Course Work Examination, July 2023

E.P. Odum School of Environmental Sciences

ECOLOGY & ENVIRONMENTAL SCIENCE

Course No. CW-702
(Research Methodology- School Level)

Full Marks: 100
Pass Marks: 50

Time: 3 Hours

The figures in the margin indicate the full marks for questions.
Answer any five questions, taking one from each unit..

UNIT-I

1. What do you understand by field research? Discuss briefly the major components of field research. Add a note on the advantages and disadvantages of fielf research. 2+10+8=20

2. Write notes on the following : 10x2=20

   (i) Hypothesis

   (ii) Methods of acquiring knowledge

UNIT-II

3. What is a research problem? State the criteria of a good research problem. Describe the purpose and role of review of literature in formulation of an effective research problem. 2+8+10=20

4. What is a research question? How to define a research problem? Why is the research problem important? Describe the criteria followed for writing a research question. 5+5+5+5=20

UNIT-III

5. Giving a schematic diagram, explain the principle of a electron microscopy (EM). How is EM different from optical microscopy (OM)? Cite specific application of EM in biological research. 8+6+6=20

6. Write notes on : 10x2=20

   (i) Chromophore

   (ii) Application of infra-red spectroscopy in two specific area of environmental science

UNIT-IV

7. Explain how meterological parameters are useful in ecological researches. Write the working principles of (i) Self-recording rain gauge, (ii) Maximum and minimum thermometer and (iii) Anemometer. Mention the advantages of automatic weather station over manual weather station. 3+(5x3)+2=20

8. Write notes on any two of the following : 10x2=20

   (i) Plant indicators of wetland

   (ii) Mass Cultivation of Azolla

   (iii) Role of Wetland in Climate change adaptation and mitigation

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