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STUDY Mate

Department of Education

GRADES 8–11 ISSUE 9 AUGUST 2007

Learning activities for Grades 8–11

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Content

Page 2:	Message from the Department of Education
Page 2-4:	English: Prepositions
Page 5-6:	Mathematical Literacy: Grade 10 lesson notes
Page 7-8:	Mathematical Literacy: Grade 11 lesson notes
Page 9-10:	Business Studies: Grade 10 and 11 lesson notes
Page 11-13:	Economics: Grade 10 exam paper
Page 14-16:	Life Sciences: Grade 10 exam paper
Page 16:	Summary skills

Education Minister Naledi Pandor

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LIFE SCIENCES GRADE 10 EXAMINATION PAPER

1.2

Any two of the three following options or any other reasonable answer

- large folded ovary ✓ means that the worm can produce many eggs at one time and increase the chances of infecting ✓ other host organisms
- thick cuticle ✓ protects it from the digestive enzymes of the host ✓ and therefore ensures survival
- flexibility (lack of skeleton) ✓ ensures that it is able to curve with the curves of the digestive system ✓ and thus be able to live in the digestive system (4)

1.3

Any reasonable answer such as

- many people infected with roundworms may not know that they are infected ✓
- people may refuse to participate in such a study ✓
- it is difficult to reach all the people in an area, especially in rural areas and so not possible to get accurate results ✓

(4)

1.4.1

Any two of the following

- the number of people infected differs in different areas ✓
- the percentage of infected people is greater in rural areas than in urban areas ✓
- a high percentage of the population in Africa is infected with roundworms ✓

(2)

1.4.2

Any two of the following or any other reasonable answer

- less access to medical facilities ✓ for treatment ✓
- poorer sanitation / less access to clean water ✓ means greater chance of infection of food ✓,
- or less opportunity to wash hands ✓ therefore more chance of hand to mouth infection ✓

(4)

1.4.3

Heading present ✓

Heading complete and appropriate ✓

Each column headed fully ✓

Units of measurement in the heading not body ✓

Identified urban and rural areas ✓

Correct figures for urban to within 2 % either way ✓

Correct figures for rural ✓

A 48

B 52

C 19

D 71

E 74

Surrounded by border ✓

(8)

1.5

Column A		Column B	
e ✓✓	alimentary canal	a.	breakdown of large, insoluble molecules, to small, soluble molecules
g ✓✓	canine	b.	chisel shaped tooth that functions to bite off pieces of food
a ✓✓	digestion	c.	animal whose dentition is suited to a diet of plant material only
c ✓✓	herbivore	d.	region of the gut from which the end products of digestion are absorbed into the bloodstream
j ✓✓	autotrophic	e.	muscular tube running through the body from the mouth to the anus
k ✓✓	peristalsis	f.	the utilisation of the products of digestion in the cells of the body
i ✓✓	large intestine	g.	cone shaped tooth that enables tearing of food
l ✓✓	heterotrophic	h.	muscular tube connecting the pharynx to the stomach
h ✓✓	oesophagus	i.	region of the gut where water is absorbed from waste material
		j.	organism that is capable of producing its own nutrients
		k.	wave of involuntary muscle contraction and relaxation that force food along
		l.	organism that has to obtain nutrients from another source as it is incapable of producing its own nutrients

(9 × 2 = 18)

Multiple choice questions

Question	1	2	3	4	5	6	7	8	9
Answer	*d* ✓✓	*d* ✓✓	*d* ✓✓	*d* ✓✓	*d* ✓✓	*a* ✓✓	*c* ✓✓	*d* ✓✓	*b* ✓✓

(9 × 2 = 18)

[36]

60 marks

Sum it up to cut it down

The further you go in your education, the more you will need to understand and learn a larger amount of information. Knowing how to summarise becomes a very useful and important skill.

Summary skills are life skills

- A summary is a shorter version of a text.
- It contains only the main points and leaves out any additional information.
- Summarising teaches you to be brief and to get straight to the point.
- Writing a summary is a useful way of making sure you understand what you read, and improves your comprehension skills.
- The ability to summarise will help you throughout your studies and future career.

How to write a summary

- Quickly read the text you want to summarise, so you have an overall idea of what it's about. This kind of reading is known as "skimming".
- Now read the text again more carefully to understand the meaning of the information. Underline key words as you read.
- Look at each paragraph and decide which sentence best sums up the main idea in the paragraph.
- Write this sentence out in your own words.
- Check if there is any important information from the paragraph not included in your summary sentence. Briefly write this information up.
- You will end up with a set of notes containing important information from each paragraph in the text – a summary of what you have read. It should be about one-third of the length of the original text.

Summarising is a skill that needs practice

- DOs
  Start writing your summary notes right from the beginning of the year, so you get better with each summary.
- Once you have practised writing summary notes for a while, allow your own style to develop.
- Summary notes should be redrafted until you are comfortable with the flow of information.
- DONTs
  Don't leave it until just before exams to start writing up your summary notes. It's too late!
- Don't copy summary notes from others. Those notes are some-one else's understanding of a text, not necessarily your own.
- Don't give up on your summary notes at first draft stage. Work on them until they read right and feel right for you.

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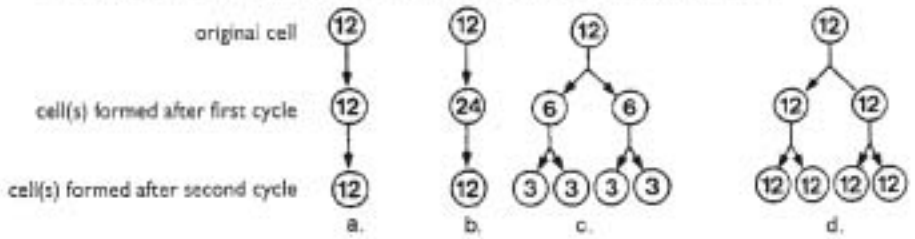
LIFE SCIENCES GRADE 10 EXAMINATION PAPER

Multiple choice questions

Each of the following questions is provided with a number of alternative answers. Write the letter only of the best alternative in the appropriate space below the question number in the table below.

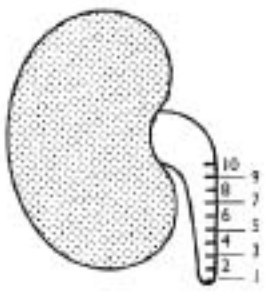
Question	1	2	3	4	5	6	7	8	9
Answer									

1. Each normal body cell in a mammal found in South Africa contains 12 chromosomes. Which of the following diagrams correctly represent two successive cycles of mitosis? The numbers in the circles refer to the chromosomes present in each cell.

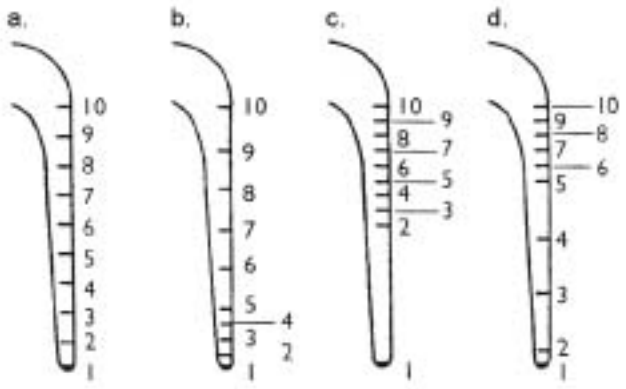


Adapted from Torrance, J. (No date). ***Problem solving in biology***. Paisley; Hodder Gibson. P 22.

2. The drawing below shows a germinating broad bean seed. Its young root has been marked at 1mm intervals with waterproof ink.



It was allowed to grow for a further three days and was then carefully examined. Mitosis had occurred between marks 1 and 2 only. The cells in the regions marked 2 - 5 had not divided, but instead had become elongated. The cells in the regions 5 - 10 had neither divided nor elongated. Which of the following drawings best represent the young root three days after receiving its ink marks?



[From Torrance, J. (No date). *Problem solving in biology*. Paisley; Hodder Gibson. p20.]

