upsetting the child, but score only for what has

been done within time limit. For tests that do not have a stated time limit, allow enough time for the child to complete the test. If the child becomes fatigued during testing, stop administration at the end of a subtest and resume testing after a short break.

Rapport

The examiner should establish rapport with the examinee by making the subject feel at ease. Establishing and maintaining rappport is a crucial factor in eliciting a child's cooperation and effort throughout the test administraion. This entails examiner's full attention. The attitude and bearing of the examiner facilitate establishing rapport. The examiner's approach must be objective and empathetic, and testing must be done in a warm and friendly atmosphere. The examiner should avoid any manifestations of excitement or over solicitiousness. Children demonstrating overactivity can best be managed by judicious and tactful disregard. The aim is to establish rapport which will keep the child interessted and motivated to make his/her maximal effort to do the best.

Before proceding with testing the examiner should be reasonably satisfied that the child feels calm, nither anxious nor threatened rather he/she is at ease and comfortable in the surroundings.

Training and Technical Qualification

The most important ethical consideration is the qualification of the user. A proper guideline on user qualification has to be adopted for using this test for clinical, academic and research purposes. It includes the knowledge of the test, clinical skills, training and experience in the use of psychological tests. User qualification refers to post-graduation in Psychology or M.Phil. in Rehabilitation or Clinical Psychology having a valid registration with Rehabilitation Council of India.

All examiners should have undergone formal training in psychological assessment having working knowledge of psychometrics, an understanding of general testing procedures, insight into the uses of norm-reference tests and conversant with the specific procedures of intelligence testing.

The users should be trained in NIEPID Indian Test of Intelligence by the Master Trainers trained by NIEPID and should have a valid certificate issued by NIEPID. Professionals who interpret and report test findings should have a comprehensive understanding of concepts such as measurement error, standard scores, reliability, validity and norms. All test users should have a thorough understanding and training in the standardized administration of the tool/instrument, scoring procedures for calculating accurate raw scores and scaled scores. The user should be familiar with the emotional and cognitive factors that may affect the learning or performance. The test user should pay attention to examinee's language and cultural background as well.

Professional and Ethical Considerations

The professional and ethical considerations regarding the importance of accurate assessment of intelligence using NIEPID Indian Test Intelligence is imperative. Ethical use of NIEPID Indian Test of Intelligence is of paramount importance because it will be widely used in the identification of Developmental Delays and Intellectual Disability which can have a profound impact on a person's life. Professional ethics, technical qualifications, training, limitations, and communicating test results should be adhered to as per guidelines given in this manual.

Professional assessment does not focus only on calculation of scores or description of profile patterns, but emphasizes on a broader understanding of the uniqueness of the individual by obtaining

wide range of information including test scores, behavioural observations and interviews from significant others.

The challenge of interpreting, communicating and writing a psychological report based on NIEPID Indian Test of Intelligence can be complex. Interpretation of test results need to go beyond descriptive reporting and recommend possible treatment strategies, interventions and placement to the decision makers to address the needs of the examinee.

Examiners should be thoroughly conversant with legal and ethical requirements of NIEPID Test results used in the context of screening, placement, employment, forensic reporting or any application that affects peoples lives.

It is the responsibility of the user to ensure that test materials and completed Record Form remain secure and released only to professionals who will safeguard the value of NIEPID Indian Test of Intelligence as a measurement tool.

Chapter 3
Subtest Administration and Scoring

This chapter consists of specific instructions for administering and scoring of NIEPID Indian Test of Intelligence. A standard set of administration guidelines and objective scoring criteria are provided in this chapter. The examiner may need to practice to become accustomed to sub-test administration reocrding and scoring procedures.

Begin the testing session by putting the subject at ease which may involve some informal converstaion like asking the name, the standard in which he/she is studying, hobbies, likes and interests. After establishing rapport, the following general instructions need to be given.

"Now we are going to do a lot of interesting activities like looking at pictures and describing them, doing puzzles and answering questions. Many people do not answer each and every question but you try to do your best."

If a child says he/she does not know the answer to a question or cannot perform a task, examiner may remark, "try your best". A reasonable amount of flexibility is permitted in making the child understand the question, yet ensure adherence to standard testing administration procedures.

Check whether the examinee understood the test instructions. Ask "Do you have any doubts? Are you ready! If the examinee understood the instructions say "Shall we proceed?". and then start testing.

Factor 1 - Knowledge

Dimension 1 - Vocabulary

Vocabulary subtest comprises of 9 pictures, which the subject has to see and tell the name as well as its use. It also consists of 12 words which the subject has to define in terms of its properties and use.

Test Item Nos. 1-9

Give the following Instruction: *"I am going to show you some pictures you have to name the object and tell its use".*

I will give you an example. Listen carefully.

E.g.: Now show the picture of the train and say, *"Look at this picture"*. and ask, *"What is this?"* If the subject says the correct name then ask him/her, *"What is the use of the train?"* If the subject does not respond or responds incorrectly, say, *"This is a train. It helps us in travelling from one place to another"*.

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Scoring rule for questions 1 to 9.

1. *Score 2* points if the child says both the name and use of the object correctly based on the scoring criteria given below.

2. *Score 1* if the child says either the name or the use of the object correctly based on the criteria given below.

3. *Score 0* if the child neither tells the name nor say the use of the object correctly.

Note: The description of the answer may differ but must convey the similar meaning given in the scoring criteria. In the same format show other pictures as listed below.

Say let's try some more

Item No.	Object
1.	Skipping Rope
2.	Calendar
3.	Lock
4.	Traffic Lights
5.	Cupboard
6.	Stapler
7.	Axe
8.	Weighing Machine
9.	Nail

Item No. 1 : Skipping Rope

Instructions: Look at the picture. Name the object and tell its use.

1. Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a skipping rope We jump over it. It is used for physical exercises. It has health benefits. **Maximum score: 2**	It is a skipping rope.	It is a children game. A game enjoyed by children. Don't know. No Response

Item No. 2 : Calendar

Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a calendar with dates and months. It has list of events and dates within a particular year that are important for people to schedule time and activities. It tells us date, day and year. **Maximum score: 2**	It is a calendar. It has numbers	It is a book Don't Know No Response

Item No. 3 : Lock

Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a lock opened with key. It is used when we go out, it protects the house. A device made of metal or steel which is used for the safety of house, gate or any other such things. **Maximum score: 2**	It is a lock.	It is a key Don't Know No Response

Item No. 4 : Traffic Lights

Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is traffic signal / lights used to control the traffic.	It is traffic signal / lights	It is a coloured light.
It is used for controlling traffic at road junctions, for the safe and smooth movement of vehicles and reduces frequency of accidents.	Signal lights	Don't Know No Response
Red - Stop Yellow - Wait Green - Go		
Maximum score: 2		

Item No. 5 : Cupboard

Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a cupboard, almirah.	It is a cupboard	It is a box
We keep clothes in it.	It is an almirah	Don't Know
It's a furniture usually contains shelves and has doors used to store things.		No Response
It is used to keep clothes, books or any other valuables things		
Maximum score: 2		

Item No. 6 : Stapler
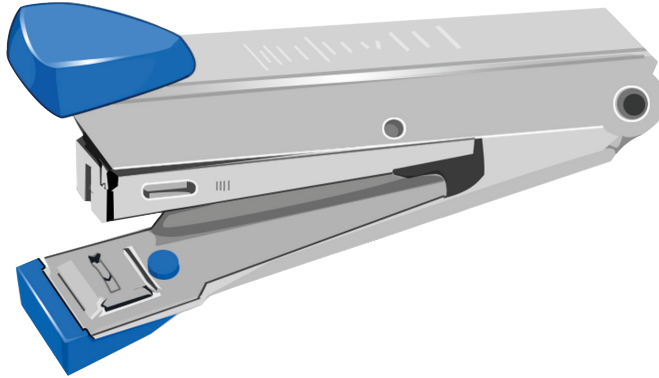
Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a stapler. Binds / pins papers together. A steel metal used to join the papers or attach them together with pins for stapling. **Maximum score: 2**	It is a stapler.	Punch machine Don't Know No Response

Item No. 7 : Axe

Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is an axe, used for cutting wood. A wooden handle with iron blade with sharp edge used for cutting wood. **Maximum score: 2**	It is an axe.	Stick with knife/blade. Don't Know No Response

Item No. 8 : Weighing Machine
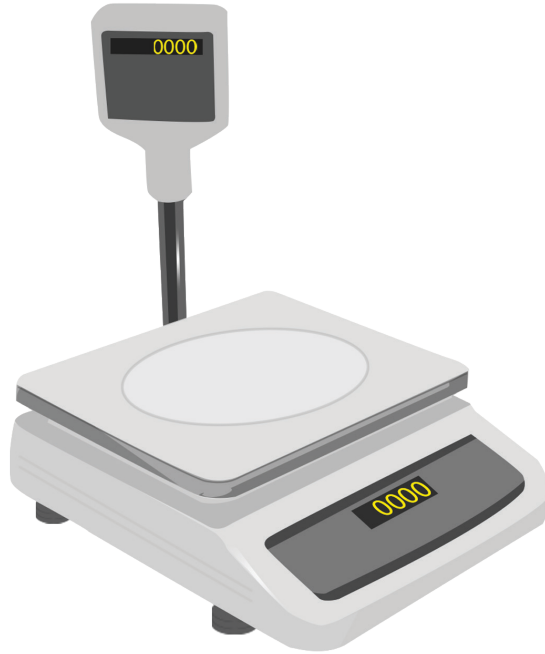
Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a weighing machine. One can weigh objects like sugar, rice, vegetables or any other items **Maximum score: 2**	It is a weighing machine.	It is a machine. Don't Know No Response

Item No. 9 : Nail

Instructions: Look at the picture. Name the object and tell its use.

Scoring Criteria

2 points for both correct name and use	1 point for correct name or use	0 point
It is a nail to hang things like calendar, keys, clothes or any other object. A piece of metal which has pointed end. It makes hole in the wall/door **Maximum score: 2**	It is a nail	To join things Don't Know No Response

Instructions for Test Items 10 to 21

"I am going to say/show few words and you have to say the meaning of the word and describe it". I will give you an example.

Now show the word ...

Dog

E.g.: Say, "*Look at this word. The word is Dog.* Point to the word on the test booklet as you read it to the subject. Ask, *"What is a Dog?"*

"Tell me more about a Dog".

Dog is a domestic animal

It eats meat. It guards our house.

If the response is vague, question further. For example, *'What else does it mean? Explain a little more*". Can you tell me more about it?

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Scoring rule for items 10 to 21

Score 2 if the subject describes the word shown to him/her in terms of either higher level of properties of the object or use of it or both.

Score 1 if the subject tells the meaning of the word based on basic physical properties of the thing or basic use of it.

Score 0 if the subject does not tell the meaning nor use of the word correctly shown to him as given in the scoring criteria.

Note: Refer the response examples given in scoring criteria given below.

Say, 'Let us try some more'.

10	Cat
11	Table
12	Friend
13	Ocean
14	Magazine
15	Dictionary
16	Forest
17	Heavy
18	Relax
19	Disappoint
20	Companion
21	Mimic

Instructions : "I am going to say/show few words and you have to say the meaning of the word and describe it".

Scoring Criteria

Item No. / Word	2 points	1 point	0 point
10. Cat	It is a domestic animal It is a carnivorous It is a mammal A pet animal, kills rats and eat.	Small furry animal. It has four legs, drinks milk, eats rats. It says meow-meow It has sharp teeth and a long tail with bright sparkling eyes.	Don't Know No Response

Item No. / Word	2 points	1 point	0 point
11. Table	Furniture, Made of wood, Usually rectangle, square or circular in shape, has flat surface with four legs. Used for eating, studying writing or working.	Put things on it. We can read, eat on it, work.	Don't Know No Response
12. Friend	Friend is the one whose company we like, Can share anything, Who understands us, We can rely on him/her, Supports us physically and emotionally. loyal, trustworthy.	Helps us, loves us, we enjoy with each other. Plays with us.	Classmate Don't Know No Response
13. Ocean	A large expansion of sea which covers 70% of land.	Water body. Salt water. Fishes and whales and other sea animals live there. Big Sea.	River/ lake Don't Know No Response
14. Magazine	Book or Publication containing articles. Source of entertainment and information.	Book with pictures and stories.	Don't Know No Response
15. Dictionary	Collection of words and their definitions and meanings arranged alphabetically.	Book with words and its meanings.	Don't Know No Response

Item No. / Word	2 points	1 point	0 point
16. Forest	A large area with dense trees and plants, wild animals. Protects from natural disasters.	Large area with trees closes together, a jungle where animals live.	Don't Know No Response
17. Heavy	Something more in weight or mass.	Bulky, hard to lift. Unable to lift.	Don't Know No Response
18. Relax	To rest after being physically and mentally exhausted . To rest or do something enjoyable like listening to music or reading a book.	Take rest, sit or lie down when tired/ stressed. To sit and do nothing.	Don't Know No Response
19. Disappoint	Expectations or hopes get unfulfilled or failed, feel dejected.	Unhappy, dissatisfy.	Don't Know No Response
20. Companion	A person or animal with whom you spend a lot of time together or go some where or live together.	Fellow member, friend, with whom we play.	Don't Know No Response
21. Mimic	Imitating the voice or action of others in an entertaining way.	Imitate. Copy action of others.	Don't Know No Response

Note: The description of the answer may vary but must convey the similar meaning given in the scoring criteria. Examiner should use his/her descretion while scoring keeping in view cultural and environmental factors.

Factor 1 - Knowledge

Dimension 2 - Information

Instructions for Questions 1 to 11

Say " I am going to ask you questions related to general knowledge, answer whatever you think is correct. "

For E.g.: Name any two green colour fruits
Answer: Grapes, Guava, Watermelon, Custard apple, etc..

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Note down the verbatim responses.
Scoring Criteria: Score 1 point for a correct response.
Score 0 point for an incorrect response.

Item No.	Question	1 point	0 point
1.	What are the four essentials for the plants to grow?	Sunlight, Water, Air and Soil	Pot, Pesticide Don't Know No Response
2.	What are the four seasons of the year?	Summer, Winter, Rainy, Autumn	Says less than 4 Don't Know No Response
3.	What is the name of our planet?	Earth	Sun, home/ House Don't Know No Response

Item No.	Question	1 point	0 point
4.	Name three vegetables which grow under the soil?	Beetroot, Carrot, Radish, Potato, Turnip or any local vegetable that grows under soil	Any other name which does not grow under soil Don't Know No Response
5.	Which month in a year will have least number of days?	February	Any other than February Don't Know No Response
6.	What does the heart pump?	Blood	Oxygen, Pulse, Heartbeat Don't Know No Response
7.	Liquids are measured in?	Liters	Kilogram Don't Know No Response
8.	Who was the first Prime Minister of India?	Jawaharlal Nehru	Other than Jawaharlal Nehru Don't Know No Response
9.	How does the water vapour form?	When water is heated to its boiling point. Evaporation	Sunlight Don't Know No Response

Item No.	Question	1 point	0 point
10.	Which substance makes the leaves green in colour?	Chlorophyll	Food, or any other Don't Know No Response
11.	Why is cooking quicker in a pressure cooker?	Because of Pressurized Steam	Heat Don't Know No Response

Note: For questions 1 & 2 children below 8 years and suspected cases of ID or DD can be passed if they tell at least 3 names correctly.

