

0555/1/2023
GEOL O/L

SOUTH WEST REGIONAL MOCK EXAMINATION GENERAL EDUCATION

The Teachers' Resource Unit (TRU) in collaboration with the Regional Pedagogic Inspectorate of Science and the South West Association of Geology Teachers (SOWEGETA)	Subject Code 0555	Paper Number 1
CANDIDATE NAME CANDIDATE NUMBER CENTRE NUMBER	Subject Title GEOLOGY	
ORDINARY LEVEL	DATE: TUESDAY 28/03/2023 -Morning	

Time Allowed: One hour thirty minutes

INSTRUCTIONS TO CANDIDATES:

1. USE A SOFT HB PENCIL THROUGHOUT THIS 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, Paper 1".
 4. Insert the information required in the spaces provided above.
 5. Without opening the booklet, pull out the answer sheet carefully from inside the front cover of this booklet. 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.
 6. Insert the information required in the spaces provided on the answer sheet using your HB pencil:
Candidate Name, Centre Number, Candidate Number, Subject Code Number and Paper Number.
- How to answer questions in this examination:**
7. Answer ALL the 50 questions in this examination. All questions carry equal marks.
 8. Non-programmable calculators are allowed.
 9. For each question there are four suggested answers, A, B, C, and D. Decide 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)
 10. Mark only one answer for each question. If you mark more than one answer, you will score zero for that question. If you change your mind about an answer, erase the first mark carefully, and then mark your new answer.
 11. Avoid spending much time on any question. If you find a question difficult, move to the next question. You can come back to this question later.
 12. Do all rough work in this booklet using, where necessary, the blank spaces in the question booklet.
 13. Mobile phones are **NOT ALLOWED** in the examination room.
 14. You must not take this booklet and answer sheet out of the examination room. All question booklets and answer sheets will be collected at the end of the examination.

1. The study of the structure and composition of earth's minerals is referred to as;
 - A. Structural Geology
 - B. Crystallography
 - C. Mineralogy
 - D. Geochemistry

2. Of the 3 major rock groups, which of them occupies the smallest portion of the earth?
 - A. Sedimentary
 - B. Igneous
 - C. Metamorphic
 - D. Clastic rocks

3. Which of the following is the smallest planet?
 - A. Venus
 - B. Mars
 - C. Jupiter
 - D. Mercury

4. How many planets make up the solar system?
 - A. 6
 - B. 7
 - C. 8
 - D. 9

5. Which of the following Earth's shell is the thickest?
 - A. Crust
 - B. Mantle
 - C. Core
 - D. Inner core

6. The portion of the earth's shell made up of liquid is called;
 - A. Outer crust
 - B. Mantle
 - C. Outer core
 - D. Inner core

7. What is the most common cause of earthquakes?
 - A. Tsunamis
 - B. Volcanoes
 - C. Faulting
 - D. Landslides

8. A Crystal Edge is defined as;
 - A. The line on a crystal formed by the intersection of two adjacent faces.
 - B. The point of intersection formed between 3 or more adjacent faces in a crystal.
 - C. The angle between the normal of 2 adjacent faces.
 - D. The line between two adjacent faces on a crystal.

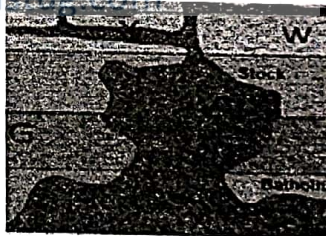
9. The rock granite is considered an example of which of the following rock types?
 - A. Extrusive
 - B. Plutonic
 - C. Hypabyssal
 - D. Volcanic

10. A common mineral found in granite is;
 - A. Diamond
 - B. Mica
 - C. Quartz
 - D. Feldspars

11. An igneous rock with vesicular texture is;
 - A. Granite
 - B. Rhyolite
 - C. Basalt
 - D. Pegmatite

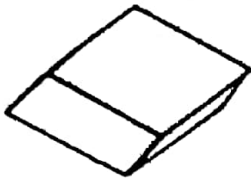
12. The highest rank of coal is called;
 - A. Lignite
 - B. Anthracite
 - C. Bitumen
 - D. Peat

13. Study the diagram in figure 1 and answer questions that follow.



14. Which of the following waves is the fastest?
 - A. P
 - B. S
 - C. L
 - D. P and S

Study the diagram (Fig. 2) below and answer questions 15.



