

Module # 1 ~ Component # 7



Mammal Questions



Introduction to Mammals

QUESTION 1

Which species has the more varied diet (Aardvark or Pangolin)? (1)

QUESTION 2

For how many years have mammals been the dominant animal life forms.

- a) 6 500
- b) 65 000
- c) 650 000
- d) 6 500 000
- e) 65 000 000

(1)

QUESTION 3

State the **physiological adaptation** and related **behaviourism** that enabled **early mammals** to **avoid competition** with dinosaurs? (2)

QUESTION 4

Which two **characteristics of mammals** are assumed to have ensured their **supremacy** over reptiles? (2)

QUESTION 5

With reference to **mammary glands** name the **three** recognised groups of mammals. (3)

QUESTION 6

Which **anatomical** characteristic is **unique** to all mammals? (1)

QUESTION 7

With reference to **feet and foot posture**, what would be the **correct term** for a foot that bears **five digits**, in addition **provide an example of an animal** that has such a foot. (2)

QUESTION 8

Name the **5 characteristics** that contribute to the **Insectivora Order** being referred to as the **most primitive** of living placental mammals. (5)

QUESTION 9

Which **species** of the Order Lagomorpha is **highly endangered**? (1)

QUESTION 10

Bats can be divided in to **3 groups** according to their **diet**: Name them. (3)

QUESTION 11

(**True / False**) Man belongs to the Order Primates. (1)

QUESTION 12

With reference to teeth, The ceropithecines have the sameas man and possess powerful jaws. (2)

QUESTION 13

Differentiate **aquatic** mammals from **marine** mammals? (3)

QUESTION 14

Which of the following **characteristics** are found **only in mammals**?

- endothermy
- body hair
- quadrupedal
- air breathing
- lactation
- backbones
- external pinnae
- monogamy
- sweat glands
- viviparity

(5)

QUESTION 15

From the above **Question # 14**, which of the characteristics are **found in all mammals**? (5)

QUESTION 16

(**True / False**). All mammals bear live young. (1)

QUESTION 17

Where and at **what time of the day** would you have found the **early mammals**? (2)

QUESTION 18

Briefly describe endothermy in mammals. (5)

QUESTION 19

Which unique feature links the monotremes, marsupials and placental mammals? **(1)**

QUESTION 20

List the three different types of mammalian foot posture and provide a common name example of an animal that uses each type. **(6)**

QUESTION 21

Placental mammals are characterised by the possession of a placenta. Briefly describe its functions. **(5)**

QUESTION 22

Briefly explain the difference between the digestive system in hindgut fermenters and ruminants. **(6)**

QUESTION 23

List any three characteristics of primitive placental mammals. **(3)**

QUESTION 24

List 10 mammalian characteristics, the first five must be unique to class Mammalia. **(10)**

QUESTION 25

Name the most primitive mammal group, provide one example and briefly describe how it feeds its young. **(4)**

QUESTION 26

Redraw and complete the table to match the species with its preferred habitat and unique characteristic.

SPECIES	PREFERRED HABITAT	UNIQUE CHARACTERISTIC
Hippopotamus		
Aardvark		
Pangolin		
Klipspringer		
Porcupine		

- Rocky areas
- Quills
- Dry woodland /savannah
- Aquatic
- No incisor /canine teeth
- Preorbital glands
- Scale covering
- Open woodland
- No sebaceous glands
- Very wide habitat

(10)

QUESTION 27

Mammals **evolved** from a sub-class known as the **Synapsida**. Provide the **common name** for this sub-class. (1)

QUESTION 28

Match up the following columns

Order Insectivora	-	Bats	
Order Chiroptera	-	Riverine Rabbit	
Order Pholidota	-	Aardvark	
Order Lagomorpha	-	Family Felidae	
Order Rodentia	-	Loxodonta africana	
Order Carnivora	-	Ruminants	
Order Tubulidentata	-	Subsists on a diet of beetles	
Order Proboscidae	-	Mountain Zebra	
Order Perissodactyla	-	Porcupine	
Order Artiodactyla	-	Myremecophagic	(10)