3. The total amount of energy entering a trophic level in a food chain is always less than the amount passed on to the next trophic level because:
   (a) not all the energy from sunlight is absorbed by plants
   (b) not all herbivores are eaten by carnivores
   (c) decomposition uses energy
   (d) each trophic level loses energy in respiration

4. The drawing on the right shows a light microscope. The magnification at which an object will be seen if the microscope is used as it is set up in the drawing, will be:
   (a) X 24
   (b) X 14
   (c) X 40
   (d) X 400

5. When red blood cells are added to water, the cells burst. The reason for this is
   (a) red blood cells cannot survive outside the human body
   (b) red blood cells are crushed by atmospheric pressure
   (c) red blood cells lose water by osmosis
   (d) red blood cells gain water by osmosis

6. In which one of the following is mitosis **not** involved?
   (a) production of sperm in the testes
   (b) replacement of cells in a cut through the skin
   (c) growth
   (d) production of identical daughter cells

7. Which one of the following best describes a carcinogen?
   (a) a substance that prevents cell division
   (b) an inhibitor of mitosis
   (c) an agent that causes cell division to get out of control
   (d) a substance that prevents the formation of a spindle in cells

8. If a plant is transplanted to a place where the light intensity is such that the rate of photosynthesis is never greater than the rate of cell respiration, the plant will:
   (a) continue to live, but will not be able to store food
   (b) die instantly
   (c) grow more vigorously because more energy will be available
   (d) stop growing and eventually die because of lack of energy

9. Stomata control the supply of which of the following for photosynthesis?
   (a) water
   (b) carbon dioxide
   (c) oxygen
   (d) radiant energy

$(9 \times 2 = 18)$

[36]

60 marks

Answers

Question 1

1.1

Any two of the three following options or any other reasonable answer

- the worms can block the digestive tract ✓ and prevent the movement of food ✓ along the alimentary canal
- the worms can release toxins ✓ that can poison ✓ the body of the human
- the worms can absorb food ✓ and the person can become malnourished ✓ as a result of lack of food (4)

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LIFE SCIENCES GRADE 10 EXAMINATION PAPER

EXAMINATION QUESTIONS

Question 1

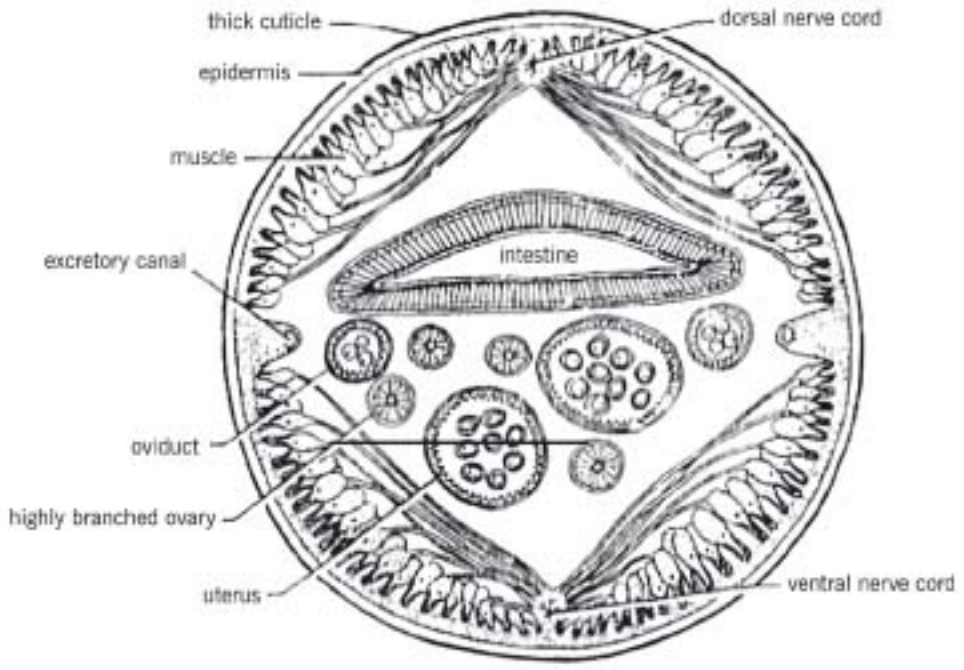
Read the following information on roundworms and then answer the questions included.

Ascaris lumbricoides is a large roundworm that lives in the human intestine. A few roundworms in the gut of an otherwise healthy person have relatively little effect, but if the infected person is already suffering from malnutrition, the effect of the worms can be severe.

Photograph showing the mass of *Ascaris lumbricoides* that was passed from one person's intestinal tract when they were treated. The ruler below the mass is 4 cm long.

1.1 Suggest two ways in which being infected with roundworms can harm the person concerned. (4)

Female roundworms lay eggs that can contaminate food or that can be spread by hand-mouth contact.



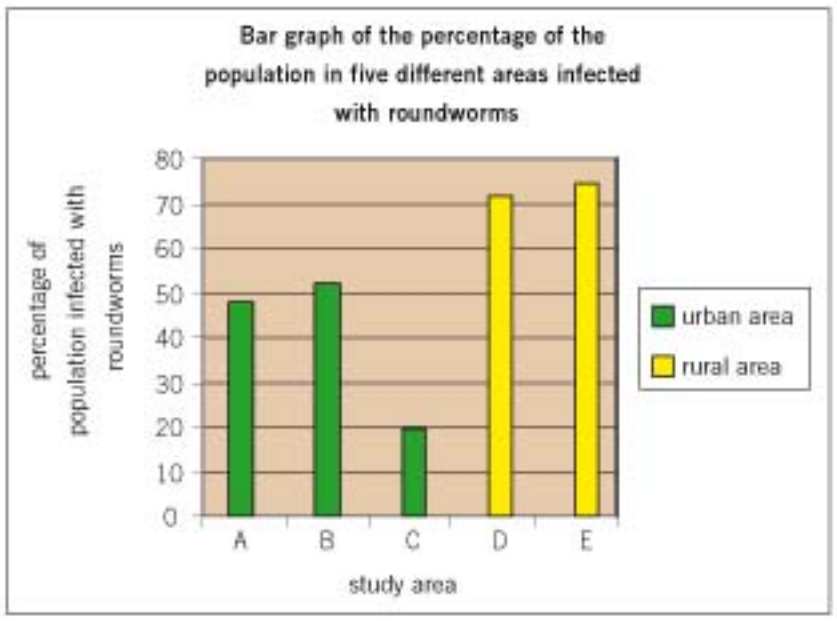
Drawing showing a highly magnified cross section through the body of an adult female *Ascaris lumbricoides*

1.2 Look at the photograph of roundworms and the drawing of a cross section through a female roundworm and suggest and explain two features of *Ascaris lumbricoides* that represent adaptations to its life as a parasite in the human intestine. (4)

Scientists cannot estimate exactly what proportion of the population is infected with roundworm: different studies in one country in Africa have produced very different figures - ranging from 10.8% to 96.3 %.

1.3 Suggest why it is difficult to estimate accurately the proportion of the population affected by roundworms. (2)

1.4 The studies that were done suggested that the results vary according to the people being studied. The graph below shows the results of five different studies done in five different areas of the country.



1.4.1 Give two pieces of information conveyed by the graph. (2)

1.4.2 Suggest two reasons why the percentages of roundworm-infected people in the urban areas and the rural areas are different. (4)

1.4.3 Draw a table to record the information illustrated in the graph. (8)

1.5 Select the letter of the description in Column B that best matches the definition in Column A. Write the letter in the corresponding space provided between the brackets. Use each letter only once.

Column A		Column B	
[___]	alimentary canal	(a)	breakdown of large, insoluble molecules, to small, soluble molecules
[___]	canine	(b)	chisel shaped tooth that functions to bite off pieces of food
[___]	digestion	(c)	animal whose dentition is suited to a diet of plant material only
[___]	herbivore	(d)	region of the gut from which the end products of digestion are absorbed into the bloodstream
[___]	autotrophic	(e)	muscular tube running through the body from the mouth to the anus
[___]	peristalsis	(f)	the utilisation of the products of digestion in the cells of the body
[___]	large intestine	(g)	cone shaped tooth that enables tearing of food
[___]	heterotrophic	(h)	muscular tube connecting the pharynx to the stomach
[___]	oesophagus	(i)	region of the gut where water is absorbed from waste material
		(j)	organism that is capable of producing its own nutrients
		(k)	wave of involuntary muscle contraction and relaxation that force food along
		(l)	organism that has to obtain nutrients from another source as it is incapable of producing its own nutrients

(9 × 2 = 18)

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They process the products of primary industries such as agriculture, mining etc. To semi-finished and final products.✓✓

Examples : electricity, construction, manufacturing etc

Secondary sector contribution is double than the primary sector.

Tertiary Sector ✓✓

These are the service sector or industries. ✓✓

Examples : Wholesale trade, retail trade, catering, transport ✓✓

Communication, final services, insurance etc.

