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## MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE SEMESTER END EXAMINATION

B.Sc. (Agri.)

<b>Semester</b> : VI (New)	<b>Term</b> : II	<b>Academic Year</b> : 2010-11
<b>Course No.</b> : ENGG 364	<b>Title</b> : Protected Cultivation and Post-harvest Technology	
<b>Credits</b> : 2 (1+1)	<b>Time</b> : 09.00 to 11.00	<b>Total Marks</b> : 40
<b>Day &amp; Date</b> : Tuesday, 26.04.2011		

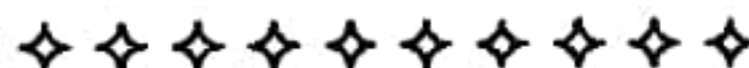
- Note :**
1. Solve ANY EIGHT questions from SECTION "A".
  2. All questions from SECTION "B" are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagrams wherever necessary.

### SECTION "A"

- Q.1 What is drying? Give the importance of drying.
- Q.2 Enlist the different types of grain storage structures.
- Q.3 What is seed processing? Give general sequence of seed processing operations.
- Q.4 Define cleaning. Explain in short the vibratory air screen cleaner.
- Q.5 What are the advantages of using greenhouse?
- Q.6 Classify the greenhouses based on shape, utility, constructions and covering material.
- Q.7 Enumerate the properties of an ideal greenhouse covering material.
- Q.8 Enlist the properties of growth media.
- Q.9 Explain in short the inclined belt draper.
- Q.10 Write in short on Hammer mill.

### SECTION "B"

- Q.11 Define :
  - 1) Grading
  - 2) Greenhouse
  - 3) Ventilation
  - 4) Food adulteration
- Q.12 Fill in the blanks:
  - 1) The \_\_\_\_\_ mark on any article of food is a guaranty of Bureau of Indian standards for that commodity.
  - 2) The Lousiana State University dryer is a continuous flow \_\_\_\_\_ type of dryer.
  - 3) The light intensity is measured by the international unit known as \_\_\_\_\_.
  - 4) For most crops, the acceptable range of relative humidity in greenhouse is between \_\_\_\_\_ to \_\_\_\_\_ percent.



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## MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2011-12
Course No. : ENGG 364	Title : Protected Cultivation and Post-harvest Technology	
Credits : 2 (1+1)		
Day & Date : Monday, 30.04.2012	Time : 09.00 to 11.00	Total Marks : 40

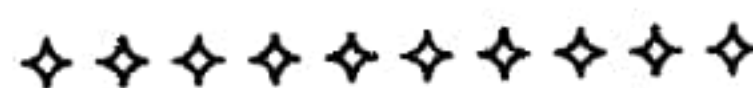
- Note :**
1. Solve ANY EIGHT questions from SECTION "A".
  2. All questions from SECTION "B" are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagrams wherever necessary.

### SECTION "A"

- Q.1 What are the factors to be considered in site selection and orientation of greenhouse?
- Q.2 Explain the construction and working of L.S.U. dryer with the help of neat diagram.
- Q.3 What is greenhouse effect? What are the advantages of using Greenhouse?
- Q.4 Write short notes on plant response to greenhouse (Any Two)
- 1) Relative Humidity
  - 2) Ventilation
  - 3) Temperature
- Q.5 Give the three important rules of application of irrigation water and explain.
- Q.6 Enlist different types of storage structures for food grains.
- Q.7 Explain Kothar type of storage structure with neat sketch.
- Q.8 What is seed processing? State the working principles of specific gravity separator.
- Q.9 Explain the magnetic separator with neat sketch.
- Q.10 What is drying? Give the importance of drying.

### SECTION "B"

- Q.11 Define the following terms.
- 1) Greenhouse
  - 2) Drip Irrigation
  - 3) Moisture Content
  - 4) Cleaning
- Q.12 State True or False.
- 1) The distance of 120 to 150 m between pad and fans is best.
  - 2) The most important factor in determining the quality of processed fruit and vegetable products is grading.
  - 3) In deep bed drying the depth of the grain bed is less than 20 cm.
  - 4) Wood and bamboo are generally used for low cost polyhouses.



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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2012-13
Course No. : ENGG 364	Title : Protected Cultivation and Post-harvest Technology	
Credits : 2 (1+1)		
Day & Date : Thursday, 25.04.2013	Time : 09.00 to 11.00	Total Marks : 40

- Note :
1. Solve ANY EIGHT questions from SECTION "A".
  2. All questions from SECTION "B" are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 Define Greenhouse. Write short note on 'Greenhouse Effect'.
- Q.2 Enlist the covering materials used for greenhouse. State the properties of an ideal greenhouse covering material.
- Q.3 Give the detail classification of greenhouses based on shape, utility, construction and covering material.
- Q.4 Enlist types of cooling system used in greenhouse. Explain evaporative cooling system.
- Q.5 List out the different irrigation system used in green house. Explain drip irrigation in detail.
- Q.6 Enumerate the advantages of drying of grain.
- Q.7 Enlist the different types of grain storage structures. Explain Kothar type storage structure in brief.
- Q.8 Explain the construction and working of LSU dryer with the help of neat diagram.
- Q.9 State the working principle of specific gravity separator.
- Q.10 Enlist the different quality standards used for food quality. Write short note on 'The Agmark Standards'.

