



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION
MOPANI EAST DISTRICT

NATIONAL
SENIOR CERTIFICATE

GRADE 12

LIFE SCIENCES
INFORMAL TEST
(HUMAN EVOLUTION)
11 AUGUST 2026

MARKS: 60

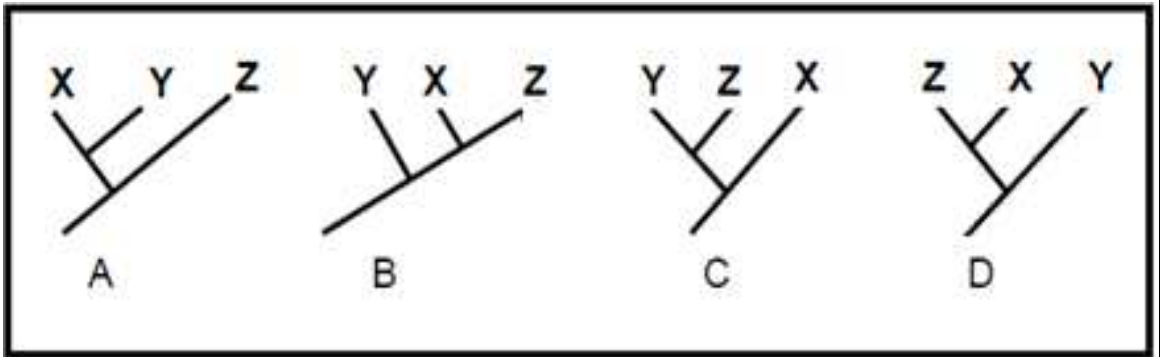
TIME: 1 HOUR

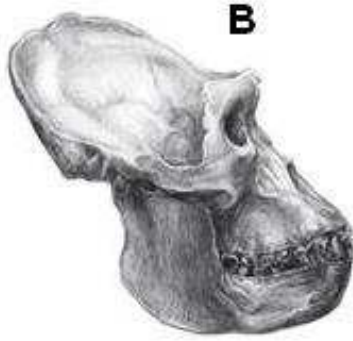
This question paper consists of 08 pages

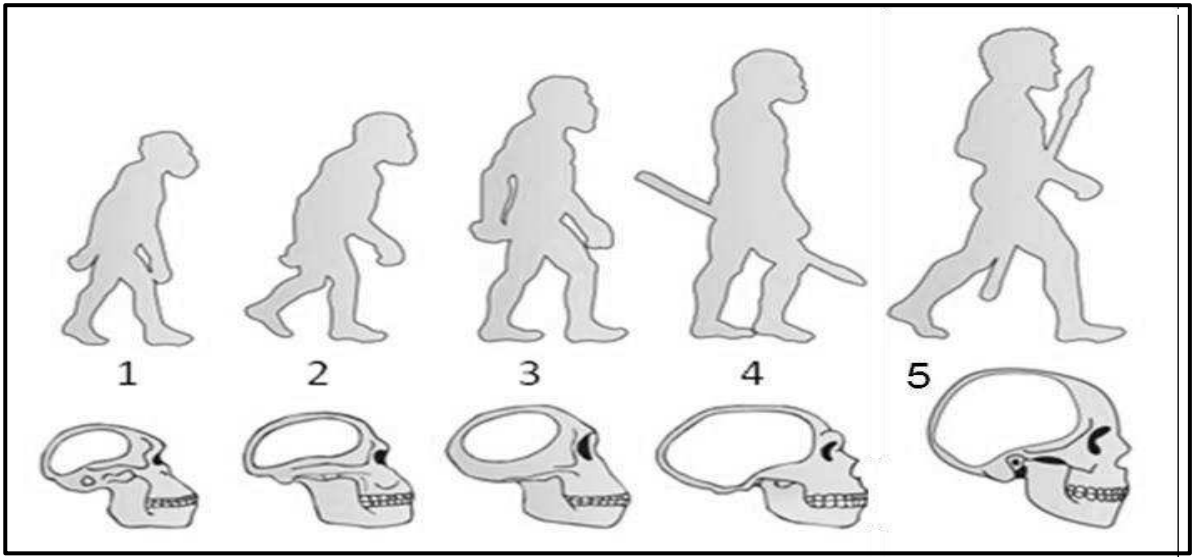
INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions
2. Write ALL the answers in the ANSWER BOOK.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Present your answers according to the instructions of each question.
5. Do ALL drawings in pencil and label them in black or blue ink.
6. Draw diagrams or flow charts only when asked to do so.
7. The diagrams in this question paper are NOT necessarily drawn to scale.
8. Do NOT use graph paper.
9. Only a non-programmable calculator, protractor and a compass must be used where necessary.
11. Write neatly and legibly.

