GBHS YAOUNDE	SUBJECT CODE NUMBER 0755	PAPER NUMBER 1
GENERAL CERTIFICATE OF EDUCATION MOCK EAMINATION		SUBJECT TITLE GEOLOGY
CANDIDATE NAME..... CANDIDATE NUMBER ..... CENTRE NUMBER		
ADVANCED LEVEL		DATE .....

Time allowed: One and a half hours

INSTRUCTIONS TO CANDIDATES:

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

Before the examination begins:

3. Check that this question booklet is headed "Advanced level-755 code and subject title—GEOLOGY-Paper 1"
4. Insert the information required in the spaces above.
5. Without opening the booklet, pull out the answer sheet carefully from inside the front cover of the booklet. Take care that you do not fold the answer sheet or write 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 B is your correct answer, mark 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.**

Turn over

1. The Nebular hypothesis suggests that the solar system:

A. More than one origin.
B. Is the remnant of another solar system.
C. Evolved from an enormous rotating cloud.
D. Formed from materials rich in oxygen.

The below (figure 1) illustrates a section of the earth's crust and part of the mantle. Use this diagram to answer questions 2, 3 and 4.

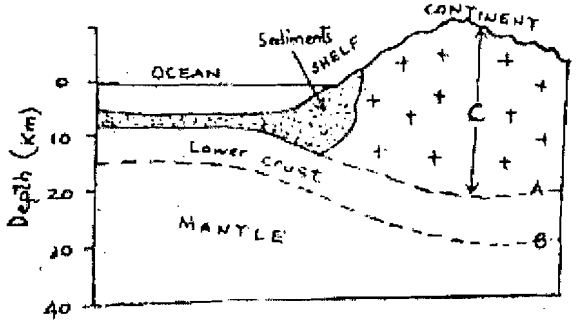

Figure 1

2. What is the approximate thickness of C?

A. 35 km
B. 20 km
C. 15 km
D. 10 km

---

3. What is the composition of the lower crust?

A. Granitic
B. Andesitic
C. Basaltic
D. Peridotic

---

4. The discontinuities that occur at A and B are respectively called?

A. Conrad and Mohorovičić
B. Mohorovičić and Gutenberg
C. Mohorovičić and Conrad
D. Conrad and Lehmann

---

5. Which of the following is the largest unit of geologic time?

A. Epoch
B. Period
C. Era
D. Eon

Use the information presented below to answer questions 6 and 7.

Specimen K reacts with dilute HCl and form cleavage rhombs.
Specimen L is pink in colour, has a hardness of 6 in the Moh scale and cleaves in 2 directions at 90°

6. Identify specimens K and L respectively?

A. Calcite and Albite
B. Marble and Orthoclase
C. Calcite and Orthoclase
D. Limestone and Orthoclase

---

7. What type of twinning is exhibited by specimen L?

A. Repeated twinning
B. Carlsbad twinning
C. Butterfly twinning
D. Geniculate twinning

The diagram below (figure 2) shows the variation in velocity of P and S waves within the Earth's interior. Use the diagram to answer questions 8 and 9.

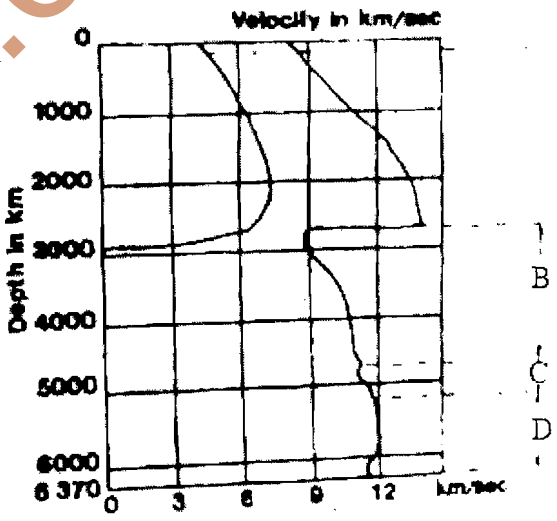

Figure 2

8. Which layers of the crust correspond to B and C respectively?

A.. Outer core and Gutenberg discontinuity.
B. Outer core and Lehmann discontinuity.
C. Inner core and Gutenberg discontinuity.
D. Mantle and Outer core.

---

9. What is the state of the layer D?

A. Fluid
B. Plastic
C. Solid
D. Nickel and iron'

10. From the jumbled list of rocks below, select the most likely sequence to show the formation of a gneiss from a granite?

A. Granite – gravel – clay – gneiss.
B. Granite – gravel – slate – schist – gneiss.
C. Granite – clay – slate – schist – gneiss.
D. Granite – slate – gneiss.

