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Index number	Names
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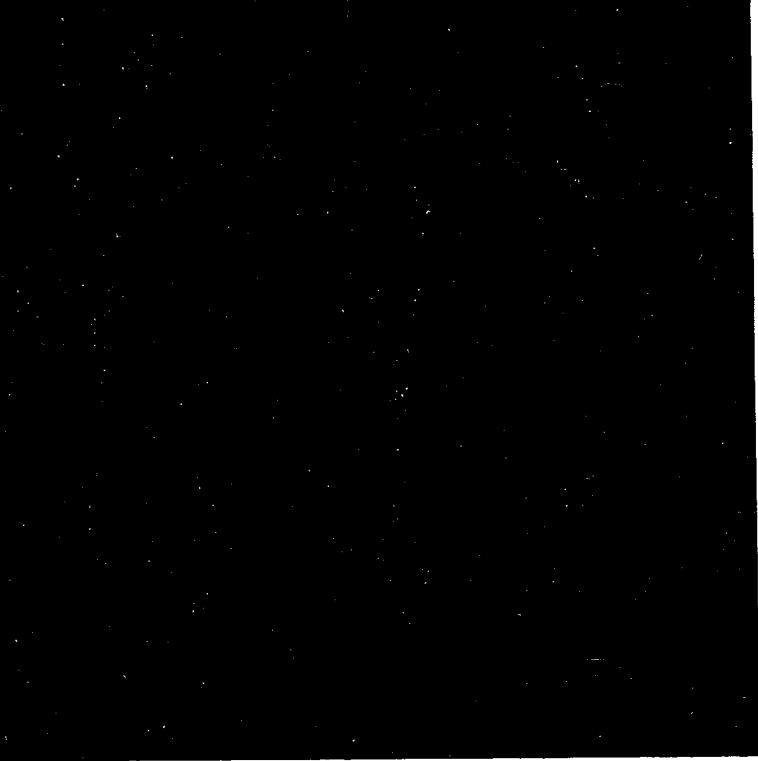
QUESTIONS and ANSWERS BOOKLET

ACADEMIC YEAR: 2020-2021

Read carefully the instructions on page (i) & (ii)

FOR THE DIRECTOR

[illegible]



TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)

1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).
2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.
3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.
4. A candidate should answer in the language in which the examination is set. (See page **(ii)**)
5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).
9. Use the last non-lined pages as draft.
10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

OPTION/TRADE: CROP PRODUCTION

SUBJECT: Plant biology, pests and diseases control

DURATION: 3 hours

INSTRUCTIONS TO CANDIDATES: PART II (Question paper)

The paper is composed of two (2) main Sections as follows:

Section I: Attempt all the Twelve (12) questions (60 marks)

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

Allowed materials:

- Ruler and square
- Calculator

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

Section I: Attempt all the Twelve (12) questions**(60 marks)**

01. How can a farmer assess or measure the intensity of a disease on the field? **(5 marks)**
02. Differentiate AT (Action Threshold) from EIL (Economic Injury Level). **(5 marks)**
03. Mention at least ten (10) tools used to identify plant pests and diseases. **(5 marks)**
04. What are the general sampling rules/guidelines in plant disease sampling? **(5 marks)**
05. Crop disease refers to an impairment or deviation of the normal state of a crop that interrupts or modifies its vital functions or physiological functions. Describe the symptoms groups of plants diseases. **(5 marks)**
06. Crop disease refers to an impairment or deviation of the normal state of a crop that interrupts or modifies its vital functions or physiological functions.
- a) What are the possible factors of crop disease?
- b) What are the transmission ways of plant virus? **(5 marks)**
07. a) What does germination mean?
- b) After giving the types of germination indicate the types of germination for the following plants: Beans, maize onion and coffee. **(5 marks)**
08. The seed is made by three (3) distinct parts. With the support of the sketch explain those parts on dicots seed, and indicate the function of each of them. **(5marks)**
09. Germination refers to the process by which the embryo in a seed develops into young plant of seedlings. Explain different stages of germination process. **(5 marks)**

10. Seed dormancy is the temporary suspension of growth of viable seeds accompanied by reduced internal metabolic activity. **(5 marks)**

a) What are the causes of seeds dormancy?

b) Dormancy of the seeds can be broken by any of different methods. State four (4) of them.

11. A plant root structure is internally composed of three major parts. Explain. **(5 marks)**

12. Match the crops below with their types of stem: **(5 marks)**

Grevillea	Woody stem
Passion fruit	Herbaceous stem
Sweet potato	Climbing stem
Paw paw	Creeping stem
Irish potato	Stem tuber

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

13. Upon entering the field, what are the general procedures must be followed by a field scout to identify pest and diseases? **(10 marks)**
14. Plant pollination is the transfer of pollen grains from the anther heads to the stigma of flowers. Therefore, this can fall in two types. **(10 marks)**
- a) What are those types? Explain each of them.
- b) How is the stigma important in pollination phenomenon?
15. Photosynthesis is an important phenomenon for the plants.
- a) Define photosynthesis. **(2 marks)**
- b) Photosynthesis can occur in specialized cell structures of plant leaves. What is their name? **(1 mark)**
- c) Photosynthesis can also take place in different stages. Explain them. **(3 marks)**
- d) The light is one of the factors that influence the rate of photosynthesis. Discuss. **(1 mark)**
- e) State any other factors of photosynthesis and its chemical reaction. **(3 marks)**
16. Differentiate wind pollinated flowers from insect pollinated flowers basing on their structure. **(10 marks)**
17. Plants may be attacked by different diseases and one of them is a viral disease. Describe the viral disease by giving its cause, propagation ways and control measures. **(10 marks)**
18. Banana bacterial wilt (BBW) it is a bacterial disease spread by diseased propagules, insects, knives and infected soils.
- a) What is the causal agent of (scientific name) BBW?
- b) What are the common symptoms of BBW and its control measures?
- c) What are factors that influence the growth of bacterial? **(10 marks)**

Do not write anything on this page !

