

**National Research University Higher School of Economics**

APPROVED by

HSE Vice Rector

\_\_\_\_\_ S.Y. Roshchin

— \_\_\_\_\_ 2017

APPROVED

By Minutes No. 7 of the Meeting of the  
Doctoral School of Psychology  
Academic Council dated 12.09.2017

Academic Director of the Doctoral  
School of Psychology

\_\_\_\_\_ M.R. Khachaturova

September 9, 2017

Entrance Examinations Programme for Field of Study  
37.06.01 Psychological Science  
for Applicants of HSE Doctoral Programmes

Moscow, 2017



## 1. Programme Scope and Regulatory References

This Entrance Examinations Programme is based on the federal state educational standards of higher education for Specialist or Master's level programmes.

## 2. Structure of Entrance Examinations

**The format of Entrance Examinations:** Entrance examinations consist of two parts: evaluation of applicants' individual academic achievements (portfolio competition) and an interview.

### 2.1. Evaluation of Individual Academic Achievements. Portfolio Structure

Applicants may provide the following documents in order to take part in the portfolio competition:

1. Resume (CV), including a list of publications, information on the applicant's participation in conferences, schools, research projects, research grants, professional experience, proficiency in foreign languages and programmes, etc. CV may be prepared in Russian or English (at the applicant's discretion).
2. A motivation letter (1000-1200 words) in Russian or English (at the applicant's discretion), highlighting the following points:

**Part I.** A brief overview of the applicant's interests and his/her motives for applying to a doctoral programme.

**Part II.** Description of the applicant's research experience, such as:

- Research projects, undertaken by the applicant (for example, during thesis preparation). Applicants should specify the project name, as well as the project deliverables.
- If the applicant wrote an article or made a presentation at a conference, this information may also be provided in the motivation letter.
- Information on all academic achievements of the applicant (for example, scholarships, or grants) should be provided.
- The applicant may provide an overview of his/her professional experience, especially if this experience has motivated him/her for admission to the doctoral programme.

**Part III.** In this section, the applicant should speak about his/her personal preferences for work and studies on a given doctoral programme:

- Areas of interests. Ideally, the scientific problem/issue for research should be formulated here (or alternatively a topic, which the applicant wishes to concentrate on).
- The applicant's motivation and personal qualities, demonstrating his/her desire to pursue doctoral studies. Qualities, competencies, and achievements, which will allow the applicant to succeed in his/her doctoral studies and further develop in the chosen field, should be emphasized.
- The applicant's idea of his/her professional activities in a given field upon graduation.



Please note that the applicant's motivation letter must not repeat his/her CV, but rather provide complementary details.

**3.** An introductory abstract (10-15 pages) in Russian or English, based on the applicant's thesis, should cover the following points:

- Research goal.
- Research problem/issue.
- Research hypotheses.
- Research methods.
- Main outcomes/deliverables.
- Further research prospects.
- Bibliography.

Instead of the abstract, applicants may submit a draft of a new research project (5-10 pages) in Russian or English, covering the following points:

- Introduction (the goal, relevance and problem/issue tackled in the research project).
- The theoretical background for formulating research hypotheses.
- Research questions or hypotheses.
- Methods used for carrying out the research.
- Anticipated outcomes/deliverables.
- The Scientific and practical significance of the research.
- Bibliography.

Applicants are expected to submit either an abstract of their thesis or an outline of a new research project, and the same number of points may be assigned for either of these documents.

**4.** A copy of educational certificate (degree certificate/diploma/transcript), containing a list of courses and respective grades. An official document containing a list of all completed courses and respective grades must be provided if the applicant has not yet received a specialist or Master's diploma/degree certificate.

**5.** A recommendation letter from a person who can attest to the applicant's academic and research achievements. Recommendation letters may be presented in Russian or English in original hard copy or electronically as a scanned copy and must include contact details.

**6.** A recommendation letter from the potential academic supervisor of the applicant's dissertation, containing his/her consent to supervise the applicant's research work, in the case of the latter's successful admission.

**7.** Research publications, if available (in PDF).

**8.** Participation in Russian and international conferences, containing conference details and the presentation topic, if any (a list of conferences in PDF).

**9.** Diplomas and certificates confirming other academic achievements (successful participation in student /student paper competitions), personal academic scholarships and grants, if any.



## 2.2. Portfolio Evaluation Criteria

The maximum grade that may be assigned for an applicant's portfolio based on the criteria given below is 55 points.

<b>Evaluation criteria</b>	<b>Points</b>
<b>Introductory abstract / Draft of a new project</b>	<b>Maximum - 15 points</b>
- Substantiated theoretical basis of research, and formulated research problem/issue and hypotheses; adequate tools for hypotheses verification, and availability of a research plan;	0 - 6 points
- Presentation and interpretation of the obtained results/deliverables;	0 - 6 points
- Excellent writing skills, as well as ability to express ideas in a clear, concise and consistent manner.	0 - 3 points
<b>Motivation essay:</b>	<b>Maximum - 10 points</b>
- Correlation between the applicant's current expertise and ongoing practical activities and the proposed area of doctoral studies;	0 - 5 points
- Proved motivation for research work.	0 - 5 points
<b>Publications:</b>	<b>Maximum - 10 points</b>
- Any number of publications, including at least one article published in a scientific journal appearing on the list of journals maintained by the Russian Higher Attestation Commission, or an article published in a peer-reviewed English journal indexed in Web of Science or Scopus.	10 points
- Any number of publications, comprised exclusively of conference report abstracts, chapters in collections of conference reports, working papers, and articles in scientific journals that do not appear on the list of journals maintained by Supreme Attestation Commission. <i>The applicant must be the principal author of at least one article.</i>	5 points
<b>Participation in research projects</b>	<b>Maximum - 7 points</b>
- in areas that match the academic supervisor's research interests, the focus of ongoing projects of the department's laboratories, and the field of study selected for doctoral studies;	7 points
- in other fields of study, in which the applicant used to specialize.	5 points



