INTELLIGENCE

EDUCATIONAL PSYCHOLOGY

📘 Intelligence

▶ **1. Definitions of Intelligence**

▶ **Binet**: Capacity to think abstractly, reason well, judge well, and be self-critical.

▶ **Wagnon**: Ability to learn and adjust to relatively new and changing conditions.

▶ **Stern**: General mental capacity to consciously adapt thinking to new problems and conditions.

▶ **Woodworth**: Use of intellect to handle situations or accomplish tasks.

▶ **Wechsler**: Aggregate/global capacity to act purposefully, think rationally, and deal effectively with the environment.

▶ **Thorndike**: Intelligence as the power of good responses from the point of view of truth or fact.

   ▶ Types:

      ▶ Abstract intelligence

      ▶ Concrete intelligence

      ▶ Social intelligence

▶ ⚠ Misconceptions:

▶ Intelligence ≠ Knowledge

▶ Intelligence ≠ Memory

2. Theories of Intelligence

- **(a) Unitary Theory**
- Intelligence is a single universal factor.
- Criticism: Too simplistic, ignores variation in abilities.
- **(b) Spearman's Two-Factor Theory**
- Every intellectual activity = **General factor (g)** + **Specific factor (s)**.
- Example:
  - Drawing = $g + s_1$
  - Mathematics = $g + s_2$
- Criticism: Overemphasis on "g"; ignores group factors.

Theories of Intelligence

- **(c) Thurstone's Group Factor Theory**
- Nine primary mental abilities:
    - Verbal
    - Spatial
    - Numerical
    - Memory
    - Word fluency
    - Perceptual
    - Inductive reasoning
    - Deductive reasoning
    - Problem-solving ability
- Criticism: Weakest link was discarding the concept of a common factor.
- **(d) Thorndike's Multifactor Theory**
- Intelligence = Combination of many independent abilities.
- Tested through: Sentence completion, arithmetic reasoning, vocabulary, following directions.
- Criticism: Too fragmented, lacks unity.

3. MEASUREMENT OF INTELLIGENCE

- **Key Contributions**

- **Alfred Binet (1905)**:
  - Developed first intelligence test (Binet-Simon).
  - Introduced **Mental Age**.

- **William Stern**:
  - Introduced **IQ formula**:
    [IQ = \frac{Mental\ Age}{Chronological\ Age} \times 100]

- **Wechsler**:
  - Developed WISC (children) & WAIS (adults).
  - Introduced **Deviation IQ** (comparison to mean score).

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4. IQ Classification

Category	Wechsler / Stanford-Binet (SD=15)	Cattell (SD=16)	Cattell (SD=24)
Extremely Low	≤69	≤68	≤76
Borderline	70-79	69-83	77-91
Low Average	80-89	84-95	92-107
Average	90-109	96-111	108-123
High Average	110-119	112-127	124-139
Superior	120-129	128-143	140-155
Very Superior	≥130	≥144	≥156

Indian Perspective on IQ Categories

◦ Indian Perspective on IQ Categories

◦ •   Below Average (≤85): May indicate learning difficulties, but Indian schools often on remedial teaching and practical skill development rather than labeling.

◦ •   Average (85–115): Considered norm most students fall here. Success is linked to diligence, discipline, and exam preparation strategies.

◦ •   High/Above Average (115–129): Se academically strong, often encouraged tow competitive exams and professional course

◦ •   Gifted (≥130): In India, this category often associated with exceptional scholastic achievement, but educators stress that hard and perseverance matter as much as raw I

Category	IQ Range	Percentage of Disability (Govt. Certification)
Superior / Gifted	120 and above	Not applicable (N/A)
Average	90 – 109	N/A
Low Average	80 – 89	N/A
Borderline	70 – 79	25%
Mild ID	50 – 69	50% – 59%
Moderate ID	35 – 49	75%
Severe ID	20 – 34	90%
Profound ID	Less than 20	100%

