Fape.3104   **Agricultural Structures and Environmental Control (2+1)**   Marks: 50
Time: 2 hours

I   **Fill in the blanks**   (10x1=10)
1. ………… fencing is more effective than plain wire fencing and not used for birds.
2. During design silo for storage of animal fodder the silage rate of removal is assumed to be ………
3. A part of the sty for housing a single or group of pigs having a covered place and an adjoining open yard is called …………
4. Stanchion barn is also called as ………
5. In cage house poultry system required dimensions of cage per bird be………………..
6. for average family of five members, the capacity of septic tank may be kept about ………
7. Bukhari type storage structure are having capacity varies from …………
   State True or False
8. Heating and humidification process is generally used in summer air conditioning
9. A floor area of 0.36 sq. m per bird is usually provided.
10. In loose housing barn, the cows are housed and milked in the same building.

II   **Write short notes on ANY FIVE of the following**   (5x2=10)
1. Explain deep litter poultry housing system.
2. Give a classification of fences and explain electric fence.
3. What you mean by CAP grain storage structure?
4. Give the details about sources of water supply to rural community.
5. What are the basic requirements of a good road?
6. What do you mean by water activity? Give its significance for storage.
7. What are the requirements of good storage structure?

III   **Answer ANY FIVE of the following**   (5x4=20)
1. What are the different types of dairy barns? Explain Stanchion barn in detail.
2. Give details about construction features of Improved Bukhari type storage structure.
3. Define composting. What are its uses and classify the process of composting?
4. Explain the moisture migration in grains stored in winter season.
5. Enlist different types of storage structures for animal feed and explain anyone.
6. Requirements of an ideal grain storage structure
7. Wheat weighing 900kg/m^3 is loaded in a circular concrete silo of 3 m internal diameter and a clear height of 8 m. the angle of internal friction for wheat is 25° and that for wheat and concrete is 24°.Applying Airy theory, calculation the maximum lateral pressure at the bottom of bin section.

IV   **Write an essay on ANY ONE of the following**   (1x10=10)
1. Explain Pusa bin for grain storage.
2. Write a note on rural roads and their construction.

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