

## Biomass Production (RDL- 700)

Minor I (SEM II, 2013-14)

Max. Marks: 22

Max. Time: 1 Hour

Note: All questions are compulsory

Q.1 (A) Draw TS and LS of a plant cell showing different layers of the cell wall/ 2

(B) Calculate a number of glucose units in one microfibril/ 2

(4)

Q.2 (A) Describe hemicelluloses 5

(B) Differentiate fibrous protein from globular and simpler proteins from conjugated proteins  
hydrophilic      hydrophobic      competition

(8)

Q.3 Justify the answers by giving valid reasons, why -

a) lignin is not degraded easily? .

b) lignified biomass is not suitable for biogas production?

c) mushroom fungi always cultivated in shade? .

d) microalgae can not be cultured in dried and darker places?

e) acidic soils are generally rich in organic matter? ✓

f) CO<sub>2</sub> is considered useful in chemical weathering (solution) of rock?

(3)

Q.4 (A) Give the mineral matter (name and percentage) in soils ✓ 3

(B) Name the GHGs covered in CDM. ✓ 1.5

(C) Name and explain the technologies seen and discussed in the Micromodel during your visit at that place. 2.5

(7)