Factor 1 - Knowledge

Dimension 3 - Comprehension

Instructions for Questions 1 to 12

Now, I am going to ask you some questions you have to answer whatever you think is appropriate.

Example: *What do you do when you have fever?*

I will take medicine

After waiting about 20 seconds for an answer the question may be repeated once. The examiner should tell the correct response.

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Say, let us try few more

1) What will you do when you find some one's pencil in the class?

2) What will you do when your friend gets hurt while playing?

3) What will you do if you are lost on your way back to home?

4) Why we should not throw garbage and waste papers on the road?

5) Why we should not take others' things without their permission?

6) What will you do if you are alone at home and someone knocks at the door?

7) Why do we celebrate festivals?

8) What is the need for traffic rules?

9) Why we should offer seat to senior citizens?

10) Why we need to respect national flag?

11) What should be the consequences for committing accident by minors (Below 18 years)?

12) Why do you think mercy petition is required?

Scoring: Score 2, 1, 0 based on the scoring criteria given below.

Scoring Criteria

Item No.	2 points	1 point	0 point
1	Ask for whose it is Give it to teacher	Put in lost property	Doesn't bother, I will keep it. Don't Know No Response
2	Provide first aid Inform teacher or parent Take him/her to doctor nearby.	Help him, Make him sit.	Doesn't bother. Get scared and runaway Don't Know No Response
3	Go to police Call parents Ask someone by saying the address in neighbourhood Use GPS / Navigation / Google map.	Ask for help	Cry Don't Know No Response
4	Prevent from pollution Keep our city neat and clean To live in a healthy environment.	Roads get dirty, We have to use dustbin. It will stink, comes under vehicles, Germs may develop.	Don't Know No Response

Item No.	2 points	1 point	0 point
5	They get worried It gives an impression as a thief.	Bad manners.	Don't Know No Response
6	Ask who it is? Peep through the window/ key hole, find out who it is?	Will not open the door. Open the door after seeing. Tell them to come after some time.	Don't Know No Response
7	It is our custom/tradition/ culture To know and spread its importance Family get together to strengthen relations.	To enjoy, brings happiness. Worship God. To eat different varieties of dishes. Have fun. Play with family.	Don't Know No Response
8	For discipline Prevent accident To abide by the rules.	For our safety. Less traffic, reduce traffic jam.	Don't Know No Response
9	They are physically weak, Lack balance, might fall and get injured. It is a kind and helpful act.	They are elders. We have to respect them.	Don't Know No Response

Item No.	2 points	1 point	0 point
10	Symbol of our independence, patriotism and loyalty to our country, nations pride	It belongs to our country.	Don't Know No Response
11	Parents to be penalized, give counseling to parents and childrens Should not drive without license.	Punishment.	Don't Know No Response
12	To give a chance for change, saves criminals sentenced to death in case of doubtful conviction. Adds human touch.	To save innocent people being punished.	To help them Don't Know No Response

Note: The description of the answer may vary but must convey the similar meaning given in the scoring criteria. Examiner should use his/her descretion while scoring keeping in view cultural and environmental factors.

Factor 2 - Fluid Reasoning

Dimension 1 - Verbal Analogies

Instructions for Test Items 1 to 8

Say, "*Now I am going to say a word pair and a stimulus word. You have to say the appropriate word in response to the stimulus word based on the first word pair*".

Let me give you an example, listen carefully

For example: Leg: Walk:: Hand : Throw/Catch

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Say, Let us try some more.

Scoring Criteria : Score 1 point for a correct response.

Score 0 point for an incorrect response.

Item No.	Item	1 point for a correct response	0 point for an incorrect response
1	Monkey: Climb:: Fish: ?	Swim	Eat
2	Monday: Week:: January: ?	Month	Year
3	Tree: Leaf:: Bird: ?	Feathers/Wings	Fly
4	Page: Book:: Map: ?	Atlas	Globe
5	Driver: Bus:: Pilot: ?	Aeroplane	Ship
6	Foetus: Child:: Seed: ?	Plant	Fruit
7	Pyramid: Triangle:: Cube: ?	Square	Box
8	Phone: Communication:: Aeroplane: ?	Transportation	Fly

Factor 2 - Fluid Reasoning

Dimension 2 - Object Series

Instructions for Test Items 1 to 17

Point to the first picture and say "*Here we have group of pictures following a particular pattern. Identify the option which comes next*"

For example:

A	B	C	D
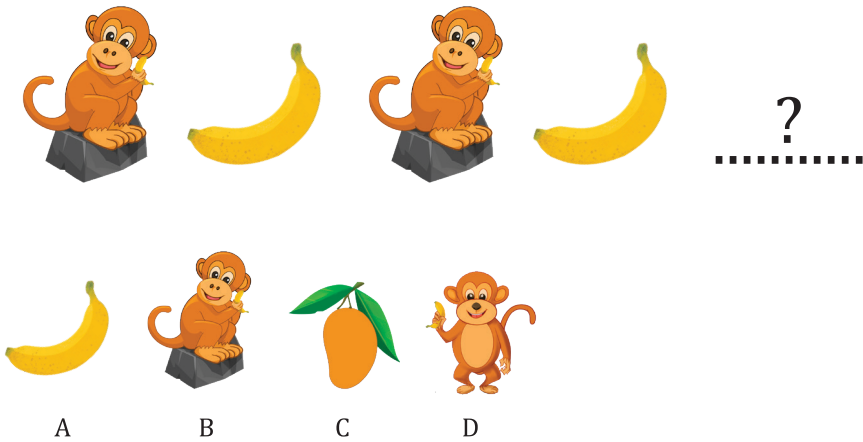
Correct response: **B**
If the subject does not respond or responds incorrectly explain the pattern followed in the example.

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Scoring Criteria
Score 1 point for a correct response
Score 0 for an incorrect response or Don't Know or No Response

Next say "let's try some more".

Item No. 1.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

Examiner: After 60 seconds say, shall we try another one? After 30

| A | B | C | D |

seconds more, say, let's move on to the next one.

Correct Response: **C**

Item No. 2.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

?
....

| | | | |
| A | B | C | D |
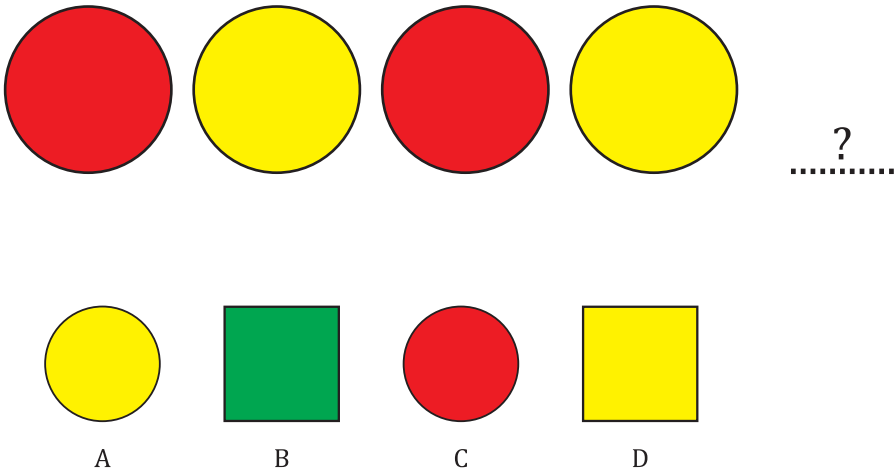
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **C**

Item No. 3.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

A   B   C   D
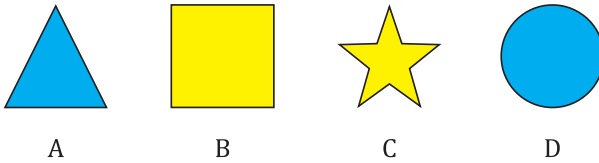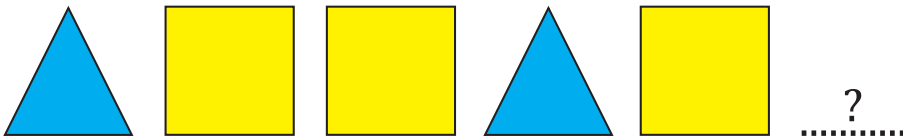
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **B**

Item No. 4.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

.....?.....
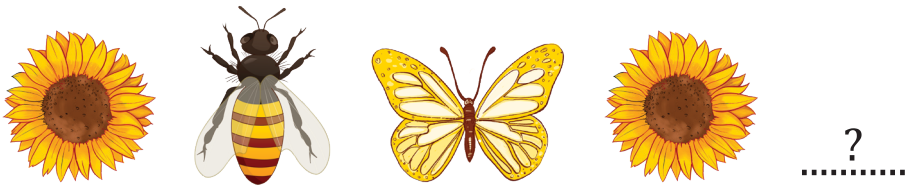
| A | B | C | D |

Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **A**

Item No. 5.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
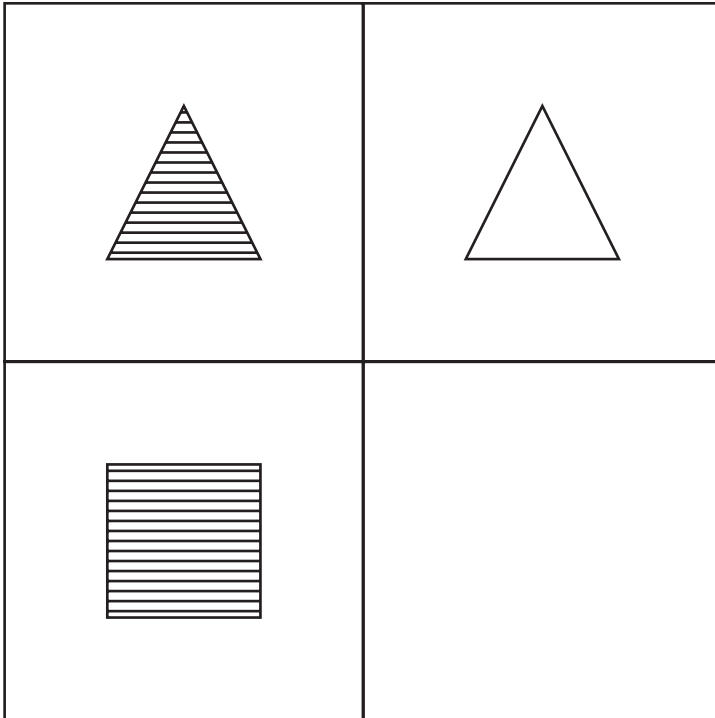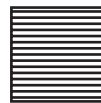
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **B**

Item No. 6.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

| A | B | C | D |
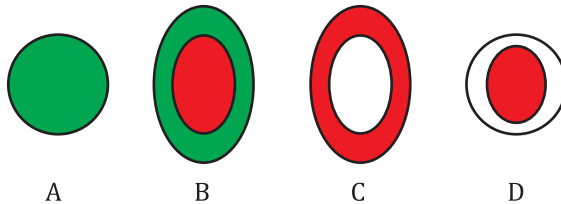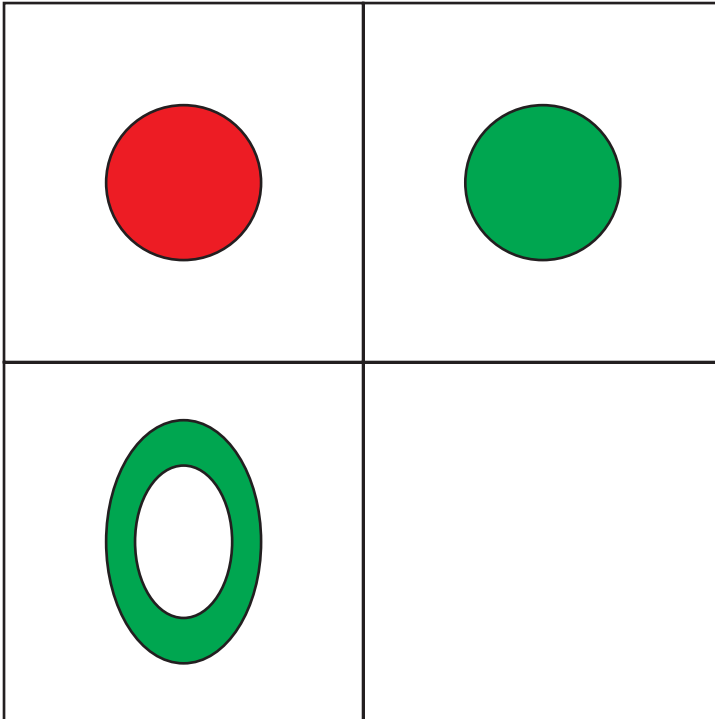
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **C**

Item No. 7.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
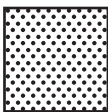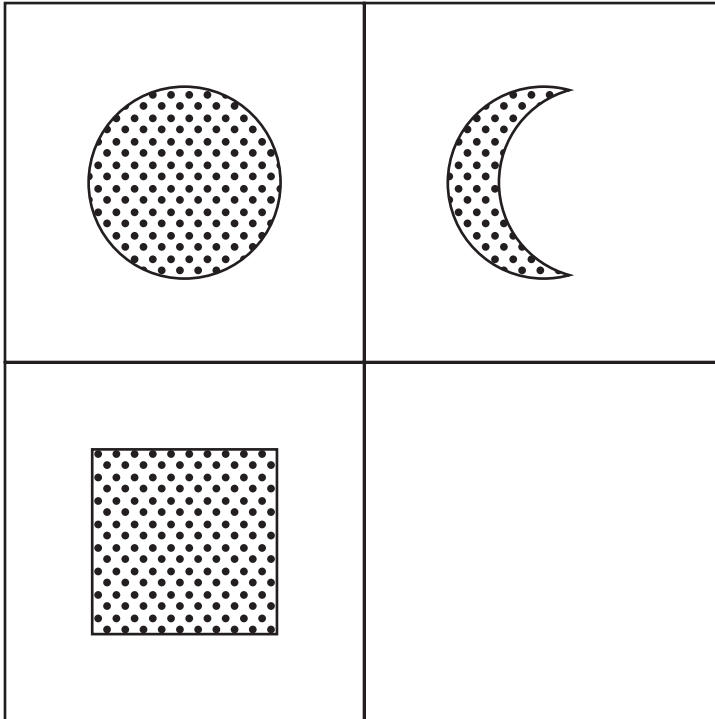
A	B	C	D

Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **C**

Item No. 8.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
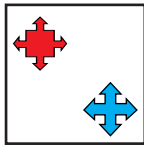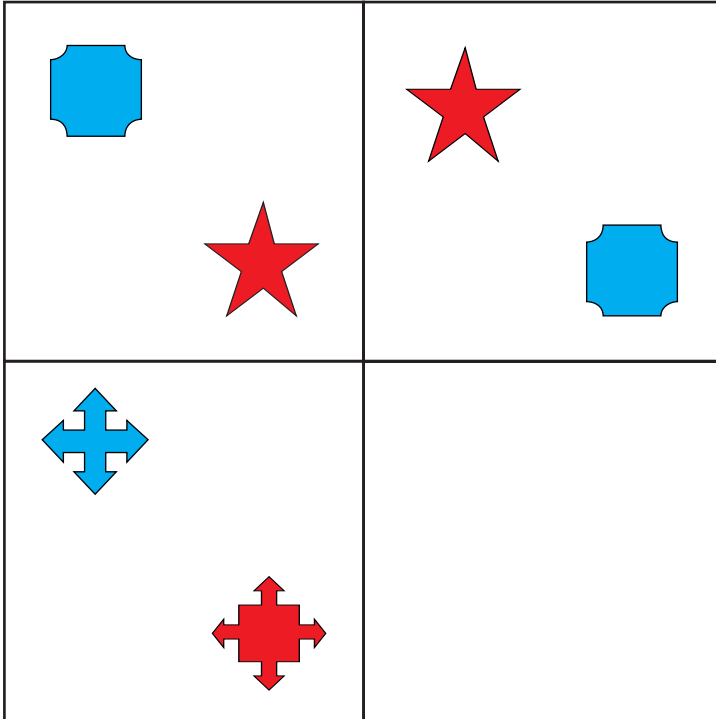
| A | B | C | D |
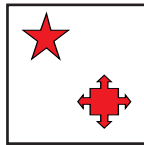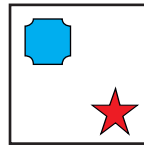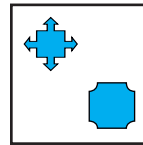
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **A**

Item No. 9.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
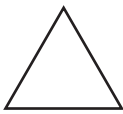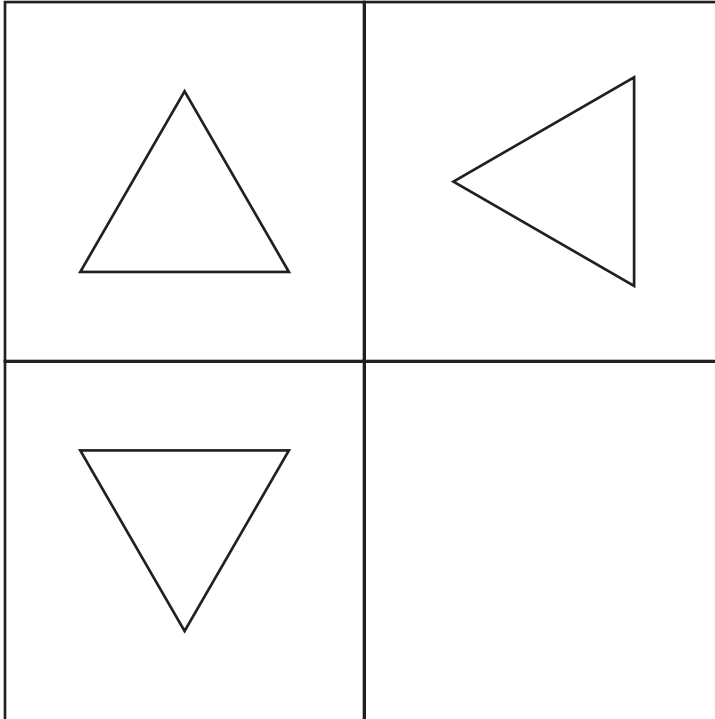
A   B   C   D
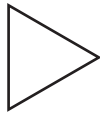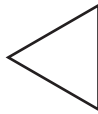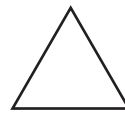
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **B**

Item No. 10.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

/ ∧ -------------

| | | | |
| A | B | C | D |

Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **C**

Item No. 11.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
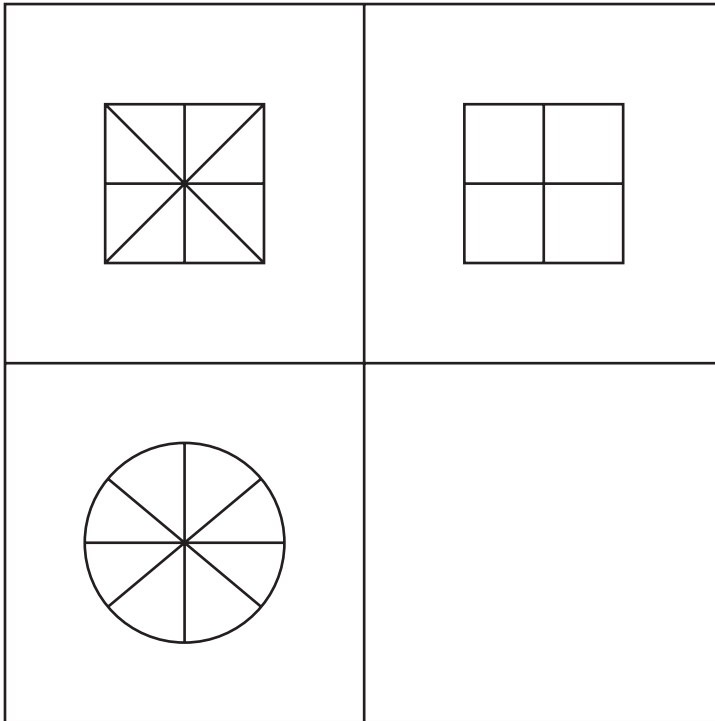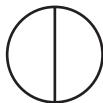
Examiner: After 60 seconds say, shall we try another one? After 30 seconds more, say, let's move on to the next one.

Correct Response: **D**

Item No. 12.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
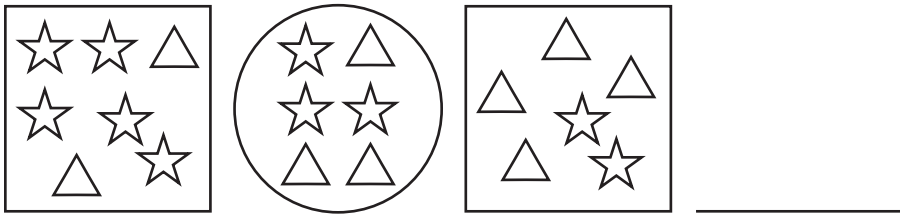
| A | B | C | D |
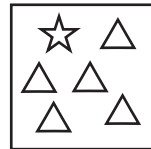
Examiner: After 90 seconds say, shall we try another one? After 60 seconds more, say, let's move on to the next one.

Correct Response: **D**

Item No. 13.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.

A   B   C   D
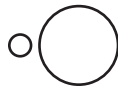
Examiner: After 90 seconds say, shall we try another one? After 60 seconds more, say, let's move on to the next one.

Correct Response: **C**

Item No. 14.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
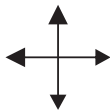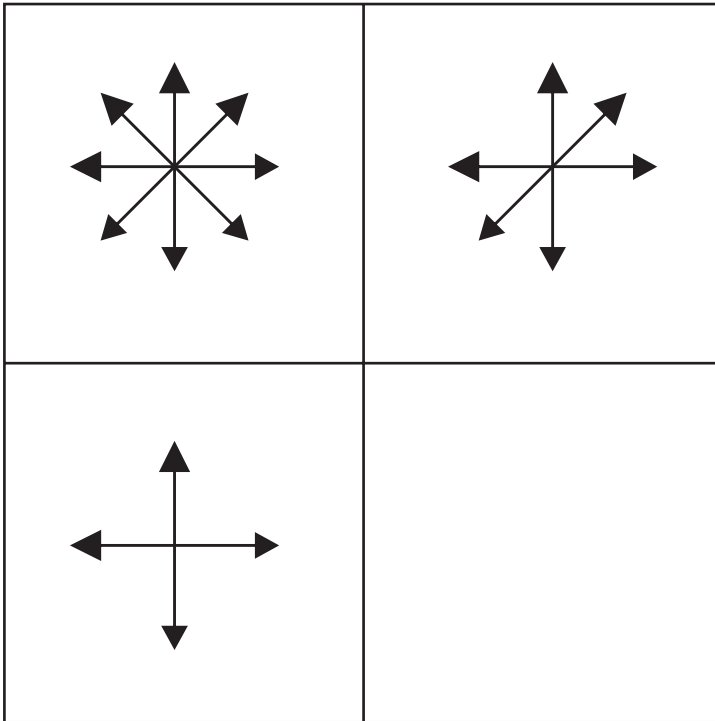
A   B   C   D

Examiner: After 90 seconds say, shall we try another one? After 60 seconds more, say, let's move on to the next one.

Correct Response: **B**

Item No. 15.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
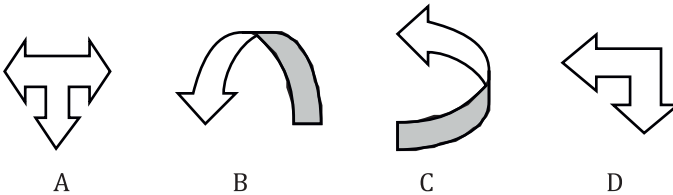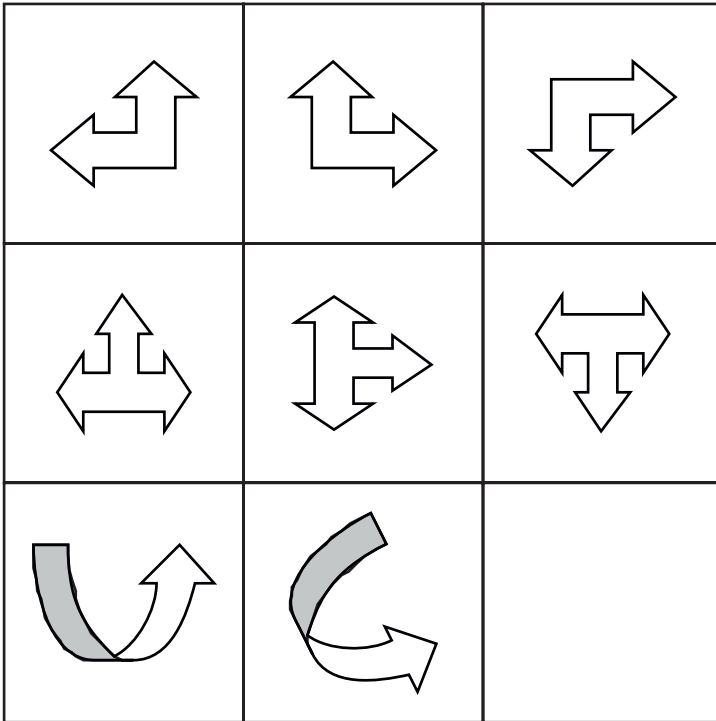
Examiner: After 90 seconds say, shall we try another one? After 60 seconds more, say, let's move on to the next one.

Correct Response: **B**

Item No. 16.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
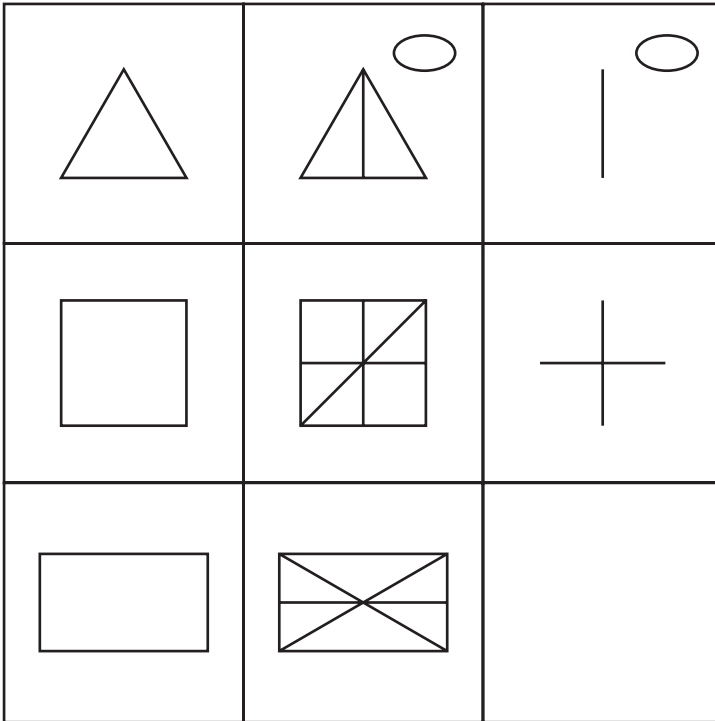
A   B   C   D
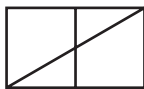
Examiner: After 90 seconds say, shall we try another one? After 60 seconds more, say, let's move on to the next one.

Correct Response: **D**

Item No. 17.

Fill in the blank space by choosing the correct option out of the four given below or point the correct answer from the given options.
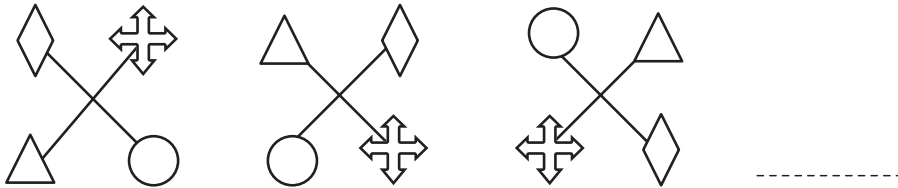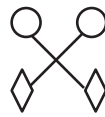
Examiner: After 120 seconds say, shall we try another one? After 90 seconds more, say, let's move on to the next one.

Correct Response: **B**

Factor 3 - Quantitative Reasoning

Dimension 1 - Arithmetic

Instructions for Test Items 1 to 3

Here are few blocks placed in front of you, I want you to count the blocks as per the number said.

Example 1: Place five blocks in front of the subject and say, *"Count and take three blocks away".*

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Example 2: Point at the picture and say, *"Let's count the number of parrots in the picture. There are total 9 parrots."*
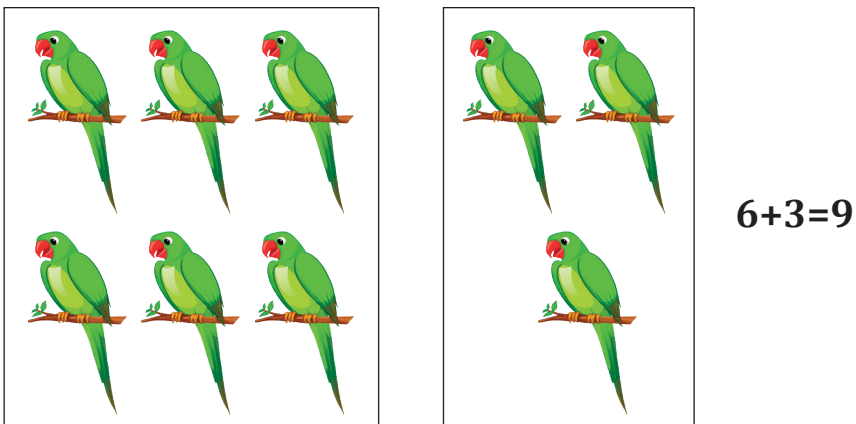
6+3=9

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Scoring Criteria:
Score 1 point for a correct response.
Score 0 for an incorrect response or Don't Know or No Response

Now say let's try some more.