SECTION "B"

- Q.11 Fill in the blanks.
- 1) The optimum pH for greenhouse root media ranges from \_\_\_\_\_ to \_\_\_\_\_.
  - 2) Under normal conditions, CO<sub>2</sub> level in atmosphere exists as \_\_\_\_\_ ppm, however plants in greenhouse drawdown CO<sub>2</sub> level to \_\_\_\_\_ ppm.
  - 3) In \_\_\_\_\_ mill, the grain size is mainly reduced by impact force.
  - 4) The capacity of Morai type storage structure varies from \_\_\_\_\_ to \_\_\_\_\_ tones.
- Q.12 State True or False.
- 1) Quonset design is used when the greenhouse is placed against the side of an existing building.
  - 2) Cation Exchange Capacity (CEC) and bulk density are the properties of root media.
  - 3) The spiral separator separates the material on the basis of relative length of food grains.
  - 4) HACCP is a system that leads to production of microbiologically safe foods.



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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: VI (New)	Term	: II	Academic Year	: 2013-14
Course No.	: ENGG 364	Title	: Protected Cultivation and Post-harvest Technology		
Credits	: 2 (1+1)	Time	: 09.00 to 11.00	Total Marks	: 40
Day & Date	: Monday, 05.05.2014				

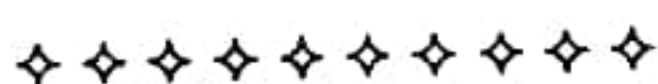
- Note :
1. Solve ANY EIGHT questions from SECTION "A".
  2. All questions from SECTION "B" are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 What are the advantages of using greenhouse?
- Q.2 Classify the greenhouse based on shape, utility, construction and covering material.
- Q.3 Enlist the different types of cooling system used in greenhouse. Explain fan and pad cooling system in detail.
- Q.4 What are the different irrigation systems in greenhouse? Explain overhead sprinklers system in detail.
- Q.5 Enumerate the properties of an ideal greenhouse covering material.
- Q.6 Enlist the different types of grain storage structure. Explain Bukhari type storage structure in brief.
- Q.7 Explain the importance of drying.
- Q.8 Enlist the different types of separator. Explain inclined draper belt separator in detail.
- Q.9 Give the general sequence of seed processing operations.
- Q.10 Enlist the different types of dryer. Explain flat bed dryer in detail.

SECTION "B"

- Q.11 Define the following terms.
- 1) Cleaning
  - 2) Ventilation
  - 3) Greenhouse effect
  - 4) Food adulteration
- Q.12 Fill in the blanks.
- 1) \_\_\_\_\_ separator separates the grain as per their roundness.
  - 2) The light intensity is measured by the international unit known as \_\_\_\_\_.
  - 3) In \_\_\_\_\_ mill, the grain size is reduced by shearforce.
  - 4) The ratio for nitrogen to carbon should be \_\_\_\_\_ for decomposition of organic matter.





MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2014-15
Course No. : ENGG 364	Title : Protected Cultivation and Post-harvest Technology	
Credits : 2 (1+1)		
Day & Date : Friday, 15.05.2015	Time : 09.00 to 11.00	Total Marks : 40

- Note :
1. Solve ANY EIGHT questions from SECTION "A".
  2. All questions from SECTION "B" are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagrams wherever necessary.



SECTION "A"

- Q.1 Give the classification of Green house on the basis of shape and explain Saw Tooth Type Greenhouse.
- Q.2 What is meant by Green house for active cooling and Green house for active heating?
- Q.3 What are the advantages of using the greenhouse for growing crops under controlled environment?
- Q.4 What are the factors to be considered while selecting the greenhouse covering? Explain the properties of an ideal greenhouse selective covering material.
- Q.5 Explain the Pipe framed greenhouse structure in brief with neatly labeled sketch.
- Q.6 Write in brief
  - 1) Inclined draper
  - 2) Magnetic Separator
- Q.7 Explain in brief the Hammer mill with neat sketch.
- Q.8 Write short notes on
  - 1) CAP storage structure
  - 2) Bunker storage structure
- Q.9 Explain in brief the spiral separator with neat sketch.
- Q.10 Explain in brief LSU dryer and draw neat sketches.

SECTION "B"

- .11 State True or False.
  - 1) In general, the percentage of carbon dioxide in the atmosphere is 345%.
  - 2) The value of percentage moisture on dry basis is higher than on wet basis.
  - 3) Uneven span type greenhouse is constructed on plain land.
  - 4) The fan-and-pad type cooling system can lower the temperature of incoming air up to 100 % of the difference between the dry and wet bulb temperatures.

- .12 Match the following pairs.

"A"

"B"

- |                               |                      |
|-------------------------------|----------------------|
| 1) Fluidized bed drying       | a) Size reduction    |
| 2) Jaw crusher                | b) Density           |
| 3) Plenum chamber             | c) Terminal velocity |
| 4) Specific gravity separator | d) Dryer             |



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