

GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

0555 GEOLOGY 1

JUNE 2023

ORDINARY LEVEL

Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are NOT allowed in the examination room.

MULTIPLE CHOICE QUESTION PAPER

One and a half hours

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. Check that this question booklet is headed "ORDINARY LEVEL – 0555 GEOLOGY 1"
4. Fill in the information required in the spaces above.
5. Fill in the information required in the spaces provided on the answer sheet using your HB pencil: **Candidate Name, Exam Session, Subject Code and Candidate Identification Number.** Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this examination

6. Answer ALL the 50 questions in this Examination. All questions carry equal marks.
7. Non-programmable Calculators are allowed.
8. Each question has FOUR suggested answers: A, B, C and D. Decide which answer is appropriate. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.

For example, if C is your correct answer, mark C as shown below:

[A] [B] [C] [D]

9. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
10. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to this question later.
11. Do all your rough work in this booklet using the blank spaces in the question booklet.
12. At the end of the examination, the invigilator shall collect the answer sheet first and then the question booklet. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.

Turn Over

0555/1

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1. A branch in Geology that studies the form, structure and properties of crystals is called
- Mineralogy.
 - Petrology.
 - Crystallography.
 - Petrography.

Study the diagram below (figure 1) showing the relationship between Geology and other sciences. Use it to answer questions 2 and 3.

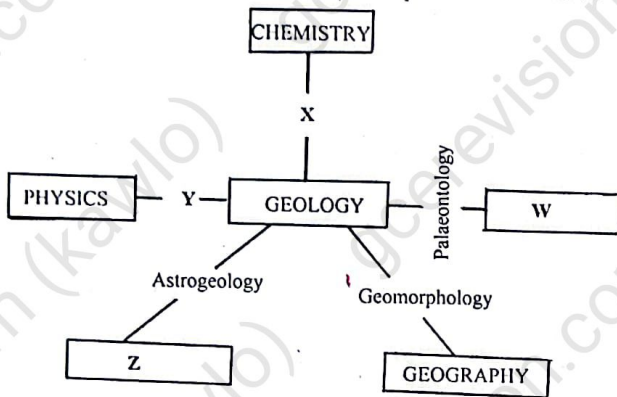


Figure 1

- W and X respectively are
 - Fossils and chemist.
 - Geochemistry and ecology.
 - Biology and geochemistry.
 - Geophysics and astrochemistry.
- Identify Y and Z respectively.
 - Geophysics and astronomy.
 - Geophysics and cosmology.
 - Astrophysics and cosmology.
 - Astronomy and geophysics.
- A cluster of stars found in the universe is called
 - galaxy.
 - comets.
 - satellite.
 - asteroid.
- The state of the earth's interior at the depth of about 5140 km is
 - semi solid.
 - gaseous.
 - solid.
 - liquid.
- The lithosphere is made up of
 - mantle and crust.
 - upper and lower crust.
 - upper and lower mantle.
 - crust and upper mantle.

Study the diagram (figure 2) and answer questions 7, 8 and 9.



Figure 2.

- What does this diagram represent?
 - Seismograph.
 - Seismogram.
 - Seismometer.
 - Radio waves.
- Identify Y on the diagram.
 - S-waves.
 - P-waves.
 - L-waves.
 - R-waves.
- Which set of waves travel on the earth's surface?
 - X.
 - Y.
 - Z.
 - X and Y.
- When Pangaea split into two continents. How was the Northern block called?
 - Laurasia.
 - Panthalasia.
 - Gondwanaland.
 - Eurasia.
- A plate boundary where there is no formation of new crust nor destruction of old crust is called
 - constructive plate boundary.
 - conservative plate boundary.
 - divergent plate boundary.
 - convergent plate boundary.
- When plates move apart, it produces a plate boundary called
 - convergent boundary.
 - conservative boundary.
 - destructive plate boundary.
 - divergent plate boundary.

Study the diagram below (figure 3) and answer questions 13 and 14.

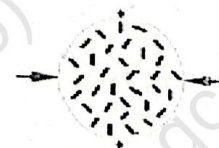


Figure 3.