<b>Participation in Russian and international conferences</b>	<b>Maximum - 5 points</b>
- Presentations or research posters at international conferences;	5 points
- Presentations at Russian conferences;	3 points
<b>Academic recommendations</b>	<b>Maximum - 5 points</b>
- A recommendation letter from a person who is able to attest to the applicant's academic and research achievements;	3 points
- A recommendation letter from a potential academic supervisor of the applicant's thesis.	2 points
<b>Diplomas awarded for winning academic competitions</b>	<b>Maximum - 3 points</b>
- Diplomas awarded for winning academic competitions.	3 points

**Applicants must earn at least 15 points for previous academic achievements in order to proceed to the next stage of competitive selection.**

### **2.3. The Interview Structure and Procedure**

The interview consists of two stages: The applicant shall receive two questions from the interview programme given below and shall have 30 minutes to prepare his/her answers.

The applicant's answer consists of two parts: First, the applicant should tell the interviewer about his/her background and motivation for choosing psychology for studies and further career development. The applicant should also give information on his/her research areas, as well as provide a rationale of the chosen topic and outline of the research. The first part of the interview takes 10 minutes.

During the second part, the applicant should answer two questions from the interview programme. The second part of the interview takes 10 to 15 minutes.

The interview may be held in Russian or English (at the applicant's discretion).

### **2.4. Interview Evaluation Criteria**

Applicants may be assigned up to 15 points for the first part of the interview. The interviewer shall assess the applicant's independent research skills, acquaintance with research methods and prior experience of research work.

#### **Suggested questions:**

- What research projects have you conducted before?
- What major achievements for those projects can you mention?
- To what extent were your previous research efforts independent?
- Please, describe one of your research projects in detail: goals, objectives, research methods and final results/deliverables.



- What tasks were easy to cope with, and what difficulties did you have to face in the course of your research work?
- Tell us about your research plans in detail: goals, objectives, research methods and final results.
- What research methods have you mastered?
- What additional training will you need during your studies?

During the second part of the interview, the interviewer shall assess the applicant's answers to the questions posed. Each answer to the question is evaluated on a 15-point scale.

<b>Evaluation Criteria</b>	<b>Points</b>
The answer is complete, logical and to the point. The interview has no special remarks. The applicant has demonstrated knowledge of concepts within the scope of psychological science and terminology.	13-15
The answer is complete, logical and to the point. There are minor deficiencies in terms of knowledge of concepts within the scope of psychological science and terminology.	10-12
The answer is incomplete, inconsistent and contains significant factual mistakes.	5-9
No answer to the question was provided.	0-4

**Applicants must earn at least 15 points for an interview in order to proceed to the next stage of competitive selection.**

For applicants with an equal number of points, priority shall be given to those satisfying the following criteria (presented in descending order):

1. Higher grades earned for the interview.
2. At least 10 points earned for the introductory abstract / a draft of a new research project.
3. Previous research experience in areas that match the academic supervisor's research interests, ongoing projects carried out at the department's laboratories, and the focus of doctoral studies.

### **3. Content of the interview program**

Applicants should choose for the interview questions of one of the 3 parts in accordance with the field of study of future research project (PhD thesis), indicated in the application for admission to Doctoral school.

#### **3.1. «19.00.01. General Psychology, Personality Psychology and History of Psychology»**

##### **PART 1. INTRODUCTION TO PSYCHOLOGY. PHILOSOPHICAL-METHODOLOGICAL AND SCIENTIFIC BASIS OF PSYCHOLOGY**

Place of Psychology in Human Sciences. Psychology and scientific knowledge. Psychology and Humanities. Psychology and culture. Contemporary fields of psychology



Genesis of scientific Psychology, general character of its subject and methods. Scientific Psychology and folk-psychology. The unique character of psychological knowledge. Distinct features of psychological knowledge.

Definitive characteristics of psychical properties (A.N.Leontiev). Evolutionary development of psyche.

Research methods of Psychology: organizational, empirical, practical methods of Psychology, methods of descriptive psychology, methods of data-processing.

Overview and characteristic of empirical methods in Psychology. Observation as a method in Psychology. Experimental method in Psychology. The system of practical methods: counseling, psychological correction, psychotherapy.

Methods in descriptive psychology: introspection, self-report, conscious observation, empathetic listening, intuition, hermeneutics. Quantitative and qualitative analysis of empirical data and its interpretation.

Experimental-genetic method. Cross-sectional study. Longitudinal study. Formative assessment. Neuropsychological and psychopathological methods in experimental research (A.R.Luria).

Tests in Psychology: possibilities and limitations. Projective research methods. Personal questionnaires. Varieties of empirical tests. General traits of interviews. Conversational interview, general interview guided approach, standardized interview. Measurements in psychology. Scaling. Testing. Representativeness, validity, objectiveness. Reliability and empirical accuracy of research.

Statistical methods in data evaluation. Main stages of research in Psychology.

## **PART 2. METHODOLOGY AND THE HISTORY OF PSYCHOLOGY**

Methodology of science in general. Methodology of Psychology. Theory, method, technique. Psychological categories (agency, personality, consciousness, communication). General principles of Psychology: activity, development, determinism, systematicity. Structure of psychological theories. The idea of practical Psychology. Psychodiagnostics and its tools.

General principles of scientific cognition: unity of consciousness and action; psychophysical unity, objectivity of psychological research, genetic principle.

Approach to Psychology from cultural and historical point of view. Psychology of activity and its categories. Contemporary framework of scientific psychological research.



Object of scientific cognition. Different views on Psychology's subject in history of science. Pre-scientific Psychology and pneumatology. Sources of psychological knowledge: Classical Greek philosophy and its contribution to the development of Psychology (Aristotle, Heraclitus, Democritus, Plato's philosophy and psychology). The problem of consciousness in Modern philosophy. The discovery of reflex. R. Descartes. Principle of association of ideas (B.Spinoza, J.Locke). Introspective and objective ways of study of psychological properties.

