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Name : Chitra Sankar

First Semester B.Ed. (Restructured) Degree Examination, March 2007
B – Optional Subject : NATURAL SCIENCE
Paper – V : Principles of Pedagogical Analysis – Natural Science

Time : 2 Hours

Max. Marks : 50

I. Answer **two** questions (not exceeding **three** pages each) :

- 1) How could the methods of teaching bring into exercise the skills involved in planning, executing the plan and evaluating the plan in terms of result ?
- 2) While preparing a lesson plan for the topic 'Human Ear', how would you present the following :
 - a) Objectives of the lesson
 - b) Content outline
 - c) Learning aids
 - d) Evaluation items.
- 3) Indicate the step by step procedure you would adopt for preparing a teacher made test on the unit 'Nervous System of Man'.
- 4) What are the major pedagogical principles ? Explain how these principles are applied while analysing the content 'Nutrition in Animals'. (2×8=16 Marks) -

II. Answer **six** questions. (not exceeding **one** page each) :

- 5) How would you cater to the needs of gifted children in a Biology class ?
- 6) Explain four process skills that can be developed in students through biology teaching.
- 7) Write two concepts and two facts for each of the concept for the topic 'Excretion in Man'.
- 8) Explain the important principles of objective based instruction.
- 9) Write two instructional objectives of cognitive domain and two specifications for each of them for the topic 'pollution'.
- 10) Explain the constructivist model for science education.

- 11) What do you mean by pre-requisites for learning ? Mention the prerequisites essential for learning for a topic of your choice.
- 12) How is a teacher benefited by studying the psychology of learning ?
- 13) Explain the role of teacher in buzz session and brainstorming.
- 14) What are the important things you would help children to observe in a chart showing an animal cell and a plant cell comparison ? (6×4=24 Marks)

III. Answer all questions in one or two sentences each.

- 15) Write any two bases for the formulation of objectives.
- 16) Give two deficiencies in Biology content in Std IX.
- 17) What is the difference between fact and concept ?
- 18) Mention any two advantages of constructivism in teacher education.
- 19) State any two skills associated with creativity.
- 20) State two specifications for the objective 'Attitude'.
- 21) Write two characteristics of a good learning experience.
- 22) Mention two national goals of education which can be realised through the teaching of Biology based on the unit 'Agriculture'.
- 23) What is a matching type test item ? Give an example.
- 24) Suggest a suitable classroom activity to demonstrate that sunlight is necessary for photosynthesis. (10×1=10 Marks)