Services are also classified as the commercial, professional and public services. [50]

Max [16]

Question 3 (Micro-economics)

3.1 Answer the following questions appropriately.

Fill in the missing word(s) :

3.1.1 marginal utility✓✓

3.1.2 budget line / consumption possibilities curve✓✓

3.1.3 subsidy ✓✓

3.1.4 changes in demand / increase or decrease in demand ✓✓ 4 x 2 (8)

3.1.5 List any THREE factors that determine the supply of goods.

- The price that consumers are prepared to pay ✓✓
- The price that consumers are willing to pay for other goods✓✓
- The cost of production ✓✓
- Technology✓✓
- The number of sellers ✓✓
- Suppliers expectations ✓✓
- Climatic conditions ✓✓ 3 x 2 (6)

[14]

3.2 Data response

3.2.1 Production possibility curve✓✓

Production possibility curve is a diagram that shows what combination of two different goods could be produced with the available limited supply of factors of production ✓✓ 2 x 2 (4)

3.2.2 Increase in the quantity of butter and bread produced. ✓✓

Improvement in the production technique✓✓

Technological advances ✓✓

Improved motivation of employees ✓✓ 4 x 2 (8)

3.2.3 List any three properties of an indifference curve. 3 x 2 (6)

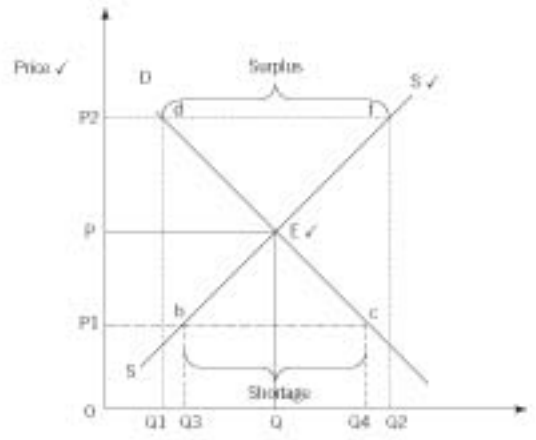
3.2.4 Graph A✓✓ (2)

[20]

3.3 Explain price formation with the aid of a clearly labelled graph.

Demand and supply are the two forces, which determine the price on the market ✓✓

The price level at which the demand and supply curve intersect is known as the equilibrium price ✓✓



Max :5

Point E is the equilibrium point where quantity demanded is equal to the quantity supplied and there are no forces acting to change the price.✓✓

OP is the equilibrium price and OQ is the equilibrium quantity ✓✓

At point E there is no surplus or shortage of goods ✓✓

At any price higher than this there will be forces acting on the price to reduce it. ✓✓

At any price below this, there will be forces acting on the price to increase it. ✓✓

This equilibrium price is known as marketprice✓✓

A market surplus / Excess supply

Occurs when there is an over supply of goods in the market ✓✓

In the above figure this is shown by f and the surplus is Q1 Q2. ✓✓

Producers will lower the price to sell all the goods supplied. ✓✓

A market shortage / Excess demand

Occurs when the quantity demanded of goods exceeds the quantity supplied✓✓

In the above figure this is shown by b c and the shortage is Q3 Q4. ✓✓

Consumers will be prepared to pay more and suppliers will increase the supply as price increase and again it will reach equilibrium. ✓✓ Max [16]

[50]

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ECONOMICS GRADE 10 EXAMINATION PAPER

2.2.3 Identify the elements of the following equation:

$J = I + G + X$ (8)

2.3 Explain the THREE main groups of production. (16)

[50]

Question 3 (Micro-economics)

3.1 Answer the following questions appropriately:

Fill in the missing word(s). Write only the missing word(s) next to the question number (3.1.1 - 3.1.4)

3.1.1 The amount by which total utility changes as an additional unit of good or service consumed, is ... .

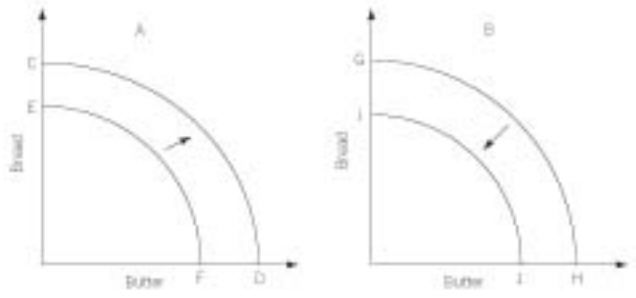
3.1.2 All the combinations of the two products that the consumer can afford to purchase with the amount of income at his/her disposal, is known as ... .

3.1.3 Financial grant or other resources to support the production of a good or a service by the government, is a ... .

3.1.4 A shift of the demand curve from one position to another position, is known as ... . (4 x 2) (8)

3.1.5 Name any THREE factors that determine the supply of goods. (3 x 2) (6)

3.2 Study the graphs below and answer the questions that follow:



3.2.1 What are the above graphs called? Define the concepts. (4)

3.2.2 Identify the phenomenon in graph A and state THREE reasons for the shifting of the curve to the right. (8)

3.2.3 Name any THREE properties of an indifference curve. (6)

3.2.4 Which ONE of the above-mentioned graphs may lead to an increase in economic growth? (2)

3.3 Explain price formation in a perfect market. Make use of a clearly labelled graph. (16)

[50]

Answers

Question 1

1.1.1	A	B	C	✓✓
1.1.2	A	B	C	✓✓
1.1.3	A	B	C	✓✓
1.1.4	A	B	C	✓✓
1.1.5	A	B	C	✓✓
1.1.6	A	B	C	✓✓
1.1.7	A	B	C	✓✓
1.1.8	A	B	C	✓✓
1.1.9	A	B	C	✓✓
1.1.10	A	B	C	✓✓
1.1.11	A	B	C	✓✓
1.1.12	A	B	C	✓✓

24

1.2.1	normative✓✓
1.2.2	Injection✓✓
1.2.3	Reserve Bank✓✓
1.2.4	decreases✓✓
1.2.5	derived✓✓

10

1.3.1	H✓✓
1.3.2	F✓✓
1.3.3	I✓✓
1.3.4	A✓✓
1.3.5	G✓✓
1.3.6	C✓✓
1.3.7	B✓✓
1.3.8	E✓✓

16	50

Question 2 (Macro-economics)

2.1 Answer the following questions appropriately

Fill in the missing word(s) :

2.1.1 econometrics ✓✓

2.1.2 scarcity✓✓

2.1.3 consumers✓✓

2.1.4 economic indicators ✓✓ 4 x 2 (8)

2.1.5 List THREE forms of leakages.

Savings ✓✓

Taxes ✓✓

Import expenditure✓✓ 3 x 2 (6)

[14]

2.2 Data response

2.2.1 A –B Prosperity- ✓✓

B –C Recession ✓✓

C –D Depression ✓✓

D –E Recovery ✓✓

D – Trough ✓✓ 5 x 2 (10)

2.2.2 Business Cycle ✓✓ (2)

2.2.3 **J** - Injection ✓✓

I - Investment ✓✓

G - Government expenditure ✓✓

X - Export expenditure✓✓ 4 x 2 (8)

[20]

2.3 Explain the three main groups of production.

Primary production ✓✓

Industries in the primary sector extract the raw materials from nature. ✓✓

Example: farming, mining, oil extraction, forestry and fishing. ✓✓

Primary sector contribution to the GDP is the smallest of the three sectors in South Africa. ✓✓

Secondary industries ✓✓

These are the manufacturing industries. ✓✓

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ECONOMICS GRADE 10 EXAMINATION PAPER

Question 1

1.1 Various possible options are provided as answers to the following questions. Indicate the correct answer by making a cross (X) in the appropriate square (A - C) next to the question number (1.1.1 - 1.1.12)

1.1.1 The study of the behaviour of individual decision-making units, is known as ... economics.
A macro-
B micro- (2)
C monetary

1.1.2 Goods that are plentiful and for which nobody will pay anything, are ... goods.
A economic
B consumer (2)
C free

1.1.3 The public sector operates on ... levels in South Africa.
A two
B three (2)
C four

1.1.4 Which ONE of the following is the satisfaction that a consumer derives from the consumption of goods and services?
A Utility
B Value (2)
C Price

1.1.5 The term opportunity cost illustrates the ... between goods.
A scarcity
B trade-off (2)
C combination

1.1.6 Market failures occur when allocative and ... occur.
A productive inefficiencies
B productive efficiencies (2)
C unproductive efficiencies

1.1.7 A specific knowledge relating to the environment, social and economic activities in your area is ... knowledge.
A valuable
B adapted (2)
C indigenous

1.1.8 Which ONE of the following contributed to the industrial development in South Africa between 1910 and 1993?
A Tourism
B Mining (2)
C Agriculture

1.1.9 The HIV/Aids pandemic leads to a decrease in labour ...
A supply.
B demand. (2)
C unproductivity.

1.1.10 The overall inability of the economy to provide employment for its total labour force, leads to ... unemployment.
A frictional
B structural (2)
C cyclical

1.1.11 Membership of a union is generally ...
A compulsory.
B obligatory. (2)
C voluntary.

1.1.12 The Department of ... is responsible for South African marine resources.
A Environmental Affairs and Tourism
B Water Affairs and Forestry (2)
C Agriculture and Land Affairs

1.2 Choose the correct word(s) in brackets. Write only the correct word(s) next to the question number (1.2.1 - 1.2.5) on the attached ANSWER SHEET.

1.2.1 The statement in which an economist has given his/her opinion or value judgement, is a (positive/normative) statement.

1.2.2 The money invested in a plant or machinery, is an example of a/an (leakage/injection).

1.2.3 The exclusive right to control and issue bank notes has been awarded to the (South African Reserve Bank/Land and Agricultural Bank).