The problem of objective method in Psychology. Main features of W. Wundt's scientific Psychology. Psychology as ethology. The basic ways of behavior study in behaviorism, the idea of learning. Psychoanalysis in Psychology. Existential Analysis in Psychology. Transaction analysis. Humanistic paradigm in Psychology. Cognitive approach in contemporary Psychology.

### **PART 3. COGNITIVE ACTIVITY**

#### *Human being as a subject of cognition*

Activity, consciousness, personality. Cognition and motivation. Cognition and experiencing.

Cognitive sphere of a human being and its main characteristics. Culture and cognition. Cognitive processes: feeling, perception, thinking. Universal cognitive processes; memory, attention, imagination.

#### *Perception as a cognitive process*

General features of sensory and perceptive spheres of a human being. Possibilities and limitations of psychological knowledge. Sensation as a psychical phenomenon. Origins of sensations. The idea of deprivation and the phenomenon of sensory impoverishment. General overview on perception and its qualities. Apperception. Unity. Structure. Self Consistency. Awareness. Physiological mechanisms of perception. Gestalt and Background. The after-effect law of Gestalt and Background. The role of awareness in distinguishing of Gestalt and Background.

Perception and sensation: comparative analysis and role in cognition. Cognitive character of processes of perception. Perception as action. Motor elements of perception. Perception volume. Levels of perceptual action. Units of perception.

#### *Memory and its role in cognition*

Memory as a complex cognitive process. The structure of memory. Imprinting. Saving. Reproduction of past experiences. Memory as a byproduct and prerequisite of cultural and historical development of humanity. Role of memory in one's activity. Temporal character of memory. Past, present and future in one's mnemonic activity. Memory as a subject of interdisciplinary research, its





philosophical, psychological, physiological and biochemical aspects. Activity as a nature of memory. Mnemonic task. General features of memory activity. Psychological theories of memory. Associative memory. Gestalt theory and memory. Mechanic and logic memory. Theory of neural models. Biochemical theories of memory. Theory of consolidation of trace. Reflective theory of memory. Patterns of memory processes. Remembering: short-term and long-term, willing and unwilling. Zeigarnic effect. Reproduction and its kinds. Forgetting and its stages. Saving. Conditions of productive memory preserving. Individual distinctions in memory processes. Mnemonists and mnemotechniques. Developing of higher forms of remembering. Memory and productive activity of a person. Research of A. Luria and other scientists on memory.

### *Psychical states. Attention as a psychical state*

Defining factors of attention. Attention and set. Attention reflex as a basis of attention. Kinds of attention. Unwilling attention, willing attention and post-willing attention. General traits of attention. Volume of memory, force of attention, stability of attention. Individual traits of attention. Allocation of attention. Switching of attention. Oscillation of attention. Attention as a mind's activity.

Attention as a sign of directedness of personality. Attention's function.

Conditioning of attention by its novelty and value of an object. Attention as a separate form of psychical activity. Methods of attention study. Development of attention.

### *Thinking as a higher type of cognition*

Comparative characteristic of sensitive cognition and thinking. Thinking as a rational kind of cognition. Thinking as a head-on reflection, foresight and prognostic activity. Thinking as a process of reflecting connections and dependencies of objects. General overview on individual thinking. General, mediate and abstract thinking. Directedness of thinking, reflection. Capacities of thinking: comparing, allocation, abstraction, generalizing, analyzing, synthesis, grouping, classification, structuring, schematization, categorization, recoding, analogy, systematization.

Types of thinking activity and classification criteria: visual-active, visual-imaginative, verbally-logical, creative. Verbal and instrumental thinking. Productive, creative and heuristic thinking. Rational and intuitive thinking.

Thinking as a subject of experimental study. Thinking as data-processing. Informational and psychological theories of thought. Thinking as a process: methods of revelation primary data and the problem of its interpretation. Thinking as a process in S. Rubinstein's school. Goal-formation in thinking process. Motivational and emotional parts of thinking. Individual traits of thinking. Creative thinking and creative problems resolving. Development of thought in ontogenesis. Studies on visual-active and visual-imaginative thinking (J.Piaget, L.Vygotsky, J.Bruner). General overview on the development of intelligence (J.Piaget).

### *Thinking and speech*

Unity of thinking and speech. Language and speech. Speech as a social development product. Speech and communication. Physiological basis of speech. Second order signal system and speech.



Speech's zones in cortex. A. Luria's research of speech. Definition and types of speech. Inner and outer speech and its genesis. Oral and written speech, its characteristics and psychological traits. Monological and dialogical speech. Functions of speech according to S. Rubinstein: communicative, expressive, signifying, nominative.

### *Imagination*

Imagination as human capacity. Imagination and creativity. Role of imagination in human activity, its function in constitution and structuration of world's image.

Imagination as a psychological basis of creativity. Social cultural ground of imagination. Mechanisms of imagination: agglutination, hyperbolization/amplification, maximization, minimization, schematization, typification.

### *Emotional willing processes*

Emotions as experience. Emotional dynamic. Feelings and emotions. Ambivalence of emotions. Emotions and emotional conditions. Affect. Stress. Frustration. Tension and stress. Affect and intellect problem. Emotional foresight. Self-regulation of one's emotional conditions.

### *Psychology of will*

Definition of will, criteria of a willful behavior. Idea of a willing process and its stages. The structure of a willing act. Willful behavior as a precondition for willful regulation. The struggle of motives and decision making, the problem of choice. The conflict of motives as a factor of willful action. Cognitive dissonance. Willing regulation and reconfiguration of problems. Will and personality.

### *Motivation*

Needs and motivation. Motivation and motives. Types of motives. Motivation and action. Biological, cognitive and social motivation. Study of motivation of activity: motivation for success, motivation of affiliation, pro- and anti-social motives. Motivation and personhood. Co-dependency of motives and its role in development and evolution of person. Study and possible ways of resolving of motivational conflicts. Study of the level of aspirations.

