**GRADE 7 INTEGRATED SCIENCE MIDTERM MARKING SCHEME**
**Answers**

1.
a) Cool the burn by holding it under cool running water until the pain feels better.
b) You can use cold milk or canned drinks instead of cold water
c) Remove any jewelry or clothing unless stuck to the bum, before the area begins to swell.
d) Cover the area loosely with sterile bandage length ways when it has cooled. Use a clean dry piece of cloth if you do not have bandage.
e) Monitor the casualty.
f) Seek medical advice.

2. Observing skills, Measuring skills, Manipulating skills, Classifying skills, Predicting skills, Communicating skills, Conclusion skill.

3. A basic quantity is a quantity that cannot be obtained from other physical quantities. A derived quantity is a quantity obtained by combining basic quantities by either multiplication or division.

4. a) 714.29 kg/m³ b) 800 kg/m³

5. An apparatus is an equipment used for a particular activity or purpose.

6. Microscope

7. W - chimney

   X - Collar

   Y - airhole

   Z- gas valve

8. Hand lens has low power magnification while microscope has high power magnification.

9. Through winnowing

10. Using magnet to attract all iron fillings

11. Fractional distillation is used to separate a mixture of miscible liquids.

12.

a) A base is a substance that neutralizes acids.

b) An acid is a substance that changes blue litmus papers red.

c) An indicator is a substance that determines the acidity or alkalinity of substances

13. Sodium hydroxide solution which is a base.

14. Manufacturing of soap for bathing and washing, making antacid tablets to treat our stomach, making tooth pastes for brushing our teeth and making lime that is used to reduce acidity in the soil.

15. To avoid pollution

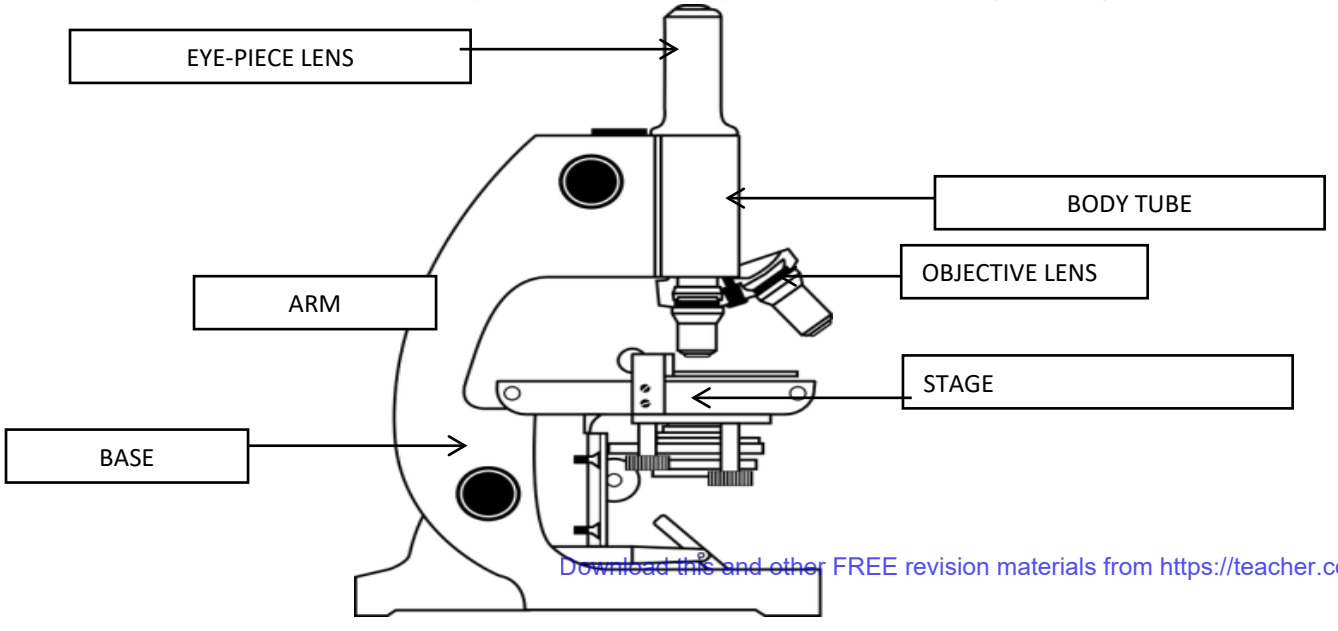
16. The soil is too acidic.

