

GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

JUNE 2025

ORDINARY LEVEL

Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are NOT allowed in the examination room.

MULTIPLE CHOICE QUESTION PAPER

Duration: 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 AN 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** questions in this Examination. All questions carry equal marks.
7. Each question has **FOUR** suggested answers: **A, B, C** and **D**. Decide on which answer is correct. 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]

8. 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 and then mark your new answer.
9. 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.
10. Do all rough work in this booklet using the blank spaces in the question booklet.
11. **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

1. A branch of geology concerned with the study of the solar system:
 - A Geophysics.
 - B Astrogeology.
 - C Seismology.
 - D Structural geology.

2. Which of the following best defines Geology?
 - A The study of natural resources.
 - B The study of the soil and water.
 - C The study of the planets.
 - D The study of the Earth's history and composition.

3. Identify the fourth planet in terms of distance away from the sun.
 - A Earth.
 - B Jupiter.
 - C Saturn.
 - D Mars.

4. The Earth's natural satellite is called:
 - A the Sun.
 - B Phobos.
 - C the Moon.
 - D Deimos.

5. A river takes its rise from the:
 - A Mouth.
 - B Discharge.
 - C Watershed.
 - D Water table.

6. A process responsible for streams to lengthen their channels:
 - A Attrition.
 - B Down cutting.
 - C Headward erosion.
 - D Runoff.

7. A ridge of sediments joining an island to the mainland is a:
 - A Bar.
 - B Tombolo.
 - C Spit.
 - D Beach.

8. In a river channel, transported particles tend to hit against each other and further break down in a process called:
 - A Abrasion.
 - B Attrition.
 - C Corrosion.
 - D Hydraulic action.

9. The Earth is subdivided into three main shells namely:
 - A Mantle, Inner Core, Outer Core.
 - B Crust, Mantle, Core.
 - C Crust, Upper Mantle, Core.
 - D Upper Crust, Mantle, Core.

10. A layer of the Earth composed of the entire crust and the upper rigid part of the mantle:
 - A Asthenosphere.
 - B Mesosphere.
 - C Lithosphere.
 - D Core.

11. The Earth's mantle is separated from the core by a discontinuity called:
 - A Lehmann.
 - B Conrad.
 - C Mohorovicic.
 - D Guternberg.

12. Which seismic wave travels fastest during an earthquake?
 - A S-wave.
 - B Love wave.
 - C Rayleigh wave.
 - D P-wave.

13. Select the instrument used to measure earthquakes.
 - A Mercalli scale.
 - B Seismogram.
 - C Seismograph.
 - D Seismic scale.

14. When earthquakes occur under the sea, they produce:
 - A Faulting.
 - B Tsunamis.
 - C Breaking waves.
 - D Vibrations.

15. Convergent plate boundaries are where plates:
 - A move away from each other.
 - B move towards each other.
 - C slide pass one another.
 - D are formed.

16. Divergent plate boundaries are characterised by:
 - A Mid Ocean Ridges.
 - B Fold mountains.
 - C Trenches.
 - D Andesitic lavas.

17. A fault where the hanging wall has moved up relative to the foot wall is a:
 A Normal fault.
 B Tear fault.
 C Strike-slip fault.
 D Reverse fault.
18. What evidence is there to show that faulting has occurred?
 A Visible displacement of beds.
 B Bending of strata.
 C Presence of tension gashes.
 D No displacement of strata.
19. If compressional forces are unequal, then the fold that will be formed is;
 A Equal.
 B Asymmetrical.
 C Symmetrical.
 D Upright.
20. A material that returns to its original shape and size after stress has been removed is described as:
 A Elastic.
 B Plastic.
 C Brittle.
 D Ductile.
21. One characteristic of sediment is that it is:
 A Loose and unconsolidated material.
 B Hard and compacted material.
 C A transported and melted material.
 D A lithified material.
22. A single act of sedimentation produces:
 A A sedimentary bed.
 B A sedimentary strata.
 C A bedding plane.
 D Laminations.
23. Secondary materials in solution that binds sediments is called;
 A Residue.
 B Soil.
 C Cement.
 D Matrix.
24. In which environment is the rock granite formed?
 A Plutonic.
 B Volcanic.
 C Extrusive.
 D Hypabassal.
25. The opening through which magma flows to the surface is called:
 A Vent.
 B Pipe.
 C Channel.
 D Plug.
26. Igneous rocks that crystallize on the Earth's surface are:
 A Hypabyssal.
 B Plutonic.
 C Extrusive.
 D Intrusive.
27. Select the intrusive landform that is produced when magma cuts across the bedding plane.
 A Sill.
 B Dyke.
 C Plug.
 D Lopolith.
28. Which of the following is an agent of transportation of weathered materials?
 A Sun.
 B Water.
 C Temperature.
 D Weather.
29. Heat is a very important factor in metamorphism because it:
 A slows down chemical reactions.
 B decreases the size of an aureole.
 C speeds up chemical reactions.
 D increases down into the Earth.

The diagram (figure 1) below shows the effect of heat from an intrusion on sedimentary rocks. Use it to answer question 30.