Study the crystal drawing below (figure 3) and answer questions 11 and 12.

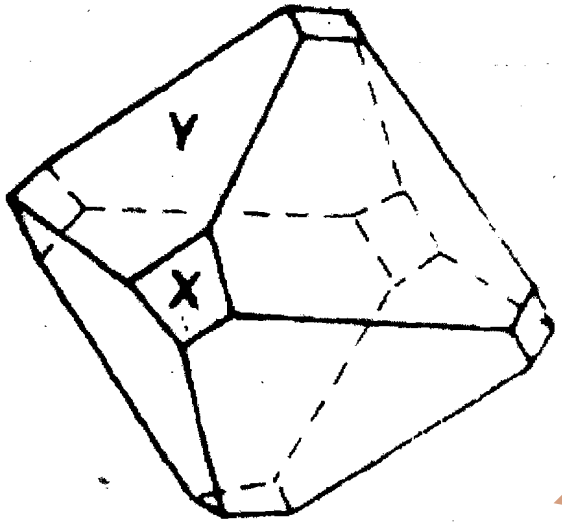

Figure 3

11. Name the forms X and Y respectively?

A. Cube and dome
B. Cube and prism
C. Pyramid and cube
D. Cube and octahedron

---

12. The miller indices of face X and form Y are respectively?

A. 100 and (1-11)
B. 101 and 1-11
C. 111 and (111)
D. 011 and (111)

---

13. Cassiterite is the principal ore of?

A. Iron.
B. Copper.
C. Aluminium.
D. Tin.

---

14. Shallow focus earthquakes are common in?

A. Triple junction.
B. Convergent plate boundary.
C. Conservative plate boundary.
D. Divergent plate boundary.

Study the block diagram below (figure 4) and answer questions 15 and 16.

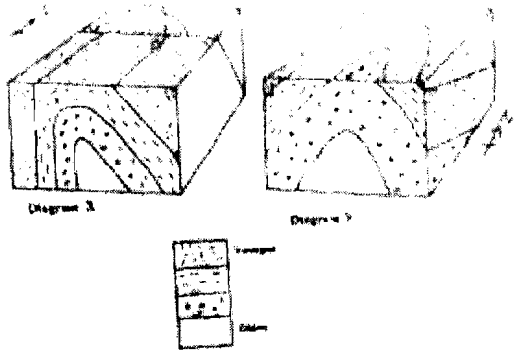

Figure 4

15. Name the type of folds represented by X and Y respectively

A. Both folds are anticlines.
B. Both folds are anticlines.
C. X is a syncline and Y an anticline.
D. X is and anticline and Y a syncline.

---

16. On which side of the fault plane in the diagram X is the downthrown side found?

A. North
B. South
C. East
D. West

---

17. An Imaginary planar surface which divides a fold into two parts is called.

A. Fault plane
B. Dip fault
C. Fault line
D. Fault strike

---

18. In an inclined plane, the blocks above and below are respectively referred to as:

A. The upthrow and hanging wall
B. The downthrow and foootwall
C. The football and hanging wall
D. The hanging wall and football.

---

19. Sedimentary rocks such as halite and gypsum which form due to evaporation of water are identified as:

A. Chemical.
B. Organic.
C. Clastic
D. Biochemical

---

20. These rocks in 19 above posses:

A. Clastic texture
B. Crystalline texture
C. Fragmental texture
D. Foliated texture.

---

21. Malleable minerals?
A. Breaks easily
B. Resume original shape after bending
C. Can be hammered out into sheets.
D. Can be drawn into wires.

---

22. From the diagram above, match the following correctly?

Letter	Corresponding feature
A	I. Guyot
B	II. Seamount
C	III. Trench
D	IV. Mid-oceanic ridge

A. A-I, B-II, C-III, D-IV.
B. A-II, B-I, C-IV, D-III.

C. A-IV, B-III, C-II, D-I.
D. A-II, B-I, C-III, D-IV.

Use the diagram below (figure 6) which shows the approximate mineral composition of igneous rocks to answer questions 23, 24, and .