Question 1 - Meaningful Counting

Keep 10 blocks in front of the subject and say here are some blocks I want you to take four blocks and count the rest.
Correct Response: **6**

Question 2 –Addition

Instructions: Point at the picture and say "Look at this picture and tell me total how many pencils are there?
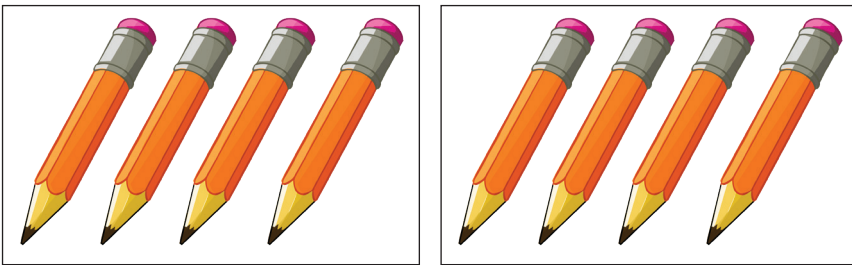
Correct Response: **4+4= 8**
Say, "Let us try another one."

Question 3 –Addition

Instructions: Point at the picture and say "Look at this picture and tell me total how many dogs are there?
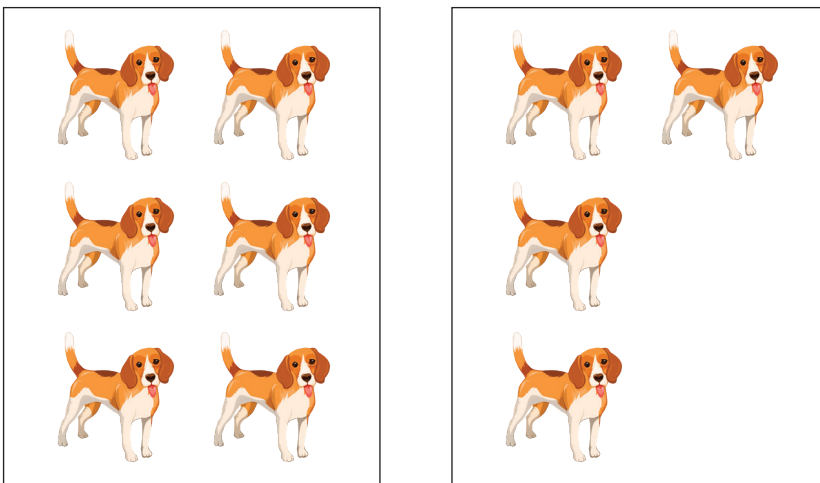
Correct Response: **6+4 = 10**

Instructions for Questions 4 to 13

Arithmetic Problems

Say, I am going to ask you some arithmetic questions and you have to give answer whichever you think is appropriate.

No paper pencil work is allowed.

Examiner can repeat the question once if the subject asks or does not respond.

Instructions : Point to the word problem and say, look at this problem as I read it and answer the question.

4) **Ram had 4 pencils. He gave one pencil to his friend. How many pencils has Ram left with?**

   Correct response: Ram will be left with 3 pencils. (4-1= 3)
   Say, "Let us try another one."

5) **Teacher had 10 chocolates, she gave 5 to you. How many are left with her?**

   Correct response: Teacher is left with 5 chocolates. (10-5=5)
   "Let us try another one."

6) **How many 5 rupee coins will you get for a 20 rupee note?**

   Correct response: 4 five rupee coins. (4x5=20)
   Say, "Let us try another one."

7) **You have 6 pencils. If you distribute these pencils equally among three friends how many each will get?**

   Correct response: 2 pencils each. (6/3=2)
   Say, "Let us try another one."

8) **Raju was carrying 8 books. Ram gave him 7 more. How many books does Raju have now?**

Correct response: 15 books (8+7=15)
Say, "Let us try another one."

9) **You have 24 balls. You divide these balls equally among 4 boys. How many balls does each boy have now?**

Correct response: 6 balls each (24/4=6)
Say, "Let us try another one."

10) **Shanti has already prepared 8 kilograms of dough. She continues preparing 1 kilogram of dough every 1 hour. How much dough did Shanti prepare if she worked for 8 hours?**

Correct response: 8kg (8x1=8)

Examiner Prompt:
After 60 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

11) **Shakuntala can go from home to school in 540 seconds. How many minutes does it take for her to get from home to school?**

Correct response: 9 minutes (540/60)

Examiner Prompt:
After 60 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

12) Which one among the following set of apples is the best one to buy?

= Rs 30

= Rs 50

= Rs 60

= Rs 90
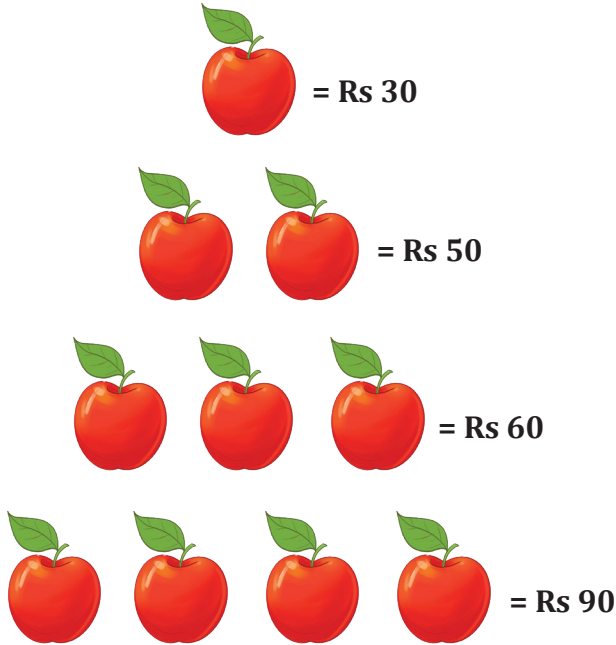
Correct response: 3 Apples = Rs. 60 (60/3=20 i.e. cost of each apple is Rs. 20/-)

Examiner Prompt:
After 60 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

13) Geeta gives an exam. The total marks of the exam are 75. Geeta scores 50% marks. How many marks did she get?

Correct response: 37 ½ 0r 37.5 (75/2=37 ½)

Examiner Prompt:
After 60 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

Factor 4 - Visual Spatial Reasoning

Dimension 1 - Spatial Concepts

Instructions for Questions 1 to 8

Say, "I am going to show you few pictures. I will ask you questions related to the direction of the picture. You have to give answer whatever you think is appropriate. I will give an example. Listen carefully".

For Example:

Show the picture and ask *"Where is the ball in the picture"?*

If the subject does not respond or responds incorrectly say the **ball is under the table by pointing the position of the ball.**

Note: This is an example or trial, so this item will not be scored even when the child gives the correct response.

Scoring Criteria:

Score 1 point for a correct response.
Score 0 for an incorrect response or Don't Know or No Response

Say, "Let us try some more".

Instruction: I will ask you about the picture. You have to answer as **Left/Right/Middle**

1.a) "Which side is the Honey Bee?
Correct Response: **Left side**

1.b) "Which side is the Dog?
Correct Response: **Right side**

1.c) "Which side is the Frog?
Correct Response: **Middle**

Scoring Criteria:
Note: If the examinee answers all the three Questions (1 a, b, c) correctly (left, right, middle) only then give a score of 1. Otherwise give a score of "0".

Instructions for Questions 2 to 5 : Place the item test booklet on the table with the image/picture facing the examinee.

2. In which hand the girl is holding the glass?
    Correct response: **Left Hand**

Then go to the next image (Question no. 3 to 5)

3. Put your finger at the man standing to the "farthest left"

4. Which direction is the man with the bag looking at?

5. What is "behind" the man standing with the stick?

Correct responses:

3. The examinee puts his/her finger correctly at the man standing to the **"farthest left"**

4. Left side

5. Road/Tree/ Wall

Instructions: I am going to read to you few questions. Listen carefully and answer them. You have to think and answer.

Note: You can repeat the question once if the subject asks or does not respond.
Point to the question and say; look at the question as I read it.

6. **Anil is facing towards East and Sudhir is sitting on his left side. If Neeta is sitting between both of them, then which side of Anil is Neeta Sitting?**

    Correct response: **Left side.**

    Examiner Prompt: After 120 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

7.   **In a row of 10 girls, Sunita is 5th from the right, and Shweta is 5th from left, if Garima is 8th from the left then towards which side of Sunita is Garima?**

    Correct response: **Right side**

    Examiner Prompt: After 120 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

8. **Vikas walked 2 kms to north and turned to the right and walked 3 kms. Now at which direction he is?**

    Correct response: **East**

    Examiner Prompt: After 120 seconds, say, "Shall we try another one?" After 60 seconds more, say, "Let's move on to the next one".

Factor 4 - Visual Spatial Reasoning

Dimension 2 - Square Construction

Instructions for Test Items 1 to 7

Here are some wooden pieces of triangular shapes of different sizes. Look (examiner points at triangular pieces of red and white) some of them are in red colour and some are in white colour. You have to use these given pieces to make the given design. I will show you an example. Watch carefully.

Note: There are four sizes of triangle (Size A-Largest to Size D-Smallest) each in Red and White colour.

For example: AW indicates 'A' size 'White' colour triangle, DR indicates 'D' size 'Red' colour triangle and the like.

Trial - Materials required
1 White triangle
1 Red triangle (A size 2 Pieces)
Stopwatch
Time limit: 30 seconds
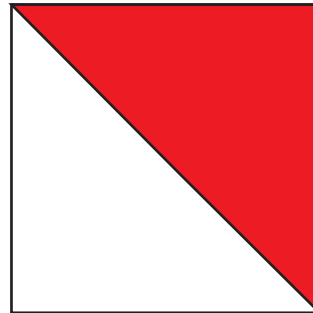
Demonstration: See how I make the design using these two pieces, show the Trial design.

Now say "You make the design just like I did using these pieces" If the subject could not do it, say "watch me put these pieces together to make the design"

Say, let us try some more.

Design - I

Materials required
    1 White triangle
    2 Red triangles
    (3 triangles - 1 AW, 2 BR)
    Stopwatch   **Time limit : 45 seconds**
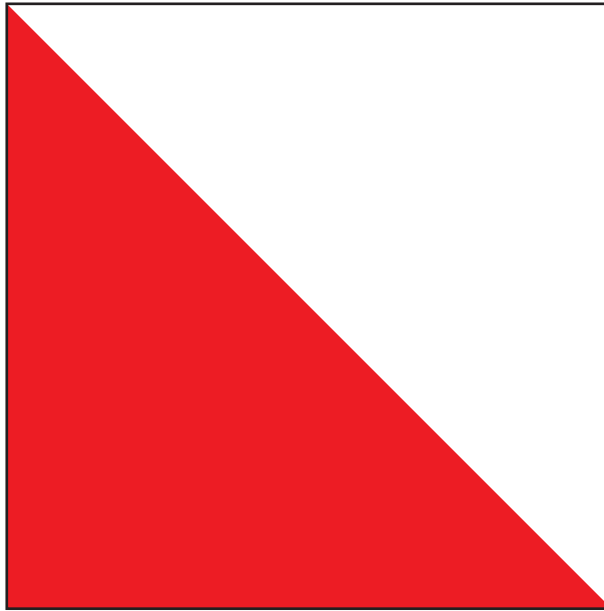
Scoring Criteria
Score 2 points if the examinee places all the triangles correctly within time limit.

Score 1 point if the examinee places all the triangles correctly in 60 seconds.

Score 0 if the examinee does not complete the design even after 60 seconds.

Design - II

Materials required

    4 Red triangles

    2 White triangles.

    (6 triangles- 2 BR, 2CR, 2CW)

    Stopwatch   **Time limit : 90 seconds**

Scoring Criteria

Score 2 points if the examinee places all the triangles correctly within time limit.

Score 1 point if the examinee places all the triangles correctly in 120 seconds.

Score 0 if the examinee does not complete the design even after 120 seconds.

Design - III

Materials required
　　7 Red triangles
　　5 White triangles
　　(12 triangles- 3CR, 1CW, 4DR, 4DW)
　　Stopwatch　　　　　　　　　　**Time limit : 90 seconds**
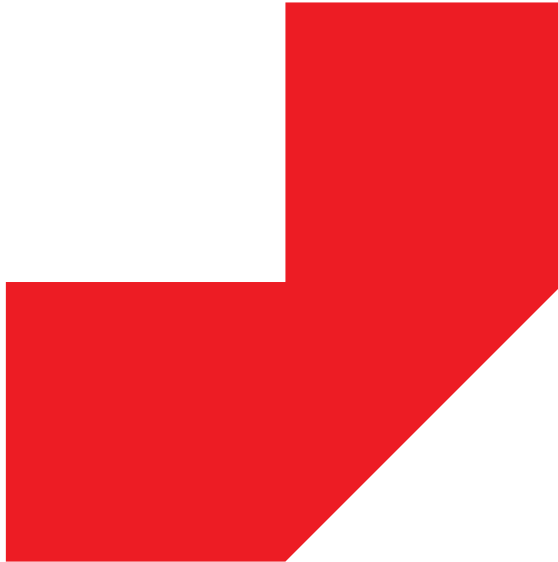
Scoring Criteria
Score 2 points if the examinee places all the triangles correctly within time limit
Score 1 point if the examinee places all the triangles correctly in 120 seconds.
Score 0 if the examinee does not complete the design even after 120 seconds.

Design - IV

Materials required

    8 Red triangles
    4 White triangles
    (12 triangles- 2 CR, 2CW, 6DR, 2DW)
    Stopwatch   **Time limit : 90 seconds**
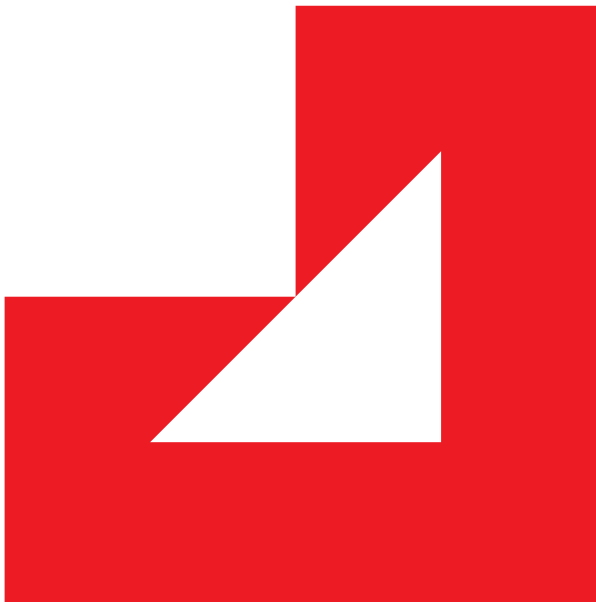
Scoring Criteria

Score 2 points if the examinee places all the triangles correctly within time limit

Score 1 point if the examinee places all the triangles correctly in 120 seconds.

