

PRACTICAL SCHEDULE OF PHYSIOLOGY MD 2023-2024. 2nd SEMESTER

1st week (12-18. Feb.): General information

1. Information of practice requirements
2. Propaedeutic of urine analysis

2nd week (19-25. Feb.): Urine analysis

Practical skills:

A) Physical examination:

1. Colour, smell, transparency and pH
2. Microscopic investigation of the urinary sediment (ppt slide show)
3. Specific gravity

B) Chemical examination:

1. Detection of calcium (Sulkowitsch' test)
2. Detection of glucose (Nylander's and Fehling's tests)
3. Detection of proteins (Heller's test, boiling test, sulphosalicylic acid test)
4. Detection of acetone (Rothera's test, Legal's test)
5. Detection of bile pigments (Gmelin's, Rosin's, Rosenbach's test)
6. Detection of UBG from the fresh urine (Ehrlich's method)

Theoretical knowledge:

1. Detection of blood (benzidine test)
2. Detection of pus (Donne's test)
3. Rapid (strip) tests (importance of ascorbic acid and nitrate reaction pads)

3rd week (26. Feb.-3-March) PRACTICAL MTO - Urine analysis

Physical examination of urine specimen and chemical analysis of its components

4th week (4-10. March) GI tract I.

Practical skills (ppt):

1. The pH of the saliva
2. Detection of albumin of the saliva
3. Investigation of saliva amylase and maltase

4. Demonstration of the protein digesting activity of pepsin
5. Detection of lactic acid in gastric juice

5th week (11-17. March): GI tract II., Endocrinology

Practical skills:

1. Determination of various anthropometric data (e.g. Body Mass Index (BMI), body fat %)
2. The effect of insulin on blood glucose level (Oral Glucose Tolerance Test OGTT)
3. Demonstration of the effect of ADH on the rat's diuresis
4. Pregnancy tests

Friday is holiday!

6th week (18-24. March) I. MTO (from the seminar knowledge)

There is NO practice!

7th week (25-31. March): Monitoring the effect of the autonomic nervous system with polygraph and biofeedback testing.

1. Polygraphy
2. Biofeedback

From Thursday is the Spring holiday!

8th week (1-7. April): Sensory organs I: Sense of Smell and Taste; Touch

Practical skills:

1. Sense of taste
2. Olfactometry
3. Investigation of the skin senses (pressure, pain, tactile sense, graphaesthesia)

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4. Sense of localisation: two-point discrimination with Weber's callipers)
5. Weber's 3 basin test
6. Cool and hot receptors localization on the hand

On Monday and Tuesday are holiday!

9th week (8-14 April): Sensory organs II: Hearing

Practical skills:

1. Determination of the acoustic acuity (audiometry)
2. Tuning fork tests (examinations according to Rinne, and Weber)
3. Laryngoscopy, otoscopy
4. Bárány's pointing test; postrotational nystagmus

Groups on Monday and Tuesday perform the "Sensory organs I" too.

10th week (15-21 April): II. MTO (from seminar knowledge)

There is NO practice!

11th week (22-28. April): Sensory organs III.: Vision

Practical skills:

1. Determination of visual acuity
2. Accommodation (determination of near point of the eye)
3. Mariotte's blind-spot test
4. The light-response of the pupil (direct and consensual pupil reflex)
5. Testing of colour blindness with Ishihara's tables
6. Testing of visual field
7. Ophthalmoscopy
8. Dark adaptation
9. Observation of the optokinetic reflex
10. Detection of astigmatism (Placido's keratoscope, Javal-Schiötz'-ophthalmometer)
11. Visual evoked potentials (computer program)

12th week (29 April 5 May): Motor system-reflexes; reaction time

Practical skills (video):

1. Human reflexes
 - proprioceptive reflexes (patella-, Achilles-tendon, biceps-, triceps-, radial-reflex)
 - exteroceptive reflexes (superficial plantar reflex, abdominal skin reflex)
3. Reaction time measurement: motor response to each visual stimulus
4. Reaction time measurement: motor response to each auditory stimulus

Wednesday is holiday!

13th week (6-12. May): EEG, Cognitive function

1. Practical skills:
2. EEG recording
3. Cognitive tests: Stroop paradigm, Mini-Mental Test, Eyes test, Trail making test

III. MTO (from seminar knowledge)

Groups on Wednesday perform the reflexes too.

14th week (13-19. May): PRACTICAL EXAM

PRACTICAL EXAM OF MATERIAL OF THE 1ST AND 2ND SEMESTERS