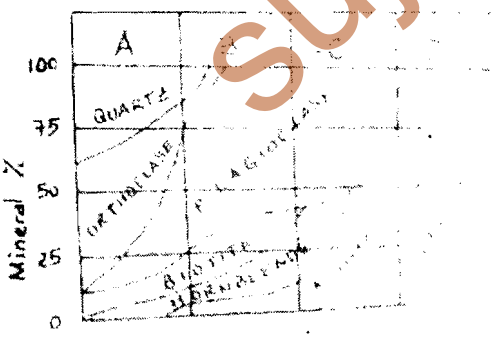

Figure 6

23. Name the two plagioclase minerals that would occur in A and in C respectively.
A. Oligoclase and Andesine
B. Anorthite and Albite
C. Albite and Labradorite
D. Anorthite and Andesine

---

24. Which mineral has the lowest density?
A. Quartz
B. Orthoclase
C. Biotite
D. Hornblende

---

25. The most easily weathered mineral would be?
A. Augite
B. Plagioclase
C. Olivine
D. Hornblende

The diagram below (figure 7) illustrates the collision between the South American and Nazca plates. Use the diagram to answer questions 26 and 27.

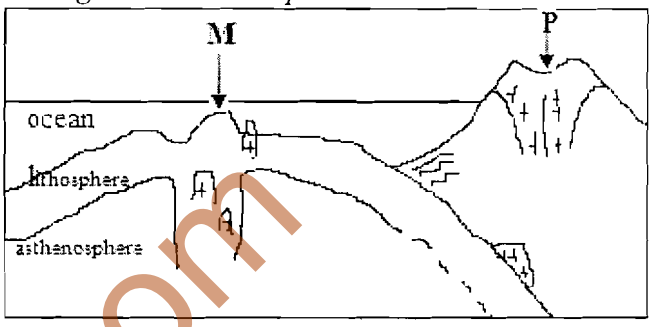

Figure 7

26. Give the name of the feature labeled M.
A. Hotspot.
B. Seamount.
C. Barrier reef
D. East Pacific Ridge.

---

27. What type of rock is common in P?
A. Andesite
B. Basalt
C. Granite
D. Granodiorite

28. A bed dips to the north. What is the strike of this bed?
A. East to West
B. Northwest
C. Southeast
D. Southwest

---

29. Basalts are used as ornamentation stone because:
A. They are load bearing.
B. They are easily shaped.
C. They are fine-grained.
D. They are less expensive to quarry.

30..... is the contact between igneous and sedimentary rocks that record missing geologic tim
A. Non conformity
B. A sedimentary contact

C. An angular unconformity

D.A disconformity

31. A term used for an unconformity produced by a period of nin deposition which is localised with a short duration is:
A. Non conformity
B. Parallel conformity
C. Diastem
D. Hererolytic unconformity.

Study the diagram below (figure 9) which depicts volcanic activities. Use it to answer questions 32 and 33.

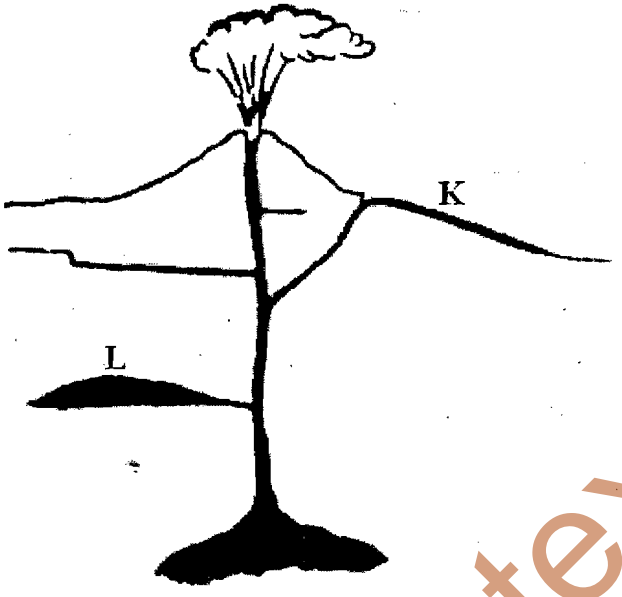

Figure 9

32. The texture of rocks formed at K and L will respectively be?
A. Fine grained and coarse grained.
B. Fine grained and medium grained.
C. Glassy and fine grained.
D. Medium grained and coarse grained.

33. The igneous body L is?
A. Dome.
B. Lopolith.
C. Laccolith.
D. Phaccolith.

34. Texture consisting of large crystals enclosed within a fine grained ground mass is referred to as?
A. Granular texture
B. Porphyritic texture
C. Graphic texture
D. Poikilitic texture

35. The argents that facilitate the gradual on the spot loosening of rocks is the following except?
A. Running water
B. Temperature
C. Precipitation
D. Sunshine

36. Anhydrite ($CaSO_4$) pseudomorphed after gypsum ($CaSO_4 2H_2O$), while Serpentine is pseudomorphed after which of the following minerals?
A. Olivine
B. Serpentinite
C. Amphibole
D. Anorthite

study the cummulative frequency curve (figure 10) of a certain sedimentary rock analysis and answer questions 37 and 38.

