



ADMINISTRATION PRINCIPLES OF PH.D. QUALIFICATION EXAM

In line with the relevant framework regulations by YOK and the decisions of the academic board of our department (Board decision date: 04.12.2020), the qualification exam to be administered to Ph.D. students of the İYTE-MBG department is carried out as follows:

1) Written Exam

- a. The student must take in-class, closed-book/notes written exams in the following subjects:
 - Biochemistry
 - Cell Biology
 - Genetics
 - Molecular Biology
- b. In order to pass the written part of the Ph.D. qualifying exam, the student must score **an average of at least 70/100 pts from the subject tests** and must score **at least 60/100 pts from each individual subject test**.
- c. **The student who is unsuccessful in the written part of the exam is considered unsuccessful regardless of the oral exam result.**

2) Oral Exam

- a. In order to pass the oral part of the Ph.D. qualifying exam, the student must score **an average of at least 80/100 pts**.
- b. **The student who is unsuccessful in the written part of the exam is considered unsuccessful regardless of the oral exam result.**
- c. Each student will be assigned a recent article from PNAS at the end of the written exam week.
- d. The student presents the assigned article on the oral exam date according to the provided guidelines/criteria.



Guidelines for PhD Qualification Oral Exam:

- You will be expected to make a **20-minute presentation**. Please make sure your presentation doesn't exceed the time allowed.
- You are not expected to present all of the results, only the most significant ones that pertain to the research goals. Your ability to condense and summarize material (critically examine all of the figures and tables and select the most important ones) will be part of the evaluation process. This exam will help us evaluate your potential to analyze data, think critically, and make connections. Thus, in your presentation, please make sure to address the following issues:
 - 1) Describe the scientific system used in the paper (this will summarize what's in the introduction).
 - 2) Describe the goals of the research. What is the scientific question of the article?
 - 3) Describe how the goals were achieved and what results were obtained (this will synthesize the materials & methods and results section; materials & methods and results should not be presented separately).
 - 4) Describe the significance of the work (this covers the discussion).
 - 5) Do you agree with the conclusions? Why/not?
 - 6) What are the strengths and weaknesses of the article, and what further work is needed?

Criteria for the Evaluation of Oral Exam Performance:

- **The ability to understand/present the main goal of the study (40%):**
What's known, what's unknown, the significance of the subject, hypothesis
- **The ability to understand weaknesses/strengths of the study (25%):**
Experimental design drawbacks, interpretation of data, statistical analysis, conclusion
- **The ability to solve problems and make suggestions (25%):**
Propose alternative approaches and future directions
- **Format (10%):**
Organization, clarity, use of time, quality of visual aids (slide format, consistency, color contrast, appropriate use of animation), interest to listeners (does the speaker engage the audience or read off the slides).