QUESTION 29

List three advantages of lactation. (6)

QUESTION 30

Provide one **plausible explanation** as to why the **Dinosaurs** became **extinct**. (5)

QUESTION 31

How would the **early mammals** have **avoided** competition with the **dinosaurs**? (2)

QUESTION 32

Following on from the **above question**, which **mammalian characteristic** enables them to do this? (2)

QUESTION 33

(True / False). Mammals are the only class of vertebrates that possess **external pinnae**. (1)

QUESTION 34

(True/ False). Besides birds, bats are the only animals capable of sustained flight. (1)

QUESTION 35

Name **five characteristics** that are **exclusively** mammalian. (5)

QUESTION 36

Name **six aquatic** mammals (provide their common names, not group names). (6)

QUESTION 37Why do some mammals **hibernate**?

(2)

QUESTION 38Match the following animals with their **described foot posture**.

a)



b)



c)

(3)

QUESTION 39Name **two functions** of sweat glands.

(4)

QUESTION 40

(True / False). Certain marsupial species are endemic to Africa.

(1)

QUESTION 41Define a **monotreme** and provide a common name **example** to substantiate your answer.

(3)

QUESTION 42Differentiate **polygynous** from **polyandrous**.

(4)

QUESTION 43Explain why **endothermy** enabled the early mammals to **avoid competing** with **dinosaurs**

(3)

QUESTION 44

Giraffe are classified as plantigrade / unguligrade / digitigrade?

(1)

QUESTION 45Divide members from the **Order Chiroptera** into three groups based on **diet**.

(3)

QUESTION 46

(True / False). Rabbits and hares are rodents.

(1)

QUESTION 47

Other than baboon and monkeys, **name two primate groups** endemic to Southern Africa.

(2)

QUESTION 48

The aardwolf subsists on a diet mainly comprised of harvester termites. Give the specific name for **this type of diet**?

(1)

QUESTION 49

Name the term that describes **daily hibernation** in mammals.

(1)

QUESTION 50

What is **echo - location**? Which group of animals uses it?

(3)

QUESTION 51

Mammals evolved approximately

- a) 650 million years ago
- b) 300 million years ago
- c) 130 million years ago
- d) 65 million years ago
- e) 65 thousand years ago

(1)

QUESTION 52

What **type of digestion** is employed by:

- a) Zebra
- b) Giraffe

(2)

QUESTION 53

Match up the following terms describing **foot posture** with the correct animals.

- a) Plantigrade
- b) Digitigrade
- c) Unguligrade

The Black footed cat, Samango monkey, Siberian tiger, Gemsbok, Puku, Mountain gorilla.

($\frac{1}{2} \times 6 = 3$)

QUESTION 54

Which species carries its young on its back (Aardvark or Pangolin)?

(1)

QUESTION 55

Re-draw and complete the following table.

- a) Indicate whether the characteristic is shared by other animal classes
- b) Indicate whether the characteristic is shared by all mammal species
- c) Provide the missing characteristic

Mammalian characteristics	Shared by other Animal Classes (Yes / No)	Shared by all Mammal Species (Yes / No)
Endothermy	?	?
Lactation	?	?
Viviparous	?	?
?	Yes	Yes
Body hair	?	?
Sweat glands	No	?
Mammary glands / tissue	?	?
External pinnae	?	?

(14)

QUESTION 56

Which three periods make up the **Mesozoic Era**?

- a) Cretaceous, Triassic, Jurassic
- b) Triassic, Carboniferous, Permian
- c) Jurassic, Cambrian, Cretaceous
- d) Devonian, Silurian, Triassic
- e) Carboniferous, Cretaceous, Cambrian

(1)

QUESTION 57

Re-draw the following table, comparing the **differences** between **mammals** and **birds**.

Characteristics	Bird	Mammal
Dentition		
Covering		
Thermoregulation		
Reproduction		

(8)

QUESTION 58

Differentiate **homeothermy** from **endothermy**

(2)

QUESTION 59

Name three marsupials.

