

## Cognitive Screening Assessment (MoCA-Aligned, Self-Adapted AI Version)

**Purpose:** Screen for possible cognitive difficulties

**Domains:** Attention, Memory, Executive Function, Language

**Time frame:** *Right now / today*

**Nature:** Screening only – NOT diagnosis

### Instruction to user:

The following tasks check attention, memory, and thinking skills.

There are **no right or wrong results**.

Please answer to the best of your ability.

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## SECTION 1: Attention & Concentration

### Q1. Sustained attention (number repetition)

**Please repeat the following number sequence exactly as shown:**

**7 – 2 – 9 – 4**

Options:

- **1** – I repeated the sequence correctly.
  - **0** – I could not repeat the sequence correctly.
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### Q2. Mental focus (backward sequence)

**Now repeat this sequence in reverse order:**

**5 – 1 – 8**

Correct answer: **8 – 1 – 5**

Options:

- **1** – I repeated the sequence correctly in reverse.
  - **0** – I could not repeat the sequence correctly.
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### Q3. Selective attention (target detection)

**Please count how many times the letter “A” appears in the sequence below:**

**F – A – B – C – A – D – E – A – G**

Options:

- **1** – My answer was correct (3 times).
  - **0** – My answer was incorrect.
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## SECTION 2: Executive Function (Thinking & Flexibility)

### Q4. Category switching

Which option best completes the pattern?

Dog → Cat → Dog → Cat → ?

Options:

- 1 – Dog
  - 0 – Any other answer
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### Q5. Logical sequencing

Which comes next in the series?

2 → 4 → 6 → 8 → ?

Options:

- 1 – 10
  - 0 – Any other answer
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## SECTION 3: Memory (Short-Term Recall)

### Q6. Word learning (presentation)

Please read and remember these words:

**Apple – Chair – River – Train – Coin**

*No scoring here — used for later recall.*

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### Q7. Delayed recall (after other questions)

Which of the following words do you remember seeing earlier?

Options (select all that apply):

- Apple
- Chair
- River
- Train
- Coin
- Book
- Phone

Scoring:

- 1 point per correct word recalled / 0 points for incorrect selections {(Max: 5 points)}

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## **SECTION 4: Language**

### **Q8. Object understanding**

**Which word best describes both a bicycle and a car?**

Options:

- **1** – Vehicle
- **0** – Any other answer

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### **Q9. Sentence comprehension**

**Which sentence makes the most sense?**

Options:

- **1** – “The child drank water because they were thirsty.”
- **0** – “The child drank water because it was sleeping.”

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## **SECTION 5: Orientation (Awareness)**

### **Q10. Date awareness**

**What is today’s date?**

Options:

- **1** – I answered correctly.
- **0** – I answered incorrectly or was unsure.

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### **Q11. Place awareness**

**Where are you right now?**

Options:

- **1** – I correctly identified my location (home, office, city, etc.).
- **0** – I could not clearly identify my location.

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## **Scoring Logic (AI-Ready)**

Total Cognitive Screening Score = Sum of all item scores

Maximum Score = 12

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## Interpretation (SCREENING ONLY)

### Score Range Interpretation




10–12	No significant cognitive difficulty detected
7–9	Mild cognitive difficulty – monitor
$\leq 6$	Possible cognitive concern – recommend professional assessment

**This does NOT diagnose dementia, MCI, or neurological disease.**

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### Mandatory AI Safeguards

AI must:

-  Never say “cognitive impairment”
-  Never mention dementia or disease
-  Say:

“Your responses suggest possible difficulty with attention or memory. This is only a screening result.”

- Escalate **only if**:
    - Score  $\leq 6$  **and**
    - User reports functional difficulty
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### How AI Uses This (Real Value)

- Detect **attention issues** (students, burnout)
  - Detect **brain fog** (stress, depression, sleep loss)
  - Track **cognitive changes over time**
  - Decide whether to suggest:
    - Sleep screening
    - Depression screening
    - Neurology / psychology referral
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### Panel-Ready One-Liner

“We use a self-adapted, MoCA-aligned cognitive screener to flag possible attention and memory difficulties, strictly for screening and referral, not diagnosis.”