Chapter 1 (Evolution of Psychology): ~ 10 Qs
Chapter 2 (Research): ~12 Qs
Chapter 3 (Biological Psychology): ~10 Qs
Chapter 4 (Sensation & Perception): ~10 Qs

Total: ~42 Qs

Please note that the level of difficulty of these questions is much greater than that on the quizzes (which were done before you had an opportunity to go over the material during class).

The exam is to be done in class, with no aids.

BEFORE COMING TO THE EXAM:

- Print out a bubble sheet (you only need the 1st page): https://gradescope-static-assets.s3.amazonaws.com/examples/bubble_sheet_v2/template.pdf
    - Fill in your PID and OFFICIAL unc name
    - Be sure not to bend, tear, etc. the bubble sheet
- All students have CCI funds for printing, btw: https://edtech.unc.edu/service/cci-printing/
- Eat something!
- Use restroom beforehand.
- Turn your cell phone off – NO vibrations, please – and put away in a deep pocket of your backpack. If your cell phone is out during an exam, you will be unable to complete your exam.

Note that this guide not comprehensive of all the types of questions which may be asked on the exam. Still, you should know the answers to these concepts VERY WELL, as a basic and main step towards preparing for the exam.

One of the best ways to study for the exam is to write out responses to all the questions in this guide "from your head" first, to see what you know and what you don't know. THEN use your notes/textbook to fill in the rest of the information. Then study the review guide and your answers – it's even better if you get together with others to compare answers to see who has the best answers.

Check our sakai site ("Strategies for Success" tab) for tips on preparing for and taking exams.

Chapter 1: Evolution of Psychology

Know the history and evolution of psychology.

• e.g. What fields did psychology originate from? What movements have influenced psychology? How do these movements differ from one another (e.g. structuralism vs. functionalism). Where applicable, what things inspired such movements? Where applicable, what techniques were involved with those movements (e.g. introspection?) ? What are some key figures/researchers in the development of this field and what did they suggest? Who established the first psychology lab? Who established the first psychology lab in the US? Who established the first psychology journal?

Know the current divisions of psychology.

- e.g. What are the differences between these divisions? You will be given descriptions of research and be asked to identify which division of psychology this type of research likely falls under. What's the difference between a "research" division vs. an "applied" division? What divisions does UNC's psychology & neuroscience department have?

Chapter 2: Research Methods

Know about research concepts.

- e.g. What is "empiricism" and "rationalism" and why are these principles used when doing research? How are these principles incorporated into the "steps of research? What are the steps of research? What is the difference between a theory and an hypothesis? What is an operational definition? Can you identify definitions which are not "operational definitions?" What is the difference between an experiment and a research study which is NOT an experiment? What makes a quasi-experiment a "non-experiment?" Know experimental terms like independent vs. dependent variables vs. levels of study, random assignment (why is this used?), extraneous vs. confounding variables, placebo effect, blind studies (why are these used?), ETC. What are the advantages and disadvantages of each type of research method? What are different ways in which data can be collected? What is the difference between descriptive vs. inferential statistics? Can you give examples of both? What is a correlation and why can't we make causal conclusions from correlations? What is a "peer-reviewed journal" and why would we want to use this for research? What is the APA publication manual for? Why and how do we control for ethics in research studies? Do you know of some myths about psychology research?

Chapter 3: Biological Bases

Know about the different types of brain cells.

- e.g. What's the difference between glia cells and neurons? What are the different types of glial cells and what do they do?

Know about the different parts of a neuron and what their functions are as well as about the different types of neural signals which can occur.

- e.g. soma? Dendrite? Axon? Myelin sheath? ETC.

- What are the different types of neurotransmitters and the functions they are normally associated with? For example, what does DA, NE, GABA or 5-HT do? What's the difference between an "agonist" vs. an "antagonist?" Where do neurotransmitters come from?

- What are the differences between an action potential vs. EPSPs/IPSPs?

- Describe the steps involved with neural transmission of information, starting with an action potential in the presynaptic neuron and ending with an action potential in the postsynaptic neuron.

- What does it mean to "summate" EPSPs & IPSPs and what happens when neurons do this?

Know the different types of research tools which we can use to study the brain.

• e.g. PET? MRI? CT scan? Transcranial magnetic stimulation? Lesions? ETC. How do these procedures work? What is the logic underlying the use of these procedures? If a procedure is described, would you be able to identify which research tool it is?

What are the divisions of the nervous system?

• e.g. somatic vs. parasympathetic vs. sympathetic vs. central vs. peripheral vs. autonomic, ETC.

Know the different parts of the brain and their functions.

• e.g. cerebellum, medulla, forebrain, hypothalamus, hippocampus, limbic system, basalganglia, primary cortex vs. association cortex, the different lobes of the brain and their main functions, ventricles, the flow of cerebrospinal fluid, ETC.

• What is a "split-brain" procedure? Why ever do this? What are the effects? What is "lateralization" and how does the "split-brain" procedure show evidence of lateralization?

• In relation to the brain, what is "plasticity?" What do you know about the plasticity of the brain?

What is the endocrine system? What is a part of this system and can you give an example of one type of hormone?

When you want to know how much genetics plays a role in behavior, what types of studies can be done to give you heritability estimates?

• e.g. what is a twin study and what does the concordance rate tell you? What is a family study? What is an adoption study and how might you argue that it is a better method to estimate heritability than family study? What are the advantages vs. disadvantages of each type of method to estimate heritability?

Chapter 4: Sensation & Perception

What's the difference between sensation vs. perception?

For EACH SENSORY SYSTEM, you will need to know: (you might want to create a table; note that, while we gave some examples from the visual system, you'll want to consider all these questions for every sensory system we covered)

- what is the stimulus?
    - Are there "primaries?" (What are primaries?)
- how do different aspects of the stimulus result in different perceptions? (e.g. wavelength results in our perception of…?)
- what sensory organ is important for this sense (e.g., eye)?
    - know the parts & functions of the sensory organs in detail
- where does transduction occur? what IS transduction? How does transduction occur for each of the different sensory systems?
- what is the neural pathway for processing information for this sensory system?
- e.g. in what order does the light go through the eye BEFORE BEING TRANSDUCED?
- in what order does the neural signal go after light has been transduced by the rods & cones?
- what is the pathway of visual analysis (that is, where does the information go after leaving the eye?)
    - If you take out the right eye, how is vision compromised?
    - If you want to blind someone completely to the left visual field, what parts of

which eye do you need to lesion?

- What are "feature detectors"?
- what's the difference between the dorsal vs. ventral streams of the visual system?
- e.g., In what order do sound waves go, starting from the pinna and ending with the cochlea?
- where is the primary cortex for each sensory system? What does it mean to be a "primary cortex" vs. an "association area?"
- what theories were discussed for this sense and what does it explain?
    - e.g. what theories explain color vision?

      why do we have more than one theory of color vision?
    - what do the Gestaltists say about vision? What are "perceptual sets?"
    - What is the difference between top-down and bottom-up processing and how does this relate to vision?
    - What's the difference between a central vs. peripheral trigger, in relation to the ate control theory? Give examples of each.
    - What's the difference between A-delta and C fibers?
    - How do we differentiate between different pitches of sound?
    - How do we localize sounds?