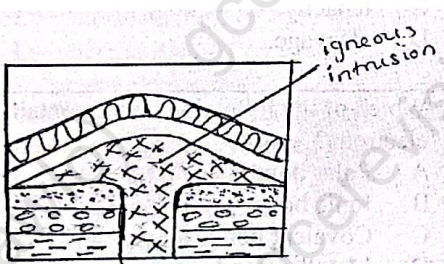
13. Identify the type of stress.
 A Uniform stress.
 B Differential stress.
 C Tensional stress.
 D Compressional stress.

14. What effect does the stress have on the material?
 A No change in shape.
 B Parallel alignment of materials.
 C Increase in the length of materials.
 D Reduction in volume of material.

15. The angle a fold axis makes with the horizontal is called a
 A dip.
 B hade.
 C strike.
 D plunge.

16. A crack in the ground through which magma escapes to the surface is called
 A fissure.
 B plug.
 C cone.
 D trench.

Study the diagram below (figure 4) and answer questions 17 and 18.



17. Identify the landform.
 A Laccolith.
 B Batholith.
 C Dyke.
 D Sill.

18. State the type of igneous structure.
 A Minor intrusion.
 B Extrusive landform.
 C Major intrusion.
 D Intrusive landform.

19. An example of a high grade regional metamorphic rock is
 A gneiss.
 B phyllite.
 C slate.
 D schists.

20. Which of the following sets of metamorphic rocks is arranged from low to high grade metamorphism?
 A Slates, schists, gneiss.
 B Phyllite, slate, schists.
 C Phyllite, slate, gneiss.
 D Slate, phyllite, schists.

21. Low grade regional metamorphism of shale produces
 A slate.
 B marble.
 C quartzite.
 D hornfels.

Study the diagram below (figure 5) and answer questions 22 and 23.

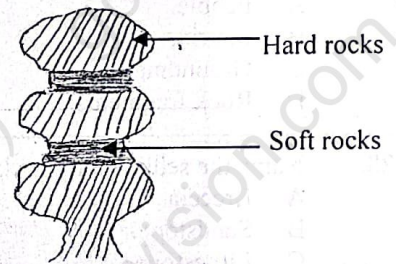


Figure 5.

22. Identify the feature.
 A Tor.
 B Plug.
 C Butte.
 D Rock pedestal.

23. Which agent of erosion is responsible for the production of this feature?
 A Glacial.
 B Water.
 C Wind.
 D Ice.

24. Large particles in a river channel are transported by
 A saltation.
 B suspension.
 C solution.
 D traction.

25. An example of a sedimentary rock with grain sizes between 2mm and 1/16mm is called
 A conglomerate.
 B sandstone.
 C breccia.
 D limestone.

Turn Over

26. Name the three main groups of sedimentary rocks.
- A Limestone, sandstone and mudstone.
 - B Organic, chemical and clastic.
 - C Evaporites, phosphates and siliceous sedimentary rocks.
 - D Arenaceous, rudaceous and argillaceous.

Study the sedimentary rock (figure 6) and answer questions 27 and 28.

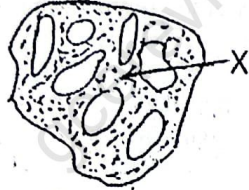


Figure 6.

27. What does X represent?
- A Pebble.
 - B Matrix.
 - C Groundmass.
 - D Rock fragments.

28. Name the sedimentary rock.
- A Breccia.
 - B Sandstone.
 - C Limestone.
 - D Conglomerates.

Study the diagram below (figure 7) and answer questions 29 and 30.

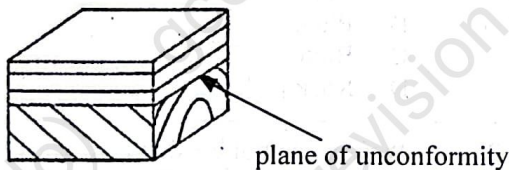


Figure 7.