Score 0 if the examinee does not complete the design even after 120 seconds.

Design - V

Materials required

    5 Red triangles
    7 White triangles
    (12- Triangles – 1CR, 4 DR, 3 CW, 4 DW)
    Stopwatch   **Time limit : 120 seconds**
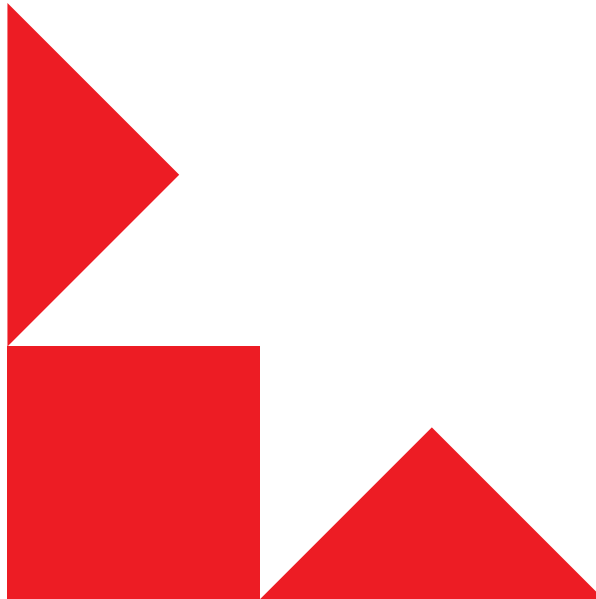
Scoring Criteria

Score 2 points if the examinee places all the triangles correctly within time limit

Score 1 point if the examinee places all the triangles correctly in 150 seconds.

Score 0 if the examinee does not complete the design even after 150 seconds.

Design - VI

Materials required

   8 Red triangles
   4 White triangles
   (12 triangles- 2 CR, 6 DR, 2 CW, 2 DW)
   Stopwatch   **Time limit : 140 seconds**

Scoring Criteria

Score 2 points if the examinee places all the triangles correctly within time limit.

Score 1 point if the examinee places all the triangles correctly in 170 seconds.

Score 0 if the examinee does not complete the design even after 170 seconds.

Design –VII

Materials required

6 Red triangles
4 White triangles
(10 triangles- 4 CR, 2 DR, 2 CW, 2 DW)
Stopwatch   **Time limit : 140 seconds**
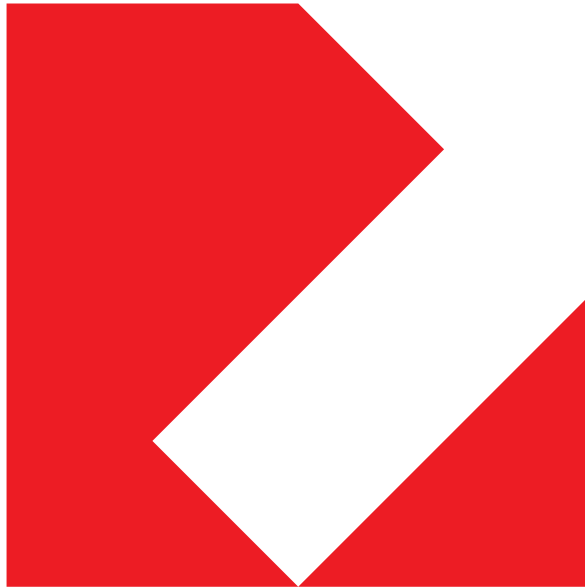
Scoring Criteria

Score 2 points if the examinee places all the triangles correctly within time limit

Score 1 point if the examinee places all the triangles correctly in 170 seconds.

Score 0 if the examinee does not complete the design even after 170 seconds.

Factor 5 - Working Memory

Dimension 1 - Digit Span Forward

Instructions for Test Items 1 to 7

Say, "I am going to say few numbers. You have to repeat the numbers in the same order as I do. Repeat after I finish saying them. Say one number per second. Listen carefully I am going to say only once".

For Example: *"Say 1-3, repeat after I finish saying them".*

If the subjects do not respond say you have to say again 1-3.

Say, *"Let us try some more".*

If the subject repeats **Trial I** correctly, go to the next increasing digit in the same trial. If he/she fails then give a second chance from **Trial II.** If fails to repeat, say let us try another one. Discontinue after 3 consecutive failures.

NOTE: The examinee has to repeat numbers correctly from one of the two trials.

Scoring: Score 1 point for a correct response.

Score 0 for an incorrect response.

	Trial - I	Trial - II
1)	3-8-6	4-2-6
2)	2-4-1-6	6-2-4-7
3)	4-6-3-5-8	6-4-1-7-2
4)	1-3-5-7-9-4	6-2-5-3-1-8
5)	7-4-6-2-5-8-3	2-8-3-6-4-9-1
6)	5-2-6-4-1-3-9-7	3-5-4-1-6-8-2-9
7)	4-1-5-8-3-7-2-6-9	8-3-6-9-5-2-7-1-4

Factor 5 - Working Memory

Dimension 2 - Digit Span Backward

Instructions for Test Items 1 to 6

Say, *"Let us try in another way. I will now say the numbers and you have to repeat the numbers backward. For example, if I say 2 - 4 you have to say 4 - 2"*. Repeat the instructions if required. Say one number per second.

Say, *"Let us try some more."*

If the subject repeats **Trial I** correctly go to the next increasing digit in the same trial. If he/she fails then give a second chance from **Trial II.** If fails to repeat say, "Let us try another one". Discontinue after 3 consecutive failures.

NOTE: The examinee has to repeat numbers correctly from one of the two trials.

Say, *"Let us try some more."*

Scoring: Score 1 point for a correct response.
Score 0 for an incorrect response.

	Trial - I	Trial - II
1)	2-1	1-3
2)	2-5-9	3-6-8
3)	8-4-9-3	2-4-3-7
4)	9-7-8-5-2	7-9-6-3-1
5)	3-6-7-1-9-4	6-3-1-4-2-5
6)	3-1-7-9-5-4-8	5-2-8-6-1-4-9

Factor 5 - Working Memory
Dimension 3 - Number Name Sequence

Instructions: Say, *"I am going to say some names along with the numbers. First you have to say the numbers in ascending order i.e., from small to big and later the names. For example, If I say - 3 Balloons, 2 Roses – you have to say 2, 3 Roses and Balloons"*.

Repeat the instruction if required. If the subject responds correctly, say, *"Let us try some more".*

Scoring:
Score 1 point for correct repetition of the numbers and names/words. Score 0 for incorrect response.

Trial 1
> 1) 2 Clocks, 6 Bananas
> 2) 3 Cows, 8 Grasshoppers, 5 Bottles

Correct Responses:
> **1.** 2, 6   Clocks, Bananas
> **2.** 3, 5, 8, Cows, Bottles, Grasshoppers.

Trial 2
> 1)   1 Doll, 3 Pens
> 2)   2 Slates, 6 Frocks, 4 Bags

Correct responses:
> 1. 1, 3, Doll, Pens.
> 2. 2, 4, 6, Slates, Bags, Frocks

Note : The subject has to say correctly from one of the two trials.

Chapter 4
Test Interpretation

Interpretation of NIEPID Indian Test of Intelligence

Test interpretation is an important part of any standardized psychological test. The raw scores does not have any meaning until and unless these areconverted to standard scores which provides a better understanding of test results. NIEPID Indian test of intelligence provides scaled scores derived from the raw scores making it meaningful for test interpretation.

This chapter provides examiners with a full understanding of proper methods of recording, scoring and analyzing the test results. It gives directions to fill the record form and steps to convert the Raw Scores into Scaled Scores. Percentiles, Full Scale IQ (FSIQ) and Profile Analysis. It unfolds the journey of response writing, scoring, interpretation and reporting the test findings to other professionals, parents or guardians and test subjects as well.

Completing theRecordForm

The Record Form is designed to facilitate the administration and scoring of NIEPID Indian Test of Intelligence. The results of the test are summarized and recorded in Record Form. The first page of the Record Form includes the identification details of the subject and the examiner which needs to be filled at the beginning. Ital so includes the tables, where the Raw Scores and Scaled Scores obtained by the subject on this test needs to be entered. Based on the scaled scores, the profile graph has to be drawn at the designated space in the Record Form.

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Identification Data

This section requires the examiner to record personal information about the subject. It includes subject's name, age, date of birth, date of testing and examiner's name – all are documented in the Record Form.

The subject's exact Chronological Age in years and months is important to get the age equivalent Scaled Scores given in Norms Tables. To calculate exact chronological age of the subject at testing, the examiner must subtract subject's Date of Birth from the Date of Test Administration. An example is given on the top right side of the Record Form

Recording and Scoring Responses

A Response Sheet is provided for recording responses and scoring each item of the test as given in Appendix A. Record subjects verbatim responses where indicated for later scoring and evaluation. It provides space for recording verbatim responses of the subject. Scoring the responses is an objective process and for most of the subtests, score is assigned according to the scoring criteria as given in Chapter 3 of this manual. The scoring criteria is self explanatory. The scoring criteria is based on verbatim responses of children in the standardization sample. To score verbatim responses, compare the subject's responses to the sample responses listed for each item and the general scoring criteria for each subtest.

All sample responses are presented according to the score point levels. Test items that are scored 1 or 0 points, 1 point is scored for any response that is similar or superior to the 1 point sample responses and 0 point for any response that is similar or inferior to 0 point sample responses.

The same rule is used for multipoint scoring. Score 2 points for a response that is similar or superior to sample responses, 1 point for a similar sample responses and 0 point for a response that is similar or inferior to 1 point sample responses. Score 0 point for any responses as 'Don't Know' (DK) or 'No response'. For verbal responses, subject should not be penalized for imperfect grammar, pronunciation or articulation.

Calculation of Raw Scores

Raw scores are referred to as the unprocessed, initial scores that a test-taker receives based on their performance on the test in an intelligence test. Raw scores are the most fundamental kind of evaluation and serve as a starting point for further investigation. Raw scores have interpret ability constraints on their own. They do not provide information about how an individual's performance compares to that of a larger population, and they do not take into account factors such as age, education, or the difficulty level of the test items. Raw scores are frequently converted into standardized scores or percentiles to make them more relevant and interpretable. This transformation allows one to compare one's performance to that of astandard reference group and provides ameasure of relative intelligence.

The subject's responses on NIEPID Indian Test of Intelligence are scored as per the guidelines given in the preceding chapters.

A total raw score for a subtest is the sum of the items scores. Add the scores for each item and enter the total raw score in the box at the bottom of each dimension in the Response Sheet. After obtaining total raw scores of each dimension, transfer the total raw scores to the Raw Score column in the Record Form.

Scaled Scores

In an intelligence test, a scaled score is a transformed score used to compare an individual's performance on the test to a standardized reference group. Scaled scores provide a standardized method of assessing and comparing an individual's cognitive ability. They are superior to raw scores in that they account for changes in test difficulty and provide a clear reference point for interpretation. The raw scores should be converted in to scaled scores by referring to the age-appropriate tables in Appendix A. Scaled scores are based on child's age as determined by using a mathematical formula that takes into account the difficulty level of test items and distribution of scores in the norming group.

For converting total Raw Scores to Scaled Scores use appropriate Tables as per child's age given in years and months. The normative Tables are presented in yearly intervals. The age range is clearly indicated at the top of each page. The obtained scaled score for each dimension in each factor should be entered on the first page of the Record Form.

Calculate sum of scaled scores by adding the scaled scores obtained on each dimension of all the five factors and enter in the corresponding boxes located in the row labeled Sum of Scaled Scores in the Record Form.

Percentiles

A Percentile describes how a score compares to other scores from the same set. It is commonly expressed as the percentage of values in a set of data scores that fall below a given value. Percentile rank show how a given value compares to others.

A percentile score represents the percentage of people in the reference group who scored less than or equal to the test-taker. A percentile score of 90, for example, indicates that the individual out performed or was equivalent to 90% of the reference group.

Percentile scores standardize test findings, making them comparable across test versions and populations. This standardization ensures that scores are interpreted fairly and consistently. Typically, intelligence tests are norm-referenced, which means they are designed to compare an individual's performance to that of a normative group. Percentile scores assist in determining a test-taker's cognitive strengths and weaknesses in comparison to others. Percentile Scores provide useful information for educational, therapeutic, and research applications. In education, percentile scores help pupils be placed in appropriate academic programmes based on their cognitive skills, such as gifted and talented programmes or special education services. Researchers utilize percentile scores to compare cognitive ability across groups or populations.

However, interpreting percentile results needs an awareness of their context, as well as consideration of potential biases and demographic characteristics that may alter the accuracy and fairness of the rankings. Overall, percentile ratings are an important tool for evaluating and assessing cognitive capacities in a variety of domains, as well as playing an important role in decision-making processes.

The corresponding percentile scores are shown in Appendix C.

Full ScaleIntelligenceQuotient (FSIQ)

Full Scale Intelligence Quotient (FSIQ) is important in intelligence testing because it provides a comprehensive estimate of a person's over all cognitive ability. FSIQ is generated from abattery of subtests that assess many facets of intelligence and are used for a variety of purposes, namely educational placement, personnel selection, clinical diagnoses and research.

In NIEPID Indian Test of Intelligence, FSIQ is obtained from the battery of five factors, namely Knowledge, Fluid Reasoning, Quantitative Reasoning, Visual Spatial Reasoning and Working Memory along with 11 dimensions. Compute sum of scaled scores and refer Table A to obtain corresponding FSIQ score. FSIQ is derived from sum of scaled scores for all 11 dimensions of the test. FSIQ is stated numerically and serve as a summary of an individual's test performance.

Inintelligence testing, the conversion of scaled scores into Full Scale Intelligence Quotient (FSIQ) is an important process that entails translating scaled results from various subtests into a single composite score that indicates an individual's overall cognitive ability .The FSIQis commonly expressed a shaving a mean (average) of100and a standarddeviationof15. One standard deviation unit is represented by each 15-point increment above or below 100. An FSIQ of 115, for example, is one standard deviation above the mean, whereas an FSIQ of 85 is one standard deviation below the mean.

Full Scale Intelligence Quotient (FSIQ) scores are an important component of intelligence testing since they provide a comprehensive measure of an individual's cognitive ability across multiple domains, yet there are several limits to consider.

FSIQ results should be examined alongside other relevant information such as clinical observations, medical history, and behavioural assessments. The conversion of scaled score to percentile score and FSIQ is shown in Appendix C.

Each table includes FSIQ, Percentile Ranks and Confidence Interval (90% and 95%). Enter the sum of scaled scores, percentiles confidence intervals and Full Scale IQ located at the bottom of the Record Form.

