

ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD
(Department of Science Education)

WARNING

1. **PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM AWARD OF DEGREE/CERTIFICATE, IF FOUND AT ANY STAGE.**
2. **SUBMITTING ASSIGNMENTS BORROWED OR STOLEN FROM OTHER(S) AS ONE'S OWN WILL BE PENALIZED AS DEFINED IN "AIU PLAGIARISM POLICY".**

Course: Teaching Models and Strategies in Science Education (6773)

Level: M. Phil Science Education

Semester: Autumn, 2013

Total Marks: 100

Pass Marks: 50

1. All questions are compulsory and carry equal marks.
2. Assignments should be handwritten.
3. Copying from reference materials is strictly prohibited. Read the reference/allied materials taking note of important points relevant to the question then compose the answer in your own words with proper citations and references wherever needed.
4. Answer of each question should be at least 1500 words.

ASSIGNMENT No. 1

(Units: 1–4)

- Q. 1 What are the important elements of a teaching model? Elaborate the nature of elements of teaching model using any model of teaching as an example. **(20)**
- Q. 2 Describe inductive thinking model of teaching. Also discuss the ways in which this model can be applied in teaching science at secondary level. **(20)**
- Q. 3 What is direct instruction? To which group of learning theories this model belongs? When is it most appropriate to use Direct Instruction model for teaching science and why? **(20)**
- Q. 4 Keeping in view the developments in science and technology. What are the new challenges in teaching science? **(20)**
- Q. 5 What are simulations? How could simulations support and enhance science teaching and learning? **(20)**

ASSIGNMENT No. 2

(Units: 5–9)

Total Marks: 100

Pass Marks: 50

- Q. 1 Explain in detail salient features of problem solving method of teaching science. What are the implications of using this method at secondary level for teacher and resources? **(20)**
- Q. 2 Give an overview of origins and theoretical underpinning of inquiry method of teaching science. Also briefly compare the problem based learning with inquiry based learning. **(20)**
- Q. 3 Critically review the role of instructional aids in teaching and learning science. **(20)**
- Q. 4 Discuss the importance of questioning in teaching science. How a teacher can use questions more effectively for teaching higher order cognitive skills in students? **(20)**
- Q. 5 What is project-based learning? Discuss the characteristics of effective project based teaching. Also give an overview of planning process of project. Which type of skills could be best developed through PBL in science? **(20)**

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