OES Group B (Odisha Education Service) - 2021

○ **Q1. In Sternberg's Triarchic Theory, "Contextual Intelligence" is most commonly referred to as:**
A) Academic Smartness
B) Street Smarts
C) Creative Thinking
D) Logical Reasoning

B) Street Smarts
Explanation:
According to Sternberg's triarchic theory, contextual intelligence involves the ability to adapt to, shape, and select real-world environments, which allows an individual to function effectively in their everyday life. This practical, real-world application of knowledge is frequently described as "street smarts" or "business sense," as opposed to "academic smartness" (analytical intelligence) or "creative thinking" (experiential intelligence).

SSB Odisha PGT (Education) - 2023

- **Q2. Who of the following Psychologists is known for multiple intelligences?**
A) E. L. Thorndike
B) R. Cattell
C) H. Gardner
D) Charles Spearman

Howard Gardner
 is the psychologist known for the theory of **multiple intelligences**.
First proposed in his 1983 book *Frames of Mind*, Gardner's theory challenges the traditional view of intelligence as a single, general ability (often measured by IQ tests). Instead, he suggests that humans possess several relatively autonomous intellectual capacities

- **3.Who introduced the concept of Mental Age?**
  - A) STERN
  - B) BINET
  - C) WECHSLER
  - D) THORNDIKE

The concept of **Mental Age** was introduced by the French psychologist B)**Alfred Binet**. In the early 1900s, Binet (along with his colleague Théodore Simon) developed a test to identify children who needed extra help in school. He realized that some children could solve problems that were typically solved by older children, while others struggled with tasks typical for their own age.

- **Q4. The PASS Model of Intelligence (Planning, Attention-Arousal, Simultaneous, and Successive) was co-authored by which Indian psychologist?**
A) S.K. Mangal
B) J.P. Das
C) Girishwar Misra
D) Udai Pareek