(3)

QUESTION 60

Using examples, differentiate between **polygamous** and **polyandrous** mammals. (4)

QUESTION 61

List the common names of the **three Families** comprising the **Order Insectivora**.

(3)

QUESTION 62

(True / False). There is no difference between rabbits and hares.

(1)

QUESTION 63

What is the **function** of **coprophagy**? Name and animal that performs this action. (3)

QUESTION 64

(True / False). Bats are the only mammals which use echolocation.

(1)

QUESTION 65

Name the **four** groups of **Primates** common to Southern Africa

(4)

QUESTION 66

Redraw and **complete** the following table.

?	Describes the dog family
Family Lorisidae	?
?	Spotted and brown varieties
Family Soricidae	?
?	Mongoose, genets, civets
Family Leporidae	?
?	Panthera leo
Family Cercopithecidae	?
?	Badgers, otters, polecat
Family Macroscelididae	?

(10)

QUESTION 67

Differentiate between hares and rabbits.

(4)

QUESTION 68

Which terms describe foot posture in mammals while standing? **Provide a common name example** of a mammal that uses each term. **(6 X 1/2 = 3)**

QUESTION 69

Which Order and family of mammals possesses **carnassial teeth**? **(2)**

QUESTION 70

Large ungulates employ 2 distinct types of **digestion**. **Name** each type. **(2)**

QUESTION 71

Re-draw the following table showing **exclusively mammalian characteristics** and indicate which characteristics are **common to all** mammal species.

Exclusively mammalian characteristics	Common to all mammal (yes / no)

(10)

QUESTION 72

Name two **monotremes**. **(2)**

QUESTION 73

What is a **colostrum**? **(2)**

QUESTION 74

Name a **polyandrous** mammalian species/ **(1)**

QUESTION 75

List 10 groups that are classified as **rodents** **(10)**

QUESTION 76

Into which **Order** do **bats** fall? **(1)**

QUESTION 77

Which group of mammals exhibits a **tooth-comb** for grooming?

(1)**QUESTION 78**

Mammals **evolved** approximately

- a) 650 million years ago
- b) 300 million years ago
- c) 130 million years ago
- d) 65 million years ago
- e) 65 thousand years ago.

(1)**QUESTION 79**

For each of the following **mammalian Orders**, provide a common name example and state whether the animal is a **primary**, **secondary** or **tertiary** consumer.

- a) Order Insectivora
- b) Order Primates
- c) Order Pholidota
- d) Order Lagomorpha
- e) Order Rodentia
- f) Order Carnivora
- g) Order Proboscidea
- h) Order Artiodactyla

(16)**QUESTION 80**

Which of the Small Mammal Orders is most successful?

- a) Order Insectivora
- b) Order Macroscelidae
- c) Order Lagomorpha
- d) Order Rodentia
- e) Order Hyracoidea

(1)**QUESTION 81**

Divide the Chiroptera into three groups based on their dietary preferences.

(3)**QUESTION 82**

Which of South Africa's endemic primates is most strongly defined with a social grouping known as an oligarchy?

(chacma baboon / vervet monkey / Bushbaby).

(1)

QUESTION 83

Which of South Africa's endemic primates exhibits the largest number of communication calls, gestures and displays?

(chacma baboon / vervet monkey / Bushbaby). (1)

QUESTION 84

Which of South Africa's endemic primates is nocturnal?

(chacma baboon / vervet monkey / Bushbaby). (1)

QUESTION 85

What is thought to be the **reason for the extinction** of the **dinosaurs**?

(3)

QUESTION 86

Name **four mammalian characteristics** that are **also shared by other vertebrate** classes.

(4)

QUESTION 87

In terms of **reproductive strategies**, what **two groups** are found **other than marsupials**

(2)

QUESTION 88

List the **three different types of foot posture** found in terrestrial mammals. Explain what **each type looks like** and provide a **common name example** of an animal that exhibits each type.