1.2.4 Mass production (increases/decreases) the cost of production per unit.

1.2.5 The demand for labour is a/an (derived/original) demand. (5 x 2) (10)

1.3 Choose a description from COLUMN B that best matches the item in COLUMN A. Write only the letter (A - I) next to the question number (1.3.1 - 1.3.8)

	COLUMN A		COLUMN B
1.3.1	Economic growth	A	a few sellers control the market
1.3.2	Economic development	B	a programme used to provide previously disadvantaged South Africans with access to agricultural land
1.3.3	Monopoly	C	goods which are sold to other countries
1.3.4	Oligopoly	D	policies aimed at redressing social, educational and economic imbalances
1.3.5	Import	E	a programme used to assess the validity of claims and restore land
1.3.6	Export	F	an increase in the standard of living and economic welfare
1.3.7	Land redistribution	G	goods which are bought from other countries
1.3.8	Land restitution	H	increase in the production capacity of an economy
		I	a single supplier for a good or a service in the market (8 x 2) (16)

TOTAL: 50

Question 2 (Macro-economics)

2.1 Answer the following questions appropriately:

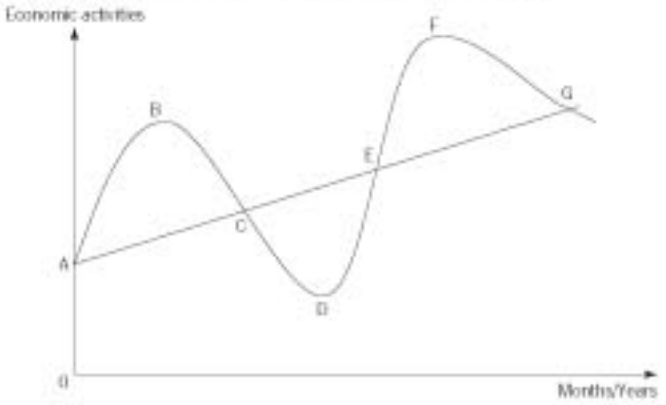
Fill in the missing word(s). Write only the missing word(s) next to the question number (2.1.1 - 2.1.4).

2.1.1 The study of the application of statistical methods in
2.1.2 economic, is ... .
2.1.3 The basic economic problem faced by all economies, is
2.1.4 ... .
2.1.5 The primary economic participants are ...

Periods of increasing or decreasing economic activity are indicated by ... . (4 x 2) (8)

List THREE forms of leakages. (3 x 2) (6)

2.2 Study the graph below and answer the questions that follow:



2.2.1 Identify the following labels from the graph:
(a) A-B
(b) B-C
(c) C-D
(d) D-E
(e) D (5 x 2) (10)

2.2.2 Which phenomenon is depicted in the above graph? (2)

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BUSINESS STUDIES GRADE 10 & 11 LESSON NOTES

➢ Regulators and trade unions:
The relationship between the business and this variable is very important. Trade unions represent the workers' interests and protect them against unfair treatment by the business. A good relationship with trade unions ensures a good relationship with the business' workers and therefore ensures loyal hard working workers.

➢ Strategic allies:
This refers to two or more businesses that work together in joint ventures. The aim of this is trying to help the business obtaining certain expertise from another business, they lack.

CONCLUSION

The macro environment has an ongoing influence on the micro environment (the business). Changes at the macro level even affect the smallest business in the market. A business has only a slight influence on the macro environment, but if more businesses form an alliance they might influence the macro environment stronger.

The business has more control over the market. They just need to do ongoing research about consumers' behaviour and potential suppliers.

Activities

ACTIVITY 1:

Choose the most correct answer from the following options:

1. The marketing function of Mazola traders (Pty) Ltd would fall in the ..... environment.
   A. micro
   B. market
   C. business
   D. macro
2. A change in the foreign exchange policy of the country would take place in the..... environment.
   A. micro
   B. market
   C. business
   D. macro
3. Suppliers are part of the ..... environment
   A. micro
   B. market
   C. business
   D. macro

ACTIVITY 2:

Match an element of the macro environment in Column A with an appropriate phase in Column B that describes an aspect of that specific environment.

A. Macro environment	B. Description
1. Political and legal	(a) A landscape that includes forests, deserts rivers, lakes and mountains
2. Demographic	(b) The Constitution and Bill of Rights in South Africa which protect the right of individuals.
3. Natural	(c) Knowledge and information flows of increasing importance in many businesses.
4. Technological	(d) South African business facing increased global competition, and opportunities.
5. International	(e) The sum total of the languages, value system, cultural norms and preferences
6. Cultural and social	(f) The rate of economic growth
7. Economic	(g) The composition of a country inhabitants

ACTIVITY 3:

Indicate whether the following are true or false.

1. The market environment is the immediate environment in which the business operates.
2. A customer supplies the business with raw material.
3. An element of the economic environment includes the economic growth rate.
4. The role of intermediaries is to distribute goods from the producer to the consumer.
5. The micro environment includes the forces and activities that are immediately outside the business.

Answers and Assessment

ACTIVITY 1:

1. A 2. D 3. C

ACTIVITY 2:

1. B 2. A 3. G
4. C 5. D 6. E
7. F

ACTIVITY 3:

1. True
2. False
3. True
4. True
5. False

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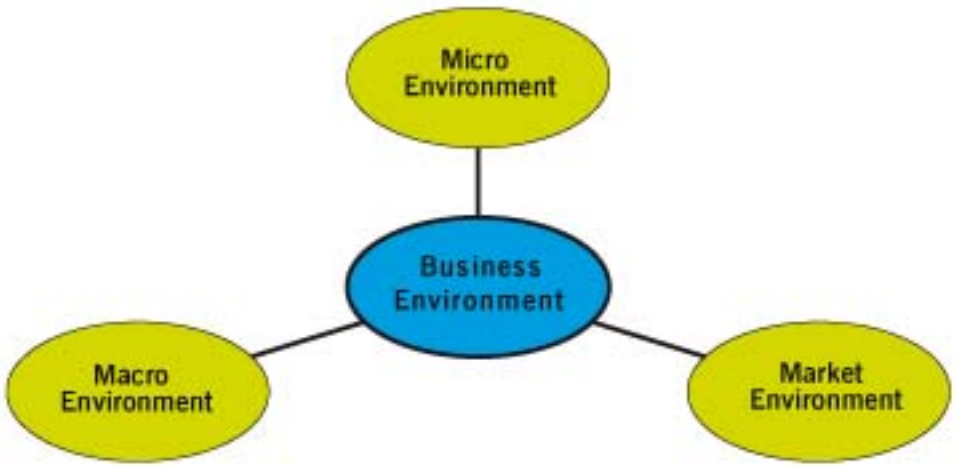
BUSINESS STUDIES GRADE 10 & 11 LESSON NOTES

BUSINESS ENVIRONMENT



The diagram above indicates that the business environment consists of three different levels:

- The micro environment
- The macro environment
- The market environment

The micro environment is the internal environment of a business; it is the environment inside the business. It refers to the business itself. Management has complete control over this environment.

The micro environment of the business includes the following different functional areas, in no particular order.

Operations/production function

The operations function is responsible for making sure that the goods and services are provided by the business, they are produced at the right time, at the right price and for the correct market.

Human resources function

This function involves recruiting new staff and managing existing staff. The human resources manager has to identify the skill and labour needed by the business. The employees have to be motivated to achieve the business's goal.

Purchasing function

The market has needs that have to be satisfied by means of goods and services. These need to be produced. Purchasing involves the buying of the raw material (inputs) needed to create the product (outputs).

Financial function

The financial management makes sure that the business has the funds it needs to run effectively. It also makes sure that these funds are used efficiently. This includes both short- and long-term funding.

Public relations function

Public relations is about building good relationships and managing existing relationships within the market to customers, suppliers and the community. Businesses contribute to the community by sponsoring events or protecting the environment.

In simpler words, we can say public relations is about promoting the business itself

Marketing function

The marketing function concerns itself with understanding customer needs and requirements. It deals with transferring the goods and services from the business to the consumer. This is by means of advertisements that make the consumers aware of the product.

Administrative/information function

Information has to be collected, organised and stored in such a way that is easy to retrieve. Today information can be stored using computer-based information technology.

General management

General management sets the overall direction for the business. It keeps all the other functions together. In doing so, it makes sure that the other functions' activities are directed towards achieving the business's goal.

The Macro Environment and the Market Environment

INTRODUCTION

The business and the environment in which it operates are not closed systems; they depend on each other for survival. The business cannot function independently and needs to adjust all the time to changes in the macro environment and market environment.

THE MACRO ENVIRONMENT

There are different factors (variables) in the macro environment that have an influence on the business. Some of these variables are: technology, the economy, social activities, physical factors, legal issues, politics, the government and international trade.

Let's look at each of these variables individually:

➢ Technology:
It is very important for the business to make effectively use of advance technology. Sophisticated electronics and computers to produce the necessary products and services replace machinery and some labour. Businesses cannot control this variable but only adjust to changes in this environment.

➢ The economy:
Forces such as levels of employment, interest rates, the economic growth rate and exchange rates cannot be controlled by a business. The business can however have some influence on this environment by creating jobs and help with the increase in the economic growth rate.

➢ Social environment:
Businesses need to get involve in social responsibility programmes. E.g. A company sponsoring food and blankets to a poverty stricken community.

➢ Physical factors:
The business also has a responsibility regarding its physical environment. It needs to minimize or avoid pollution, and implement waste management. Remember, there are only limited resources available, so therefore we need to manage it well!