Profile Analysis

A profile shows difference in scores on the test. Profile Analysis helps to analyze patterns of subtest scores. The analysis depicts scores across various domains of intelligence for an individual. Profile analysis helps to identify whether two or more individuals or groups of test-takers have a significantly distinct profile.

The scaled scores of all five factors and 11 dimensions of NIEPID tests can be plotted on the graph provided on the right side of the Record Form. To plot the subtest scaled scores, place a dot at the point on the subtest Scaled Score profile that corresponds to the scaled score obtained for each subtest. Draw a line between the dots to join them.

Profile analysis clearly indicates the subject's strengths and weakness in cognitive ability. It will be useful for planning cognitive intervention programmes.

Interpretation of the Test Results

Interpreting intelligence tests is generally intricate and requires consider able training and experience on the part of the examinee.

It is essential for psychologists to obtain the needed skills and clinical expertise for interpreting the test results. For accurate interpretation of the test results, it is assumed that the test is administered strictly as per the guide lines given in this manual. It is important to keep in mind that any changes or accommodation made during administration of this test, due to examinees' disabilities or exceptional conditions, require clinical acumen of the examiner for more comprehensive and qualitative appraisal of scores rather than only direct use of normative scores. Valid interpretation requires being accurate and easy to comprehend for professionals, teachers, parents and examinees.

An essential aspect of assessment of intelligence is the purpose of assessment which might influence to some degree the manner of test interpretation. For example, if an examiner's goal is to place pupils in special education or certify an examinee's IQ level, then determining global composite scores such as Full Scale IQ will be more meaningful. However, if an examiner is examining to create or plan an intervention for a neurologically damaged adult or understand an individual's challenges in information processing in order to make a differential diagnosis of certain learning disorders, for qualitative interpretations, he or she may focus on test findings of factors and dimensions and profile analysis. For assessing an examinee's optimal cognitive potential capability, ethical responsibility and clinical acumen are necessary. The behavioural observations should be noted and communicated in the psychological report that helps to give a better perspective for interpretation of NIEPID Indian Test of Intelligence scores.

The FSIQ provides an over all summary of current general intellectual functioning as measured by the NIEPID Indian Test of Intelligence. The FSIQ from the NIEPID test has a high predictive

value since it encompasses more elements and dimensions than other regularly used intelligence test batteries. It has both verbal and nonverbal components. It is also important to remember that global intellectual functioning can be influenced by avariety of factors such as environmental factors, an individual's health, motivation or emotional stability, the examinee's and examiner's training and education, and many other factors that change overtime. It should be noted, however, that the test may not cover all conceivable facets of intelligence that may arise across different cultures.

As a result, use caution when interpreting the FSIQ score or assuming it to be a fixed numerical number determined wholly innately.

During the administration of the test, an examiner can obtain a wealth of information by keen observation and clinical acumen about an examinee's cognitive process, which must be taken in to account when interpreting the test results. Examiners, teachers, and parents are frequently eager to identify areas of strength in the cognitive capacities of individuals with intellectual impairments that may offer promise for changing their lives.

Clinicians who must create intervention programmes are frequently needed to conduct both quantitative and qualitative research. An examinee's cognitive strength an frequently be used to boost self-esteem and self-confidence, as well as to improve are as of academic underachievement or cognitive deficit. Identifying an individual's capabilities also aids in knowing their relative advantage, which may encourage them to learn and perform more readily. The areas o relative strength may also indicate a preferred learning method, which can be used to teach or train them effectively. The greatest

and lowest scores in the profile of NIEPID Indian Test of Intelligence, can be used to plan interventions and issue IQ level certifications.

The following table can be referred for interpretation of FSIQ obtained on NIEPID Indian Test of Intelligence.

FSIQ	Confidence Interval		Inference
	90%	**90%**	
146 – 160	143 – 165	142 – 166	VerySuperior
131 – 145	128– 150	127 – 151	Superior
116– 130	113– 135	112– 136	HighAverage
86– 115	83– 120	82– 121	Average
71 – 85	68– 90	67 – 91	Borderline
56 – 70	53 – 75	52 – 76	Mild ID
41 – 55	39– 60	38– 61	ModerateID
26 – 40	-	-	SevereID
Below 25	-	-	ProfoundID

NIEPID INDIAN TEST OF INTELLIGENCE

NIEPID

Record Form

Name : **Kamal**

Sex : **Male**

Examiner : **Dr. Sunita Devi**

	Year	Month	Day
DOA :	2023	08	15
DOB :	2010	12	27
Age :	12	7	18

Total Raw Score to Scaled Score Conversions

Dimensions	Raw Scores	Scaled Scores	Sum of Scaled Scores	Factors
Vocabulary	41	19	42	Knowledge
Information	08	10		
Comprehension	20	13		
Verbal Analogies	05	08	18	Fluid Reasoning
Object Series	14	10		
Arthmetic	12	13	13	Quantitative Reasoning
Spatial Concepts	08	16	23	Visual Spatial Reasoning
Square Construction	10	07		
Digit Span Forward	04	08	29	Working Memory
Digit Span Backward	04	07		
Number Name Sequencing	02	14		
Sum of Scaled Scores			125	Full Scale

Dimension Scaled Score Profile

Scale	Sum of Scaled Scores	Percentile	Confidence Interval	Full Scale IQ
NIEPID Indian Test of Intelligence	125	63	102-112	106

Case Illustration

The subject's name Kamal; the test date (15-08-2023); the subject's date of birth (27-12-2010); the subject's age attesting (18-07-12); and the examiner's name are all documented on the top right side of the Record Form.

Kamal age at the time of testing was determined by substracting his birth date from the date of testing. To subtract, one may occasionally borrow a year (12 months). Because 12 months can not be deducted from 8 months, subject's age would be 12-7 if 12 months (1 year) were borrowed from the Year column and added to the Month column, turning 8 to 20 and 2023 to 2022.

After administration and scoring, Kamal's raw scores, scaled scores, percentile ranks and FSIQ were recorded in the appropriate sections of the Record Form.

Kamal's raw score in the vocabulary dimension was 41. For determining the scaled score for the vocabulary dimension of the subject, the examiner has to refer the table corresponding to age group 12 years to 12 years 11 months, as his chronological age is 12 years 7 months. The corresponding scaled score of the vocabulary dimension is 19. Similarly, the scaled score for each dimension can bedetermined from the table. The profile of subject's provided to help you understand how to convert raw ratings into scaled scores. Dimension wise Scaled score profile also gives the overall graphical representation.

The total sum of scaled scores obtained for kamal is 125. For conversion of scaled score into FSIQ, Appendix As hould be used. In the Appendix A, FSIQ corresponding tototal sum of scaled scores is given. Here in this case, the corresponding FSIQ for the scaled score 125 is 106 with 95% confidence interval of 102–112, the percentile score is 63.

Appendices

Appendix-A

NIEPID INDIAN TEST OF INTELLIGENCE

NIEPID

Record Form

Name : _____

Sex : _____

Examiner : _____

	Year	Month	Day
DOA :			
DOB :			
Age :			

Total Raw Score to Scaled Score Conversions

Dimensions	Raw Scores	Scaled Scores	Sum of Scaled Scores	Factors
Vocabulary				
Information				Knowledge
Comprehension				
Verbal Analogies				Fluid Reasoning
Object Series				
Arthmetic				Quantitative Reasoning
Spatial Concepts				Visual Spatial Reasoning
Square Construction				
Digit Span Forward				Working Memory
Digit Span Backward				
Number Name Sequencing				
Sum of Scaled Scores			Full Scale	

Dimension Scaled Score Profile

	Knowledge			Fluid Reasoning	Quantitative Reasoning	Visual Reasoning		Working Reasoning		
	VC	IN	CO	VA	OS	AR	SC	SQ	DF	DB	NS
19	*	*	*	*	*	*	*	*	*	*	*
18	*	*	*	*	*	*	*	*	*	*	*
17	*	*	*	*	*	*	*	*	*	*	*
16	*	*	*	*	*	*	*	*	*	*	*
15	*	*	*	*	*	*	*	*	*	*	*
14	*	*	*	*	*	*	*	*	*	*	*
13	*	*	*	*	*	*	*	*	*	*	*
12	*	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*	*	*
9	*	*	*	*	*	*	*	*	*	*	*
8	*	*	*	*	*	*	*	*	*	*	*
7	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*

Scale	Sum of Scaled Scores	Percentile	Confidence Interval	Full Scale IQ
NIEPID Indian Test of Intelligence				

NIEPID Indian Test of Intelligence
RESPONSE SHEET

Factor 1: Knowledge					
Dimension 1: Vocabulary					
Item No	**Item**	**Response**	**Score**		
1	Skipping Rope		0	1	2
2	Calendar		0	1	2
3	Lock		0	1	2
4	Traffic Lights		0	1	2
5	Cupboard		0	1	2
6	Stapler		0	1	2
7	Axe		0	1	2
8	Weighing Machine		0	1	2
9	Nail		0	1	2
10	Cat		0	1	2
11	Table		0	1	2
12	Friend		0	1	2
13	Ocean		0	1	2
14	Magazine		0	1	2
15	Dictionary		0	1	2
16	Forest		0	1	2
17	Heavy		0	1	2
18	Relax		0	1	2
19	Disappoint		0	1	2
20	Companion		0	1	2
21	Mimic		0	1	2
		Total			

Factor 1: Knowledge			
Dimension 2: Information			
Item No	Item	Response	Score
1	Sunlight, Water, Air and Soil		0 1
2	Summer, Winter, Rainy, Autumn		0 1
3	Earth		0 1
4	Beetroot, Carrot, Radish, Potato, Turnip		0 1
5	February		0 1
6	Blood		0 1
7	Liters		0 1
8	Jawaharlal Nehru		0 1
9	When water is heated to its boiling point, Evaporation.		0 1
10	Chlorophyll		0 1
11	Because of Pressurized Steam		0 1
		Total	

Factor 1: Knowledge			
Dimension 3 : Comprehension			
Item No	**Response**	**Score**	
1		0 1 2	
2		0 1 2	
3		0 1 2	
4		0 1 2	
5		0 1 2	
6		0 1 2	
7		0 1 2	
8		0 1 2	
9		0 1 2	
10		0 1 2	
11		0 1 2	
12		0 1 2	
	Total		

	Factor 2: Fluid Reasoning		
	Dimension 1: Verbal Analogies		
Item No	**Item/ correct response**	**Response (in Verbatim)**	**Score**
1	(Monkey: Climb :: Fish :?) **Swim**		**0** **1**
2	(Monday: Week:: January : ?) **Month**		**0** **1**
3	(Tree: Leaf :: Bird : ?) **Feathers / Wings**		**0** **1**
4	(Page: Book :: Leaf : ?) **Tree/Plant**		**0** **1**
5	(Driver: Bus :: Pilot : ?) **Aeroplane**		**0** **1**
6	(Foetus: Child :: Seed : ?) **Plant /Tree**		**0** **1**
7	(Pyramid: Triangle :: Cube : ?) **Square**		**0** **1**
8	(Phone: Communication :: Aeroplane: ?) **Transportation**		**0** **1**
		Total	

Factor 2: Fluid Reasoning			
Dimension 2: Object Series			
Item No	Item/Correct response	Score	
1	C	0	1
2	C	0	1
3	B	0	1
4	A	0	1
5	B	0	1
6	C	0	1
7	C	0	1
8	A	0	1
9	B	0	1
10	C	0	1
11	D	0	1
12	D	0	1
13	C	0	1
14	B	0	1
15	B	0	1
16	D	0	1
17	B	0	1
	Total		

Factor 3: Quantitative Reasoning		
Dimension 1: Arithmetic		
Item No	Item/Correct response	Score
1	6	0 1
2	8	0 1
3	10	0 1
4	3 Pencils	0 1
5	5 Chocolates	0 1
6	4 Coins	0 1
7	2 Pencils	0 1
8	15 Books	0 1
9	6 Balls each	0 1
10	8 Kgs	0 1
11	9 Minutes	0 1
12	3 Apples = Rs. 60	0 1
13	37.5	0 1
	Total	

Factor 4: Visual Spatial Reasoning				
Dimension 1 : Spatial Concepts				
Item No	**Item/ correct response**	**Response (in Verbatim)**	**Score**	
1	1. Left side 2. Right side 3. Middle		**0**	**1**
2	Left Hand		**0**	**1**
3	Farthest left side		**0**	**1**
4	Left side		**0**	**1**
5	Road/Tree/Wall		**0**	**1**
6	Left side		**0**	**1**
7	Right side		**0**	**1**
8	East		**0**	**1**
		Total		

Factor 4: Visual Spatial Reasoning					
Dimension 2: Square Construction Test					
Item No	**Correct Responses**	**Time Taken (in Seconds)**	**Scores**		
1			**0** **Above 60 Sec**	**1** **46 - 60 Sec**	**2** **45 Sec**
2			**0** **Above 120 Sec**	**1** **91-120 Sec**	**2** **90 Sec**
3			**0** **Above 120 Sec**	**1** **91-120 Sec**	**2** **90 Sec**
4			**0** **Above 120 Sec**	**1** **91-120 Sec**	**2** **90 Sec**
5			**0** **Above 150 Sec**	**1** **121-150 Sec**	**2** **120 Sec**
6			**0** **Above 170 Sec**	**1** **141-170 Sec**	**2** **140 Sec**
7			**0** **Above 170 Sec**	**1** **141-170 Sec**	**2** **140 Sec**
	Total				

\	Factor 5: Working Memory		
	Dimension 1: Digit Span Forward		
Item No	Item/Correct response		Score
1	3-8-6	4-2-6	0 1
2	2-4-1-6	6-2-4-7	0 1
3	4-6-3-5-8	6-4-1-7-2	0 1
4	1-3-5-7-9-4	6-2-5-3-1-8	0 1
5	7-4-6-2-5-8-3	2-8-3-6-4-9-1	0 1
6	5-2-6-4-1-3-9-7	3-5-4-1-6-8-2-9	0 1
7	4-1-5-8-3-7-2-6-9	8-3-6-9-5-2-7-1-4	0 1
		Total	

Factor 5: Working Memory			
Dimension 2: Digit Span Backward			
Item No	Item/Correct response		Score
1	1-2	3-1	0 1
2	9-5-2	8-6-3	0 1
3	3-9-4-8	7-3-4-2	0 1
4	2-5-8-7-9	1-3-6-9-7	0 1
5	4-9-1-7-6-3	5-2-4-1-3-6	0 1
6	8-4-5-9-7-1-3	9-4-1-6-8-2-5	0 1
		Total	

Factor 5: Working Memory					
Dimension 3: Number Name Sequence					
Item No	**Item/Correct response**		**Response (in Verbatim)**	**Score**	
	Trial 1	**Trial 2**			
1	2 clocks 6 bananas	1 doll 3 pens		**0**	**1**
2	3 cows 8 grasshoppers 5 bottles	2 slates 6 frocks 4 bags		**0**	**1**
			Total		