29. Identify the type of unconformity.
- A Parallel unconformity.
 - B Angular unconformity.
 - C Heterolytic unconformity.
 - D Non conformity.
30. State the reason for your answer in question 29.
- A Sedimentary rocks are lying above igneous rocks.
 - B Older beds completely surrounded by younger beds.
 - C Beds above are horizontal while beds below are folded.
 - D Younger beds are completely surrounded by older beds.
31. The principle of cross cutting relationship states that, an igneous rock intrusion is
- A always older than the layer it cuts across.
 - B the same age as the layer it melts.

- C always older than the layer it comes in contact with.
- D always younger than the layer it cuts across.

32. The coils on the shells of a gastropod are called
- A aperture.
 - B sutures.
 - C umbo.
 - D whorls.

33. What joins the two valves in a bivalve?
- A Socket.
 - B Muscle scar.
 - C Ligament.
 - D Pallial line.

34. Which of the following conditions is more suitable for the preservation of fossils?
- A Fine grained, large size, slow burial.
 - B Abundance, size, rapid burial.
 - C Few organisms, rapid burial, coarse grained.
 - D Abundance, small size, shallow marine.

35. The ability of minerals to break along parallel planes of weaknesses within the crystal producing smooth surfaces is referred to as its
- A fracture.
 - B hardness.
 - C tenacity.
 - D cleavage.

36. Which of the following bonds contain a sea of electrons?
- A Polar bond.
 - B Ionic bond.
 - C Covalent bond.
 - D Metallic bond.

37. Which of these minerals is used as an abrasive?
- A Quartz.
 - B Calcite.
 - C Olivine.
 - D Diamond.

38. State the physical property that makes talc suitable for the manufacture of powder?
- A Ductility.
 - B Sectility.
 - C Malleability.
 - D Elasticity.

39. What is the cause of frequent landslides in most areas in Cameroon?
- Earth quakes.
 - Farming on slopes.
 - Heavy rain fall.
 - Deforestation.

40. Which of the following gases is responsible for global warming?
- Carbon dioxide.
 - Sulphur dioxide.
 - Nitrogen.
 - Hydrogen.

41. Flooding can be controlled by
- narrowing stream channels.
 - removing waste on river banks.
 - planting of trees.
 - construction of embankments.

42. In which rock type can petroleum be formed?
- Sedimentary rocks.
 - Igneous rocks.
 - Granitic rocks.
 - Metamorphic rocks.

43. A mineral deposit formed due to a magmatic process is called
- hydrothermal.
 - ortho magmatic.
 - metasomatic.
 - pegmatitic.

44. A metalliferous mineral deposit that can be mined at a profit is referred to as
- mineral deposit.
 - economic minerals.
 - ore deposit.
 - gangue mineral.

Study the crystal model in figure 8 and answer questions 45 and 46.

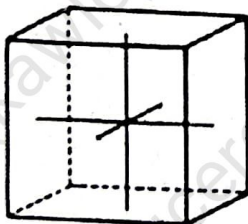


Figure 8

45. Identify the crystal system to which the model can be formed.
- Tetragonal.
 - Orthorhombic.
 - Hexagonal.
 - Triclinic.

46. Name a mineral that crystalizes in this system.
- Calcite.
 - Galena.
 - Staurolite.
 - Zircon.

Study the sketch map below (figure 9) and answer question 47 and 48.

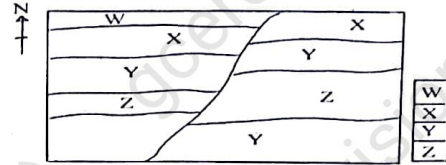


Figure 9.

47. The oldest bed on the map is
- Z.
 - Y.
 - X.
 - W.
48. Identify two geological structures shown on the map.
- Fault and fold.
 - Anticline and fault.
 - Syncline and joint.
 - Fault and syncline.

Study the diagram below (figure 10) and answer questions 49 and 50.



Figure 10

49. Identify the drainage pattern shown on the diagram.
- Trellis.
 - Dendritic.
 - Rectangular.
 - Radial.
50. Give the name of the feature labelled A.
- Misfit.
 - Elbow of capture.
 - Tributary.
 - Consequent stream.

STOP
GO BACK AND CHECK YOUR WORK