



**THE OPEN UNIVERSITY OF SRI LANKA
BACHELOR OF EDUCATION DEGREE (NATURAL SCIENCE)
LEVEL 05**

FINAL EXAMINATION - 2007

**ESU 3316/3319 – EDUCATIONAL TECHNOLOGY FOR TEACHING
SCIENCE AND MATHEMATICS**

**ESU 3303 – CLASSROOM LEARNING AND METHODS OF TEACHING
SCIENCE/MATHEMATICS.**

DURATION : THREE (03) HOURS

DATE : 02nd September, 2007

TIME : 9.30 a.m. – 12.30 p.m.

**Answer Question No. 01 and TWO other questions from PART I and TWO
(02) questions from PART II.**

PART – I

01. i. Explain what is meant by 'Educational Technology'
- ii. State five advantages of using teaching-learning aids for classroom teaching.
- iii. State five characteristics of student centred education differentiating it from teacher centred education.
- iv. Explain what is Dale's Cone of experiences, using a suitable diagram.
- v. Explain the basic features of a behavioural objective, using an example.
- vi. Briefly describe two advantages and two disadvantages of team – teaching.
- vii. Briefly describe five (5) techniques of teaching.
- viii. Explain how formative evaluation facilitates student learning.

(5 marks each)

(5x8=40 marks)

02. i. Explain the role of technology in teaching and learning, using three examples. (06 marks)
- ii. Briefly describe three factors to be considered when selecting appropriate technologies for teaching. (06 marks)
- iii. Briefly explain three challenges faced by teachers when integrating new technology into teaching-learning process. (03 marks)
(15 marks)
03. i. Explain four main considerations in the selection of a teaching-learning methodology. (4 marks)
- ii. State three disadvantages of teacher-centred methods in classroom teaching-learning process, and explain different techniques that can be used by a teacher to make these methods more interactive. (06 marks)
- iii. Explain 5 points to be considered by a teachers in the implementation stage of the teaching learning process. (05 marks)
(15 marks)
04. Write short notes on any three of the following:
- i. Basic steps in the project method.
- ii. Questioning strategies that can be adopted by a teacher.
- iii. Advantages and disadvantages of multi-grade teaching.
- iv. Difference between formative evaluation and summative evaluation.
- v. Advantages of planning a lesson by a teacher. (05x3 marks)
(15 marks)

PART – II

05. i. Discuss the importance of gaining primary experiences, by students in concept formation when learning science/mathematics. (5 marks)
- ii. State a teaching methodology which facilitates students to gain primary experiences and, briefly explain using an example how this can be used in a science/mathematics lesson. (5 marks)
- iii. State limitations of the above methodology and explain the strategies that can be used to minimize those. (5 marks)
(15 marks)
06. i. Explain the main steps in scientific method. (5 marks)
- ii. Describe using examples how students can apply scientific method in their day –to-day activities. (5 marks)
- iii. Explain using an example the role of the teacher as a facilitator in the learning process of students in a science/ mathematics lesson. (5 marks)
(15 marks)
07. Briefly explain any three of the following stating examples.
- i. Use of field work in the teaching-learning process of science/mathematics.
- ii. Use of models in the teaching-learning process of science/mathematics.
- iii. Use of information and communication technology in the teaching-learning process of science/mathematics
- iv. Use of different methods of evaluation in the teaching-learning process of science/mathematics.
- v. Use of assignments in the teaching-learning process of science/mathematics.
- (5x3 marks=15 marks)