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## GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Third Semester – Regular) Examinations, December – 2020

### BPCAG 3030 – Principles of Agronomy

#### (Agricultural Engineering)

Time: 2 hrs

Maximum: 50 Marks

The figures in the right-hand margin indicate marks.

#### PART – A: (Multiple Choice Questions)

(1 × 10 = 10 Marks)

##### Q.1. Answer *ALL* questions

- Agronomy is derived from a Greek word ‘agros’ meaning ..... and ‘nomos’ meaning .....
  - field, crop
  - field, management
  - soil, management
  - field crop, cultivation
- ..... is considered as father of tillage.
  - Jethro Tull
  - Thomson
  - Kally
  - Darwin
- Tillage is the ..... manipulation of soil with tools and implements for obtaining conditions ideal for seed germination, seedling establishment and growth of crops.
  - physical
  - chemical
  - mechanical
  - biological
- Inserting a seed through a hole at a desired depth and covering the hole is called .....
  - broadcasting
  - dibbling
  - drill sowing
  - lone sowing
- Which crop is mostly sown following sowing behind the plough?
  - Rice
  - Green gram
  - Black gram
  - Groundnut
- The optimum depth of sowing for most of the field crops ranged between ..... cm depth.
  - 1-2
  - 2-3
  - 3-5
  - 5-8
- Under broadcasting the seed rate is ..... when compared with line sowing.
  - lower
  - higher
  - equal
  - least
- Urea is a straight fertilizer because .....
  - it is applied to the crop straight
  - plant takes the nutrient straight
  - it is dissolved in water quickly
  - it contains single nutrient
- In which case crop intensification is in both time and space dimensions?
  - Multiple cropping
  - Intercropping
  - Sequential cropping
  - Ratoon cropping
- Water use efficiency in drip irrigation is ..... %.
  - 65
  - 75
  - 85
  - 95

**PART – B: (Short Answer Questions)**

**(2 x 5 = 10 Marks)**

Q.2. Answer *ALL* questions

- a. What is zero tillage? What are its merits?
- b. Classify cropping seasons of your state with suitable examples.
- c. What is simple or straight fertilizer? Name two simple fertilizers with nutrient contents.
- d. What is meant by the critical stages of irrigation? Name critical stages of irrigation for maize.
- e. What is biological method of weed management? Give two examples.

**PART – C: (Long Answer Questions)**

**(6 x 5 = 30 Marks)**

Answer *ANY FIVE* questions

Marks

3. What is a crop? What are the principles of classifying crops? (6)
4. What is agronomy? What are the basic principles of Agronomy? (6)
5. What are the methods of sowing of field crops? Write the merits and demerits of these methods. (6)
6. What are the methods and time of application of manures and fertilizers to rice, wheat, green gram and groundnut? (6)
7. Why is water management necessary for successful crop production? What are the principles of water management? (6)
8. Briefly describe the methods of surface irrigation. What are the advantages and limitations of these methods? (6)
9. What is meant by weed management? What are the basic principles of weed management? (6)
10. Differentiate between mixed cropping and intercropping. Discuss their advantages and limitations. (6)

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