(Fig. 2)

15. Identify the system to which the mineral above belongs;

- A. Cubic
- B. Trigonal
- C. Tetragonal
- D. Monoclinic

16. Identify a physical property displayed by this mineral.

- A. Shows 5 perfect cleavage
- B. Has a hardness of 3
- C. Dark in colour
- D. Magnetic

Study the diagram (Fig 3.) of a portion of a crystal. Use it to answer question 17.



(Fig. 3)

17. W-W represents;

- A. Axes of symmetry
- B. Symmetry elements
- C. Center of symmetry
- D. Plane of symmetry

18. What mineral has its chemical composition as CaCO_3 ?

- A. Calcite
- B. Dolomite
- C. Calcium
- D. Calcium carbonate

19. An example of a rock that reacts with HCl is known to be;

- A. Basalt
- B. Gneiss
- C. Rhyolite
- D. Limestone

Study the diagram (Fig. 4) of a sedimentary structure and answer question 24.

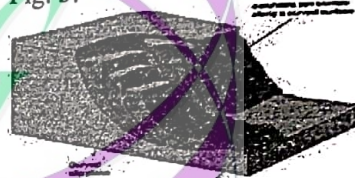


(Fig. 4)

20. Identify the structure.

- A. Mud cracks
- B. Ripple marks
- C. Current beds
- D. Graded beds

21. Identify the type of mass movement below in Fig. 5.



(Fig. 5)

- A. Avalanche
- B. Mud flow
- C. Slumping
- D. Rock fall

Study the diagram (Fig. 6) and answer question 26.



(Fig. 6)

22. Identify the feature.

- A. Yardang
- B. Zeugen
- C. Rock pedestal
- D. Dunes

23. An environment where the structure above is common;

- A. Arid
- B. Tropics

- C. Humid
- D. Temperate

24. Which of the following rock types show stratification?

- A. Igneous
- B. Sedimentary
- C. Clastic
- D. Metamorphic

25. Which of the following factors play the main role in regional metamorphism?

- A. Temperature and pressure
- B. Chemically active fluid
- C. Pressure
- D. Temperature

26. An example of a low -grade regional metamorphic rock is referred to as;

- A. Slate
- B. Gneiss
- C. Schist
- D. Migmatite

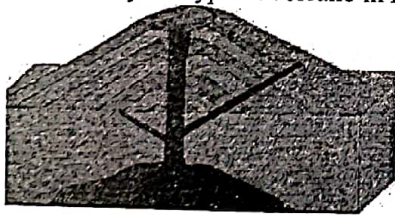
27. An example of a non-foliated texture is called;

- A. Hornfelsic
- B. Slaty
- C. Gneissose
- D. Schistose

28. One of the effects of earthquakes is known to be ;

- A. Rainfall
- B. Fires
- C. Volcanicity
- D. Erosion

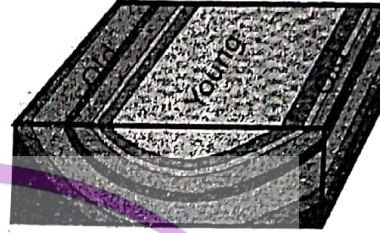
29. Identify the type of volcano in Fig. 7 below.



(Fig. 7)

- A. Shield
- B. Cinder cones
- C. Strato
- D. Ash and lava

30. Identify the type of fold on the map (Fig. 8) below.



(Fig. 8)

- A. Anticline
- B. Synform
- C. Syncline
- D. Antiform

Use this diagram (Fig. 9) to answer question 31.