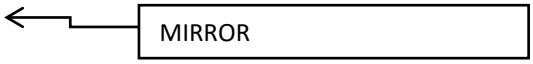
17. Simple distillation

18. Give four differences between luminous and non-luminous flame.(8 mks)

| Luminous flame | Non-luminous flame |
|---|---|
| **Yellow/orange in colour** | Blue in colours |
| **Used for lighting** | Used for heating |
| **Has 4 regions and burns quietly** | Has 3 regions and noisy |
| **Produced when air hole is closed** | Produced when air hole is open |
| **Produces soot** | Does not produce soot |
| **Its wavy and large** | Its straight |

19. Name the following parts of the light microscope.( 5 mks)

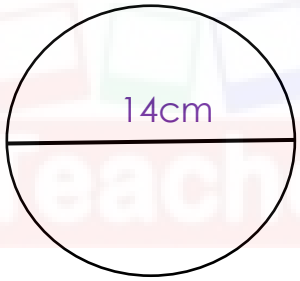





20. Grade 8 students had their practical lesson in the laboratory. Name two common accidents their Integrated Science teacher taught them. (2 mks)
a) Burns, corrosion
b) Falls and fractures
c) Fires and explosions
d) Cuts and scalds

21. Name three protective wear for safety in the laboratory.( 3 mks)
Gloves
Overall
Safety goggles
Facemask
Headgear

22. Calculate the area of the Circle whose diameter is 14cm. (2 mks)




Area = $\pi r2$

Area=$\frac{22}{7}$*7cm*7cm

Area=154cm$^2$

23. Outline three safe ways of handling of the Bunsen burner. (3 mks)
a) Always turn off the Bunsen burner after use.
b) Always make sure that flammable liquids and combustible materials are not near theBunsen burner to avoid the risk of unwanted fires and explosions.
c) When lighting the gas, have your strikers ready to avoid excess gas leakage that mightlead to an explosion.

24. State the SI unit and symbol for the following quantities.(10 mks)

| Basic quantity | SI unit | Symbol |
|---|---|---|
| Mass | Kilogram | kg |
| Length | Metre | m |
| Time | Second | s |

| | | |
|---|---|---|
| Temperature | Kelvin | K |
| Electric current | Ampere | A |

25. What is the meaning of the following hazard symbol? (6 mks)

Corrosive

poisonous

Radioactive

flammable

Carcinogenic

**26.** When working in the laboratory, you must observe the following safety rules: Namely? (4 mks)

a) Work carefully as carelessness can cause accidents as well as inaccurate results.
b) Wear gloves, laboratory aprons and safety glasses.

c) Never eat or drink in the laboratory.
d) Tie back loose hair, roll back and secure open sleeves and neckties and make sure youwear shoes that fully cover your feet.
e) Do not carry out laboratory experiments at home or in the dormitories unless directed to do so by your class teacher.
f) Carefully read chemical labels and understand the hazard symbol on them.
g) Listen carefully to your teacher's instructions on when and how to use safety equipmentsuch as glasses, protective aprons, fire extinguishers and fire blankets.
    a. Make sure you know where the nearest fire alarm is in your school laboratory.
    b. Do not begin an experiment until the teacher instructs you to do so.
h) Do not touch substances unless the teacher instructs you to do so. What looks harmlessmay be dangerous.
i) Wash your hands with soap and running water after handling chemical substances. Some chemical substances are poisonous.
j) Heat materials in suitable containers only, such as Pyrex glass container that can resistbreakage.
k) Always keep the open end of the test tube pointed away from the learners and yourselfwhen heating chemicals because the fumes produced may be harmful.
l) Pick up hot objects carefully using tongs or insulated materials.
    a. Make sure that you turn off the heat source when not in use to conserve energy.
m) Always unplug electric cords by pulling out the plug and not the cord.
n) Check that there are no flammable substances near the burner. Flammable substances willcause fire if exposed to a flame.
o) After each experiment, tidy up your working area, clean all equipment and put them in their respective storage areas.
p) Report any accidents, broken equipment and damaged facilities to your teacher. In this way, you will be taking responsibility for your safety and for those who use thelaboratory after you.
    a. If a chemical gets into your eyes, wash it out with running water for about 12 minutes andthen visit a health centre or hospital for further medical attention.
q) If you inhale poisonous gases or vapour, move outside the laboratory for fresh air. Immediately seek medical assistance.