



# HINDU COLLEGE, GUNTUR – 522 003

(Re-accredited by NAAC as Grade 'A')

Guntur,  
04-01-2018

From  
The Principal,  
Hindu College,  
Guntur.

To  
The Registrar  
Acharya Nagarjuna University,  
Nagarjuna Nagar.

Respected Sir,

Sub: Submission of III B.Sc. (VI Semester) Agriculture Model Papers –  
CBCS pattern – Regarding.

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I am herewith submitting the proposed model papers for III B.Sc. (VI semester)  
Agriculture students under CBCS pattern with effect from 2017-18 academic year.  
I request you to kindly verify and approve.

## **Enclosures:**

1. III B.Sc. Semester VI Paper VII(B) - Elective  
Manures, Fertilizers and Soil fertility management
2. Paper VIII B - Cluster Electives (B)
  - i. Paper VIII B(1) - GENETICS AND PLANT BREEDING
  - ii. Paper VIII B(2) -ORGANIC FARMING AND SUSTAINABLE  
AGRICULTURE
  - iii. Paper VIII B(3) - SOCIAL AND FARM FORESTRY

Thanking you, sir.

Yours faithfully,

(Dr. Y. GOWRI SANKAR)

Principal (PAC)  
HINDU COLLEGE  
GUNTUR

**III B.Sc. SEMESTER-VI Agriculture**  
**Elective-II**  
**Paper VII(B) – Manures, Fertilizers and Soil fertility management**

Time: 3 hours

Max. Marks: 75

Section – A (5 X 5 = 25 marks)

Answer any **FIVE** of the following.

(Short questions)

1. Write short notes on bulky organic manures.
2. Write the classification of phosphatic fertilizers with examples and their use.
3. Give a brief note on the suitability of different nitrogenous fertilizers for different soils and crops.
4. Write the principle of manufacture of any potassic fertilizer.
5. Straight Vs Complex fertilizers.
6. What is unit value of fertilizers and how will you evaluate the fertilizers.
7. Soil Acidity.
8. Outline the different methods of applying fertilizers to soil.

Section – B (5 X 10 = 50 marks)

Answer any **ALL** of the following.

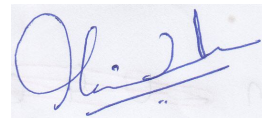
(Essay type questions)

9. a. What are nitrogenous fertilizers and write the manufacture of urea, its properties and use.  
(or)  
b. Discuss the importance and scope of organic farming.
10. a. What are phosphatic fertilizers? Write its classification and manufacture, properties and use of superphosphate.  
(or)  
b. Write an essay on the manufacture of any complex fertilizer its properties and use.



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11. a. What are the common agricultural liming materials? Evaluate the efficiency of liming materials.  
(or)  
b. What are the common soil amendments for alkali soils and write the action of soil conditioners.
12. a. Discuss the general principles involved in selecting the proper time for application of fertilizers.  
(or)  
b. What is optimum fertilizer dose and write the factors affecting optimum fertilizer dose.
13. a. Classify diagnostic methods for soils and crops and explain it.  
(or)  
b. Define secondary nutrients, materials supplying micronutrients and chelating compounds of micronutrients.



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**III B.Sc. SEMESTER-VI Agriculture**  
**Cluster Elective-B**  
**Paper VIII B(1) - GENETICS AND PLANT BREEDING**

Time: 3 hours

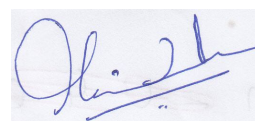
Max. Marks: 75

Section – A (5 X 5 = 25 marks)  
Answer any **FIVE** of the following.  
(Short questions)

1. Achievements of Plant Breeding.
2. Vegetable reproduction.
3. Domestication
4. Germplasm
5. Acclimatization
6. Heterosis
7. Centres of diversity
8. Estimation of heterosis

Section – B (5 X 10 = 50 marks)  
Answer any **ALL** of the following.  
(Essay type questions)

9. a. What is apomixes? Explain any two methods and add a note on significance of Apomixis.  
(or)  
b. Write an essay on self incompatibility and mention its application in crop improvement
10. a. What are different male sterility types and add a note on its utilization in crop improvement.  
(or)  
b. What are different genetic resources and add a note on conservation.



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11. a. Write an essay on systems of mating.

(or)

b. Illustrate components of variability and heritability.

12. a. Describe the Puraline theory.

(or)

b. Write an essay on methodology and advantages of back cross breeding.

13. a. Describe the different types of recurrent selection schemes.

(or)

b. