

RDL 700 : Biomass Production

(Major Test)

Dt. :Nov.29,06.

Time:3:30to5:30P.M.

Marks: 55

Note: Attempt all questions:

- Q.1. (A)Discuss merits and demerits of Chemical fertilizers and biofertilizers. 2
- (B) What do you understand by high and low analysis type of fertilizers? 2
- (c) What is the difference between monocalcium phosphate fertilizer and dicalcium phosphate fertilizer? 2
- (D) Calculate the amount of DAP, MOP and Urea to provide 60, 50 and 40 kg. NPK respectively to a what crop (considering N and P in DAP 18 and 46% respectively, Potassium in MOP 60% and N in Urea 40%) 4
- (10)
- Q.2. Justify the following answers by giving valid reasons; why-
- (a) biogas is known a better fuel than natural gas?
- (b) mushroom spent straw (left over residue after mushroom growth) is known a better substrate than raw straw, for biogas production?
- (c) VAM or AM fungi can not be cultured on lab media?
- (d) endogeic earthworms are not suitable for vermicomposting?
- (e) the height of a windrow or heap in vermibed is generally kept 50 or 60 cm?
- (f) Blue Green Algae can not be cultured in the darker places?
- (g) the potential of *Rhizobium* can not be exploited for the enhancing the growth and yield of wheat? (7)
- Q.3. Distinguish:
- (a) Budding from grafting.
- (b) Stool layering from Air layering.

(c) Bulb from Corm

(d) Apomixis from totipotency.

(e) Stock from scion and auxins from cytokinins. (10)

Q.4. (A) Define mycorrhiza. What are the similarities and dissimilarities between ecto and endomycorrhiza?

Or

Discuss the potential applications of AM fungi. Why VAM fungi, now a days are known AM fungi? And how AM fungi are multiplied?

3

(B) Classify the earthworms on the basis of their food habit and habitate.

2

(C) Calculate the space (with dimensions of vermibed) required for the vermicomposting of cowdung of 50 cows producing 15 kg. cowdung perday assuming 40 days vermicompositing period.

3(8)

Q.5. Define/clear any five of the following;

(A) Eubacteria and archaebacteria

(B) Xenobiotics

(C) Alluvial and colluvial soils

(D) Edaphology and pedology

(E) Lithosphere

(F) *Bacillus* (5)

Q.6. Write short note on any three of the following;

(a) Medicinal & nutritional value of Honey.

(b) Value added products from Aromatic Plants.

(C) Classification of Medicinal Plants.

(d) Importance of essential oil Industry in the Indian context. (15)