

AUGUST 2022  
EMA 208SW  
METHODS OF TEACHING HIGH  
SCHOOL MATHEMATICS  
30 MINUTES

Candidate's Index Number
Signature:

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

FIVE-SEMESTER BACHELOR OF EDUCATION (SANDWICH) PROGRAMME  
LEVEL 350, FIRST SEMESTER QUIZ, AUGUST 2022

30<sup>TH</sup> AUGUST 2022

METHODS OF TEACHING HIGH  
SCHOOL MATHEMATICS

3:00 PM - 3:30 PM

Answer ALL the questions.  
[20 MARKS]

Items 1 to 20 are stems followed by four options lettered A to D. Read each item carefully and circle the letter which corresponds to the correct or best option.

1. Which of the following pairs of terms is referred to as the two critical dimensions of effective teaching of mathematics?
  - A. Closure and Objective.
  - B. Implementation and planning.
  - C. Intent and achievement.
  - D. Intent and evaluation.
2. Which one of the following teaching approaches is best described as a *less participatory* pedagogy? .....
  - A. Indirect teaching approach.
  - B. Learner-dominated strategy.
  - C. Student-centered teaching.
  - D. Teacher-centered teaching.
3. A mathematics teacher who brands some students as *incapable of learning school mathematics* is said to be defeating the senior high school syllabus premise of ensuring that .....
  - A. all students can and need to learn mathematics.
  - B. all students must be compelled to learn mathematics.
  - C. every student can and need to have mathematics anxiety.
  - D. every student has the ability to learn mathematics very fast
4. Positive student achievement is usually associated with the teacher .....
  - A. being business-like, cold and insensitive.
  - B. being unclear when presenting instructional content.
  - C. employing variety of instructional materials and procedures.
  - D. limiting students to specific instructional materials and procedures.

5. Which of the following teacher actions best describes indirect teaching?
- Placing emphasis on students' critical thinking and problem-solving skills.
  - Placing high priority on completion of academic activities.
  - Relying heavily on justification of authority, criticism and directives.
  - Selecting and directing every mathematics task for students.
6. Which of the following statements is **not** true about the characteristics of an effective teacher of mathematics? Teacher .....
- believes that all students can learn mathematics.
  - exhibits anxiety in learning and teaching mathematics.
  - has competency in the mathematics being taught.
  - is excited about learning and doing mathematics.
7. Which one of the following teaching methods is usually associated with *rote learning*?
- Cooperative learning.
  - Expository.
  - Guided discovery.
  - Laboratory.
8. Which one of the following statements is **true** about the *cone of experience* for teaching methods? Most students learn .....
- 50% of what they talk over with others.
  - 70% of what they see and hear.
  - 80% of what they use and do in real life.
  - 95% of what they use and do in real life
9. Which one of the following is a limitation of *exposition* method of teaching?
- Individual differences are catered for.
  - It breeds passive learners in the classroom.
  - It is generally student-centred.
  - Retention and transfer of learning is enhanced.
10. Three of the basic elements of cooperative learning are .....
- group processing, face-to-face interaction and individual accountability.
  - individual accountability, collaborative skills and positive interdependence.
  - positive dependence, collaborative skills and individual accountability.
  - positive interdependence, individual accountability and group processing.
11. Which of the following terms is described as "broad general statements that **describe** what the mathematics programme plans to accomplish?"
- Aims.
  - Objectives.
  - Scheme.
  - Scope.
12. Which of the following curriculum terms is regarded as **most** specific?
- Aim.
  - Objective.
  - Rationale.
  - Scope.



13. Which of the following is defined as “something that baffles or confuses, an enigma, or a problem that often requires ingenuity and persistence”?
- A. Puzzles.
  - B. Inquiry.
  - C. Game.
  - D. Equation.
14. Which of the following statements are factors of effective teaching? An effective mathematics teacher is .....
- I. warm and slipshod.
  - II. imaginative and stimulating.
  - III. organized and business-like.
- A. I & II only
  - B. I & III only
  - C. II & III only
  - D. I, II & III
15. The sequential *basic teaching functions* which classroom teachers make decisions on regarding students’ learning and teaching strategies are .....
- A. evaluation → implementation → planning
  - B. implementation → planning → evaluation
  - C. planning → evaluation → implementation
  - D. planning → implementation → evaluation
16. Which one of the following methods of teaching involves a few students put together to study some material and produce a single result?
- A. Cooperative learning.
  - B. Expository learning.
  - C. Lecture.
  - D. Role play.
17. The teaching technique often described as representing “ a conception of education in which teachers who know give knowledge to students who do not know” is known as ..... method.
- A. heuristic
  - B. indirect
  - C. inquiry
  - D. lecture
18. The teaching method that engages students in spontaneous, unrehearsed, informal dramatization of roles of given characters in given situations is called .....
- A. Brainstorming.
  - B. Investigation.
  - C. laboratory method.
  - D. role play method.
19. Effective teaching generally includes all the following **except** teacher .....
- A. listening to students and avoiding too much talk during instruction.
  - B. making complex issues understandable to students.
  - C. making the subject exciting and linking it with students’ world.
  - D. posing complex and difficult tasks to students to do.

20. The selection of a teaching method by a teacher is influenced by three critical criteria **namely**

.....

- A. learning objective, planning and implementation.
- B. learning objective, the learner and practical requirements.
- C. teacher and learner activities, learning objective, and evaluation.
- D. the teacher, learning objective and classroom formation.