▶ **Q5. Which of the following is considered a 'Culture-Fair' test of intelligence?**
A) Stanford-Binet Scale
B) Wechsler Adult Intelligence Scale (WAIS)
C) Raven's Progressive Matrices (RPM)
D) Bhatia's Battery of Performance Tests
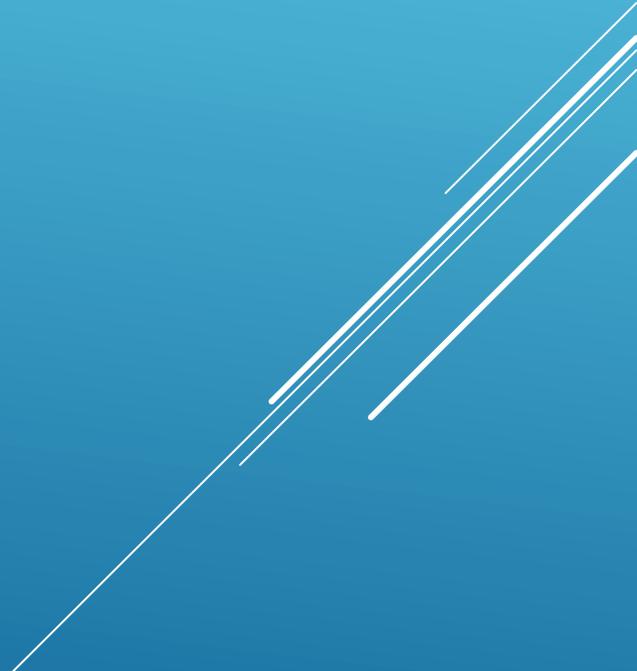
- **Normal/Average IQ range is:**
 - 80–100
  - 85–115
  - 90–110
  - 95–105
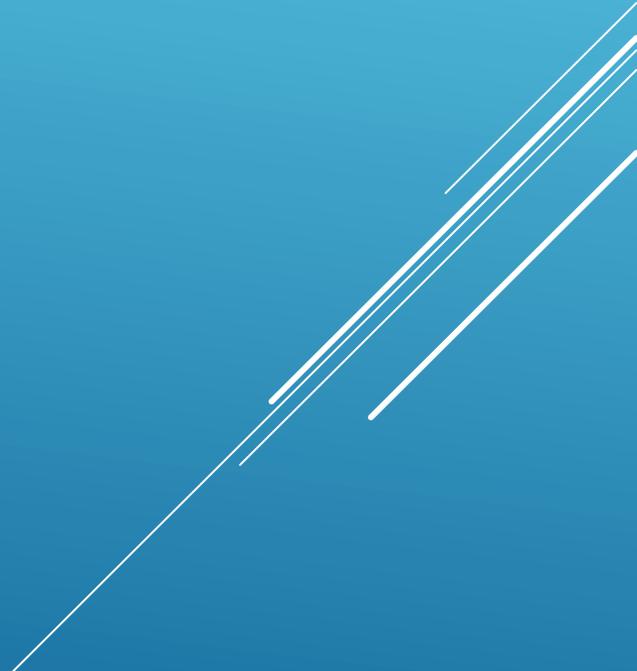
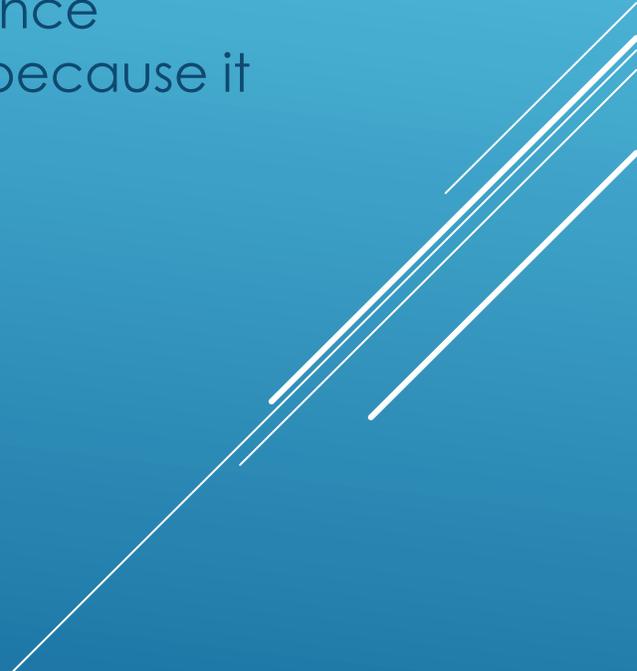- **Which of the following is NOT a misconception about intelligence?**
  - Intelligence is not knowledge
  - Intelligence is not memory
  - Intelligence is not reasoning
  - Intelligence is not judgment

- **Q:** According to Spearman, intelligence consists of:
    1. General factor (g) and specific factor (s)
    2. Fluid and crystallized intelligence
    3. Analytical, creative, and practical intelligence
    4. Verbal and non-verbal intelligence
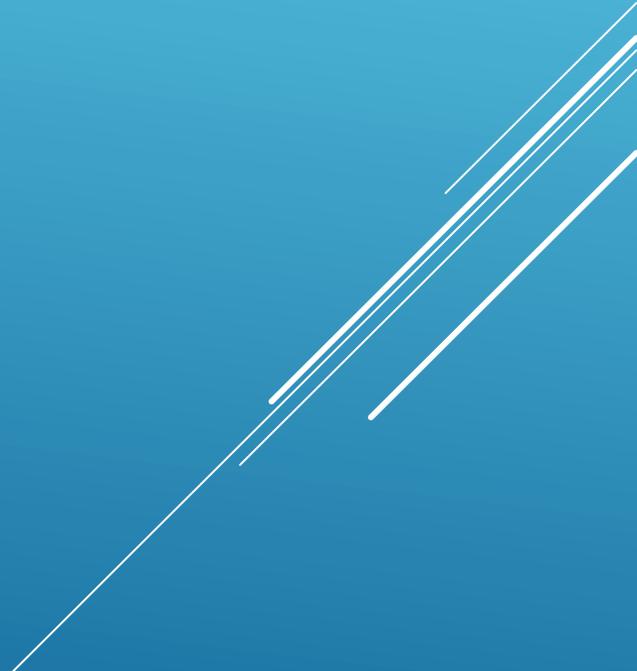
- ▶ - Answer: a) General factor (g) and specific factor (s)