➢ Legal environment:
This environment includes all the rules, laws and restrictions that all business and individuals need to adhere to. Some of these laws (Acts) are: the Labour Relations Act, the Employment Equity Act etc.

➢ Political environment:
During elections citizens of the country elect certain individuals to form a government to represent them. All businesses need to adhere to all legislation set by this elected government.

➢ The government:
This is also known as the institutional environment. They play an important role in the economic and social environment of the country. The government has certain objectives for the country such as: Sustainable economic growth increase in the employment rate etc. All businesses need to support the government in these objectives.

➢ International trade:
This variable includes trade with other countries. South Africa needs to import certain products from other countries and we earn foreign currency by exporting products to other countries. All businesses need to make sure that they produce good quality products and build good relationships with foreign businesses.

THE MARKET ENVIRONMENT

Factors of a business such as customers, competitors, suppliers, regulators and strategic allies are the variables that make up the market environment.

The business does not have full control over these variables, but it will be able to influence them to a certain extent.

The market environment has a very strong influence on the success of the business, so therefore the business need to be aware of all changes in this environment.

➢ The customers (consumers):
The business needs to do research on the needs and buying behaviour of consumers continually. Factors such as cultural factors, personal preferences, social orientation and the motivation of people's actions are very important.

➢ Competitors:
Competition is regarded as another business which is selling more or less the same product as your business. Businesses need to know their competitors to able to improve on what they provide (better quality products or lower prices).

➢ Suppliers:
They are manufacturers and wholesalers that provide the business with resources to produce products, or final products to sell. Good relationships with suppliers ensure prompt delivery, good prices and quality raw materials.

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MATHEMATICAL LITERACY GRADE 11 LESSON NOTES

Solutions

(a)

gravel	:	sand	:	cement	
4	:	2	:	1	Mixing ratio
×4↓		×4↓		×4↓	
16	:	8	:	4	Actual number of bags

The builder needs 16 bags of gravel and 2 bags of sand.

(b)

gravel	:	sand	:	cement	
4	:	2	:	1	Mixing ratio
×3↓		×3↓		×3↓	
12	:	6	:	3	Actual number of buckets

Note: (1) You must use the same unit for each component i.e. all bags or all buckets.

(2) You can multiply any of the terms in the ratio by a number as long as you multiply all of the terms by the same number and the components of the mixture will be in the same ratio.

Activities

1 Khutso is 12 years old and her brother, Vuyani, is 8 years old. Their father says that he will pay them pocket money in the ratio of their ages.

1.1 Write down the ages of Khutso and Vuyani as a ratio. Remember to specify in which order you are writing the ratio.

1.2 Write this ratio in its simplest form.

1.3 How much pocket money will Vuyani get, if Khutso gets R60.

2.1 What will the teacher : learner ratio be if a school, A, of 945 learners has 21 teachers?

2.2 Write the ratio in its simplest form.

2.3 Another school, B, has 1 050 learners and 25 teachers. What is its teacher : learner ratio in simplest form?

2.4 Which has the better teacher : learner ratio school A or school B? Give a reason for your answer.

3 A new grey colour of paint is made by mixing 3 parts of black paint with 5 parts of white.

3.1 Write down the ratio of black : white paint.

3.2 How much white paint do you need to add to the black paint if you have 1,5 *l* of black paint?

3.3 How many litres of grey paint will you have once you have mixed the black and white paint together?

4 A salad dressing is made by mixing vinegar and salad oil in the ratio 2 : 3.

4.1 Explain what this ratio means.

4.2 How much salad oil will I need to make up the dressing if I have 20 *ml* of vinegar?

4.3 I am catering for a big function and want to make up a large quantity of dressing. How much vinegar will I need to make up the dressing if I have 750 *ml* of salad oil?

5 Sex ratio is the ratio of males to females in a population. In humans at the time of birth the sex ratio is said to be: 105 : 100

5.1 Explain what is meant by this ratio.

5.2 Write this ratio in its simplest form.

5.3 What is the estimated number of boys that were born if 5 000 girls were born?

5.4 This sex ratio is said to be "at the time of birth". Do you think this ratio is the same for a population of over 70 year olds? Explain your answer.

Answers

1.1 Two possible solutions:

Khutso : Vuyani = 12 : 8 or

Vuyani : Khutso = 8 : 12

1.2 Khutso : Vuyani = 3 : 2 or

Vuyani : Khutso = 2 : 3

1.3 R40

2.1 21 : 945

2.2 1 : 45

2.3 25 : 1 050 = 1 : 42

2.4 School B. There are fewer learners per teacher.

3.1 3 : 5

3.2 2,5 *l*

3.3 4 *l*

4.1 For every 2 units of vinegar you must add 3 units of salad oil.

4.2 30 *ml*

4.3 500 *ml*

5.1 105 boys are born for every 100 girls that are born. More boys than girls are born.

5.2 21 : 20

5.3 5 250

5.4 No. Men have a lower life expectancy than women. So the ratio would show that there are more women than men.

Useful tips

1. It is important that you understand that a ratio has no units and that you can choose which unit you want to work with. However, the units for both values must be the same i.e. if you use a cup for the one quantity, then you must use a cup for the other quantity as well.
2. Writing a ratio in its simplest form means that the terms of the ratio have no common factor. As long as the terms of a ratio have a common factor the ratio is not in its simplest form.
3. Ratios do not give actual quantities.
4. Note the following:

	gravel	sand	cement
Low strength	6	3	1
Medium strength	4	2	1

- For low strength concrete the number of bags in the mixture is: 6 + 3 + 1 = 10 bags. The cement is therefore $\frac{1}{10}$ of the mixture or 10%.
- For medium strength concrete the number of bags in the mixture is: 4 + 2 + 1 = 7 bags. The cement is therefore $\frac{1}{7}$ of the mixture or 14,3%.
- This shows that the medium strength concrete has a greater percentage of cement present hence the name medium strength.

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MATHEMATICAL LITERACY GRADE 11 LESSON NOTES

Ratio

An introduction

OVERVIEW

Introduction

In this lesson we start on a new topic: ratio. We will look at what a ratio is and how we use it in daily activities.

Ratio is often used in the same breath as proportion and rate. We will deal with proportion and rate in later lessons.

A ratio is a comparison of two (or more) numbers called the terms of a ratio.

A ratio can be expressed in different ways:

- In words *a* to *b*
- With a colon *a* : *b*
- As a fraction $\frac{a}{b}$

Ratios do not have units as we are comparing quantities of the same kind. This will become clearer in the following example.

The example that we are going to focus on is when we make cold drink by mixing water and concentrate. The instructions on side of the bottle of concentrate say that cold drink is made by mixing concentrate to water as follows: 1 : 3 – this is a ratio written with a colon.

It is important to know the order of the ratio i.e. one unit of concentrate to 3 units of water and not the other way round.

Note: the ratio has no units leaving us to choose our own units.

This means we can mix:

1 cup of concentrate with 3 cups of water

or

1 bottle of concentrate with 3 bottles of water

or

1 bucket of concentrate with 3 buckets of water

The mixtures would all taste the same. The only difference would be in the quantity of juice that we have made.

Methods and worked examples

A builder uses ratio when he mixes concrete.

He has to mix three different components when mixing concrete. He needs to mix gravel, sand and cement. He needs to mix these quantities in a particular ratio in order to get the right quality concrete.

There are two different grades of concrete: lower strength concrete and medium strength concrete. The difference between the two grades is in the ratio of the components. See table below.

	gravel	sand	cement
Low strength	6	3	1
Medium strength	4	2	1

The ratios are given with no units. The builder will therefore choose a unit that suits him. He could mix a low strength concrete by using 6 wheelbarrows of gravel; 3 wheelbarrows of sand; and 1 wheelbarrow of concrete or if he only wanted a small amount he could mix 6 buckets of gravel; 3 buckets of sand; and 1 bucket of cement.

Note: We will ignore the water that is also used in making concrete as that is not an issue here. Water is only used to mix these components and activate the cement. As the mixture sets, the water evaporates out of it, so the amount of water used by the builder only affects how easy the product is to work with and how long it will take to get hard.

Worked example

Calculate the quantities of gravel and sand that the builder must use to make a medium strength cement, if he has 2 bags of cement.

Solution: The quantity of cement has been doubled. Therefore the amount of gravel and sand must also double in order to keep the ratio the same.

gravel	:	sand	:	cement	
4	:	2	:	1	Mixing ratio
×2↓		×2↓		×2↓	
8	:	4	:	2	Actual number of bags

Therefore the builder will need 8 bags of gravel and 4 bags of sand. The size of the bags must all be the same.

These two ratios: 4 : 2 : 1 and 8 : 4 : 2 are called **equivalent ratios**.

4 : 2 : 1 is the **simplest form** of the ratio.

Consider the following examples:

(1) Concrete for the foundations of a house is mixed in the following ratio by volume:

gravel : sand : cement = 4 : 2 : 1.