Behavioural Observations

Name of Examiner   **Signature of Examiner**

Appendix B
Norms Tables

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group

Appendix-B

3 Years to 3 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehension	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0 - 2	0	0	-	0	0	-	0	0	-	-	1
2	3	-	1	-	1	-	0	-	-	-	-	2
3	4	1	2	-	-	1	-	1	-	-	-	3
4	5	-	-	0	2	2	-	-	-	0	-	4
5	6 – 8	2	3 - 4	1	-	3	-	2	1	-	-	5
6	9	3	5	-	3	4	1	3	-	-	-	6
7	10	-	6	2	4 – 5	5	-	4	-	1	-	7
8	11 – 12	4	-	-	6 – 7	-	-	5	2	-	-	8
9	13 – 15	5	7	-	8	6	2	6	-	2	-	9
10	16	-	-	3	9	7	-	7	-	3	-	10
11	17	6	8	-	10	8	3	-	3	-	-	11
12	18 – 21	7	9 – 10	-	11 – 12	-	-	8	-	-	-	12
13	22	-	11	4	-	9	4	-	4	4	0	13
14	23 - 25	-	12	-	13	-	-	9	-	-	-	14
15	26	8	13 – 14	5	14	10	5	10	5	-	-	15
16	27	-	15	-	-	-	-	11	-	5	-	16
17	28 – 29	9	16	6	15	11	6	12	-	-	1	17
18	30 – 31	10	17	7	16	12	7	13	6	-	-	18
19	32 – 42	11	18 – 24	8	17	13	8	14	7	6	2	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

4 Years to 4 Years 11 Months

Scaled Score	Number Name Sequence	Digit Backward	Digit Forward	Square Construction	Spatial Concepts	Arithmetic	Object Series	Verbal Analogies	Comprehension	Information	Vocabulary	Scaled Score
1	-	-	0	0	-	0	0	-	0	0	0 - 3	1
2	-	-	-	-	0	-	1	-	1	-	4	2
3	-	-	-	1	-	1	-	-	2	-	5	3
4	-	0	-	-	-	2	2	0	3 - 4	1	6 - 8	4
5	-	-	-	2	-	3	3	1	-	2	9	5
6	-	-	1	3	1	-	4	-	5	-	10	6
7	-	1	-	4	-	4	5	2	6	3	11 – 12	7
8	-	-	-	-	-	5	6	-	7	4	13 – 15	8
9	-	2	2	5	2	6	7	-	-	-	16	9
10	-	3	-	6	-	7	8	-	8	5	17	10
11	-	-	3	-	3	-	9	3	9	6	18 - 19	11
12	-	-	-	7	-	8	10 – 11	-	10	7	20 – 21	12
13	-	-	4	8	4	-	12	-	11	-	22	13
14	0	4	-	9	-	9	-	4	12	8	23 - 25	14
15	-	-	5	10	5	-	13	5	13 – 14	-	26	15
16	-	-	-	11	-	10	14	-	15	9	27 - 28	16
17	1	5	-	12	6	11	15	6	16 - 17	-	29 - 31	17
18	-	-	6	13	7	12	16	7	18 - 19	10	32 - 33	18
19	2	6	7	14	8	13	17	8	20 – 24	11	34 – 42	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

5 Years to 5 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehension	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-3	-	-	-	0	0	-	0	-	-	-	1
2	4	0	0	-	-	1	-	-	0	-	-	2
3	5	-	1-2	-	1	2	0	1	-	0	-	3
4	6-7	-	-	-	-	3	-	2	-	-	-	4
5	8-9	1	3-4	0	2	4	-	-	1	-	-	5
6	10-11	2	5	-	3	5	1	3	-	1	-	6
7	12	-	-	1	4	-	-	4	-	-	-	7
8	13-14	3	6	-	5	6	-	-	-	2	-	8
9	15	4	-	2	6	7	2	5	2	-	-	9
10	16	5	7	-	7-8	-	3	-	-	3	-	10
11	17-18	-	8	-	9	8	-	6	3	-	-	11
12	19-20	6	9	3	-	-	4	7	-	-	-	12
13	21	7	10	-	10-12	-	5	8	4	4	-	13
14	22	8	11-12	4	-	9	-	9	-	-	-	14
15	23-24	-	13	5	13	10	6	10	5	-	0	15
16	25-26	-	14	-	14	11	-	11	-	-	-	16
17	27	9	15	6	15	12	7	12	6	5	-	17
18	28-29	-	16-17	7	16	13	8	13	-	-	1	18
19	30-42	10-11	18-24	8	17	-	-	14	7	6	2	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

6 Years to 6 Years 11 Months

Scaled Score	Number Name Sequence	Digit Backward	Digit Forward	Square Construction	Spatial Concepts	Arithmetic	Object Series	Verbal Analogies	Comprehension	Information	Vocabulary	Scaled Score
1	-	-	-	0	-	0	0	-	0	0	0-3	1
2	-	0	0	1	-	1	-	0	-	1	4-5	2
3	-	-	-	2	0	2	1	-	1	-	6-7	3
4	-	1	-	3	-	3	-	1	2	2	8-9	4
5	-	-	1	-	-	4	-	-	-	-	10-11	5
6	-	2	-	4	1	5	2	2	3-4	3	12	6
7	-	-	-	5	-	-	3	-	5	-	13-14	7
8	-	-	2	-	-	6	4	3	-	4	15	8
9	-	-	-	6	2	7	5	-	6	5	16-17	9
10	-	3	-	7	3	-	6	-	7	-	18-19	10
11	-	-	3	8	-	8	7-8	4	8	-	20	11
12	-	-	-	9	4	-	9	-	9-10	6	21-22	12
13	0	4	-	-	5	9	10-11	-	11-12	-	23	13
14	-	-	4	10	-	-	12	5	13	7	24	14
15	-	5	-	11	6	10	13	-	14-15	8	25	15
16	-	-	5	12	-	11	14	-	16-17	-	26-27	16
17	1	-	6	13	7	12	15	6	18-19	9	28-29	17
18	-	6	7	14	8	13	16	7	20	10	30-31	18
19	2	-	-	-	-	-	17	8	21-24	11	32-42	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
7 Years to 7 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehension	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-2	0	-	-	0	0-1	1	0-1	-	-	-	1
2	3-4	1	0	0	1	2	0	2	0	0	-	2
3	5-6	2	1	1	2	3	-	3	-	-	-	3
4	7-9	3	2	2	-	4	1	4	1	1	-	4
5	10-12	-	3	-	3	5	-	5	-	-	-	5
6	13-14	4	4	-	-	6	2	-	-	2	-	6
7	15-16	5	5	3	4	-	-	6	2	-	-	7
8	17	-	6	-	5	-	3	7	-	-	-	8
9	18	6	7-8	-	6	7	-	8	3	3	-	9
10	19-21	-	9	4	7-8	8	-	9	-	-	0	10
11	22	-	10-11	-	9	-	4	-	-	-	0	11
12	23	7	12-13	-	10	9	5	-	-	4	-	12
13	24	-	14-15	-	11-12	10	-	10	-	-	-	13
14	25	8	16	5	13	-	6	11	4	5	-	14
15	26	-	17-18	-	14	11	-	12	-	-	1	15
16	27-28	-	19	6	15	12	-	13	5	-	-	16
17	29-30	9	20	7	-	-	7	-	6	6	-	17
18	31-33	10	21	8	16	13	8	14	7	-	2	18
19	34-42	11	22-24	-	17	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
8 Years to 8 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehen-sion	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-2	0	-	-	0	0-2	-	0-2	-	0	-	1
2	3-4	1	0	-	1-2	3-4	0	3	0	1	-	2
3	5-6	2	1	0	3-4	-	1	4	-	-	-	3
4	7-9	3	2	1	5	5	2	5	1	2	-	4
5	10-12	4	3	2	6	6	-	6	-	-	-	5
6	13-15	-	4	-	7	-	-	7	-	-	-	6
7	16	5	5	3	-	7	3	8	2	3	-	7
8	17	-	6-7	-	8	-	-	-	-	-	-	8
9	18-20	6	8-9	-	9	8	4	9	3	-	0	9
10	21	-	10-11	4	10	-	-	-	-	-	-	10
11	22	-	12	-	11	9	5	10	-	4	-	11
12	23	7	13-14	-	12	10	-	11	-	-	-	12
13	24-25	8	15-16	5	13	11	6	-	4	5	1	13
14	26	-	17	6	14	-	-	12	5	-	-	14
15	27	-	18	-	15	12	7	-	-	-	-	15
16	28-29	9	19-20	7	16	-	-	13	6	-	-	16
17	30-32	-	21	-	-	13	8	14	-	6	2	17
18	33-35	10	22	8	17	-	-	-	7	-	-	18
19	36-42	11	23-24	-	-	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
9 Years to 9 Years 11 Months

Scaled Score	Number Name Sequence	Digit Backward	Digit Forward	Square Construction	Spatial Concepts	Arithmetic	Object Series	Verbal Analogies	Comprehension	Information	Vocabulary	Scaled Score
1	-	0	-	0-2	-	0-3	0-2	-	0	0-1	0-3	1
2	-	1	0	3	-	4-5	3-4	0	1	2	4-5	2
3	-	-	-	4	0	-	5	1	2	3	6-8	3
4	-	2	1	5	1	6	6	2	3	4	9-12	4
5	-	-	-	6	2	7	7	3	4	-	13-15	5
6	-	3	2	7	-	-	-	-	5	5	16	6
7	-	-	-	8	3	8	8	-	6-8	-	17	7
8	0	4	3	-	4	-	9	4	9-10	6	18-20	8
9	-	-	-	9	-	9	10	-	11	-	21	9
10	-	-	-	10	-	-	11	-	12	-	22	10
11	1	5	-	11	5	10	12	5	13-14	7	23	11
12	-	-	4	-	-	-	13	-	15	8	24	12
13	-	-	5	12	6	-	14	6	16-17	-	25-26	13
14	-	-	-	-	-	11	15	-	18	-	27	14
15	-	-	-	13	7	12	16	7	19	9	28-29	15
16	2	6	6	-	-	-	-	-	20	-	30-31	16
17	-	-	-	14	8	13	17	8	21	-	32-34	17
18	-	-	7	-	-	-	-	-	22	10	35	18
19	-	-	-	-	-	-	-	-	23-24	11	36-42	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

10 Years to 10 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehen-sion	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-4	0-2	0-2	0	0-3	0-4	-	0-3	0	-	-	1
2	5-6	3	3	1	4-5	5	0	4	-	0	-	2
3	7-8	4	4	2	6	6	1	5	-	1	-	3
4	9-12	5	5	3	7	7	2	6	1	2	-	4
5	13-15	-	-	-	8	-	-	7	2	-	-	5
6	16-17	-	-	-	-	-	3	8	-	3	-	6
7	18-20	6	6	4	9	8	4	-	-	-	-	7
8	21	-	7-9	-	10	9	-	9	3	4	0	8
9	22	-	10-12	-	11	-	-	10-11	-	-	-	9
10	23	7	13	5	12	10	5	-	-	-	-	10
11	24	8	14-15	-	13	-	-	12	4	-	-	11
12	25-26	-	16-17	6	14	11	6	-	-	5	1	12
13	27-28	-	18	-	15	-	-	-	5	-	-	13
14	29-30	9	19	7	16	12	7	13	-	-	-	14
15	31-32	-	20	-	-	-	-	-	6	-	-	15
16	33	-	21	-	-	-	-	-	-	-	2	16
17	34-35	10	22	8	17	13	8	14	7	6	-	17
18	36	11	23	-	-	-	-	-	-	-	-	18
19	37-42	-	24	-	-	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
11 Years to 11 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehension	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-4	0-2	0-3	0-1	0-3	0-4	-	0-3	0	-	-	1
2	5-6	3-4	4	2	4-5	5	0	4	-	0	-	2
3	7-8	-	5	3	6-7	6	1-2	5-6	-	1	-	3
4	9-12	5	-	-	8	7	-	7	1	2	-	4
5	13-15	-	-	-	-	-	3	8	2	-	-	5
6	16-17	6	6	4	9	8	4	-	-	3	-	6
7	18-20	-	-	-	10	-	-	9	3	4	0	7
8	21	-	7-9	-	-	9	-	10	-	-	-	8
9	22-23	7	10-12	5	11	-	5	11	4	-	-	9
10	24	8	13-14	-	12	10	-	12	-	-	-	10
11	25-26	-	15	6	13-14	11	-	-	5	5	1	11
12	27	-	16-17	-	15	-	6	-	-	-	-	12
13	28-29	-	18-19	-	-	12	-	13	-	-	-	13
14	30-32	9	20	7	16	-	7	-	-	-	-	14
15	33	-	21	-	-	-	-	-	-	-	2	15
16	34	10	22	-	-	13	8	14	6	6	-	16
17	35-36	-	23	-	17	-	-	-	7	-	-	17
18	37	11	-	8	-	-	-	-	-	-	-	18
19	38-42	-	24	-	-	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
12 Years to 12 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehen-sion	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-4	0-3	0-4	0-1	0-4	0-4	-	0-3	0	-	-	1
2	5-8	4	5	2	5-6	5	0-1	4-5	-	0	-	2
3	9-11	5	6	3	7	6-7	2	6	-	1	:-	3
4	12-14	-	-	-	8	-	3	7	1	2	-	4
5	15-17	6	7	4	9	8	-	8-9	2	-	-	5
6	18-20	-	-	-	10	-	4	-	3	3	0	6
7	21	7	8-9	-	-	9	-	10	-	4	-	7
8	22-23	-	-	5	11	-	-	11	4	-	-	8
9	24	-	10-12	-	12	10	5	12	-	-	-	9
10	25-26	8	13-14	6	13-15	11	-	-	5	-	1	10
11	27	-	15-16	-	-	-	-	13	-	5	-	11
12	28-29	-	17	-	16	-	6	-	-	-	-	12
13	30-32	9	18-20	7	-	12	-	-	-	-	-	13
14	33	-	-	-	-	-	7	-	-	-	2	14
15	34	-	21	-	-	-	-	14	6	-	-	15
16	35-36	10	22	-	17	13	8	-	-	6	-	16
17	37	-	23	8	-	-	-	-	7	-	-	17
18	38	11	24	-	-	-	-	-	-	-	-	18
19	39-42	-	-	-	-	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
13 Years to 13 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehension	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-5	0-4	0-5	0-2	0-4	0-4	0	0-3	0	0	-	1
2	6-9	5	6	3	5-7	5-6	1	4-5	-	1	-	2
3	10-12	-	-	-	8	7	2-3	6	1	2	-	3
4	13-16	6	7	4	9	-	-	7-8	2	-	--	4
5	17-18	-	8	-	10	8	-	9	-	3	0	5
6	19-21	-	9	-	-	9	4	10	3	-	-	6
7	22	7	-	5	11	-	-	-	-	4	-	7
8	23-24	-	10	-	12-13	10	5	11	4	-	-	8
9	25	8	11-12	6	14-15	-	-	12	-	-	-	9
10	26-27	-	13-14	-	-	11	-	13	5	5	1	10
11	28-29	-	15-16	-	16	-	6	-	-	-	-	11
12	30	9	17-18	-	-	-	-	-	-	-	-	12
13	31-33	-	19-20	7	-	12	-	-	-	-	2	13
14	34	-	21	-	-	-	7	-	6	6	-	14
15	35	10	22	-	17	-	-	14	-	-	-	15
16	36-37	-	23	8	-	13	8	-	7	-	-	16
17	38	11	24	-	-	-	-	-	-	-	-	17
18	39	-	-	-	-	-	-	-	-	-	-	18
19	40-42	-	-	-	-	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

