

Modul designation	Neurobehaviour System
Semester in which the module is taught	3rd Semester of Academic/Bachelor Stage
Person responsible for the module	<ol style="list-style-type: none"> <li>1. Widayanti,dr,MKes</li> <li>2. Yuniarti,drg,M.Kes</li> <li>3. Alya Tursina,dr, SpS</li> <li>4. Siti Annisa Devi Trusda, dr, MKes</li> <li>5. Susanti Dharmmika,dr.,SpKFR</li> </ol>
Language	Bilingual (Indonesia & English)
Relation to curriculum	Compulsory
Teaching methods	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Tutorial</li> <li>- Laboratory activity</li> </ul>
Workload	<p>Total workload : 7 weeks</p> <p>Contact hours : Lecture 2 hours/week</p> <p style="padding-left: 40px;">Tutorial 3 hours/meeting (3 meeting/week)</p> <p style="padding-left: 40px;">Laboratory activity 3 hours/meeting</p>
Credit points	10 ECTS (7 SKS)
Required & recommended prerequisites for joining the module	Learning course at 1 <sup>st</sup> -2 <sup>nd</sup> semester
Module Objective	<p>At the end of course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Apply the embryological process and organ development in the neurobehavior system according to the rules of basic medical science. (C3)</li> <li>2. Apply tissue and organ structures to normal and abnormal conditions in the neurobehavior system according to the principles of basic medical science (C3)</li> <li>3. Analyze the functions and physiological processes of the neurobehavior system according to the rules of basic medical</li> </ol>

	<p>science. (C4)</p> <ol style="list-style-type: none"> <li>4. Applying biochemical concepts to processes related to the neurobehavior system (C3)</li> <li>5. Apply morphological descriptions, properties, virulence, and examination of microorganisms in the neurobehavior system according to the principles of microbiology. (C3)</li> <li>6. Explain the definition, etiology, and classification of neurobehavioral disorders in accordance with the rules of clinical medicine. (C2)</li> <li>7. Analyze clinical manifestations based on pathogenesis and pathophysiology, supporting examinations, differential diagnosis, management, prognosis, and complications of neurobehavior disorders in accordance with the rules of clinical medicine. (C4)</li> <li>8. Apply psychodynamics, theories of mental and personality development, and mental defence mechanisms to psychiatric disorders. (C3)</li> <li>9. Demonstrate polite, ethical, and professional behaviour in communicating in accordance with the principles of bioethics and humanities. (A3)</li> </ol>
Content	<p>Neurobehavioral Systems module discusses basic science, including embryology, anatomy, histology, physiology, clinical pathology, anatomical pathology, microbiology, and pharmacology, related to the nervous system and psychiatry. In this module, we will also discuss several behavioural disorders that are most frequently encountered and that general practitioners must be aware of.</p>
Examination forms	<p>Multidisciplinary Examination (MDE), SOOCA, Lab exam</p>
Study and examination requirements	<p>System Pass Criteria : Minimum MDE, SOOCA and Lab exam score 55.5 (C)</p>
Reading list	<ol style="list-style-type: none"> <li>1. Victor M, Ropper AH. Adams and Victor's Principles of Neurology 7th ed. USA. McGraw-Hill</li> <li>2. Rowland LP. Merrit's Textbook of Neurology 90h ed.: 990-1018</li> <li>3. Cokerell C, Shorvon S. Epilepsy Current concept</li> <li>4. Gilman S. Manter and Gatz's Essentials of Clinical Neuroanatomy &amp; Neurophysiology, 8th ed. FA Davis Company, USA</li> <li>5. DeMyer W. Neuroanatomy 2nd ed. Williams and Wilkins-A.</li> </ol>

	<p>Waverl Co, USA</p> <ol style="list-style-type: none"> <li>6. Basic Histology. L.C. Junqueira, J. Carneiro, R.O. Kelley, 11th ed., Prentice Hall nt.</li> <li>7. Functional Histology ,Wheater's,. B. Young, J.W. Heat, 4th ed, Churchill Livingstone</li> <li>8. Synopsis of Psychiatry, Behavioural Science/Clinical Psychiatry, 9th ed. Lippincott Wilkins&amp;Wilkins, Philadelphia</li> <li>9. Katzung :Basic to Clinical Pharmacology 8Th Ed</li> <li>10. Guyton &amp;Hall, Textbook of Medical Physiology,11th Edition</li> <li>11. Seeley's Physiology&amp; Anatomy,11th Edition</li> <li>12. Moore Anatomy</li> <li>13. Junqueira, Basic Histology</li> <li>14. Wallen K. Lippincott Illustrated Review : Pharmacology. Wolters Kluwer. sixth edition. 447-56</li> <li>15. Buku Ilmu Kedokteran Fisik dan Rehabilitasi, Perdosri</li> <li>16. Braddom's Physical Medicine and Rehabilitation, 5th Ed</li> </ol>
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Rubric of Tutorial Process:

Rubric Tutorial Process				CASE 1/2/3/4/5/6/7				
No.	Students matrix	Students's name	Group	Interpersonal group capability	Problem solving ability	The ability to gather information	Evaluation capability	Average score
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
Tutor Name								

**Total = (Score / 4) x 100**

**Criteria**

- Very good, if scored 80-100
- Good : 70-79
- Acceptable : 60-69

**Date:**

**Tutor's name:**

**Signature:**

● Poor : < 60

## Assessment Rubric of SOCA

### RUBRIC OF STUDENTS' ORAL CASE ANALYSIS (SOCA) 3<sup>rd</sup> SEMESTER ACADEMIC YEAR 2023/2024 MODULE NEUROBEHAVIOR SYSTEM/ DATE \_\_\_\_\_

Assessed components	0	1	2	3
<b>Problem identification</b>	Unable to identify the patient's problems only reading questions	Able to identify only 1-2 patient problems	Able to identify 3-4 patient problems	Able to identify the following 5-6 patient problems: 1. Age and Main Complaints 2. Current disease history 3. History of past diseases 4. Neurological examination 5. Neuropsychological examination 6. MRI of the head
<b>Concept Map</b>	Does not make concept map	Create a concept map but are wrong and/or don't understand	Creating and explaining concept maps correctly but incompletely	Create and explain concept maps completely and correctly
<b>Basic science</b>	Unable to explain basic science	Able to explain basic science well on 1 component	Able to explain 2 components of basic science well	Able to explain 3-4 components of basic science well
<b>Clinical science</b>	Unable to explain <i>clinical science</i>	Able to explain other than points 3-4 (Pathogenesis and Pathophysiology and diagnostic criteria) or 3-4 other components of clinical science well	Able to explain points 3-4 (Pathogenesis and Pathophysiology and diagnostic criteria) and 1-2 other components of clinical science well	Able to explain points 3-4 (Pathogenesis and Pathophysiology and diagnostic criteria) and 3-4 other components of clinical science well
<b>Pathomechanism</b>	Does not make pathomechanism	Making a pathomechanism but wrong and/or not understanding	Creating and explaining pathomechanism correctly but incompletely	Creating and explaining the map correctly and completely
<b>Diagnostic Enforcement</b>	Unable to explain the reasoning basis of the diagnosis		Able to establish the diagnosis and explain the reasoning basis of the diagnosis accurately but incompletely	Able to establish the diagnosis and explain the reasoning basis of the diagnosis completely and accurately
<b>Bioethic and Humanity Aspect</b>	Not explaining education to patients		Explaining education but incomplete	Explain patient education completely and well
<b>Islamic Value Integration</b>	Does not make Islamic Value Integration	Mention verse/hadiths but are less related	Mention related verse/hadiths but cannot explain the relationship properly	Mention relevant verse/hadiths and be able to explain the relationship well
<b>Performa</b>	Speech is unclear, unsystematic and uncooperative and disrespectful	Speak clearly but not systematically and uncooperatively	Speak clearly, politely, cooperatively, but not systematically	Speak clearly, systematically, cooperatively and politely

### Example of Written Test Exam: MODULE NEUROBEHAVIOR SYSTEM

1. A 65-year-old man came to the general practitioner's clinic with complaints of frequent forgetfulness since 6 months ago. Complaints of forgetfulness are often lost when returning home, forgetting to store things. History of stroke and hypertension (+) since 1 year ago. Examination of vital signs, blood pressure of 140/90 mmHg is other within normal limits. Neurological status: right hemiparesis, others within normal limits. CT scan of the head: multiple infarction of the lakuner.

What is the most appropriate drug for the package?

- A. Aspilet
  - B. Citicholin
  - C. Pyracethams
  - D. Donepezil**
  - E. Amlodipine
2. A 65-year-old man came to the ER Hospital with a complaint of his mouth turning to the left accompanied by rero speech since 2 days ago when he woke up. The complaint was accompanied by weakness in the right limb. Complaints of decreased acuity, headache, seizures and projectile vomiting were denied. History of DM (+) and hypertension (+) since 5

years ago. Examination of the consciousness of the mentis compos, another 180/90 mmHg blood pressure within normal limits. Neurological status: Paresis NVII and XII right central, right hemiparesis superior right motor force 3 inferior 1, others within normal limits.

What are the vascular abnormalities that occur in the case?

- A. Middle cerebral artery infarction
  - B. **Anterior cerebral artery infarction**
  - C. Multiple cerebral artery infarctions
  - D. Anterior cerebral artery hemorrhage
  - E. Middle cerebral artery haemorrhage
3. A 20-year-old man came to the health center with complaints of being pierced by a nail in his right leg since 3 hours ago. The patient felt pain in the puncture area. Localized status: tenderness (+), redness (+), swelling (+), heat (+). There are 4 stages in the pain process, including those that involve the conversion of mechanical or thermal stimuli into electrical signals.

What is the pain process in the above case?

- A. Stimulation
- B. Transmission
- C. **Transduction**
- D. Modulation
- E. Perception