

The logo of Galgotias University, featuring a stylized circular emblem with three curved segments in shades of blue, yellow, and red, set against a light grey background.

# NEUROLOGICAL EXAMINATION

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# Disclaimer

All the content provided here is only for teaching purpose

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# HIGHER MENTAL FUNCTIONS

## I. LEVEL OF CONSCIOUSNESS

1. Full Consciousness
2. Lethargy
3. Obtundation
4. Stupor
5. Coma

## • II. ORIENTATION

1. Time
2. Place
3. Person



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- *Confusional state* is a more profound deficit that includes disorientation, bewilderment, and difficulty following commands.
- *Lethargy* consists of severe drowsiness in which the patient can be aroused by moderate stimuli and then drift back to sleep.
- *Obtundation* is a state similar to lethargy in which the patient has a lessened interest in the environment, slowed responses to stimulation, and tends to sleep more than normal with drowsiness in between sleep states.
- *Stupor* means that only vigorous and repeated stimuli will arouse the individual, and when left undisturbed, the patient will immediately lapse back to the unresponsive state.
- *Coma* is a state of unarousable unresponsiveness

TABLE 38-2

## Glasgow Coma Scale

BEHAVIOR	RESPONSE	SCORE
Eye opening response	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best verbal response	Oriented to time, place, and person	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No response	1
Best motor response	Obeys commands	6
	Moves to localized pain	5
	Flexion withdrawal from pain	4
	Abnormal flexion (decorticate)	3
	Abnormal extension (decerebrate)	2
	No response	1
Total score:	<i>Best response</i>	15
	<i>Comatose client</i>	8 or less
	<i>Totally unresponsive</i>	3

- III. MEMORY

1. Immediate Memory (Immediate Recall)

2. Short- term Memory

3. Long- term Memory



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- IV. ATTENTION

- It is the capacity of brain to process in information from the environment or long term memory.

- Occur in individuals with delirium, brain injury, dementia, mental retardation or performance anxiety

1. Selective Attention

2. Sustained Attention

3. Alternating Attention

4. Divided Attention

- METHODS OF TESTING ATTENTION

a) Digit span forward (Test for immediate memory)

- Numbers given @ rate 3 or 4 per second.
- Expected performance-  $7 \pm 2$

b) Backward digit span

- Repetition of series of number in reverse order
- Expected performance-  $5 \pm 1$

c) Three step task

d) Line bisection test

- e) Patient to signal whenever “A” is heard from string of random letters dictated by examiner or having the patient cross all the “A’s” on a written sheet.

## V. CALCULATIONS

- Dyscalculia- Characteristic of lesions of dominant parietal lobe, particularly angular gyrus.

- METHODS OF TESTING CALCULATION

a) Simple arithmetic either verbally or on paper.

b) Serial 7 test

- Subtracting serial 7s from 100.

## VI. ABSTRACT THINKING

- Patient asked to tell differences and similarities; interpretation of proverbs.
- Its disorders common with frontal lobe disorders
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## VII. INSIGHT AND JUDGEMENT

- Insight to one's own problem, medical illness.
- Artificial situations given for judgment testing

# The Mini-Mental State Exam

Patient \_\_\_\_\_ Examiner \_\_\_\_\_ Date \_\_\_\_\_

Maximum Score

5 ( )

### Orientation

What is the (year) (season) (date) (day) (month)?

5 ( )

Where are we (state) (country) (town) (hospital) (floor)?

### Registration

3 ( )

Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat them until he/she learns all 3. Count trials and record.  
Trials \_\_\_\_\_

### Attention and Calculation

5 ( )

Serial 7's. 1 point for each correct answer. Stop after 5 answers.  
Alternatively spell "world" backward.

### Recall

3 ( )

Ask for the 3 objects repeated above. Give 1 point for each correct answer.

### Language

2 ( )

Name a pencil and watch.

1 ( )

Repeat the following "No ifs, ands, or buts"

3 ( )

Follow a 3-stage command:

"Take a paper in your hand, fold it in half, and put it on the floor."

1 ( )

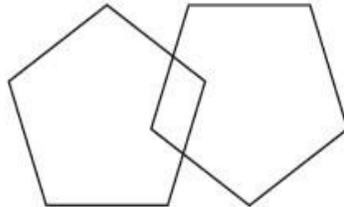
Read and obey the following: CLOSE YOUR EYES

1 ( )

Write a sentence.

1 ( )

Copy the design shown.



\_\_\_\_\_ Total Score

ASSESS level of consciousness along a continuum \_\_\_\_\_

Alert Drowsy Stupor Coma

## References

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**THANK YOU**

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