



### Higher National Diploma in Technology (Agriculture)

#### First Year, First Semester Examination – 2017

#### AG 1103- Crop Production Technologies –Paddy and Cereals

Instructions for Candidates:

Answer all questions

All questions do not carry equal marks

Answer part I & part II on the paper itself, & will be collected after one (01) hour

No. of questions : 07

No. of pages : 05

Time : 3hrs

Index Number.....

### PART I

(Total marks 16)

Select the correct answer and underline it.

- (i). Select the average productivity of paddy in Sri Lanka from the following?  
a) 4.6mt/ha                      b) 3.2 mt/ha                      c) 2.5 mt/ha                      d) 5.8 mt/ha
- (ii). Kurakkan is classified under family;  
a) koracaceae                      b) Sativa                      c) Graminae                      d) Plantae
- (iii). Select the pre-emergent, selective dust from of weedicide from the following,  
a) M.C.P.A                      b) 3. 4. D. P. A                      c) Benlate                      d) Diurone
- (iv). Which of the following is an Old Improved paddy variety?  
a) Suwadal                      b) MI-273                      c) H<sub>4</sub>                      d) IR<sub>8</sub>
- (v). Which of the following is a characteristics of new improved paddy variety?  
a) High fertilizer responsibility and high weed problem  
b) Short plant and droopy leaves  
c) Tall plant and droopy leaves  
d) Less photo sensitive and high pest & diseases resistance
- (vi). Select the correct labeling of parts A, B, C and D of a paddy plant in the figure given.  
a) Leaf sheath, ligule, auricle and leaf blade  
b) Leaf sheath, ligule, auricle and leaf blade  
c) Leaf blade, auricle, ligule and leaf sheath  
d) Leaf blade, ligule, auricle and leaf sheath

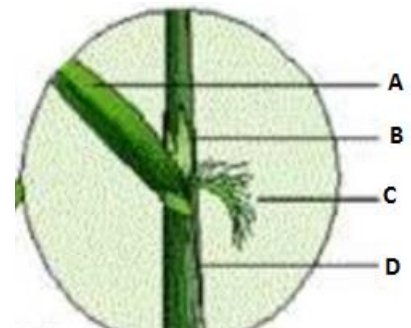


Figure 1: morphological part of the paddy

- (vii). Which of the following is a sorghum variety.
- ICR 41
  - IS2941
  - MI-212
  - None of the above is correct
- (viii). Which of the following is the correct sequence of main growth stages in the paddy?
- Tillering Phase, Ripening Phase, milking
  - Vegetative Phase, Reproductive Phase, Ripening Phase
  - Vegetative Phase, , Ripening Phase, Tillering Phase
  - Milking, flowering Phase, Reproductive Phase
- (ix). Which of the following is an effect of high temperature in the paddy plant?
- Low germination
  - Stunt growth
  - Low fertility
  - Early ripening
- (x). Which of the following is a benefit of wind in paddy cultivation?
- Crop lodging
  - Poor pollination
  - Increase in plant height
  - Maintain RH
- (xi). Select the correct statement/statements regarding **BW-450** paddy variety from the following.
- Statements:**
- It takes four and half months to complete its life span
  - It is released from Bombuwala rice research institute
  - It takes 65 days to harvest from panicle initiation.
- x** and **y** only
  - y** only
  - z** only
  - all the above are correct.
- (xii). Which of the following affects tillering ability of paddy?
- Increasing water level for weed management
  - Varietal characters
  - High density planting
  - All the above are correct.
- (xiii). Select the correct statement/statements regarding dry bed nursery.
- Statements:**
- Germinated seeds are used to establish the nursery
  - Practiced in areas where water is available
  - Seeds are broadcasted directly to the nursery beds
  - Practiced under dry condition in the up land where irrigation water is limiting
- p** and **q** only
  - s** only
  - r** and **s** only
  - all correct
- (xiv). Which of the following is a use of Finger millet.
- Animal feed
  - Making thripasha
  - Diabetic food
  - All above

- (xv) “Ruwan” is a variety belongs to;  
 a). Kurakkan                      b). Mineri                      c). Maize                      d). Sorghum
- (xvi) Select the correct seed rate of maize from the following.  
 a) 11-15 kg/ha                      b) 16-20 kg/ha                      c) 21-25kg/ha                      d) 26-30kg/ha

**Part II**

**Question No. 2.**

**(Total marks-12)**

- (i). Name two varieties of finger millet. (3 marks)  
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 .....
- (ii). Write two (02) diseases which may attack to sorghum plants. (2 marks)  
 .....  
 .....
- (iii). Name three (03) field problems related to sorghum cultivation in Sri Lanka. (3 marks)  
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- (iv). Draw a flow Diagram to show the important steps of harvesting and processing of paddy in Sri Lanka? (4 marks)  
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**Question No. 3.**

**(Total marks-12)**

(i) Write three (03) types of maize products. (3 marks)

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(ii) Name three (03) varieties of Maize. (3 marks)

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(iii) Name three (03) crop establishment methods used in paddy and give one advantage of each method (6 marks)

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### **Part III**

#### **Question No. 4.**

**(Total marks-15)**

- (i) Name 4 economic importance of paddy. (4 marks)
- (ii) What are the factors considered in selection of a paddy variety for cultivation? (5 marks)
- (iii) Compare the differences between old paddy varieties and newly improved paddy varieties. (6 marks)

#### **Question No. 5.**

**(Total marks-15)**

- (i) Name two (02) newly implemented research and extension programs related to paddy production. (2 marks)
- (ii) What do you mean by the term “ratoon crop”? (3 marks)
- (iii) What are the conditions maintained in a paddy storage? (4 marks)
- (iv) List out the advantages and disadvantages of dry bed nursery in paddy cultivation (6 marks)

#### **Question No. 6.**

**(Total marks-15)**

- (i) What are the techniques used to determine fertilizer requirement in maize? (3 marks)
- (ii) What are the disadvantages of low planting density in paddy cultivation? (4 marks)
- (iii) List out the steps of wetland preparation for paddy cultivation? (8 marks)

#### **Question No. 7.**

**(Total marks-15)**

- (i) Briefly explain the steps in preparation of pre-germinated seeds in paddy? (3 marks)
- (ii) List out the advantages and disadvantages of minimum tillage. (4 marks)
- (iii) List out the problems associated with millet production in Sri Lanka and briefly explain how these problems can be overcome? (8marks)