14 Years to 14 Years 11 Months

Scaled Score	Vocabulary	Information	Comprehension	Verbal Analogies	Object Series	Arithmetic	Spatial Concepts	Square Construction	Digit Forward	Digit Backward	Number Name Sequence	Scaled Score
1	0-6	0-4	0-5	0-3	0-4	0-4	0	0-3	0	0	-	1
2	7-10	5	6	-	5-7	5-7	1-2	4-6	1	1	-	2
3	11-13	6	7	4	8-9	-	3	7	2	2	-	3
4	14-17	-	8	-	10	8	-	8	-	3	-	4
5	18-19	-	9	-	-	9	4	9	-	-	0	5
6	20-21	-	-	5	11	-	-	10	3	4	-	6
7	22-23	7	10	-	12	10	-	-	-	-	-	7
8	24	8	11	6	13-14	-	5	11	4	-	-	8
9	25-26	-	12-13	-	15	11	-	12	5	5	1	9
10	27-28	-	14-15	-	16	-	-	13	-	-	-	10
11	29-30	9	16-17	-	-	-	6	-	-	-	-	11
12	31	-	18-19	7	-	12	-	-	-	-	-	12
13	32-33	-	20-21	-	-	-	-	-	6	-	2	13
14	34	10	22	-	-	-	7	14	-	6	-	14
15	35-36	-	23	8	17	13	-	-	-	-	-	15
16	37	-	-	-	-	-	8	-	7	-	-	16
17	38-39	11	24	-	-	-	-	-	-	-	-	17
18	40	-	-	-	-	-	-	-	-	-	-	18
19	41-42	-	-	-	-	-	-	-	-	-	-	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

15 Years to 15 Years 11 Months

Scaled Score	Number Name Sequence	Digit Backward	Digit Forward	Square Con-struction	Spatial Concepts	Arithmetic	Object Series	Verbal Analogies	Comprehen-sion	Information	Vocabulary	Scaled Score
1	-	0-1	0-1	0-3	0-1	0-4	0-4	0-3	0-5	0-4	0-6	1
2	-	2	2	4-6	2-3	5-7	5-7	4	6-7	5-6	7-10	2
3	-	3	-	7-8	-	-	8-9	-	8	-	11-14	3
4	0	-	-	9	4	8	10	-	9	-	15-18	4
5	-	4	3	10	-	9	11	5	-	-	19-20	5
6	-	-	-	-	-	10	12	-	10	7	21-22	6
7	-	-	4	11	5	-	13	6	11	8	23-24	7
8	1	5	5	12	-	11	14	-	12-13	-	25	8
9	-	-	-	13	-	-	15-16	-	14-15	-	26-27	9
10	-	-	-	-	6	-	-	-	16-18	9	28-29	10
11	-	-	6	-	-	12	-	7	19	-	30-31	11
12	-	-	-	-	-	-	-	-	20-21	-	32	12
13	2	6	-	-	-	-	-	-	22	-	34-34	13
14	-	-	-	14	7	-	17	-	23	10	35	14
15	-	-	7	-	-	13	-	8	-	-	36-37	15
16	-	-	-	-	8	-	-	-	-	11	38	16
17	-	-	-	-	-	-	-	-	24	-	39	17
18	-	-	-	-	-	-	-	-	-	-	40	18
19	-	-	-	-	-	-	-	-	-	-	41-42	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)
16 Years to 16 Years 11 Months

Scaled Score	Number Name Sequence	Digit Backward	Digit Forward	Square Construction	Spatial Concepts	Arithmetic	Object Series	Verbal Analogies	Comprehen-sion	Information	Vocabulary	Scaled Score
1	-	0-1	0-1	0-4	0-1	0-5	0-5	0-3	0-5	0-4	0-7	1
2	-	2	2	5-7	2-3	6-7	6-8	4	6-8	5-6	8-11	2
3	0	3	-	8-9	4	8	9-10	-	9	-	12-14	3
4	-	4	3	10	-	-	11	5	-	-	15-18	4
5	-	-	-	-	-	9-10	12	-	10	7	19-21	5
6	-	-	4	11	5	-	13	6	11	8	22-23	6
7	1	5	5	12	-	11	14-15	-	12	-	24-25	7
8	-	-	-	13	-	-	16	-	13	-	26	8
9	-	-	-	-	6	-	-	-	14-16	9	27-28	9
10	-	-	-	-	-	12	-	7	17-18	-	29-30	10
11	-	-	6	-	-	-	-	-	19-20	-	31-32	11
12	2	6	-	-	-	-	-	-	21	-	33-34	12
13	-	-	-	14	7	-	17	-	22	10	35	13
14	-	-	7	-	-	13	-	8	23	-	36-37	14
15	-	-	-	-	8	-	-	-	-	11	38	15
16	-	-	-	-	-	-	-	-	24	-	39	16
17	-	-	-	-	-	-	-	-	-	-	40	17
18	-	-	-	-	-	-	-	-	-	-	41	18
19	-	-	-	-	-	-	-	-	-	-	42	19

Table A: Scaled Score Equivalents of Total Raw Scores for Subtests, by Age Group (Continued)

17 Years to 17 Years 11 Months

Scaled Score	Number Name Sequence	Digit Backward	Digit Forward	Square Construction	Spatial Concepts	Arithmetic	Object Series	Verbal Analogies	Comprehension	Information	Vocabulary	Scaled Score
1	-	0-1	0-1	0-5	0-2	0-5	0-6	0-4	0-6	0-5	0-8	1
2	0	2-3	2	6-8	3-4	6-7	7-9	-	7-9	6	9-12	2
3	-	4	3	9-10	-	8	10-11	5	-	-	13-16	3
4	-	-	-	-	-	9	12	-	10	7	17-20	4
5	-	-	4	11	5	10	13	6	11	8	21-23	5
6	1	5	5	12	-	11	14	-	12	-	24-26	6
7	-	-	-	13	-	-	15-16	-	13-14	-	27	7
8	-	-	-	-	6	-	-	-	15-17	9	28	8
9	-	-	-	-	-	12	-	7	18-19	-	29-30	9
10	-	-	6	-	-	-	-	-	20	-	31-32	10
11	2	6	-	-	-	-	-	-	21	-	33-34	11
12	-	-	-	14	7	-	17	-	22	10	35	12
13	-	-	7	-	-	13	-	8	23	-	36	13
14	-	-	-	-	8	-	-	-	-	11	37	14
15	-	-	-	-	-	-	-	-	24	-	38	15
16	-	-	-	-	-	-	-	-	-	-	39	16
17	-	-	-	-	-	-	-	-	-	-	40	17
18	-	-	-	-	-	-	-	-	-	-	41	18
19	-	-	-	-	-	-	-	-	-	-	42	19

Appendix-C

Table B: FSIQ Equivalents of Sums of Scaled Scores

Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval		Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval	
			90%	95%				90%	95%
11	40	< 0.1	38-45	37-46	36	52	0.1	49-57	48-58
12	40	< 0.1	38-45	37-46	37	53	0.1	50-58	49-59
13	40	< 0.1	38-45	37-46	38	53	0.1	50-58	49-59
14	41	< 0.1	39-46	38-47	39	53	0.1	50-58	49-59
15	41	< 0.1	39-46	38-47	40	54	0.1	51-59	50-60
16	41	< 0.1	39-46	38-47	41	54	0.1	51-59	50-60
17	42	< 0.1	40-47	39-48	42	55	0.1	52-60	51-61
18	42	< 0.1	40-47	39-48	43	56	0.2	53-61	52-62
19	43	< 0.1	41-48	40-49	44	56	0.2	53-61	52-62
20	43	< 0.1	41-48	40-49	45	57	0.2	54-62	53-63
21	44	< 0.1	42-49	41-50	46	58	0.3	55-63	54-64
22	44	< 0.1	42-49	41-50	47	58	0.3	55-63	54-64
23	45	< 0.1	43-50	42-51	48	59	0.3	56-64	55-65
24	45	< 0.1	43-50	42-51	49	60	0.4	57-65	56-66
25	46	< 0.1	43-51	42-52	50	60	0.4	57-65	56-66
26	46	< 0.1	43-51	42-52	51	61	0.4	58-66	57-67
27	47	< 0.1	44-52	43-53	52	61	0.4	58-66	57-67
28	48	< 0.1	45-53	44-54	53	61	0.4	58-66	57-67
29	49	< 0.1	46-54	45-55	54	62	0.5	59-67	58-68
30	50	< 0.1	47-55	46-56	55	63	0.5	60-68	59-69
31	50	< 0.1	47-55	46-56	56	63	0.5	60-68	59-69
32	50	< 0.1	47-55	46-56	57	64	1	61-69	60-70
33	51	0.1	48-56	47-57	58	65	1	62-70	61-71
34	51	0.1	48-56	47-57	59	65	1	62-70	61-71
35	52	0.1	49-57	48-58	60	66	1	63-71	62-72

Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval		Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval	
			90%	95%				90%	95%
61	66	1	63-71	62-72	87	82	12	79-87	78-88
62	67	1	64-72	63-73	88	83	13	80-88	79-89
63	67	1	64-72	63-73	89	84	13	81-89	80-90
64	68	2	65-73	64-74	90	84	13	81-89	80-90
65	68	2	65-73	64-74	91	85	14	82-90	81-91
66	69	2	66-74	65-75	92	86	14	83-91	82-92
67	70	2	67-75	66-76	93	87	15	84-92	83-93
68	70	2	67-75	66-76	94	87	15	84-92	83-93
69	71	3	68-76	67-77	95	88	16	85-93	84-94
70	72	3	69-77	68-78	96	89	16	86-94	85-95
71	72	3	69-77	68-78	97	89	18	86-94	85-95
72	73	3	70-78	69-79	98	90	21	87-95	86-96
73	73	3	70-78	69-79	99	91	23	88-96	87-97
74	74	4	71-79	70-80	100	91	23	88-97	87-97
75	74	4	71-79	70-80	101	92	26	89-97	88-98
76	75	4	72-80	71-81	102	93	28	90-98	89-99
77	76	5	73-81	72-82	103	94	30	91-99	90-100
78	76	5	73-81	72-82	104	94	30	91-99	90-100
79	77	6	74-82	73-83	105	95	32	92-100	91-101
80	77	6	74-82	73-83	106	96	36	93-101	92-102
81	78	7	75-83	74-84	107	96	36	93-101	92-102
82	79	8	75-84	75-85	108	97	39	94-102	93-103
83	79	8	76-84	75-85	109	97	39	94-102	93-103
84	80	9	77-85	76-86	110	98	42	95-103	94-104
85	80	9	77-85	76-86	111	98	42	95-103	94-104
86	81	10	78-86	77-87	112	99	48	96-104	95-105

Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval		Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval	
			90%	95%				90%	95%
113	99	48	96-104	95-105	139	115	85	112-120	111-121
114	100	50	97-105	96-106	140	115	85	112-120	111-121
115	100	50	97-105	96-106	141	116	87	113-121	112-122
116	101	51	98-106	97-107	142	117	90	114-122	113-123
117	101	51	98-106	97-107	143	117	90	114-122	113-123
118	102	53	99-107	98-108	144	118	91	115-123	114-124
119	102	53	99-107	98-108	145	119	92	116-124	115-125
120	103	55	100-108	99-109	146	119	92	116-124	115-125
121	104	58	101-109	100-110	147	120	93	117-125	116-126
122	104	58	101-109	100-110	148	121	94	118-126	117-127
123	105	61	102-110	101-111	149	122	95	119-127	118-128
124	105	61	102-110	101-111	150	123	95	120-128	119-129
125	106	63	103-111	102-112	151	124	95	121-129	120-130
126	107	66	104-112	103-113	152	125	96	122-130	121-131
127	108	70	105-113	104-114	153	126	97	123-131	122-132
128	108	70	105-113	104-114	154	127	97	124-132	123-133
129	109	73	106-114	105-115	155	128	97	125-133	124-134
130	110	75	107-115	106-116	156	129	97	126-134	125-135
131	110	75	107-115	106-116	157	130	97	127-135	126-136
132	111	77	108-116	107-117	158	131	98	128-136	127-137
133	112	79	109-117	108-118	159	132	98	129-137	128-138
134	112	79	109-117	108-118	160	133	98	130-138	129-139
135	113	81	110-118	109-119	161	134	98	131-139	130-140
136	114	82	111-119	110-120	162	135	99	132-140	131-141
137	114	82	111-119	110-120	163	136	99	133-141	132-142
138	115	85	112-120	111-121	164	137	99	134-142	133-143

Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval		Sum of Scaled Scores	FSIQ	Percentile Rank	Confidence Interval	
			90%	95%				90%	95%
165	138	99	135-143	134-144	187	151	> 99.9	148-156	147-157
166	139	99	136-144	135-145	188	152	> 99.9	149-157	148-158
167	140	99	137-145	136-146	189	152	> 99.9	149-157	148-158
168	141	99	138-146	137-147	190	153	> 99.9	150-158	149-159
169	141	99	138-146	137-147	191	153	> 99.9	150-158	149-159
170	142	99.5	139-147	138-148	192	153	> 99.9	150-158	149-159
171	143	99.5	140-148	139-149	193	154	> 99.9	151-159	150-160
172	143	99.5	140-148	139-149	194	154	> 99.9	151-159	150-160
173	144	99.5	141-149	140-150	195	154	> 99.9	151-159	150-160
174	145	99.9	142-150	141-151	196	155	> 99.9	152-160	151-161
175	145	99.9	142-150	141-151	197	155	> 99.9	152-160	151-161
176	146	99.9	143-151	142-152	198	156	> 99.9	153-161	152-162
177	146	99.9	143-151	142-152	199	156	> 99.9	153-161	152-162
178	147	99.9	144-152	143-153	200	157	> 99.9	154-162	153-163
179	148	99.9	145-153	144-154	201	157	> 99.9	154-162	153-163
180	148	99.9	145-153	144-154	202	158	> 99.9	155-163	154-164
181	149	99.9	146-154	145-155	203	158	> 99.9	155-163	154-164
182	149	99.9	146-154	145-155	204	159	> 99.9	156-164	155-165
183	150	> 99.9	147-155	146-156	205	159	> 99.9	156-164	155-165
184	150	> 99.9	147-155	146-156	206	160	> 99.9	157-165	156-166
185	150	> 99.9	147-155	146-156	207	160	> 99.9	157-165	156-166
186	151	> 99.9	148-156	147-157	208	160	> 99.9	157-165	156-166
					209	160	> 99.9	157-165	156-166