(Fig. 9)

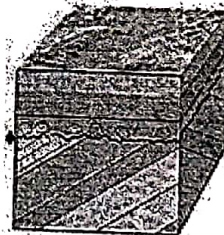
31. The strain above results in;

- A. Stretching and thinning of rock bodies
- B. Sliding of rock bodies
- C. Squeezing and shortening of rock bodies
- D. Pulling apart of rock bodies

32. Large seismic sea waves cause;

- A. Tsunamis
- B. Flooding
- C. Earthquakes
- D. Volcanicity

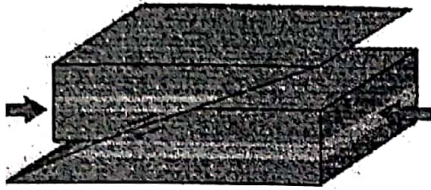
33. Identify the unconformity in (Fig. 10) below.



(Fig. 10)

- A. Angular
- B. Parallel
- C. Heterolytic
- D. Non conformity

Study the fault (Fig. 11) and answer question 34.



(Fig. 11)

34. Identify the fault.

- A. Normal fault
- B. Reverse fault
- C. Thrust fault
- D. Tear fault

35. What type of force is responsible for this type of fault?

- A. Shearing
- B. Tension
- C. Compression
- D. Strain

Study Fig. 12 and answer question 36.



(Fig. 12)

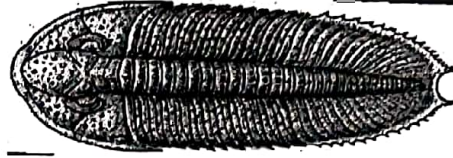
36. Identify the type of plate margin.

- A. Transform
- B. Diverging
- C. Constructive
- D. Destructive

37. The super continent is called;

- A. Gondwanaland
- B. Pangea
- C. Eurasia
- D. Asia

38. Identify the fossil specie in Fig. 13 below.



(Fig. 13)

- A. Molluscs
- B. Coelenterate
- C. Bivalve
- D. Trilobite

The diagram (Fig. 14) shows a sedimentary layering. Use it to answer questions 39 -40.



(Fig. 14)

39. Which is the youngest rock layer in the sedimentary sequence above?

- A. O
- B. P
- C. X, Y
- D. M

40. What stratigraphic principle is demonstrated by the structure?

- A. Original Horizontality
- B. Lateral Continuity
- C. Included Fragments
- D. Cross Cutting Relationship

41. Identify the possible rock type O

- A. Basalt
- B. Rhyolite
- C. Granite
- D. Magma

42. A gangue mineral deposit is defined as;

- A. The unwanted part of an ore deposit
- B. The ore part of a mineral deposit
- C. The unwanted part of a mineral
- D. The wanted metal of a mineral

- C. Solution
- D. Attrition

43. Which of the following is an example of an ultra-basic igneous rock?
- A. Granite
 - B. Obsidian
 - C. Peridotite
 - D. Gabbro

END

GO BACK AND CHECK YOUR WORK

44. Petroleum exists as;
- A. Solid
 - B. Liquid
 - C. Gas
 - D. Both solid, liquid and gas

45. The movement of petroleum from source to reservoir rock is known as;
- A. Primary migration
 - B. Secondary migration
 - C. Subsurface migration
 - D. Petroleum trap

46. Very fine-grained sedimentary material in which larger grains are embedded is referred to as;
- A. Cement
 - B. Matrix
 - C. Sorting
 - D. Welding

47. Rock gypsum is used in the making of
- A. Cement
 - B. Concrete
 - C. Plaster
 - D. Tile

48. The oceanic crust is denser than the continental crust because of its;
- A. Thickness
 - B. Depth
 - C. Composition
 - D. Texture of rocks

49. Which of the following is not a denudational process?
- A. Deposition
 - B. Transportation
 - C. Weathering
 - D. Erosion

50. The process by which very large sizes of particles are carried by a river is referred to as;
- A. Traction
 - B. Saltation