

THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF EDUCATION
BACHELOR OF EDUCATION HONOURS IN NATURAL SCIENCES
DEGREE PROGRAMME
LEVEL - 05



FINAL EXAMINATION 2021/2022

STU5816 – EDUCATIONAL TECHNOLOGY FOR TEACHING SCIENCE &
MATHEMATICS

DURATION – THREE (03) HOURS

Date: 27.11.2022

Time: 9.30 a.m. – 12.30 p.m.

Answer the first question and any other two (02) questions in part I and any two (02) questions from part II.

PART – I

01. i. Explain briefly the concept of team teaching.
- ii. Explain the basic conditions and standards that should be considered in writing a specific behavioural objective, using an example.
- iii. Briefly describe **three (03)** challenges faced by the teachers when integrating technology into classroom teaching-learning process.
- iv. List **five (05)** ways in which the use of technology facilitates learning.
- v. Describe briefly, the main steps of the Project Method?
- vi. Mention **five (05)** important factors to be considered in the preparation of a lesson plan.
- vii. Explain briefly the importance of field trips as techniques of teaching by citing **three (03)** reasons.
- viii. State **five (05)** advantages to the student of using discovery method as a teaching methodology.

(05 x 08 = 40 marks)

02. i. Explain the term 'Educational Technology' by citing a suitable definition. (03 marks)
- ii. Describe **three (03)** factors that need to be considered when integrating technology in to the teaching learning process. (06 marks)
- iii. Discuss **three (03)** benefits that the teacher can gains by using Information Technology (ICT) in the teaching-learning process by citing a suitable example for each. (06 marks)
03. i. Explain briefly how the student centered education is differ from the teacher centered education by citing **three (03)** facts. (05 marks)
- ii. Explain the role of the teacher in a student centred approach by giving three (03) examples. (06 marks)
- iii. Explain briefly **two (02)** challenges faced by teachers in student centered approach. (04 marks)
04. i. Explain the importance of knowledge on 'Dale's cone of experiences" for a teacher by citing **three (03)** reasons. (06 marks)
- ii. Discuss **two (02)** instances that teachers can use the text book successfully as a teaching techniques. (04 marks)
- iii. "Both students and teachers can be benefited by using learning aids". Justify this statement by citing **three (03)** reasons. (05 marks)
05. i. Examine why a teacher need to plan a lesson before the teaching-learning session by giving **three (03)** reasons. (05 marks)
- ii. Explain **three (03)** features that should be included in a lesson plan by citing suitable examples. (06 marks)
- iii. "The nature of the teacher influences the planning of the lesson". Examine this statement by citing **two (02)** facts. (04 marks)

PART – II

06. i. Briefly explain the **two (02)** Main methods followed in problem solving. (03 marks)
- ii. Explain how problem solving method is used to teach mathematics/science by giving **two (02)** examples. (06 marks)

- iii. Investigate how problem solving method contributes to students' cognitive development by giving **two (02)** suitable examples. (06 marks)
07. i. Briefly explain what is meant by learning aids by citing an appropriate definition. (03 marks)
- ii. Explain **four (04)** factors that should be considered when selecting learning aids to teach Mathematics/Science. (04 marks)
- iii. Select any Mathematics/Science lesson from a any grade and explain as a teacher how you are going to facilitate the teaching-learning process of that lesson by using different teaching-learning aids. (08 marks)
08. i. Name **three (03)** special teaching methods that can be used to teach Science/Mathematics. (03 marks)
- ii. Explain how you could use one of the above teaching methods in teaching/science/Mathematics by giving a suitable examples. (06 marks)
- iii. Discuss the advantages and disadvantages (Two for each) of your chose teaching method. (06 marks)
09. Development of 'Higher Order Cognitive Skills' is important for students to cope with the 'World of Work'.
- i. Mention **three (03)** higher order cognitive skills that can be developed in students by teaching Science/Mathematics. (03 marks)
- ii. a. State **three (03)** teaching-learning method that are suitable to use to develop higher order cognitive skills in students. (03 marks)
- b. Explain how a teacher can implement one method that mentioned above in the teaching-learning process to develop higher order cognitive skills in students by giving an example. (03 marks)
- iii. Discuss **two (02)** challenges faced by a teacher when implementing above mentioned method to develop higher order cognitive skills in students. (06 marks)

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