



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 180808

Roll No.

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B. Tech.

(SEM. VIII) THEORY EXAMINATION, 2014-15
**AGRICULTURAL STRUCTURES & ENVIRONMENTAL
CONTROL**

Time : 3 Hours]

[Total Marks : 100

Note: Attempt each section.

SECTION – A

- 1 Attempt each short answer type question. (10×2=20)
- (a) What is plane of rupture? How will you decide a deep bin and shallow bin?
 - (b) What are the norms of water supply for humans and cattles?
 - (c) What are the BIS standards for piggery?
 - (d) Write short note on "Compost pit"?
 - (e) What should be the orientation of residential building in regard to sanitation?
 - (f) What is bore – hole latrine?
 - (g) List the non conventional energy sources and their utilization status under Indian scenario.

- (h) How will you calculate the electrical charges for domestic requirement?
- (i) Define pollution?
- (j) What do you mean by "balanced - Ecosystem"?

SECTION – B

- 2 Attempt any three parts of the following . (10×3=30)
- (a) What is "Acid – rain"? How this rain forms?
 - (b) Discuss the scope, importance for pollution control.
 - (c) How will you design a septic tank for a family of 10 members?
 - (d) List the water standards and explain water treatment suitable to rural community.
 - (e) What are the types of poultry houses? Explain the deep litter poultry house with figure.

SECTION — C

- 3 Attempt all parts of the following. (10×5=50)
- (a) Compare between stall barn and loose housing barn?

OR

- (a) Estimate the economical diameter and depth of silo to store the sufficient quantity of silage for a herd of 400 dairy cows having an average body weight of 450kg. The cows are fed silage for 200 days - in a year. Assume the necessary data ?
- (b) With the neat sketch of cylindrical bulk storage structure, explain cylindrical grain bin.

OR

- (b) How will you design a concrete grain bins? Discuss in detail.
- (c) What do you mean by sewerage system? Explain the design parameters in detail.

OR

- (c) What do you mean by "Sulabh Suchalaya"? For what purpose they are designed?
- (d) Write short notes on following:
 - (i) Alternate sources of energy.
 - (ii) Electrification of rural housing.

OR

What are the sources of farm power of Indian forms?
How it is helpful for mechanization?

- (e) Explain the COD (Chemical Oxygen Demand) for food plant waste?

OR

- (e) Write short notes on :
 - (i) Global warming
 - (ii) Water pollution.