(9)

QUESTION 89

List **three common name examples** of mammals that are classified in the **Order Insectivora**

(3)

QUESTION 90

Critically analyze the statement "blind **as a bat**"

(4)

QUESTION 91

Into **which Order** does the species *Homo sapiens* belong?

(1)

QUESTION 92

Name the **Order** and **common name** of the group of **terrestrial mammals** that uses **echolocation**.

(2)

QUESTION 93

Endothermy, although common to other vertebrates, is perhaps the single factor that has **allowed mammals to become the dominant animal** type in most ecosystems. What is endothermy? And **why** has it afforded mammals a **great advantage**?

(4)

QUESTION 94

Differentiate between **Primary, Secondary** and **Tertiary** consumers. Provide one **common name example** of a mammal from each group.

(2 X 3 = 6)

Herbivores

QUESTION 95

(True / False). Elephants drink through their trunks.

(1)

QUESTION 96

List the **common names** of **12** Southern African antelope?
Include **4 large**, **4 medium** and **4 small** sized species.

(12 x ½ = 6)

QUESTION 97

Define the term '**ungulate**'.

(2)

QUESTION 98

Ungulates exhibit two very different and **distinct forms of digestion**. Name both forms and provide an **example** of an animal that uses each form.

(4)

QUESTION 99

Which **two species of zebra** are found in Southern Africa?

(2)

QUESTION 100

Which is the **tallest artiodactyl** mammal?

(1)

QUESTION 101

Certain herbivores such as the **impala, kudu** and **elephant** are both **grazing and browsing animals**. Provide an **alternative term** to describe their dietary habits. (1)

QUESTION 102

 What is the **most common antelope** in South Africa's National Parks?

(1)

QUESTION 103

What is the African Elephant's specific name. (write it using the correct scientific format)

(2)

QUESTION 104

List three characteristics that advertise that a bull elephant is in musth.

(3)

QUESTION 105

 Re-draw and complete the following table to differentiate the *Diceros bicornis* from the *Ceratotherium simum*

Characteristic	Black or White (rhinoceros)
Square-lipped	?
Browser	?
Calf follows mother	?
Larger of the Rhinocerotidae family	?
Males defend territories	?

(5)

QUESTION 106

Into which two groups are all buffalo in South Africa divided?

(2)

QUESTION 107

 How much **water** can an **adult elephant** drink daily?

(2)

QUESTION 108

 Provide the **scientific name** for odd and even toed **ungulates**.

(2)

QUESTION 109

 List the **two distinct feeding types** recognised amongst the mammalian **herbivores**, provide a **common name example** of each.

(4)

QUESTION 110

 (**True / False**) The Blue Antelope was the first African mammal recorded to become extinct.

(1)

QUESTION 111

 Name the **two Orders of hoofed mammals** and provide a **common name example** of each.

(4)

QUESTION 112

Comparing **ruminants** with **hindgut fermenters**, name an **example of each** and state which animal has the **more efficient** method of digestion?

(3)**QUESTION 113**

(True / False). Grazing in buffalo is aided by the fact that they possess a prehensile tongue.

(1)**QUESTION 114**

Buffalo are ruminants / hind-gut fermenters?

(1)**QUESTION 115**

What reputation have African buffalo earned from a hunting perspective?

(1)**QUESTION 116**

Indicate whether the following species are grazers, browsers or mixed feeders.

- a) Blue wildebeest
- b) Steenbok
- c) Kudu
- d) Waterbuck
- e) Springbok
- f) Sable antelope
- g) Impala
- h) Grey rhebok

(8)**QUESTION 117**

What is the collective noun for the warthog social group?

(1)**QUESTION 118**

On what basis are warthog sexually dimorphic?

(1)**QUESTION 119**

Briefly describe how you would separate male giraffe from female giraffe, when viewed close and at a distance? (assume their genitalia are not in view in both cases)

(5)**QUESTION 120**

Which zebra species is recently extinct?

(1)**QUESTION 121**

Describe one theory to explain the coat pattern of Burchell's zebra.

(3)**QUESTION 122**

Name the South African National Park that is dedicated to a specific zebra species.