## **PART 4. PSYCHOLOGY OF PERSONALITY**

### *Personality as subject of being and activity*

Personality as a subject of being. Personality as a subject of activity. Notions of «individual», «subject», «person» and «individuality». Historical determination of phenomenon of Personality. Non-adaptive behavior: role-situational and non-role behavior.



Main approaches to study of individuality. Development of individual character and personal development. Diagnosis and study of individual properties on human being: individual capacities, temperament, character. Sources of activity of Personality. Structure of personality and its main parts.

Main theories of personality in Russian and International Psychology. The notion of unconsciousness in classic psychoanalysis. Main ideas of depth Psychology of personality. Idea of personality in Gestalt Psychology. Behaviorism and the problem of personality's behavior.

Humanistic Psychology and the study of personality. Self-actualization and development of personality. Main traits of self-actualizing personality. Personal development. Searching for the meaning of life and understanding of life goals. Problems of personality in cognitive Psychology. Existential analysis.

Methods of diagnosis and correction of personality development. Analysis of development of personality conflicts and psychological help on its resolving. Counseling and self-development of personality. Individual and group psychotherapy.

General overview of personality's development. Problem of development in Psychology. Sensitive periods and the role of education in psychical development of a child. Primary activity and its main types. Problem of periodization of psychical development in Russian and International Psychology.

Psychological system of activity. Distinct features of human activity. Study of regularity of the genesis of system of activity. Psychological theory of personality's activity.

### *Individual typological traits of a personality. Temperament*

Idea of individual traits of personality. Temperament as an integral personal trait. Humoral conception of temperaments (Hippocrates). Constitutional typologies of temperament and their limits. Basic features of nervous system. Kinds of higher nervous activity.

General overview on temperament. Traits of temperament: reactivity, activity and its correlations, the speed of reactions, plasticity and rigidity, extroversion and introversion, emotional inflammability. Coping with psychodynamical traits of temperament and the problem of individual activity style.

### *Individual traits of person. Character*

General idea of character. Character and person. Character and temperament. Physiological approach to character study, ideas of dynamic stereotype and general type of nervous system as explanatory principles. Clinical approach to character study. Character and accentuation of personal traits. Structure of character.

Character and its development. Character as a system of human's relations to the world, other people and Self. Character as a personality's individual lifestyle.



### *Capacities*

Methodological problems of capacities study. Main theories of capacities. Capacities in one's activity. Problem of correlation between general and special capacities. Diagnostics of capacities. Capacities development. Capacities and cognitive processes. System of mental qualities: capacities, giftedness, intelligence, talent.

### *Self-consciousness*

Self-consciousness and its place in personality's psychical organization.

Consciousness and self-consciousness. The problem of appearing and developing of self-consciousness. Self-experience and self-relations. Self-consciousness and the «image of Self». «Real Self» and «Ideal Self». Main elements of self-consciousness. Self-esteem in the structure of self-consciousness. Self-esteem and the level of aspiration.

## **PART 5. CONTEMPORARY FIELDS OF PSYCHOLOGY**

General overview of fields in Psychology. Psychology and social studies. Psychology and education. Psychology and human resources management. Psychology and economics.

Social Psychology. Educational Psychology. Psychology of human development. Clinical Psychology. Labor Psychology and ergonomics. Psychology of Engineering. Psychology of personnel management. Organizational Psychology. Animal Psychology. Legal Psychology.

Practical Psychology. Counseling Psychology. Psychological help service and people support. Psychological help in emergencies. Hot lines. Counseling and psychotherapy. Practical psychologist as a psychotherapist. Psychological trainings. Self-help oriented psychological education.

### **Recommended Literature**

#### ***Basic books:***

1. Atkinson & Hilgard's. Introduction to Psychology. 2009
2. Gazzaniga M., Ivry RB, Mangun GR. Cognitive Neuroscience. W.W. Norton and Company, 2008.
3. Handbook of Research Methods in Social and Personality Psychology. Ed.: Harry T. Reis, Charles M. Judd, 2000.
4. Handbook of Psychology. John Wiley and Son. DOI: 0.1002/0471264385
5. Maddi S.R. Personality Theories : A Comparative Analysis, 2001.
6. Psychology: An Introduction. Ed: Morris C.G., Maisto A.A.
7. Solso R.L., MacLin, M.K., MacLin, O.H. Cognitive psychology. Boston: Allyn and Bacon, 2005.
8. Weiner I.B. Handbook of Psychology, History of Psychology. John Wiley and Sons, 2012.



***Supplementary books:***

1. Blum G.S. Psychoanalytic Theories of Personality. McGraw-Hill, 1964.
2. Craig, G.J., Baucum, D. Human development. Upper Saddle River, NJ: Prentice Hall, 2002.
3. Frankl V.E. Man's Search for Meaning. Beacon Press, 2006.
4. Freud S. Introductory Lectures on Psychoanalysis. Liveright, 1989.
5. Hall C.S., Lindsey G. Theories of Personality. New York: John Wiley, 1978.
6. Heckhausen H. Motivation and Action. Springer-Verlag, 1991.
7. Jung C.G. Analytical Psychology. Princeton University Press, 1991.
8. Luria A.R. The Working Brain: An Introduction to Neuropsychology, 1976.
9. Maslow A.H. A Theory of Human Motivation, 2013.
10. Motivation and Personality. Ed: Maslow A.H., Frager R.D., Fadiman J. 1997.
11. Myers D.G. Social Psychology. New York: McGraw-Hill, 2010.
12. Popper K.R., Eccles J.C. The Self and its Brain. Berlin, Springer, 1977.
13. Rogers C. On Becoming a Person: A Therapist's View of Psychotherapy, 1995.
14. Squire L.R. Memory and Brain. NY: Oxford University Press, 1987.
15. The Oxford Handbook of Quantitative Methods.

**Questions for Exam in «19.00.01 – General Psychology, Personality Psychology and History of Psychology»**

1. Object and subject of Psychology.
2. Genesis of scientific Psychology.
3. Fields of psychology.
4. Methodological principles of psychology.
5. Natural-science basis of psychology.
6. Applied significance of psychology for social practice.
7. Basic methods of psychological research.
8. Human being as a subject of cognition.
9. Evolutionary development of psyche.
10. Temperament and its types.
11. Communication of a personality in a group.
12. Psychology of personality.
13. Personal development.
14. Self-consciousness of a personality.
15. Character and person.
16. Cognitive processes and their types.
17. Psychology of individuality.
18. Psychology of activity.
19. Emotions and their types.
20. Sensation and perception.



21. Psychology of speech.
22. Memory and its types.
23. Psychology of will.
24. Applied psychology.
25. Thinking and its types.
26. Attention and its types.
27. Capacities and talent.
28. Needs and motives.
29. Psychology of creative thinking.
30. Attention and its types.
31. Humanistic Psychology.
32. Imagination and its types.
33. Consciousness and reflection.
34. Psychotherapy and its methods.
35. Developmental psychology.
36. Place of psychology in human sciences.
37. Social psychology.
38. Organizational psychology.

### Example of Examination Paper

**NSU Higher School of Economics**

**Department of Psychology**

«APPROVED»

Academic Director  
Doctoral School of Psychology

\_\_\_\_\_ M. Khachaturova  
«\_\_» \_\_\_\_\_ 2017

**«19.00.01 – General Psychology, Personality Psychology and  
History of Psychology»**

Exam Paper № 8

1. Cognitive processes and their types.
2. Psychology of individuality.
3. Topic and plan of PhD thesis.

Examiner \_\_\_\_\_



### **3.2. «19.00.02. Psychophysiology»**

#### **PART 1. MORPHOLOGY AND FUNCTIONS OF NERVOUS SYSTEM**

Morphology of neural tissue. Morphology, ultra structure and functions of neurons, its bodies, dendrites, axons, synapses. Neurons classification. Morphology, functional qualities and classification of glial cells.

Resting potential. Action potential. Characteristics of ion-selective membrane channels. Chemical synapse. Postsynaptic potentials. Synaptic receptors. The main mediator brain systems, their anatomical location and functions. Phylogenies and ontogenesis of human nervous system. General morphology of nervous system. Main parts of nervous system. Central and peripheral nervous systems. Spinal cord and brain cord.

Morphology and functions of the spinal cord. Brainstem. Cerebral nerves. Brain nuclei and tracts. Reticular formation. Cerebellum. Diencephalon. Basal ganglia. Brain cortex: anatomical and functional structure.

#### **PART 2. METHODS OF PSYCHOPHYSIOLOGICAL RESEARCH**

Invasive psychophysiological methods: nerve cell impulse activity recording, optical recording, electrical and chemical stimulation of brain tissue, destroying and temporary shutting down of nerve tissue. Molecular and genetic methods of research of brain activity.

Non-invasive psychophysiological methods: electroencephalography, cardiography, electromyography, eye tracking, galvanic skin response, plethysmography, pneumography, etc., its connection with psychical processes and conditions, practical application. Polygraphy.

Contemporary methods of neuroimaging: structural and diffusion tensor magnetic resonance imaging, functional magnetic resonance imaging, positron-emission tomography, high definition electroencephalography, magnetoencephalography.

Evoked potentials, event-related potentials, ways of recording and methods of analysis, components. Connection with psychical processes and conditions. Principles of electrical and magnetic brain activity source localization.

Near-infrared spectroscopy (NIRS). Transcranial magnetic stimulation.

Physical basics of psychophysiological research methods. Temporal and spatial resolution, types of data.



### **PART 3. PSYCHOPHYSIOLOGY OF SENSORY PROCESSES AND PERCEPTION**

Sensory organs. Sensory receptors: morphology and classification. General principles of information coding in sensory systems. Detector neurons and distributed coding in the central nervous system. Feature binding. Image recognition. Morphology and functioning of major exteroceptive sensory systems: visual, auditory, vestibular, somatosensory, olfactory, gustatory.

### **PART 4. PSYCHOPHYSIOLOGY OF MOTOR CONTROL**

Muscular contraction, neuromuscular junction. Proprioception. Cerebro-spinal movement control. Central levels of motor control, roles of the brain stem structures, cerebellum, basal ganglia, cerebral cortex. Motor coordination. Types of movements. Acquisition of motor skills. Body scheme. Electrophysiological correlates of preparing and performing a movement: readiness potential, motor potential.

### **PART 5. PSYCHOPHYSIOLOGY OF NEEDS, MOTIVATIONS AND EMOTIONS**

Psychophysiology of needs. Definition and classification of needs. Physiological mechanisms of vital needs appearing. Motivation as a factor of the behaviour organization. Classification of motivations. Physiological mechanisms of motivations.

Psychophysiology of emotional states. Human and animal emotion expression. Communicative function of emotions. Brain mechanisms of perception of emotion face expression. Polygraphical recording of emotions. Psychophysiological detection of lie: the history of method, physiological basics, application.

Limbic system of the brain: functioning and its role in needs, motivation and emotions.

### **PART 6. PSYCHOPHYSIOLOGY OF COGNITIVE PROCESSES**

Orienting response, its forms and meaning. Attention and pre-attention. Correlates of attention and pre-attention in evoked potentials - mismatch negativity, P300. Attentional networks (systems). Mechanisms of voluntary and involuntary attention.

Psychophysiology of memory and learning. Neuronal mechanisms of long-term and short-term memory. Psychophysiology of working memory. The role of prefrontal area in working memory. Psychophysiology of explicit and implicit memory. Role of hippocampus in forming memory traces.