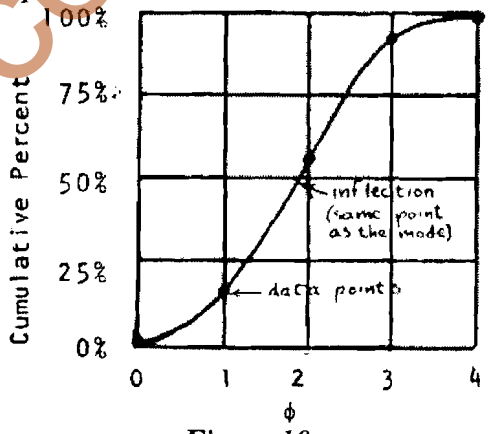

Figure 10

37. What is the grain size diameter of the rock at the 75 percentile?
A. 1
B. 2
C. 3
D. 4

38. What is the name of the rock at a cumulative percentage of 75%?
A. Conglomerate
B. Sandstone
C. Siltstone
D. Mudstone

39. Given that the general chemical formula for plagioclase is $Ca_xNa_{1-x}Al_{1+x}Si_{3-x}O_8$. *Which of the following plagioclases will be formed if X is equal to1?*
A. Albite
B. Oligoclase

C. Labradorite
D. Anorthite

40. The replacement of wood fibers by quartz gives rise to the formation of?
A. Petrified wood
B. Quartzitic rock
C. Coal
D. Baked wood

41. Match the following to identify and define the divisions of the geologic time scale.

Time unit	Definition
1. Era	a. Third order geologic time units.
2. Period	b. First order geologic time unit
3. Epoch	c. Second order geologic time units.

A. 1a, 2b, 3c.
B. 1b, 2c, 3a.
C. 1c, 2b, 3a.
D. 1b, 2a, 3c.

Figure 11

42. Figure 11 above most likely represents which of the following features?
A. Bending and twisting.
B. Fracture with visible displacement.
C. Dyke and sill
D. Joints and veins.

43. Which law of stratigraphy is illustrated by figure 11 above?
A. Included fragment
B. Truncation of dykes
C. Cross cutting relationships
D. Original horizontality

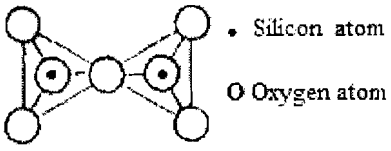

Figure 12

44. Referring to the silicate structure above (figure 12), what is the basic structural unit of the silicate group?
A. SiO_4^{-4}
B. $Si_2O_7^{-6}$
C. $Si_3O_9^{-6}$
D. $Si_2O_5^{-2}$

45. The process that preserves evidence of life in earth's rock record is called?
A. Sedimentation.
B. Stratification.
C. Fossilization.
D. Carbonization.

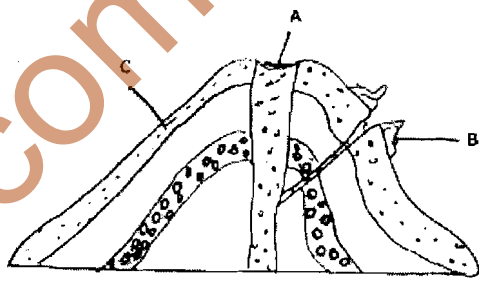

Figure 13

47. Referring to the volcano diagram above, the features A, B and C are respectively?
A. Vent, cone and lave layer
B. Crater, vent and cone
C. Ash, lava flow and pyroclastic materials
D. Crater, flank and cone

Study the hydrographic map bellow (figure 14) and answer the questions 48 and 49.

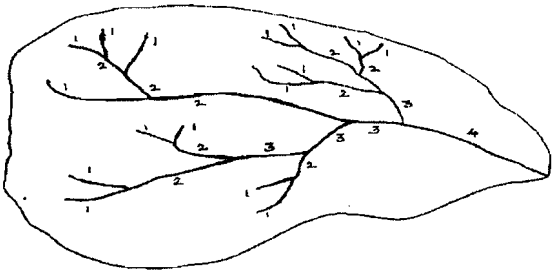

Figure 14

48. Which Geological feature is formed when tributary 2 and 3 join in the map?
A. Capture.
B. Drainage pattern.
C. Dendrite.
D. Rejuvenation.

49. From the map, the stream order 4 forms?

A. Stream source.
B. Maturing stream.
C. Stream bed.
D. Main stream.

---

50. A dark rock, glassy with conchoidal fracture surface with flow bands but no crystals and formed from supper rapid cooling of high silica rich magma is likely to be?

A. Basalt
B. Rhyolite
C. Pumice
D. Obsidian

THE END