(1)**Mammal Questions**

QUESTION 123

(True / False). Hippos cannot float in water.

(1)

QUESTION 124

The hippopotamus is a herbivore.

- Where do hippos feed?
- When do they feed?
- What do they feed on?

(3)

QUESTION 125

List one instance of unusual hippo behaviour

(1)

QUESTION 126

Name two equally important **functions** of the **elephant's ears**.

(3)

QUESTION 127

Describe the **physiology of rumination** in the *Tragelaphus strepsiceros*.

(5)

QUESTION 128

How many **toes** would a **Perrisodactyl mammal** have?

(2)

QUESTION 129

List **three ways** to distinguish **black** from **white rhino**

(6)

QUESTION 130

List **four of the six types** of common **horn** seen in among bovids.

(4)

QUESTION 131

What is the **most common mammal** in South Africa?

(1)

QUESTION 132

For which **two purposes** is rhino **horn** sought for?

(4)

QUESTION 133

Explain **sexual dimorphism** in **warthogs**

(3)

QUESTION 134

List the common names for **20 species** of Southern African **antelope**.

(20 x 1/2 = 10)

QUESTION 135

Name **two** Southern African species that have **become extinct** in the last 150 years.

(2)

QUESTION 136

Name four spiral horned antelope.

(4 x 1/2 = 2)

QUESTION 137

Name **two** currently **endangered** Southern African mammals.

(2)

QUESTION 138

(True / False). Most Buffalo in South Africa are disease free.

(1)

Carnivores

QUESTION 139

List the common names of five species in the **Order Canidae**.

(5)

QUESTION 140

Name two morphological and one ethological difference between male and female lions.

(3)

QUESTION 141

Explain the correlation between **cooperative hunting** and **hunting success**.
(exact percentages are not required).

(2)

QUESTION 142

Explain why leopards do not need to make kills as often as most other predators.

(3)

QUESTION 143

(True / False). Leopards never eat carrion.

(1)

QUESTION 144

Which behaviourism is not observed in leopards when they are the dominant predator in an area?

(1)

QUESTION 145

List three physical adaptations that allow cheetahs to run at speeds of up to 112 km / h.

(3)

QUESTION 146

Why do cheetah need to make more kills than other predators of similar size? (1)

QUESTION 147

(True / False). Single cheetah have been recorded as having been successful in hunting giraffe. (1)

QUESTION 148

(True / False). Single leopard have been recorded as having been successful in hunting giraffe. (1)

QUESTION 149

The spotted hyaena exhibits a remarkable social system

- a) What is the name of this system?
 - b) Who is the head of this social system?
 - c) How is dominance within this system gained? (3)
-

QUESTION 150

Under which circumstances can a spotted hyaena be expected to give a high cackling laugh? (1)

QUESTION 151

Name **three** South African hyaenid species. (3)

QUESTION 152

Why is it relatively simple to calculate overall population numbers using photographs of wild dogs? (1)

QUESTION 153

Explain why wild dogs can kill African buffalo, an animal that is 30 times larger than it is? (2)

QUESTION 154

How are wild dogs that have not participated in a kill able to eat of it? (2)

QUESTION 155

Suricate societies are characterised by a division of labour. One of the tasks is that of sentinel. Describe how this animal performs its duties. (5)

QUESTION 156

Provide the **colloquial name** for the **suricate**. (1)

QUESTION 157

What is a **Baculum**? Where would you **find it**? What is its **function**?

(4)

QUESTION 158

What is the **function** of **carnassial teeth**?

(2)

QUESTION 159

Why is the **cheetah** the '**odd one out**' with reference to the **other felids**?

(2)

QUESTION 160

Name the **five families** in the **Order Carnivora**, and provide a common name **example** of an animal from each family.

(10)

QUESTION 161

Excluding the lion, leopard, cheetah and spotted hyaena, list the **common name** of 10 **carnivorous** mammals.

(10 x ½ = 5)

QUESTION 162

Explain **echolocation** as it pertains to bats.

(3)