Psychophysiology of decision making. Neuroeconomics.

Psychophysiology of speech. Speech centers. Correlates of speech perception in evoked potentials.

Psychophysiology of conscious and unconscious processes. Brain and consciousness: definitions, theories, experimental approaches of research.





### **Recommended Literature**

1. Andreassi J.L. Psychophysiology: Human behavior and physiological response. Psychology Press, 2000.
2. Baars B.J., Gage N.M. Cognition, brain, and consciousness: Introduction to cognitive neuroscience. Academic Press, 2010.
3. Cacioppo J.T., Tassinary L.G., Berntson G.G. Handbook of psychophysiology. New York: Cambridge University Press, 2007.
4. Gazzaniga M., Ivry R.B., Mangun G.R. Cognitive Neuroscience: The Biology of the Mind. W.W. Norton and Company, 2013.
5. Glimcher P.W., Fehr E. Neuroeconomics: Decision Making and the Brain. Academic Press, 2013.
6. Gruszka A., Matthews G., Szymura B. Handbook of Individual Differences in Cognition. Springer Science and Business Media 2010.
7. Kandel E.R., Schwartz J.H., Jessell T.M., Siegelbaum S.A., Hudspeth A.J. Principles of Neural Science. McGraw-Hill Professional, 2012.
8. Nicholls J.G., Martin A.R., Wallace B.G., Fuchs P.A. From Neuron to Brain. Sunderland, MA: Sinauer Associates, 2001.
9. Purves D., Augustine G.J., Fitzpatrick D., Hall W.C., LaMantia A.-S., White L.C. Neuroscience, Sinauer Associates, 2011.
10. Schomer D.L., Da Silva F.L. Niedermeyer's Electroencephalography: Basic Principles, Clinical Applications, and Related Fields. Lippincott Williams and Wilkins, 2012.
11. Squire L.R. Fundamental Neuroscience. Academic Press, 2013.
12. Stern R.M., Ray W.J., Quigley K.S. Psychophysiological recording. Oxford University Press, 2001.

### **Questions for Exam in «19.00.02 – Psychophysiology»**

1. Morphology, ultrastructure and functions of neurons, its bodies, dendrites, axons, synapses. Neurons classification.
2. Resting potential. Action potential. Characteristics of ion-selective membrane channels.
3. Main mediator brain systems, their anatomical location and functions.
4. Brain cortex: anatomical and functional structure.
5. Invasive psychophysiological methods.
6. Non-invasive psychophysiological methods.
7. Electroencephalography and magnetoencephalography: ways of recording and methods of analysis.
8. Sensory organs. Sensory receptors: morphology and classification.
9. Morphology and functioning of the vision system.
10. Morphology and functioning of the auditory system.



11. Morphology and functioning of the somatosensory system.
12. Muscular contraction, neuromuscular junction. Proprioception.
13. Central levels of motor control, roles of brain stem structures, cerebellum, basal ganglia, cerebral cortex. Motor coordination.
14. Movement coordination. Types of movements. Acquisition of motor skills. Body scheme.
15. Psychophysiology of needs. Definition and classification of needs. Physiological mechanisms of vital needs appearing.
16. Motivation as a factor of the behaviour organization. Classification of motivations. Physiological mechanisms of motivations.
17. Psychophysiology of emotional states.
18. Psychophysiology of memory and learning. Neuronal mechanisms of long-term and short-term memory.
19. Psychophysiology of working memory. The role of prefrontal area in working memory.
20. Psychophysiology of decision making. Neuroeconomics.
21. Psychophysiology of speech. Speech centers. Correlates of speech perception in evoked potentials.
22. Psychophysiology of conscious and unconscious processes. Brain and consciousness: definitions, theories, experimental approaches of research.

### Example of Examination Paper

**NSU Higher School of Economics**

**Department of Psychology**

«APPROVED»

Academic Director  
Doctoral School of Psychology

\_\_\_\_\_ M. Khachaturova  
«\_\_» \_\_\_\_\_ 2017

«19.00.02 – Psychophysiology»

Exam Paper № 8

1. Electroencephalography and magnetoencephalography: ways of recording and methods of analysis.
2. Morphology and functioning of the auditory system.
3. Topic and plan of PhD thesis.

Examiner \_\_\_\_\_



### **3.3. «19.00.05. Social Psychology»**

#### **PART 1. SUBJECT, HISTORY AND METHODS OF SOCIAL PSYCHOLOGY**

Place of social psychology in the system of scientific knowledge. Correlation of social psychology and other disciplines. Fundamental and applied social psychology.

Theoretical approaches in contemporary social psychology: neobehaviorism, cognitivism, interactionism, evolutionary psychology. Dilemma of self and circumstances in social psychology

Distinctive features of empirical research in social psychology: experimental, quasi-experimental and correlation research. Experimental variables, experimental plan. Qualitative characteristics of social psychological research: internal validity, external validity, operational validity, reliability.

Methods in social psychology: research methods, methods of data-processing and methods of influence. Research methods in social psychology: observation, survey, document analysis, tests. Mixed methods designs. Methods of statistical data-processing: correlation analysis, factor analysis, classification criteria, regression analysis (choosing appropriate methods, interpreting results). Methods of influence: social psychological training, role-playing, individual and group counseling.

#### **PART 2. SOCIAL COGNITION**

Domain of social cognition. Categorization as a mechanism of social cognition. Categories and patterns, types of patterns. Types of analysis of information: «downward» and «upward». Heuristics as a rule of making a statement about a person. Effects of social cognition: halo effect, priority and novelty effect, etc. Emotion part in social cognition.

Attributive statements. Causal attribution models: model of correspondence conclusion (E.Jones, K.Davis), model of causal schemes (H.H.Kelly), ANOVA model (H.H.Kelly). «Errors» of causal attribution.