- ▶ - Explanation: Spearman argued that a single general ability (g) underlies all intellectual tasks, while specific abilities (s) apply to particular tasks. This is foundational because many later theories (like Thurstone's and Gardner's) evolved as critiques of Spearman.
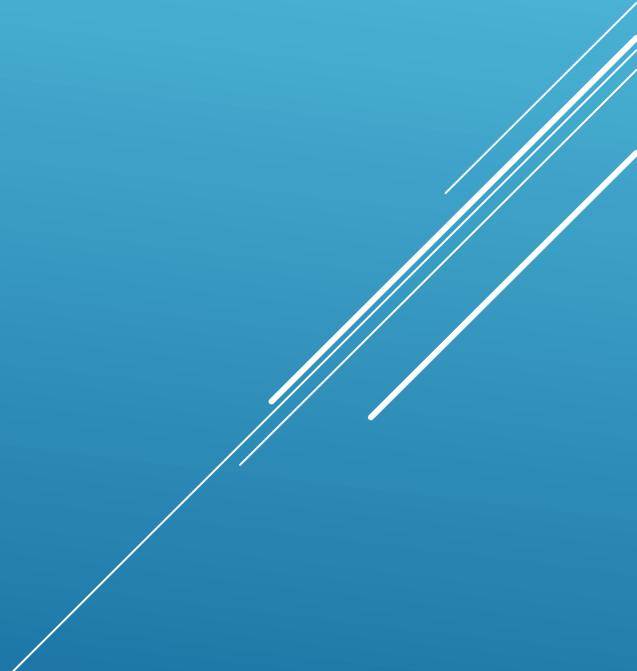
- **Q: Fluid intelligence is best described as:**

- **a.   Knowledge gained through experience**

- **b.   Ability to solve new problems and think abstractly**

- **c.   Verbal ability and vocabulary**

- **d.   Social adaptability**
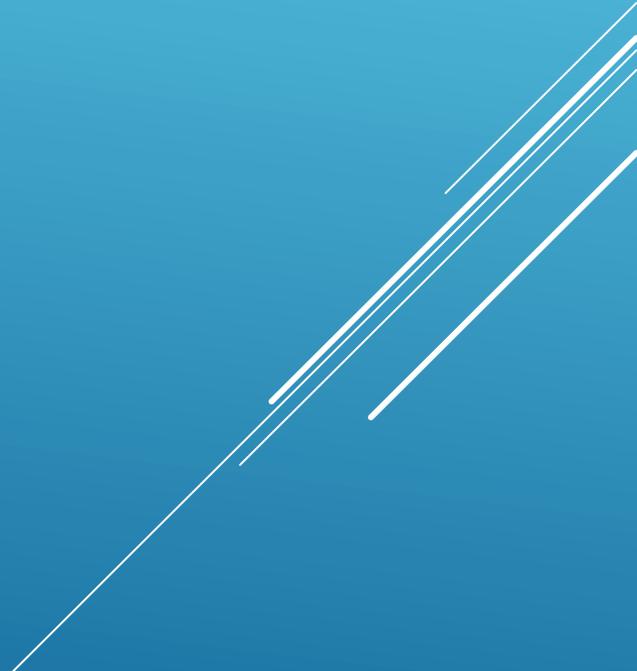
- Answer: b) Ability to solve new problems and think abstractly

- Explanation: Cattell distinguished between fluid intelligence (problem-solving, independent of prior knowledge) and crystallized intelligence (knowledge from experience). This distinction is frequently tested because it links theory to application.