



UNIVERSITY OF GHANA

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DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

END OF FIRST SEMESTER EXAMINATIONS, 2021

(B. ED) BASIC EDUCATION

UGTE 101: INTRODUCTION TO INTEGRATED SCIENCE 1

TIME ALLOWED: 2 HOURS

DATE:

Instruction: THE PAPER IS IN TWO SECTIONS, A, B AND C. ANSWER ALL THE QUESTIONS IN SECTION A and B AND TWO IN SECTION C.

SECTION A
(10 MARKS)

Instruction: Answer all the questions in this section in the answer booklet. For the multiple-choice items, write the letter of the option that best answers the question.

For questions 1 to 15, write the letter corresponding to the correct option in the answer booklet.

1. Which of these can be classified as importance of the Scientific Methods?
 - i. Providing a systematic process for arriving at a logical conclusion.
 - ii. Providing uniformity in all fields of science.
 - iii. Providing knowledge which can be verified.
 - A. i only
 - B. i and ii only
 - C. i and iii only
 - D. i, ii and iii only

2. In the Paleolithic Age, man
 - A. Lived by fishing alone
 - B. Ate fruit and roots.
 - C. Lived by hunting and gathering fruits and roots.
 - D. Only collected bird's eggs.

3. Which chemical is believed by modern science to be contained in bread moulds used in the treatment of wounds?

- A. Thiamine
- B. Nicotine
- C. Penacol
- D. Penicillin

* 4. Which science process skill uses numbers to describe an object.

- A. inferring
- B. predicting
- C. measuring
- D. experimenting

* 5. The classification of matter includes all the following except

- A. Living and non-living
- B. Elements and compounds
- C. Solid, liquid and gas
- D. Tangibles and intangibles

* 6. What causes changes in the states of matter?

- A. Kinetic Energy
- B. Chemical Energy
- C. Change in Temperature
- D. Chemical Properties

* 7. The state of matter which consists of super energetic particles in the form of ionized gases is called _____.

- A. gaseous state
- B. liquid state
- C. Bose-Einstein condensate
- D. plasma state

8. Flammable materials, like alcohol, should never be dispensed or used near

- A. An opened door
- B. An opened flame
- C. Another student
- D. A sink

* 9. Which of the following approaches will not be more appropriate for teaching JHS1 students the characteristics of living things?

- A. Concept cartoons
- B. Concept maps
- C. Lecture
- D. Shower thought

10. A pupil has accidentally broken a test tube and spilled a chemical on the table. Which of the following best explains what he/she should do?

- A. Use water and paper towel to clean the spill; place the broken test tube in the disposal container specified by your teacher for sharp objects
- B. Throw the glass into the nearest thrash bin and let the spill air-dry.
- C. Quickly dispose of the glass, wipe up the spill with the nearest cloth and hope nobody notices.
- D. Caution your colleagues to avoid the area while you inform the teacher of the accident.

11. Which of the following is not an SI unit

- A. Metre ✓
- B. Candela ✓ — luminous intensity.
- C. Seconds ✓
- D. Yard

Handwritten notes:
Metric
light
luminous intensity

12. 'Concept cartoons' were created in an attempt to develop an innovative teaching and learning strategy which took account of views on learning in science

- A. behaviourists
- B. cognitivists
- C. constructivists
- D. instructivists

13. Introspection is the process of

- A. communicating your learning preferences to others.
- B. examining the actions of others to gain self-insight.
- C. giving feedback to others to help them learn.
- D. examining one's self for the purpose of a deeper self-understanding.

14. They remember best by using their hands, creating charts, walking and talking when studying.

- A. Visual Learner
- B. Kinesthetic Learner
- C. Auditory Learner
- D. All three above

15. In the new basic school curriculum, the body skills that teachers at all levels should seek to develop in their learner's is known as.....

- A. Strands
- B. Indicators
- C. Core competencies
- D. Content standard

SECTION B

Fill in the blank spaces with the most appropriate answers.

16. The ability of a scientist to pursue a problem until a satisfying solution is found is known as
17. A piece of a metal ball was dropped from the top to the bottom of stationary kerosene. The force that was experienced between the ball and the molecules of the kerosene is the
18. The SI unit of force is the
19. How someone thinks or feels about him or herself is referred to as
20. The predetermined level of knowledge, skills and/or attitude that a learner attains by a set stage of education is referred to as.....

SECTION B

[30 marks]

Answer any Three questions.

15/20 (15/2)
8.5

1.

- a) Give any three differences between the mass and the weight of a body. (3 Marks)
- b) Classify the following child learning style activities under visual and auditory learning styles. Write only the number corresponding to the activity under the appropriate heading. (5 Marks)

No	Activity	Visual Learning Style	Auditory Learning Style
I	Focus on using graphs and diagrams	✓	
II	Draw pictures	✓	
III	Read out loud		✓
IV	Discuss concept with others		✓
V	Talk through information		✓

- c) Give two effects of rotation and revolution of the earth. (2 Marks) 1 1/2
- (i) causes day to turn to night
(ii) causes summer to become winter.
2. a) State three (3) possible causes of hazards in a science class. (3 Marks)
- b) Outline the types of inquiry-based learning and explain any two (2) of them.

(5 Marks)

c) Copy and complete the table below. (2Marks)

Quantity of measurement	Units of measurement
<i>Wt</i>	joules per second
Amount of substance	<i>mol</i>
<i>Mass</i>	kilogram
Velocity	

- a) List any six items that can be found in a first aid box. (3Marks)
- b) How would you teach the Change in State of Matter to a JHS1 class? (5marks)

All living and non living things contain

c) Give four examples each of fundamental quantity. (2 Marks)

*L
A*

*Literacy, numeracy,
reading, writing, arithmetic*

- a) List the three (3) integral learning domains that are the bases for instructions and assessment in the Basic School Science Curriculum. (3 Marks)
- b) Using a concept map, illustrate the chemical classification of matter. (5Marks)
- c) What is Self-Awareness? (2 Marks)