Definition and structure of attitude. Functions of attitude. Distinctive criteria: stability, accessibility, ambivalence. Explicit and implicit social attitudes. First theories of attitudes and behavior: early studies. Factors increasing influence of attitudes on behavior. Theory of planned behavior (A.Ajzen). Influence of behavior on attitudes: cognitive dissonance theory and self-perception.

Definition of attraction. Factors influencing attraction. Sympathy, friendship, love as different levels of attraction. Close relationship: formation, satisfaction, break-up.

#### **PART 3. SELF-CONCEPT**

Definition of self-concept. Structure of self-concept: concept of self and self-esteem. Self-schemas. Modality of self-concept: real self, ideal self, self-duty and possible self. Applied self-concept. State of objective self-awareness: private and public self, deindividuation. Personal and



social identity. Social identity theory (H.Tajfel, D.Turner). Strategies of social comparison: ascending, descending, equal. Self-concept and personal achievements: self-efficiency (A.Bandura). Self-presentation as a way to control self-perception, strategies of self-presentation. Level of self-control.

#### **PART 4. SOCIAL COMMUNICATION**

Distinctive features of exchange of information. Agents of communication: communicator and recipient. Feedback: positive, negative, neutral. Communicative barriers: technical, phonetic, psychological, semantic, social.

Verbal and nonverbal communication: similarity and differences. Systems of nonverbal communication. Nonverbal communication coding (R.Birdwhistell, P.Ekman). Mechanisms of decoding nonverbal communication: categorization and imitation. Problems of decoding nonverbal messages.

Verbal communication: persuasive impact. Stages and mechanisms of persuasion. Two-process models of persuasion (R.Petty, J.Cacioppo, S.Chaiken). Factors, influencing persuasion effectiveness: communicator, message, audience, communication channel.

#### **PART 5. SOCIAL INTERACTION**

Definition and types of conflict. Structure of conflict. Causes of conflict. Stages of conflict development. Conflict behavior strategies. Conflict resolving procedure: negotiations and mediation. Theory of interdependence (J.W.Thibaut, H.H.Kelly). Social dilemmas: definition and types of dilemmas.

Definition and types of aggression. Innate and acquired in aggression. Emotional mechanisms of aggression (J.Dollard, L.Berkowitz, J.Zillmann). Cognitive mechanisms of aggression (K. Dodge). Personal and situational factors of aggression.

Definition and types of prosocial behavior. Egoistic and altruistic motives for help. Innate and acquired in prosocial behavior. Emotional and cognitive mechanisms of prosocial behavior. Personal and situational factors of prosocial behavior.

#### **PART 6. SMALL SOCIAL GROUPS**

Definition and size of small groups. Group identity and group cohesion.

Differentiation in group: structure of small group. Centralized and decentralized communication networks. Status-role structure: definition and types of group roles.

Influence of small group on individual performance. Effect of social facilitation/inhibition: definition, mechanisms, factors. Effects of social laziness: definition, mechanisms, factors.



Social influence. Source of authority (J.French). Public and actual agreement. Submission: definition and factors (S.Milgram). Influence of majority, conformism (S.Asch): definition, mechanisms, factors. Influence of minority, innovations (S.Moscovici): definition, mechanisms, factors.

Definition of leadership. Leadership as a result of personal traits (R.Stogdill). Leadership as behavioral style (K.Lewin, B.Burnes). Style of leadership and situation (F.Fiedler). Leadership as a result of social exchange: ideosyncratic credit. Exchange between leader and followers.

Group discussion effects: divided information preference effect (G.Strasser), group thinking (I.Janis), group polarization, risky shift and cautious shift. Ways of increasing group decision effectiveness, (before and in the process of discussion). Developmental stages of small group (B.Tuckman). Group socialization (R.Moreland, D.Levine).

## **PART 7. BIG SOCIAL GROUPS**

Definition of big social groups. Crowd, mass, audience. Crowd types. Psychological mechanisms of influence in crowd. Gossip as a factor of spontaneous behavior. Collective behavior: factors and consequences (M.Van Zomeren, B.Klandermans).

Ethnic groups. Emic and ethic approaches to study cultures. Psychological dimensions of cultural differences (G.Triandis, M.Gelfand). Individual and cultural values (G.Hofstede, Sh.Schwartz, R.Inglehart). Cross-cultural differences in self-concept, social cognition, communication, and interaction. Meeting a new culture: migration, migration stress, culture shock. Acculturation: definition, types, strategies, and acculturation expectations (J.Berry).

## **PART 8. INTERGROUP RELATIONSHIP**

Definition of stereotype, prejudice and intergroup emotions. Types of prejudices. Intergroup differentiation: ingroup favoritism and outgroup discrimination.

Threat anticipation as reason for intergroup conflicts. Individual level of intergroup conflict explanation: hypothesis of scapegoat, authoritarian personality theory. Group level of intergroup conflict explanation: real conflict theory, social identity theory, self-categorization theory.

Contact hypothesis: influence of personal communication on intergroup relations. Improving intergroup relations: attribution change, cognitive dissonance creation, reinforcement and behavior modeling, teamwork, intercultural training.

## **PART 9. SOCIALIZATION**

Definition of socialization. Differences in socialization of children and adults. Socialization models. Socialization mechanisms (operant conditioning, learning through observation, categorization, social comparison). Socialization institutions: family, school, mass media. Mass media as a socialization institution: priming models, agenda, cultivation, social cognitive theory. Culture and socialization: culture transmission and enculturation.



