

AUGUST 2021
EBS 203
METHODS OF TEACHING SCIENCE
2 HOURS

Candidate's Index Number:
Signature:

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION
FOUR-YEAR BACHELOR OF EDUCATION (B.ED)
SECOND YEAR, END-OF-SECOND SEMESTER EXAMINATION, AUGUST, 2021

AUGUST 19, 2021

METHODS OF TEACHING SCIENCE

2:00 PM – 2:40 PM

This paper consists of two sections, A and B. Answer ALL the questions in Section A and THREE questions from Section B. Section A will be collected after the first 40 minutes.

SECTION A

Answer ALL the questions in this Section.

For items 1 to 14, each stem is followed by four options lettered A to D. Read each item carefully and circle the letter of the correct or best option.

1. Which one of the following can be considered as Cognitive Domain?
 - A. Conducting experiments and making measurements.
 - B. Communicating ideas orally and in written form (recording).
 - C. Discriminate between relevant and irrelevant information.
 - D. Manipulating objects in their environment.
2. Scientific knowledge is the product of mankind resulting from an effort to impose order on nature and involve creating imagination. This is referred to as
 - A. historical.
 - B. humanistic.
 - C. systematic exploration.
 - D. unique.
3. Suggesting reasons for events or phenomena, which can be tested scientifically and in applying concepts and ideas from previous experience needs skills.
 - A. experimentation
 - B. evaluation
 - C. hypothesis
 - D. prediction

4. What skill is needed to give meaning to information gathered?
 - A. Generalizing.
 - B. Interpretation data.
 - C. Observation.
 - D. Raising questions.

5. Values in science include the following **except**
 - A. consideration of premises.
 - B. longing to know and understand.
 - C. questioning of some things.
 - D. respect diversity.

6. Which one of the following statements is not a limitation of science?
 - A. Anything outside the sense is not science.
 - B. Methods of science are based on observation and are limited to it.
 - C. There is a building up on observation.
 - D. There is an authority in science and when that authority speaks then that is the end of it.

7. When a teacher encourages students to participate and makes suggestions about how students may proceed in an activity, the teacher plays the role of the
 - A. assessor.
 - B. controller.
 - C. prompter.
 - D. resource.

8. The Pre-active phase of teaching refers to
 - A. conduct.
 - B. consolidation.
 - C. follow-up.
 - D. planning.

9. Which one of the following is **not** a characteristic of deductive learning approach? Deductive is
 - A. a discovery.
 - B. experimental by nature.
 - C. finding from the theory.
 - D. whole to part.

10. Instead of explaining a given concept and following this explanation with examples, the teacher presents students with many examples showing how the concept is used. What type of learning is this?
 - A. Deductive learning.
 - B. Inductive learning.
 - C. Practice learning.
 - D. Traditional learning.

11. Which of the following school of thoughts suggests that only observable behaviours should be studied, since internal states such as cognitions, emotions and moods are subjective?
- A. Behaviorist theory.
 - B. Cognitivist theory.
 - C. Constructivist theory.
 - D. Interactivist theory.
12. Disadvantages and limitations of peer teaching include each of the following **except**
- A. Parent pushback.
 - B. Poor applicability.
 - C. Student experience.
 - D. Student hesitancy.
13. Peer teaching can enhance learning by enabling learners to take responsibility for
- A. reviewing.
 - B. disorganizing and consolidating existing knowledge and material.
 - C. filling in the gaps.
 - D. finding additional meanings.
14. The Method in Science defined as the standard procedure in the presentation of instructional materials and the content of activities is known as
- A. laboratory method.
 - B. observation method.
 - C. project method.
 - D. teaching method.

Items 15 – 20 are statements followed by True or False options. Read each statement carefully and indicate whether it is True or False by circling the letter of the correct option.

15. A goal describes the skill, knowledge, or attitude a learner will have at the end of the learning activity or course.
- A. True
 - B. False
16. Willingness of the Science Teacher to accept responsibility for classroom management is considered as one of the purposes of classroom management.
- A. True
 - B. False
17. Directed discovery is where the teacher generally creates the conditions under which the pupils will discover for themselves that which someone else has previously discovered.
- A. True
 - B. False
18. Cognitivism is "the psychology of learning which emphasizes human cognition or intelligence as a special endowment enabling man to form hypotheses and develop intellectually".
- A. True
 - B. False

19. A behaviorist theory is based on the fundamental idea that behaviors that are reinforced will tend to continue, while behaviors that are unpunished will eventually end.
A. True
B. False
20. Teaching as a Science depends on the individual and his personality
A. True
B. False

For items 21 - 30 write the appropriate responses in the spaces provided.

21. Computer simulation is useful because it enables one to explore and gain insight into new technology and to estimate the performance of systems. Computer simulation serves as a
22. The process of generating knowledge and a search for explanation is termed as
23. A spontaneous reaction that occurs automatically to a particular stimulus to alter the “natural” relationship between a stimulus and a reaction was viewed as a major breakthrough in the study of
24. Which law states that when a connection between a stimulus and response is positively rewarded it will be strengthened and when it is negatively rewarded it will be weakened?
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25. The body of knowledge which can be communicated to others and which can be verified by anyone willing to make the efforts to do so is known as
26. Learners should accurately apply appropriate science concept, principles, laws and theories in interacting with the
27. The purposeful use of man’s knowledge and materials, resources of energy and natural phenomena is known as
28. In a restricted sense, teaching is the role related to the behaviour of those individuals who occupy the position of a
29. The process where teachers think over their teaching practices, analyzing how something was taught and how the practice might be improved or changed for better learning outcomes is referred to as
30. When management is made of strategies and systems that will manage and eliminate difficult behaviours that prevent students from succeeding in an academic environment is known as