



JUNIOR SECONDARY SCHOOL ASSESSMENT
MONITORING LEARNER'S PROGRESS
GRADE 8 – 004
INTEGRATED SCIENCE

Name _____

Learner's Number

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Gender:

Boy

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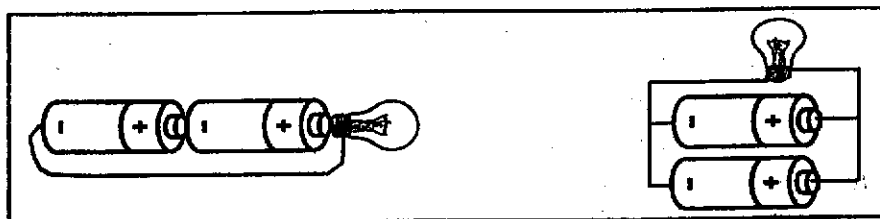
Girl

☐

School Name _____

Section A

1. Eighth-grade student was tasked with identifying the core elements of interdisciplinary science. Which of the following options represents the most accurate combination of these elements?
A. Biology, Chemistry, Physics
B. History, Geography, Civics
C. Mathematics, Literature, Art
D. Music, Drama, Dance
2. Which of the following activities is a foundational skill within of scientific practice?
A. Memorizing formulas
B. Conducting experiments
C. Writing essays
D. Painting landscapes
3. Considering typical laboratory incidents, which factor is primarily responsible for causing a "scald" injury?
A. Exposure to electricity
B. Lack of oxygen
C. Contact with hot substances
D. Sharp objects
4. Which of the following is an excretory product released by both the skin and kidneys?
A. Urea
B. Carbon dioxide
C. Sweat
D. Bile
5. What is a primary advantage of a kidney transplant over long-term dialysis?
A. Lower cost
B. No need for immunosuppressants
C. Improved quality of life and independence
D. Shorter recovery time
6. In the circuits shown, how are the dry cells arranged?



- A. Both circuits have cells in parallel
 - B. Both circuits have cells in series
 - C. Circuit 1 has cells in series, Circuit 2 in parallel
 - D. Circuit 1 has cells in parallel, Circuit 2 in series
7. Why is it dangerous to be in an open field during a rainstorm?
A. Risk of hypothermia
B. Increased risk of lightning strike
C. Potential for flash floods
D. Higher chance of slipping and falling

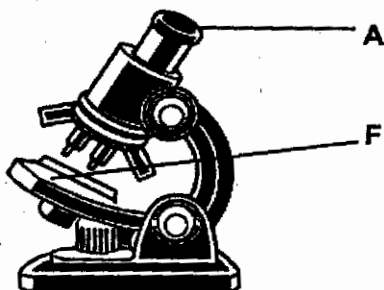
8. Mercy carries a cylindrical water bottle with a base radius of 3.0 cm. If the bottle holds 500 cm³ of water, what is approximately the height of the water column in the bottle?
 A. 17.7 cm B. 55.5 cm C. 7.07 cm D. 25 cm
9. What is the name of the laboratory instrument shown, and what is its primary function?



- A. Beaker; general mixing and heating
 B. Erlenmeyer flask; swirling and mixing liquids without splashing
 C. Volumetric flask; accurate measurement of volumes
 D. Test tube; holding small samples

Study the diagram of the microscope below and answer questions 10 and 11

10. What is the function of the part marked A?

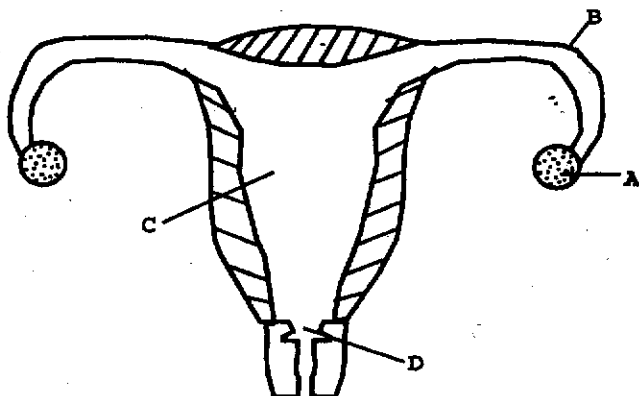


- A. To view the specimen
 B. To magnify the specimen
 C. To hold the slide
 D. To adjust the focus

