Seat No: _____

PARUL UNIVERSITY COLLEGE OF AGRICULTURE

Enrolment No: _____

B.Sc. (Hons.) Agriculture Winter 2018 - 19 Examination

Semester: 1 Date: 08/12/2018 Subject Code: 20101103 Time: 10:30 am to 01:00pm **Subject Name: Fundamentals of Agronomy Total Marks: 50** Instructions 1. All questions are compulsory. 2. Figures to the right indicate full marks. 3. Make suitable assumptions wherever necessary. 4. Start new question on new page. Q.1 Do as Directed. A. Fill in the blanks. (Each of 0.5 marks) (05)1. In the term 'Agronomy' 'Agros' means ______ and 'nomos' means _____ 2. Turning into the soil green leaves and tender twigs collected from outside of the field is known as 3. ______ is an example for straight fertilizer. 4. An example for natural chelating agent is _____ 5. 'One cusec' is equals to ______ litres of water. 6. The average rainfall of India is _____ mm. 7. The rate of growth of crop per unit area (CGR) is expressed in _____(unit) 8. ______ is considered as upper limit of water availability of plants. 9. ______ is an example for complete root parasite. 10. The seeds which require light for inducing germination are called ______ **B.** Multiple choice type questions. (Each of 0.5 marks) (10)1. Nitrogen is called as ______ element. c) Secondary element a) Quantity b) Quality d) Micro element 2. Tillage is referred as _____ manipulation of soil. a) Physical c) Biological b) Chemical d) All of these 3. Bulky organic manures are characterized by _____ a) Supply of nutrients in small quantity c) No definite chemical formula b) Low analytical value d) All of the above 4. The solid N fertilizer containing highest amount of nitrogen is _____ a) Anhydrous ammonia c) Urea b) MOP d) SSP 5. Soil moisture held against the gravitational force a) Maximum water holding capacity c) Field capacity b) Permanent wilting point d) Ultimate wilting point 6. Integrated Nutrient Management includes _____. a) Recycling of organic manures c) Green manuring b) Biological nitrogen fixation d) All of the above 7. The energy status of water at hygroscopic co efficient is a) – 10000 Bar c) - 100 Barb) - 1000 Bar d) - 10 Bar 8. For drought resistant crops scheduling of irrigation at _____% of depletion of available soil moisture is adequate. a) 50 % c) 25 % b) 75 % d) 100 % 9. The % nutrient (Nitrogen) present in anhydrous ammonia is _____ a) 100 % c) 82 %

	b) 46 %	d) 18 %	
	10. The fertilizer which is/are organic in nature		
	a) Urea	c) Both A and B	
	b) Calcium cyanamide	d) None of the above	
	11. The first organ to emerge from the soil is	,	
	a) Plumule	c) Hypocotyl	
	b) Radicle	d) Mesocotyl	
	12. 'Cyprus rotundas' is an example for	weed.	
	a) Grassy	c) Sedge	
	b) Broad leaved	d) Parasitic weed	
	13 The boron content in normal water should be		
	a) < 3 ppm	c) 4-5 ppm	
	b) 5-10 ppm	d > 10 ppm	
	14 The growth analysis parameter which is simila	ar to compound interest	
	a) Leaf Area Index (I AI)	c) Crop Growth Rate (CGR)	
	a) Absolute Growth Pate (ACP)	d) Polotivo Growth Poto (PGP)	
	15 Complete removal of all live plant parts and as	d) Relative Orowin Rate (FOR)	
	a) Prevention	a) Eradication	-
	a) Prevention b) Wead control	c) Eradication	
	b) Weed control	d) Weed management	
	16. Continuous application of same herbicide will	leads succession/ cause for	
	a) Agricultural ecotypes	c) Weed shift	
	b) Chemo types	d) All of the above	
	17. Which growth phase is considered as 'grand g	rowth period'	
	a) Lag phase	c) Log phase	
	b) Decreasing growth rate	d)Senescence	
	18. The unit to express the water use efficiency (\mathbf{V}	VUE)	
	a) kg/ha mm ⁻¹	c) kg/ha	
	b) kg ha/mm	d) None of the above	
	19. The soil moisture held by oven dry soil at 98 9	% relative humidity	
	a) Maximum water holding capacity	c) Permanent wilting point	
	b) Field capacity	d) Hygroscopic coefficient	
	20. One or two flushes of weeds are destroyed by	irrigating field is known as	
	a) Soil solarization	c) Stale seedbed	
	b) Flooding	d) Pre sowing irrigation	
Q.2	Do as Directed.		
Α	Define the following. (Any five)		(05)
	1. Agriculture		
	2. Tillage		
	3. Exotic crops		
	4. Fertilizer ratio		
	5. Nutrient Efficiency ratio (NRE)		
	6. Growth and Development		
	7. Soil solarization		
В	Answer the following. (Any Five)		(05)
	1. Who has given the term 'Allelopathy'		
	2. Define intercropping		
	3. Why MOP/KCl is not suitable for crops like sugarcane and tobacco??4. What is irrigation frequency		
	5. What is Stale seedbed		
	6. Field capacity		
	7. Mention the 3 principles of weed management		
0.3	Write short notes. (Any five)		(10)
V •2	The short notes. (They have)		

- 1. 'Criteria of essentiality'
- 2. Classification of nitrogenous fertilizers with their examples.
- 3. Water Use Efficiency and its type
- 4. Water requirement and consumptive use of water
- 5. Sigmoid growth curve
- 6. Physical/mechanical weed control

Q.4 Attempt any Three/Long Questions/Example

1. What are the important roles and deficiency symptoms of N, P and K in plant metabolism?

(15)

- 2. Explain the different soil moisture constants with their energy status.
- 3. What is 'Weed management'? Mention the 3 principles of weed management and explain the physical / mechanical method of weed control.
- 4. Explain the 'Growth and Development' analysis parameters