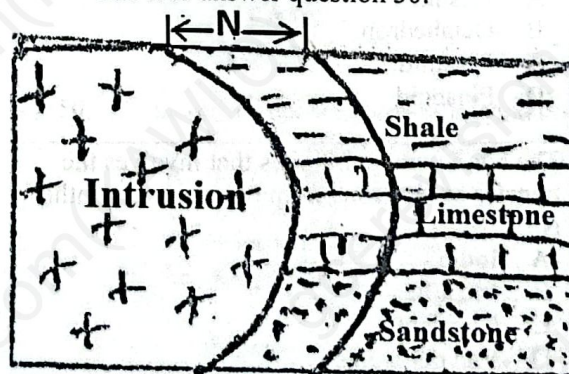


Figure 1

30. Name the zone marked "N" in the diagram
 A Contact.
 B Aureole.
 C Baked margin.
 D Chilled margin.

OR

The portion of country rocks affected by a large intrusion is referred to as:

- A Contact.
- B Aureole.
- C Baked margin.
- D Chilled margin.

31. The main factor responsible for regional metamorphism is;
- A Pressure.
 - B Heat.
 - C Chemically active fluids.
 - D Heat and pressure.

32. Minerals that breaks along planes of weaknesses producing smooth surfaces are said to exhibit a property known as:
- A Fracture.
 - B Streak.
 - C Cleavage.
 - D Lustre.

33. A line on a crystal where two crystal faces intersect is called:
- A Axis of symmetry.
 - B Plane of symmetry.
 - C Crystallographic axis.
 - D Edge.

34. Which of the following is a crystal system?
- A Octahedron.
 - B Prism.
 - C Tetragonal.
 - D Pyramid.

35. A common crystal form in the cubic system:
- A Prism.
 - B Octahedron.
 - C Pyramid.
 - D Pinacoid.

36. The bond type in minerals that involves the transfer of electrons from one atom to another is:
- A Ionic.
 - B Metallic.
 - C Covalent.
 - D Van der waals.

37. Which of the following rock types have the highest potential for fossil preservation?
- A Igneous.
 - B Sedimentary.
 - C Metamorphic.
 - D Crystalline.

Study the fossil shown below (figure 2) and answer question 38.

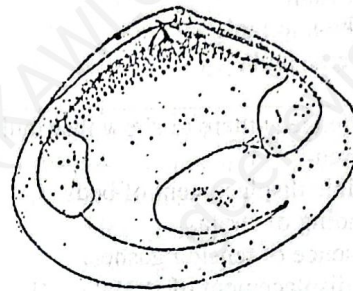


Figure 2.

38. Identify the fossil group in figure 2.
- A Bivalves.
 - B Gastropods.
 - C Cephalopods.
 - D Corals.

OR

Give the name of the phylum to which Gastropods belong.

- A Mollusca.
- B Brachipoda
- C Gastropoda.
- D Cephalopoda.

39. One of the reasons given for the incomplete nature of the fossil record is the:
- A Large size of organisms.
 - B Abundance of organisms.
 - C Rapid burial of organisms.
 - D Organisms eaten by scavengers.

Study the diagram below showing rocks affected by faulting. Use it to answer questions 40 and 41.

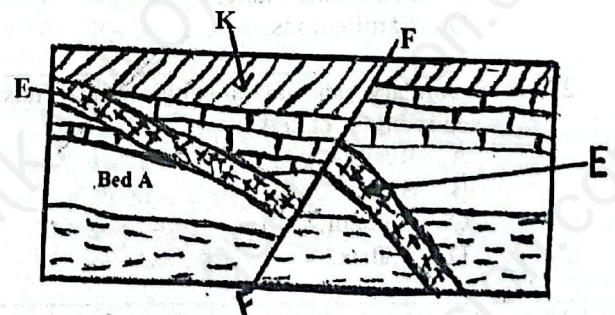


Figure 3

40. Identify a fault in figure 3.
- A K
 - B F-F
 - C E-E
 - D Bed A

OR

Identify a stratigraphic principle which states that "the present is the key to the past".

- A Cross cutting relationship.
- B Uniformitarianism.
- C Lateral continuity.
- D Superposition.

41. State the geologic principle that has been used to determine the age of the fault with respect to the beds displaced in figure 3.

- A Included fragments.
- B Cross cutting relationship.
- C Superposition.
- D Lateral continuity.

OR

State the principle used to date faults and intrusions in a rock sequence

- A Included fragments
- B Cross cutting relationship.
- C Superposition.
- D Lateral continuity.

42. A marine transgression indicates that:

- A the sea is moving gradually onto the land.
- B the sea is moving gradually away from the land.
- C the sea is depositing material away from the land.
- D there is coarsening upwards of sediments.

43. Rocks which have the ability to store fluid through the help of pores are said to be:

- A Permeable.
- B Porous.
- C Pervious.
- D Infiltrated.

44. Mineral deposits formed by igneous and metamorphic processes are called:

- A Residual deposits.
- B Placer deposits.
- C Endogenetic deposits.
- D Exogenetic deposits.

45. A type of aquifer from which one can get sufficient water under pressure is:

- A Unconfined.
- B Perched.
- C Artesian.
- D Well.

46. A good example of a rock used for roofing is:

- A Granite.
- B Basalt.
- C Limestone.
- D Slate.

47. Which of the following is a greenhouse gas?

- A Ammonia.
- B Sulphur.
- C Carbon dioxide.
- D Magnesium oxide.

48. Select from below, the advice one can give the community to protect itself from the effects of an earthquake.

- A Run to open areas.
- B Climb on tall trees.
- C Crawl under a bed.
- D Run to where people are many.

49. Which of the following can be used to identify fold on a geologic map?

- A Spot heights.
- B Contour lines.
- C Dip arrows.
- D Grid references.

50. Identify a common insoluble and resistant weathered product of granite:

- A Feldspars.
- B Quartz.
- C Biotite.
- D Clay.

STOP**GO BACK AND CHECK YOUR WORK**