11. Name part marked A?
 A. Condenser B. Objective lens C. Adjustment knob D. Eyepiece lens
12. Which of the following best describes the role of integrated science in addressing real-world problems, such as climate change and resource management?
 A. It focuses solely on theoretical concepts without practical application.
 B. It combines knowledge from various scientific disciplines to develop holistic solutions.
 C. It relies on isolated experiments within specific fields of study.
 D. It prioritizes technological advancements over environmental concerns.
13. In the context of separating mixtures, which method would be most effective for Grace to separate iron filings from sulfur powder, and why is this method unsuitable for separating salt from sugar?
 A. Distillation, because it relies on differences in boiling points, which are significant between iron and sulfur but not between salt and sugar.
 B. Filtration, because it separates solids from liquids, which is applicable to both mixtures.
 C. Magnetism, because iron is magnetic and sulfur is not, while salt and sugar do not have magnetic properties.
 D. Evaporation, because it removes liquids, which is effective for both mixtures.
14. Based on the pH values provided for Mzee Matano's soil samples, which of the following statements is accurate regarding the acidity, basicity, and neutrality of the soils?
 A. Soil D is basic, Soil E is acidic, and Soil F is neutral.
 B. Soil D is acidic, Soil E is neutral, and Soil F is basic.
 C. Soil D is neutral, Soil E is basic, and Soil F is acidic.
 D. Soil D is basic, Soil E is neutral, and Soil F is acidic.
15. How does fertilization occur in human beings, leading to the initiation of pregnancy?
 A. It involves the fusion of two egg cells within the female reproductive system.
 B. It is the process where sperm cells are produced in the testes.
 C. It occurs when a sperm cell penetrates an egg cell in the fallopian tube, forming a zygote.
 D. It is the implantation of a fertilized egg in the uterine lining before fertilization.

Use the diagram below to answer questions 16 and 17.

16. What are the parts labeled C and D, and what are their respective functions in this process?



- A. C is the ovary, which produces eggs, and D is the cervix, which connects the uterus to the vagina.
 B. C is the fallopian tube, which transports the egg to the uterus, and D is the vagina, which receives sperm during intercourse.
 C. C is the cervix, which supports the fetus during pregnancy, and D is the vagina, which facilitates childbirth.
 D. C is the cervix, which prevents infections, and D is the vagina, which facilitates childbirth.
17. Where does implantation takes place?
 A. B B. Walls of C C. Upper part of D D. A
18. A researcher, Brightson, documented typical incidents in a lab setting. Which of the following options is the MOST accurate explanation for what causes a "scald" injury?
 A. Being shocked by electricity B. Not having enough oxygen
 C. Touching very hot materials D. Being cut by sharp objects
19. If a student gets chemicals in their eyes during a science experiment, what should be done FIRST as first aid?
 A. Cover the eyes with a bandage B. Tell the teacher right away
 C. Wash the eyes with water D. Put medicine on the eyes
20. What is the chemical formula of table salt?
 A. KCl B. H₂O C. NaCl D. NaOH

Section B

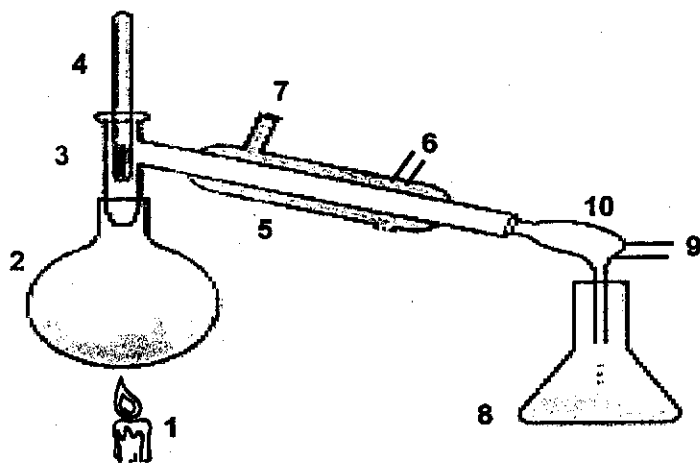
21. Study the diagram below and answer the question that follows.



Name the apparatus shown above and give its function. [2 marks]

- i) _____ ii) _____

22. Grade 8 learners were being taught on electric energy. Name 3 sources of electric energy. [3 marks]
- i) _____ ii) _____
- iii) _____
23. Tonny was playing with magnetic materials. What happens when a south pole of a magnet is brought near the north pole of another magnet? [1 mark]
- _____
24. Describe the activities that take place during the following phases of menstrual cycle.
- (a) Ovulation phase _____ [2 marks]
- (b) Luteal phase _____ [2 marks]
25. The skin is the largest body organ as it covers the whole-body surface. The skin is composed of two main layers that is _____ and _____ [2 marks]
26. Label parts marked 1-8 from diagram below (8marks)



1 _____

3 _____

5 _____

7 _____

2 _____

4 _____

6 _____

8 _____