SECTION A**QUESTION 1**

1.1.	Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A to D) next to the question number (1.1.1 to 1.1.3) in the ANSWER BOOK, e.g. 1.1.3. B			
1.1.1.	A possible explanation for an observation that can be tested is known as a			
	A	fact		
	B	hypothesis		
	C	law		
	D	theory		
1.1.2.	Which one of the following serves as evidence of cultural evolution in early <i>Homo</i> species?			
	A	The size of a <i>Homo erectus</i> cranium relative to a <i>Homo sapiens</i> cranium		
	B	Male and female skeletons in the same area		
	C	Animal fossils mixed with hominin fossils		
	D	The presence of ancient stone tools		
1.1.3.	Three related species, X, Y and Z, share a common ancestor. Species Y and Z share the most recent common ancestor. Which phylogenetic tree most accurately represents their evolutionary relationship?			
				
			(3 x 2)	(6)

1.2	Give the correct biological term for each of the following descriptions. Write only the term next to the question number (1.2.1 to 1.2.3).		
	1.2.1	Genetic material used to trace female ancestry.	
	1.2.2	The type of vision shared by apes and humans that allows for depth perception	
	1.2.3	Having a face with protruding jaws	
		(3 x1)	(3)
1.3.	Indicate whether each of the statements in COLUMN 1 applies to A ONLY, B ONLY, BOTH A and B, or NONE of the items in column II . Write A only, B only, Both A and B, or NONE.		
	COLUMN I		COLUMN II
	1.3.1.	Discovered the fossil called 'Little Foot'	A: Raymond Dart B: Ronald Clarke
	1.3.2.	Found in apes and humans	A: Claws B: Nails and an opposable thumb
	1.3.3.	Study of fossils	A: Fossilisation B: Palaentology
		(3 x 2)	(6)
1.4.	The diagram shows the skulls of two organisms; a human and a gorilla.		
	A  B 		
	1.4.1	Which organism (A or B), is bipedal for most of its adult life?	(1)
	1.4.2	Name and explain two possible advantages of bipedalism for an organism.	(4)
			(5)
	TOTAL QUESTION 1:		[20]

		SECTION A:	20
SECTION B			
QUESTION 2			
2.1	Study the diagram below and answer the questions that follow.		
			
	2.1.1	Identify the species represented. Species include: <i>H. habilis</i> , <i>A. afarensis</i> , <i>A. robustus</i> , <i>H. sapiens</i> , <i>H. erectus</i>	(5)
	2.1.2	Supply FOUR characteristics that make the organism, labelled E different from other primates.	(4)
			(9)
2.2.	Study the extract below.		
	2.2.1	State the 'Out of Africa' hypothesis.	(2)
	2.2.2	Explain why we speak of an 'Out of Africa' <i>hypothesis</i> , not theory.	(4)
			(6)

2.3.	The image below is of Mrs. Ples	
		
	2.3.1	What clues are there in the image to the brain size of Mrs. Ples? (2)
	2.3.2	Where was Mrs. Ples found and by whom? (2)
	2.3.3	What species did Mrs. Ples belong to and when did this species exist? (2)
		(6)
TOTAL QUESTION 2:		[21]