## Recommended Literature

### *Basic literature:*

1. Aronson E. The Social Animal. Worth Publishers, 2008. <http://www.rawanonline.com/wp-content/uploads/2012/09/The-Social-Animal-Aronson-English.pdf>
2. Aronson E., Wilson T.D., Akert R.M. Social psychology. Pearson Education, 2010. <http://www.dmacc.edu/instructors/tkwilson2/SocChap2.pdf>
3. Baron R.A., Kerr N.L, Miller N. Group Process, Group Decision, Group Action Open University Press, 2003.
4. Berry J.W., Poortinga, Y.H., Brugelmans S.M., Chasiotis A., Sam, D. Cross-cultural psychology: Research and applications. Cambridge University Press, 2011.
5. Goodwin C.J. Research in psychology methods and design. John Wiley and Sons, 2010. <http://med.mui.ac.ir/clinical/pezeshkej/Methodology.pdf>
6. Harris R.J. Cognitive Psychology of Mass Communication. Taylor and Francis, 2009.
7. Myers D.G. Social Psychology. McGraw-Hill Companies, 2012. <http://solucaoperfeita.com/wp-content/uploads/2011/02/David-G.-Myers-Social-Psychology-10th-Edition.pdf>

### *Additional literature:*

1. Baron R.A., Richardson D. Human aggression. Springer, 2004.
2. Bryant J., Thompson S. Fundamental media effects. McGraw-Hill Humanities, 2001.
3. Clarke D. Prosocial and antisocial behavior. Taylor and Francis Group, 2003.
4. Hewstone M., Stroebe W., Jonas K. Introduction to Social Psychology: A European Perspective. BPS Blackwell, 2007.
5. Hewstone M., Stroebe W., Stephenson G.M. Introduction to social psychology. Oxford: Blackwell, 1996.
6. Hogg M.A., Vaughan G.M. Social Psychology. Prentice Hall, 2011.
7. Klandermans P.G. The social psychology of protest. Oxford: Blackwell, 1997.
8. Matsumoto D., Juang L. Culture and Psychology. Wadsworth, Cengage Learning, 2008.
9. Miculincer M., Shaver P.R. Prosocial motives, emotions and behavior. The Better Angels of our Nature. American Psychological Association, 2010.
10. Miller A.G. The Obedience Experiments: A Case Study of Controversy in social science. Praeger, 1986.
11. Nelson T. D. The Psychology of Prejudice, Allyn and Bacon, 2002.
12. Oyster C.K. Groups: A User's Guide. McGraw-Hill Humanities, 1999.
13. Pines A., Maslach C. Experiencing Social Psychology. McGraw-Hill Humanities, 2001.
14. Pruitt D., Rubin J., Hee Kim S. Social Conflict: Escalation, Stalemate, and Settlement. McGraw-Hill Humanities, 2003.



15. Ross L., Nisbett R. The Person and the Situation: Perspectives of Social Psychology. Pinter and Martin, 2011.
16. Triandis H.C. Culture and Social Behavior. McGraw-Hill Humanities, 1994.
17. Turner J. C. Social influence. Wadsworth Publishing, 1991.
18. Van Stekelenburg J., Klandermans B. The social psychology of protest. Sociopedia.isa, 2010.  
<http://www.surrey.ac.uk/politics/research/researchareasofstaff/isppsummeracademy/instructors/Social%20Psychology%20of%20Protest,%20Van%20Stekelenburg%20%26%20Klandermans.pdf>
19. Van Zomeren M., Leach C.W., Spears R. Protesters as «passionate economists»: A dynamic dual pathway model of approach coping with collective disadvantage // Personality and Social Psychology Review. 2012. Vol.16.P.180-199.  
[http://www.academia.edu/2045906/Protesters\\_as\\_passionate\\_economists\\_A\\_dynamic\\_dual\\_pathway\\_model\\_of\\_coping\\_with\\_collective\\_disadvantage](http://www.academia.edu/2045906/Protesters_as_passionate_economists_A_dynamic_dual_pathway_model_of_coping_with_collective_disadvantage)

### Questions for Exam in «19.00.05 – Social Psychology»

1. Subject of social psychology and theoretical approaches in contemporary social psychology.
2. Empiric research in social psychology: types and methods of research.
3. Social cognition: mechanisms, effects, and types of analysis of information.
4. Social cognition: attributive statements.
5. Definition and typology of values.
6. Attitude: definition, distinctive criteria, functions.
7. Influence of attitudes on behavior: separate and models of planned behavior.
8. Influence of behavior on attitudes: cognitive dissonance theory and self-perception.
9. Attraction: sympathy, friendship, love as different levels of attraction.
10. Self-concept: definition, structure, modality, objective self-awareness.
11. Social comparison and self-presentation.
12. Agents of communication: communicator and recipient, feedback, and communicative barriers.
13. Nonverbal communication: systems, coding, and decoding.
14. Stages, mechanisms, and factors of persuasion.
15. Social conflict: types, structure, stages of a conflict. Conflict resolving procedure.
16. Social dilemmas: theory of interdependence, types of dilemmas.
17. Aggressive behavior: mechanisms and factors.
18. Prosocial behavior: mechanisms and factors.
19. Small social groups: identity, group cohesion, structure of small group.
20. Influence of small group on individual performance: effect of social facilitation and social inhibition, effect of social laziness.
21. Social influence: authority, influence of majority, influence of minority.
22. Theories of leadership.
23. Group discussion effects.



24. Big social groups. Crowd, mass, audience: mechanisms of influence.
25. Collective behavior: factors and consequences.
26. Cross-cultural differences in social-psychological phenomena.
27. Indicators of intergroup conflict: stereotype, prejudice, intergroup emotions, and intergroup differentiation.
28. Reasons for intergroup conflicts: theoretical approaches.
29. Psychological ways of improving intergroup relations.
30. Socialization: theoretical approaches, mechanisms, socialization institutions.

### Example of Examination Paper

**NSU Higher School of Economics**

**Department of Psychology**

«APPROVED»

Academic Director  
Doctoral School of Psychology

\_\_\_\_\_ M. Khachaturova  
«\_\_» \_\_\_\_\_ 2017

**«19.00.05 - Social Psychology»**

Exam Paper № 11

1. Agents of communication: communicator and recipient, feedback, and communicative barriers.
2. Small social groups: identity, group cohesion, structure of small group.
3. Topic and plan of PhD thesis.

Examiner \_\_\_\_\_