Determine the missing amounts in the following mixtures:

(a) 4 bags of cement

(b) 12 buckets of gravel

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MATHEMATICAL LITERACY GRADE 10 LESSON NOTES

NOTES

(1) "0,90%; 16,25 minimum" means that the transaction fee is 90% of the transaction value with a minimum fee of 16,25

(2) "2,90; 0,90%" means there is a basic transaction fee of R2,90 and an additional fee of 0,90% of the transaction value

(3) "2,90; 0,53%; 13,50" means there is a basic transaction fee of R2,90 and an additional fee of 0,53% of the transaction value, however, the maximum transaction fee is R13,50.

Additional activities:

- You will almost certainly have noticed that the Mzansi transaction fees are all more expensive for small transaction values than the corresponding fees for the bronze and silver accounts—yet Mzansi accounts were introduced as low-cost accounts from the previously un-banked. This appears to be wrong. To understand this apparent contradiction would require you to consider a full monthly bank statement and other factors such as basic monthly fees (silver), minimum balances (bronze) and the range of services available with each account type (e.g. debit orders, cheque books or not etc.)
- It could also be interesting to compare the interest paid to clients for each account type.

Banking Costs – Worksheet 1

1. Which account requires you to always keep a minimum amount of money in your account, and how much is this minimum?
2. How much do you have to pay for an account balance enquiry, at your branch, if you have:
   a. An Mzansi account
   b. A Bronze account
   c. A Silver account
3. How much would you have to pay for a branch withdrawal of R200 from your bank, if you have:
   a. An Mzansi account
   b. A Bronze account
   c. A Silver account
4. How much would you have to pay for an ATM withdrawal of R200 from your own bank's ATM if you have:
   a. An Mzansi account
   b. A Bronze account
   c. A Silver account
5. How much would you have to pay for a cash deposit of R200 at your own bank's ATM if you have:
   a. An Mzansi account
   b. A Bronze account
   c. A Silver account
6. How much would you have to pay for an ATM withdrawal of R200 from another bank's ATM if you have:
   a. An Mzansi account
   b. A Bronze account
   c. A Silver account
7. With an Mzansi account, a cash withdrawal and a cash deposit cost the same amount when you use your own bank's ATM. Is this true for:
   a. A Bronze account? If not explain the difference
   b. A Silver account? If not explain the difference
8. With an Mzansi account, a cash withdrawal and a cash deposit cost you the same amount when you use another bank's ATM. Is this true for:
   a. A Bronze account? If not explain the difference
   b. A Silver account? If not explain the difference
9. How much would you have to pay for a stop order/ debit order of R299,00 if you have:
   a. An Mzansi account
   b. A Bronze account
   c. A Silver account
10. How much would you have to pay for a stop order/ debit order of R2300,00 if you have:
    a. An Mzansi account
    b. A Bronze account
    c. A Silver account
11. How much would you have to pay if you go to Pick n Pay and you use your bank card to pay for R295,86 worth of groceries if you have:
    a. An Mzansi account
    b. A Bronze account
    c. A Silver account
12. How much would you have to pay if you go to Pick n Pay and you use your bank card to pay for R295,86 worth of groceries, and you ask for R500 cash back, if you have:
    a. An Mzansi account
    b. A Bronze account
    c. A Silver account

Banking Costs Worksheet 1: Solutions

1. The Bronze account, R50,00.
2. a. An Mzansi account: R4,00
   b. A Bronze account: R2,65
   c. A Silver account: R2,65
3. a. An Mzansi account: R8,00
   b. A Bronze account: 0,90% × 200 = R1,80 therefore you'd have to pay the minimum R16,25.
   c. A Silver account: R2,90 transaction fee + R200×0,90% – R2,90 + R1,80 – R4,70.
4. a. An Mzansi account: R4,00
   b. A Bronze account: R4,70
   c. A Silver account: R2,90 + 200 × 0,90% = R4,70.
5. a. An Mzansi account: R4,00
   b. A Bronze account: R4,00 + 200×0,40% = R4,80
   c. A Silver account: R2,90 + 200 × 0,90% = R4,70.
6. a. An Mzansi account: R4,00
   b. A Bronze account: R7,00 + 200×0,53% R7,80
   c. A Silver account: R2,90 + 200 × 0,90% = R4,70
7. a. A Bronze account: There is a flat fee for a cash withdrawal, but for a deposit there is a fee of R4,00 as well as a 0,40% of the amount deposited.
   b. A Silver account: The charge for deposit and for withdrawal is the same (R2,90; 0,90%)
8. a. A Bronze account: There is a flat fee for a cash withdrawal, but for a deposit there is a fee of R7,00 as well as a 0,53% of the amount deposited.
   b. A Silver account: The charge for withdrawal (R9,60; 0,90%) is more than that charge for a deposit (R2,90; 0,90%)
9. a. An Mzansi account: there isn't such a facility if you have this account.
   b. A Bronze account: R4,70
   c. A Silver account: R2,90 + 299 × 0,53% – R4,48
10. a. An Mzansi account: there isn't such a facility if you have this account.
    b. A Bronze account: R4,70
    c. A Silver account: R2,90 + 2300 × 0,53% – R15,09 but the max fee is R13,50 so you would be charged R13,50.
11. a. An Mzansi account: R2,00
    b. A Bronze account: R2,00
    c. A Silver account: R2,90 + 295,86 × 0,53% – R4,47
12. a. An Mzansi account: R2,00 + R2,00 – R4,00.
    b. A Bronze account: R2,00 + R2,00 = R4,00.
    c. A Silver account: R4,47 + R2,90 + 500 × 0,53% – R4,47 + R5,55 – R10,02.

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MATHEMATICAL LITERACY GRADE 10 LESSON NOTES

Calculating values involving percentage – Banking costs

Mathematical concepts dealt with:

- Basic calculations
- Simple formulae
- Expenses
- Relationship between arithmetical operations
- Table of values
- Interpreting answers in context
- Percentage
- Ratio/proportion
- Using a basic calculator

Activities

1. **Understanding bank costs**

   Study the table provided on the rates for the various types of accounts available at a commercial bank and note down any observations you can make from the data supplied.

   Do you know that the bank charges people a transaction fee for each transaction they make? Do you know that the transaction fees are different for different accounts? Why are the bank fees so high (compared to others) for transactions involving cash? Why are the transaction costs using the bank's own ATMs less than when you use other bank's ATMs?

   Do you notice the difference between transaction fees and interest charged on a loan or interest paid on a balance?

2. **Calculating the costs for different transactions**

   Determine the transaction fee for a range of different transactions for all three account types, e.g.:

➢ A cash withdrawal of R200,00 at the bank for each kind of account.

Solution:

Mzansi: R 8,00 – fixed cost irrespective of amount

Bronze: 0,90% × R 200,00 = R1,80

BUT R 1,80 < R16,25 minimum ∴ R 16,25

Silver: R 2,90 + 0,90% × R 200,00 = R 2,90 + R 1,80 = R 4,70

➢ A stop or debit order of R299,00 for each kind of account that offers this facility.

Solution:

Mzansi: Not available

Bronze: R 4,70 – fixed cost irrespective of amount

Silver: R 2,90 + 0,53% × R 299,00 = R 2,90 + R 1,58 = R 4,48

NOTE R 4,49 < R 13,50 (maximum) ∴ R 4,48

➢ An ATM cash withdrawal of R100,00 for each type of account for own and other ATMs.

Solution:

Own ATM

Mzansi: R 4,00 – fixed cost irrespective of amount

Bronze: R 4,70 – fixed cost irrespective of amount

Silver: R 2,90 + 0,90 × R 100,00 = R 2,90 + R 0,90 = R 3,80

Other ATM

Mzansi: R 4,00 – fixed cost irrespective of amount

Bronze: R 11,40 – fixed cost irrespective of amount

Silver: R 9,60 + 0,90 × R 100,00 = R 9,60 + R 0,90 = R 10,50

➢ The point of service fee for a purchase of R82,00 and a cash back of R55,00 at some point of sale.

Solution:

Mzansi: R 2,00 + R 2,00 = R 4,00 – cost unrelated to amount

Bronze: R 2,00 + R 2,00 = R 4,00 – cost unrelated to amount

Silver: R 2,90 + 0,53 × (R 82,00 + R55,00)

= R 2,90 + R 0,73 = R 3,63

NOTE R 3,63 < R 13,50 (maximum) ∴ R 3,63

Compare this with purchase of R 82,00 only

Mzansi: R 2,00 – cost unrelated to amount

Bronze: R 2,00 – cost unrelated to amount

Silver: R 2,90 + 0,53 × R 82,00 = R 2,90 + R 0,43 = R 3,33

Again NOTE R 3,33 < R 13,50 (maximum) ∴ R 3,33

3. **Drill and practice—percentage**

In order to calculate the various costs, you have to be able to calculate a percentage of a given amount. You may need to practice this skill and in particular practice the skill using the buttons on a basic calculator.

While it is important to be sure that you can determine the percentage of an amount using the % button on a calculator, you should be able to estimate % (i.e. to estimate 1 one-hundredth by thinking about the decimal representation) and also be familiar with the r100 approach.

See WORKSHEET 1 for further calculations.

Data:

The data that is supplied here is based on the rates of one of the commercial banks in South Africa as published in their rates brochure.

