

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

PAPER ID :**Roll No.**

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B.TECH.**Theory Examination (Semester-VIII) 2015-16****SEED PROCESSING****Time : 3 Hours****Max. Marks : 100****SECTION-A****1 Attempt all parts.****(10×2= 20)**

- What do you mean by processing?
- What is meant by viable seed?
- What is seed conditioning?
- What do you mean by screen aperture?
- Define equilibrium moisture content.
- Enlist the various equipments involved in mechanical drying method.
- Draw the neat sketch of drying curve.
- What points should be considered during the selection of conveying equipment?
- Why the idlers are provided in belt conveyor?
- What is difference between drying and dehydration?

SECTION-B**2 Attempt any five parts of the following****(10×5=50)**

- What is the principle of seed processing? How government supports the development of seed industries in India.
- What do you understand by ideal and actual screen? Drive an expression for effectiveness of screen.
- Explain the working principle of slurry and angular type seed treaters with neat sketch.
- A vegetable seed is stored at different temperature of 315°k & 280°k at relative humidity of 25% and 45% respectively. If Henderson equation for equilibrium moisture content is valid in both cases are as 13% (db) calculate the value of constant c and n.
- Explain the difference between seed and grain.
- What are the changes occurs in seed quality during storage? Explain in detail.
- Write short note on:-
 - Shrink packaging
 - Color separator
 - Fumigation
 - Screw conveyor
- Establish the relationship for calculation of air, heat and fuel requirement for heated air dryer.

SECTION-C**Attempt any two questions of the following.****(15×2= 30)**

- Attempt the following
 - Enlist the various types of grain storage structures. What are the requirements for a good grain storage structure? Discuss the constructional detail of 'Pusa-Bin'.
 - What are the principles that should be considered during the selection of a conveying system? Design a belt conveyor for handling capacity of 60 m³ /hr.
- Attempt the following
 - Briefly explain the working principle of bucket elevator with neat sketch.
 - Explain the different types of packaging material. What do you mean by labeling and printing?
- Attempt the following
 - Discuss on precautions that should be taken during seed treatment. Also explain the different factors which deteriorate the quality of seed.
 - Discuss on site selection and design consideration for seed plant layout construction

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