

# Faculty of Agriculture

## End Semester Examination May 2025

### AG3CO43 Rainfed Agriculture & Watershed Management

<b>Programme</b>	:	B. Sc. (Hons.)	<b>Branch/Specialisation</b>	:	AG
<b>Duration</b>	:	3 hours	<b>Maximum Marks</b>	:	50

**Note:** All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

#### Section 1 (Answer all question(s))

**Marks** CO BL  
1 1 1

**Q1.** Which type of tillage operation in dryland improves moisture conservation?

<b>Rubric</b>	<b>Marks</b>
All of these	1

- Off season shallow tillage       Deep tillage one in 2-3 years  
 Shallow tillage in red soils       All of these

**Q2.** Cultivation of crops in regions receiving more than 1150 mm rainfall is known as-

1 1 2

<b>Rubric</b>	<b>Marks</b>
Rainfed farming	1

- Rainfed farming       Dry land farming  
 Dry farming       Mixed farming

**Q3.** Crop chosen under delayed onset of monsoon is-

1 2 1

<b>Rubric</b>	<b>Marks</b>
Both a and c	1

- Pulses       Cereals  
 Oilseeds       Both (A) and (C)

**Q4.** Which type refers to the impact of drought, particularly the availability of soil moisture for crops?

1 2 2

<b>Rubric</b>	<b>Marks</b>
Agricultural Drought	1

- Meteorological Draught       Hydrological Drought  
 Agricultural Drought       Socioeconomic Drought

**Q5.** Contour bunds are recommended for-

1 3 2

<b>Rubric</b>	<b>Marks</b>
Low rainfall areas	1

- Low rainfall areas       Medium rainfall areas  
 High rainfall areas       None of these

**Q6.** Main objective of watershed management is to-

1 3 1

Rubric	Marks
All of these	1

- Protect and conserve the land resources
- Utilize the local resources effectively
- Improve the soil economic status and local residents
- All of these

**Q7.** Which among the crop is well adapted to transplanting under late onset of monsoon?

1 4 1

Rubric	Marks
Finger millet	1

- Finger millet
- Pearl millet
- Foxtail millet
- None of these

**Q8.** Legume crop gives good cover for land during rainy season is-

1 4 2

Rubric	Marks
Both a and b	1

- Cowpea
- Mung bean
- Both (A) and (B)
- None of these

**Q9.** Which is the important approach in micro watershed?

1 5 1

Rubric	Marks
All of these	1

- Soil conservation
- Soil improvement
- Storage of runoff water
- All of these

**Q10.** Which among the following erosion can not be prevented by normal tillage operations?

1 5 2

- Rill erosion
- Gully erosion
- Sheet erosion
- Splash erosion

## Section 2 (Answer all question(s))

Marks CO BL

1 1 1

**Q11.** Define rainfed agriculture.

Rubric	Marks
rainfed agriculture.	1

**Q12.** List the different types of rainfed agriculture.

2 1 1

Rubric	Marks
different types of rainfed agriculture	2

**Q13. (a)** Explain the difference between rainfed and irrigated agriculture.

5 1 2

Rubric	Marks
Any five difference	5

**(OR)**

**(b)** Discuss the problems of rainfed agriculture in India.

Rubric	Marks
Any five point- problems of rainfed agriculture in India.	5

### Section 3 (Answer all question(s))

Marks CO BL

1 2 1

**Q14.** Define drought.

Rubric	Marks
drought definition	1

**Q15.** Give the importance of mulching in conserving soil moisture in rainfed regions.

3 2 2

Rubric	Marks
the importance of mulching in conserving soil moisture in rainfed regions.	3

**Q16. (a)** Explain effect of water deficit on physio-morphological characteristics of the plants.

4 2 2

Rubric	Marks
Any four point	4

**(OR)**

**(b)** Differentiate between meteorological, hydrological, and agricultural droughts.

Rubric	Marks
Any four point	4

### Section 4 (Answer all question(s))

Marks CO BL

2 3 1

**Q17.** Define water harvesting and list its major techniques.

Rubric	Marks
water harvesting	1
list its major techniques.	1

**Q18. (a)** Describe the importance of water harvesting in sustainable agriculture.

6 3 3

Rubric	Marks
Any six point	6

**(OR)**

**(b)** Suggest and explain suitable cropping systems for efficient water utilization in arid and semi-arid regions.

Rubric	Marks
suitable cropping systems for efficient water utilization in arid	3
suitable cropping systems for efficient water utilization in semi-arid regions	3

### Section 5 (Answer all question(s))

**Marks CO BL**

**Q19.** What is contingent crop planning?

2 4 1

Rubric	Marks
contingent crop planning	2

**Q20.** How does crop management in rainfed areas differ from irrigated farming?

2 4 2

Rubric	Marks
crop management in rainfed areas differ from irrigated farming	2

**Q21. (a)** Explain the concept and objectives of contingent crop planning in rainfed agriculture.

4 4 2

Rubric	Marks
Any four point	4

**(OR)**

**(b)** Explain management of crops in rainfed areas through contingent crop planning.

Rubric	Marks
Any four point	4

### Section 6 (Answer any 2 question(s))

**Marks CO BL**

**Q22.** Explain the key principles of watershed management and their importance in sustainable agriculture.

4 5 4

Rubric	Marks
Any four point	4

**Q23.** Describe the major components of watershed management and their role in soil and water conservation.

4 5 4

Rubric	Marks
Any four point	4

**Q24.** How do biophysical and socio-economic factors influence watershed management in different regions?

4 5 4

Rubric	Marks
Any four point	4

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