Type of transaction	Mzansi account	Bronze account	Silver account
Monthly fee	0,00	0,00	31,50
Minimum balance	not applicable	50,00	not applicable
Branch transactions			
Cash withdrawal	8,00	0,90%; 16,25 minimum (1)	2,90; 0,90% (2)
Cash deposit	8,00	4,00; 0,53% (2)	2,90; 0,90% (2)
Cheque deposit	0,00	0,00	0,00
Balance enquiry	4,00	2,65	2,65
Other transactions			
Stop/debit order	not available	4,70	2,90; 0,53%; 13,50 (3)
Cheque fee	not available	not available	2,90; 1,10%, 26,00 (3)

ATM transaction		Own ATM	Other ATM	Own ATM	Other ATM
Cell phone top-up	free	free	11,40	Free	9,60; 0,90% (2)
Cash withdrawal	4,00	4,70	11,40	2,90; 0,90% (2)	9,60; 0,90% (2)
Cash deposit	4,00	4,00; 0,40% (2)	7,00; 0,53% (2)	2,90; 0,90% (2)	2,90; 0,90% (2)
Cheque deposit	0,00	Free	Free	Free	Free
Balance enquiry	2,00	1,05	3,35	1,05	3,35
Point of sale purchase	2,00	2,00		2,90; 0,53%; 13,50 (3)	
Point of sale cash back	2,00	2,00			

NOTES

(1) "0,90%; 16,25 minimum" means that the transaction fee is 90% of the transaction value with a minimum fee of 16,25

(2) "2,90; 0,90%" means there is a basic transaction fee of R2,90 and an additional fee of 0,90% of the transaction value

(3) "2,90; 0,53%; 13,50" means there is a basic transaction fee of R2,90 and an additional fee of 0,53% of the transaction value, however, the maximum transaction fee is R13,50.

ENGLISH LESSON NOTES

UNISA

9 I hope we're back ***in*** *time* for the wedding.
10 I hope the wedding starts ***on*** *time*.

Exercise 3

1 I used to be *afraid* ***of*** meeting new people.
2 I thought I wasn't *good* enough ***at*** making conversation.
3 I thought they'd be *bored* ***with*** my company.
4 My mother would get *annoyed* ***with*** me ***for*** not going out more.
5 I was *upset* ***about*** that.
6 Now she's *delighted* ***with*** me for getting *engaged* ***to*** Mark.
7 He doesn't need to be *jealous* ***of*** other guys because I'm never *friendly* ***to*** any of them.
8 My friends are *amazed* ***at*** the change in me.
9 I am *delighted* ***with*** the gifts they all gave me.
10 It was *kind* ***of*** them to be so generous.

Exercise 4

1 Maggie is *crazy* ***about*** watching Big Brother.
2 She is *interested* ***in*** all the conflict between the contestants.
3 She likes it when they *shout* ***at*** each other.
4 At first the house seemed to be *crowded* ***with*** people.
5 It was *different* ***from*** what I had expected.
6 I wondered who was *responsible* ***for*** the South African version.
7 I've been quite *impressed* ***with*** it.
8 I wouldn't be *capable* ***of*** living with so many strangers for so long.
9 I feel *sorry* ***for*** everyone who is voted out.
10 Perhaps they're *tired* ***of*** their housemates by the time they go.

Exercise 5

1 A taxi *collided* ***with*** a bus and then *crashed* ***into*** a tree.
2 The bus driver *complained* ***to*** the traffic police ***about*** the taxi's smooth tyres.
3 He also said the taxi driver wasn't *concentrating* ***on*** driving.
4 The taxi driver *apologized* ***to*** him for the accident.
5 He said the taxi didn't actually *belong* ***to*** him.
6 The bus driver said the taxi driver just didn't *care* ***about*** other people.
7 He wondered if he even *believed* ***in*** God.
8 The taxi driver said that *depended* ***on*** what he meant by 'God'.
9 He said people shouldn't *rely* ***on*** God to *look* ***after*** them.
10 They should *take care* ***of*** themselves.

Exercise 6

1 *Look* ***at*** my finger – it's bleeding.
2 What *happened* ***to*** it?
3 Don't *laugh* ***at*** me if I tell you.
4 I wouldn't *dream* ***of*** doing that.
5 Well, I *dreamed* ***about*** Miranda last night.
6 Who's she? I've never *heard* ***of*** her.
7 Didn't you *hear* ***about*** what she did on Saturday?
8 I certainly didn't *hear* it ***from*** you.
9 I think you just don't *listen* ***to*** what I tell you.
10 Now you're *looking* ***for*** trouble.

Exercise 7

1 Have you been *thinking* ***about*** the offer I made you?
2 Yes, and I'm afraid I don't *think* much ***of*** it.
3 Shouldn't you *speak* ***to*** someone else ***about*** it before deciding?
4 I'd rather just *wait* ***for*** something better to come along.
5 Don't *shout* ***at*** me if that doesn't happen.
6 Let's not *discuss* ..***Ø***.. it any further.
7 Fine, but *write* ***to*** me if you change your mind.
8 Sure. Or I might *phone* ..***Ø***.. you.
9 Here's my number – that will save you *searching* ***for*** it.
10 Thanks It did *enter* ..***Ø***.. my mind to ask you for it.

Exercise 8

1 Never *ask* Gerald ***for*** money: he'll only say no.
2 No-one can *accuse* him ***of*** generosity, then.
3 No, nor *blame* him ***for*** spreading good fortune.
4 Nor *congratulate* him ***on*** making anyone happy.
5 Nor *point* a finger ***at*** him for being nice.
6 I'm determined to *borrow* something ***from*** him.
7 He's already *left* home ***for*** the station.
8 Let's *invite* him ***to*** our party on Saturday.
9 I *prefer* his wife ***to*** him.
10 Oh? Well, let me *warn* you ***about*** her.

Exercise 9

1 Maureen decided to *charge* her boss ***with*** sexual harassment.
2 Is he going to *do* anything ***about*** it?
3 He's still trying to *explain* his actions ***to*** his wife.
4 What he's done *provides* her ***with*** good reason to leave him.
5 Yes. She *regards* it ***as*** a betrayal of trust.
6 She'll *throw* the book ***at*** him in court.
7 The magistrate will *sentence* him ***to*** life without her.
8 She'll have to find someone else to *spend* money ***on*** her.
9 That *reminds* me ***of*** a good joke.
10 No thanks. May Beelzebub *protect* me ***from*** good jokes.

Exercise 10

1 The match begins ***in*** half an hour.
2 Pedro is coming on ***at*** half time.
3 The last time he played well was ***in*** 1999.
4 He says he plays best ***at*** night.
5 He does weight training ***on*** Mondays and Wednesdays and rests ***on*** Fridays.
6 He also takes it easy ***in*** summer.
7 He'll probably retire from the game ***at*** the age of 35.
8 His first game for United was ***on*** October 13 last year.

Exercise 11

1 Margaret lives ***in*** a village ***by*** the sea.
2 She's ***in*** this photograph – sitting ***on*** the grass ***at*** the bottom of the picture.
3 Who's that ***in*** the window behind her?
4 I'm not sure. The names are ***on*** the back of the photograph.
5 It was a lovely day for a photo – not a cloud ***in*** the sky.
6 Leave the photograph ***on*** the table ***at*** the front door.

Exercise 12

1 I made new friends ***during*** my holiday in Durban.
2 We stayed in a hotel ***for*** three weeks.
3 My friends lay on the beach ***while*** I swam.
4 ***By*** the time I came out they were sunburned.
5 They didn't think of using suntan lotion ***until*** it was too late.
6 We'll all be home ***by*** Monday.
7 What did you do ***while*** I was away?
8 I sometimes thought about you ***during*** the night.

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ENGLISH LESSON NOTES

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Exercise 7

Fill in the correct *preposition* after the italicized verbs below. Write Ø if no preposition should be used.

1 Have you been *thinking* … the offer I made you?
2 Yes, and I'm afraid I don't *think* much …it.
3 Shouldn't you *speak* … someone else … it before deciding?
4 I'd rather just *wait* … something better to come along.
5 Don't *shout* … me if that doesn't happen.
6 Let's not *discuss* … it any further.
7 Fine, but *write* … me if you change your mind.
8 Sure. Or I might *phone* … you.
9 Here's my number – that will save you *searching* … it.
10 Thanks. It did *enter* … my mind to ask you for it.

Exercise 8

Fill in the correct *preposition* after the object of the italicized verbs below.

1 Never *ask* Gerald … money: he'll only say no.
2 No-one can *accuse* him … generosity, then.
3 No, nor *blame* him … spreading good fortune.
4 Nor *congratulate* him … making anyone happy.
5 Nor *point* a finger … him for being nice.
6 I'm determined to *borrow* something … him.
7 He's already *left* home … the station.
8 Let's *invite* him … our party on Saturday.
9 I *prefer* his wife … him.
10 Oh? Well, let me *warn* you … her.

Exercise 9

Fill in the correct *preposition* after the object of the italicized verbs below.