QUESTION 3

3.1 The data below shows the development of brain size from different species

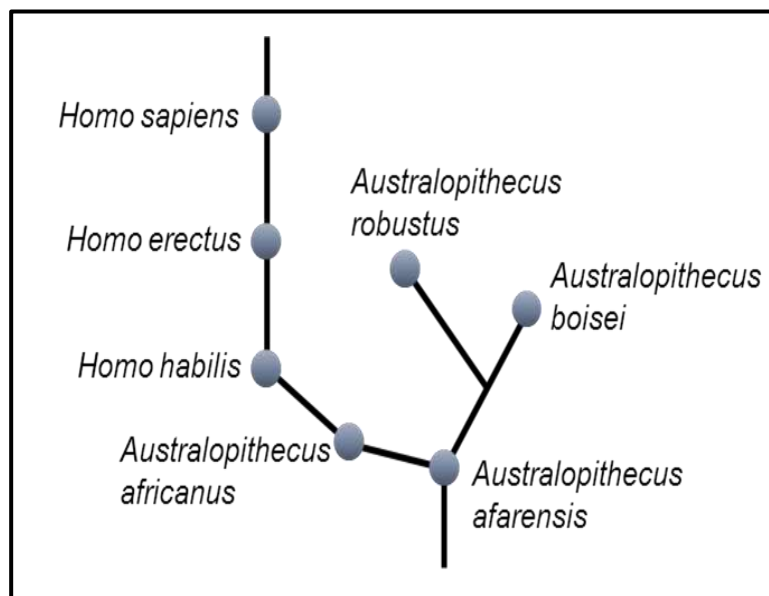
Species	Time frame (mya)	Brain size (mL)
<i>Ardipithecus ramidus</i>	5	350
<i>Australopithecus afarensis</i>	3,4	460
<i>A. afarensis</i>	2,6	520
<i>A. sediba</i>	1,9	420
<i>Homo habilis</i>	2	650
<i>H. erectus</i>	1,2	950
<i>H. sapiens</i>	0,2	1500

3.1.1 Draw a line graph to show the development of brain size and time frames for the for different species. (6)

3.1.2 What conclusion/s can you draw from the graph? (3)

(9)

3.2 The diagram below shows possible relationships between members of the family Hominidae



3.2.1 What is the name given to this type of diagram? (1)

3.2.2 How many genera and species are represented? (2)

3.2.3 Explain why *A. robustus* and *A. boisei* are more closely related than *A. boisei* and *A. afarensis*. (2)

(5)

3.3	Read the following passage		
	<i>Australopithecus sediba</i> According to those who discovered the fossil remains of <i>Australopithecus sediba</i>, this species shared many characteristics with <i>Australopithecus africanus</i> from which it descended. The species however also reveals a number of early <i>Homo</i> features, more so than any other <i>Australopithecus</i> species. This suggests that <i>A. sediba</i> is possibly ancestral to <i>Homo</i>, though it may also be an evolutionary dead end. Like other species from the genus <i>Australopithecus</i>, <i>A. sediba</i> had a relatively small brain size. The length of the legs, arms adapted for climbing trees, and details of the teeth also resemble earlier Australopithecines. On the other hand, the species' hand with the precision grip of a toolmaker, and its facial features closely resemble those of early <i>Homo</i> species. Remarkably, <i>A. sediba</i> had a more human-like pattern of movement than a fossil attributed to <i>Homo habilis</i>. The pelvic structure of <i>A. sediba</i> suggests this species walked upright on a regular basis. The legs and feet however point to a previously unknown way of walking upright. With each step, <i>Australopithecus sediba</i> turned its foot inward with its weight focused on the outer edge of the foot. (adapted from <i>Australopithecus Sediba</i> https://factsanddetails.com/world/cat56/2215.html)		
	3.3.1	Who discovered <i>Australopithecus sediba</i> and where?	(2)
	3.3.2	A. <i>sediba</i> is described as having a relatively small brain size. B. What was the average brain size for this species?	(1)
	3.3.3	According to the passage, <i>Australopithecus sediba</i> had a previously unknown way of walking upright. What does this suggest for the evolution of bipedalism?	(2)
			(5)
	TOTAL QUESTION 3:		[19]
	SECTION B:		40
	GRAND TOTAL:		60