Home tasks Modern methods biotechnology

Specialty «7M05201 **Environmental biotechnology**

**…. Spring semester**

**Code of discipline 5302**

**2019-2020 teaching year**

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| ***Week of presentation*** | ***Home task title*** |
| 3 | *Assignments for the CDS* 1. Use of modern biotechnological methods in agriculture*.*  on Methods of determination of membrane stability. **Carry out type:** Presentation. |
| 5 | *Assignments for the CDS* 2. Describe enzyme activity analysis by electrophoresis. Show preparative gel electrophoresis in protein study. Calculation of molecular mass from SDS gels Describe methods in study of proteins separation according to distinct physical properties. Determine protein precipitation methods*.*  3. Methods of determination of membrane stability.  **Carry out type:** Presentation. |
| 7 | *Assignments for the CDS 3.* Principles of isoelectric focusing (IEF) to separate proteins based on their isoelectric points preparation of gel in protein study. Calculation of molecular mass from SDS gels in isoelectric focusing (IEF). **Carry out type:** Presentation. |
| 9 | *Assignments for the CDS 4.* Molecular methods of structural and functional organization of genes and genome. Protocols of Real-Time PCR  Protocols *Allele-specific PCR*  Protocols *Convective PCR*  Protocols of *Asymmetric PCR*  Protocols of *Dial-out PCR* |
| 13 | *Assignments for the CDS 5*. Methods of study of transcriptional factors and nucleic acids staining. Use of molecular markers in improvement of living organisms traits. |
| 15 | *Assignments for the CDS 6.* Mutation and genetic variation as modern approach, the use, advantage and disadvantage. Practical applications of induced mutagenesis |