1 Maureen decided to *charge* her boss … sexual harassment.
2 Is he going to *do* anything … it?
3 He's still trying to *explain* his actions … his wife.
4 What he's done *provides* her … good reason to leave him.
5 Yes. She *regards* it … a betrayal of trust.
6 She'll *throw* the book … him in court.
7 The magistrate will *sentence* him … life without her.
8 She'll have to find someone else to *spend* money … her.
9 That *reminds* me … a good joke.
10 No thanks. May Beelzebub *protect* me … good jokes.

Exercise 10

The prepositions ***at, on*** and ***in*** are used to indicate ***time***.

- ***At*** is used with **specific times** *(at 08:00/at sunset)*
- ***On*** is used with **days and dates** *(on Christmas day/on Saturday)*
- ***In*** is used with **periods of time** *(in summer/in a week's time)*

Fill in *at, in* or *on* in the spaces below.

1 The match begins … half an hour.
2 Pedro is coming on … half time.
3 The last time he played well was … 1999.
4 He says he plays best … night.
5 He does weight training … Mondays and Wednesdays and rests … Fridays.
6 He also takes it easy … summer.
7 He'll probably retire from the game … the age of 35.
8 His first game for United was … October 13 last year.

Exercise 11

The prepositions ***at, on, by*** and ***in*** are also used to indicate ***position***, in which case their meaning may be as follows:

- ***At*** means ***position*** or ***location*** (at the top/bottom/end)
- ***On*** refers to a surface, or means ***close to*** or ***along the side of*** (on the coast)
- ***By*** means ***near*** or ***next to*** or ***going past something*** (he went by my house)
- ***In*** means ***inside or at a place where something is*** (in the shade)

Fill in *at, in, by* or *on* in the spaces below.

1 Margaret lives .. a village … the sea.
2 She's … this photograph – sitting … the grass … the bottom of the picture.
3 Who's that … the window behind her?
4 I'm not sure. The names are … the back of the photograph.
5 It was a lovely day for a photo – not a cloud … the sky.
6 Leave the photograph … the table … the front door.

Exercise 12

Other prepositions for ***time*** are ***by, until, for, during and while***.

- ***By***: *not later than/before* (be here by six)
- ***Until***: *up to a time that* (he ran until he collapsed); *in* or *throughout the period before* (work until six); *before* (used with *not*)(you may not eat until you've washed your hands)
- ***For***: *how long something goes on* (he held his breath for a minute)
- ***During***: *while something else is also happening* (please don't eat popcorn during the main movie); *within the limit of a period of time* (during the day)
- ***While*** + *subject + verb: while something else is also happening* (please don't eat popcorn while the main movie is on/while I'm sitting near you)

Fill in *by, until, for, during* or *while* in the spaces below.

1 I made new friends … my holiday in Durban.
2 We stayed in a hotel … three weeks.
3 My friends lay on the beach … I swam.
4 … the time I came out they were sunburned.
5 They didn't think of using suntan lotion … it was too late.
6 We'll all be home … Monday.
7 What did you do … I was away?
8 I sometimes thought about you … the night.

Answers

Exercise 1

1 The students wanted to know the *reason* ***for*** their good marks.
2 What is the main *cause* ***of*** AIDS?
3 What can be done about the *rise* ***in*** the rate of AIDS infections?
4 The spread of AIDS has a strong *connection* ***with*** poverty.
5 Will we ever find a *solution* ***to*** the problem?
6 A lot depends on your *relationship* ***with*** your partner.
7 Try not to let anyone take *advantage* ***of*** you.
8 Never accept an *invitation* ***to*** go somewhere strange.
9 Don't give in to a *demand* ***for*** unprotected sex.
10 The *key* ***to*** your survival is in your own hands.

Exercise 2

1 My friends have decided to go ***on*** a *diet*.
2 ***In*** my *opinion* they have chosen the wrong kind.
3 They should rather go ***for*** a long *walk* every day.
4 Putting on weight doesn't happen ***by*** *accident*.
5 They think rich men are more likely to fall ***in*** *love* ***with*** thin girls.
6 I think people actually fall for each other ***by*** *chance*.
7 It could happen while you're away ***on*** a *business trip*.
8 It could happen ***at*** any *time*.

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Dear Learner

Spring has arrived and we hope that the new growth and warmer weather inspires you to find a new energy for your last few months of study this year. Now is the time to put in every bit of effort you have to succeed in your end of year exams. Today's Study Mate brings you quite a variety of study material, from English to Maths Literacy to Life Sciences and Economics exam papers. There is also a Business Studies lesson for the business-minded among you. We hope that you find this issue useful. If you can't use all the pages, pass them on to your friends! And enjoy spring - make sure you get some fresh air and exercise. You will find that you study better after a brisk walk around the block - give it a try!

ENGLISH LESSON NOTES

Prepositions

English prepositions give great trouble because a single preposition can have several different meanings, and several different prepositions can be used with the same meaning.

You can get rid of many of the mistakes you make with prepositions by learning them *in combination with the noun or adjective or verb they go with*. For example, we say

- ***on** strike, **by** accident, **in** love, **for** breakfast* (preposition + noun)
- *angry **with** someone, angry **about** something, aware **of** something, good **at** something, engaged **to** someone* (adjective + preposition)
- *collide **with**, concentrate **on**, believe **in**, apologise **to** someone **for** something (verb + preposition)*

The exercises below will tell you which combinations you need to learn. Ignore the ones you get right, but learn the others: treat the preposition as part of the word it goes with.

UNISA

Exercise 1

Fill in the correct *preposition* after the italicized words/phrases below.

1 The students wanted to know *the reason* ... their good marks.
2 What is the main *cause* ... AIDS?
3 What can be done about *the rise* ... the rate of AIDS infections?
4 The spread of AIDS has a strong *connection* ... poverty.
5 Will we ever find a *solution* ... the problem?
6 A lot depends on *your relationship* ... your partner.
7 Try not to let anyone *take advantage* ... you.
8 Never accept *an invitation* ... go somewhere strange.
9 Don't give in to *a demand* ... unprotected sex.
10 *The key* ... your survival is in your own hands.

Exercise 2

Fill in the correct *preposition* before the italicized words/phrases below.

1 My friends have decided to go ... *a diet*.
2 ... *my opinion* they have chosen the wrong kind.
3 They should rather go ... *a long walk* every day.
4 Putting on weight doesn't happen ... *accident*.
5 They think rich men are more likely to fall ... *love* ... *thin girls*.
6 I think people actually fall for each other ... *chance*.
7 It could happen while you're away .. *a business trip*.
8 It could happen ... *any time*.
9 I hope we're back ... *time* for the wedding.
10 I hope the wedding starts ... *time*.

Exercise 3

Fill in the correct *preposition* after the italicized adjectives below.

1 I used to be *afraid* ... meeting new people.
2 I thought I wasn't *good* enough ... making conversation.
3 I thought they'd be *bored* ... my company.
4 My mother would get *annoyed* ... me .. not going out more.
5 I was *upset* ... that.
6 Now she's *delighted* ... me for getting *engaged* ... Mark.
7 He doesn't need to be *jealous* ... other guys because I'm never *friendly* ... any of them.
8 My friends are *amazed* ... the change in me.
9 I am *delighted* ... the gifts they all gave me.
10 It was *kind* ... them to be so generous.

Exercise 4

Fill in the correct *preposition* after the italicized adjectives below.

1 Maggie is *crazy* ... watching Big Brother.
2 She is *interested* ... all the conflict between the contestants.
3 She likes it when they *shout* ... each other.
4 At first the house seemed to be *crowded* ... people.
5 It was *different* ... what I had expected.
6 I wondered who was *responsible* ... the South African version.
7 I've been quite *impressed* ... it.
8 I wouldn't be *capable* ... living with so many strangers for so long.
9 I feel *sorry* ... everyone who is voted out.
10 Perhaps they're *tired* ... their housemates by the time they go.

Exercise 5

Fill in the correct *preposition* after the italicized verbs below.

1 A taxi *collided* ... a bus and then *crashed* ... a tree.
2 The bus driver *complained* ... the traffic police ... the taxi's smooth tyres.
3 He also said the taxi driver wasn't *concentrating* ... driving.
4 The taxi driver *apologized* ... him for the accident.
5 He said the taxi didn't actually *belong* ... him.
6 The bus driver said the taxi driver just didn't *care* ... other people.
7 He wondered if he even *believed* ... God.
8 The taxi driver said that *depended* ... what he meant by 'God'.
9 He said people shouldn't *rely* ... God to *look* ... them.
10 They should *take care* ... themselves.

Exercise 6

Fill in the correct *preposition* after the italicized verbs below.

1 *Look* ... my finger – it's bleeding.
2 What *happened* ... it?
3 Don't *laugh* ... me if I tell you.
4 I wouldn't *dream* ... doing that.
5 Well, I *dreamed* ... Miranda last night.
6 Who's she? I've never *heard* ... her.
7 Didn't you *hear* ... what she did on Saturday?
8 I certainly didn't *hear* it ... you.
9 I think you just don't *listen* ... what I tell you.
10 Now you're *looking* ... trouble.

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