

**PTP1501
SECOND PAPER**

May/June 2018

Introduction to Plant Production

Duration 2 Hours

100 Marks

EXAMINERS :

FIRST

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SECOND

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Closed book examination.**This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.**This examination paper consists of **4 pages****ANSWER ALL THE QUESTIONS****Instructions:**

- Write your **student number** and all other information required on each answer book you use
An additional answer book may be obtained from the invigilator when the first book is full
- Read each question **carefully** before you answer it
- Use the same numbers for your answers as those used for the questions in the examination paper
- **All answers must be written in the Answer Book.**
- Make sure that your hand writing is neat and easy to read
- Read the warning about irregularities on the other side of the answer book

[TURN OVER]

QUESTION 1

- (a) Use a concise explanation to define photosynthesis (5)
- (b) What are the factors that affect the rate of photosynthesis? List them. (10)
- [15]**

QUESTION 2

Explain the following terms using short sentences

- (a) Gymnosperms (2)
- (b) Monocotyledons (2)
- (c) Dicotyledons (2)
- (d) Coleoptile (2)
- (e) Coleorhiza (2)
- [10]**

QUESTION 3

- (a) What are the functions of water in plants? Please explain (6)
- (b) How does water move from the soil right through to the moment it evaporates into the air? Please describe the process bearing in mind that this forms part of the transpiration stream (6)
- (c) Define osmosis (2)
- (d) Define diffusion. (2)
- (e) What is the difference between a turgid cell and flaccid cell? Explain. (2)

[TURN OVER]

(f) What is meant by "Embolism " Explain

(2)

[20]

QUESTION 4

Name and discuss the three basic parts that are found on seeds

(10)

[10]

QUESTION 5

Explain the functions of plant stems

(10)

[10]

QUESTION 6

Provide the name of the plant part that is used for propagation of the following plant species.

(a) Potato

(1)

(b) Strawberry

(1)

(c) Onion

(1)

(d) Ginger

(1)

(e) Maize

(1)

(f) Litchi

(1)

(g) Mango

(1)

(h) Papaya

(1)

[TURN OVER]

(i) Dry beans (1)

(j) Cabbage (1)

[10]

QUESTION 7

Describe the following using short explanations

(a) Pollination (3)

(b) Fertilization (2)

(c) Fruit set (2)

(d) Parthenocarpic fruits (3)

[10]

QUESTION 8

Use a concise explanation to define metabolism in plants (5)

[5]

QUESTION 9

What is the difference between growth and development in plants?

Please explain comprehensively (10)

[10]

TOTAL MARKS: 100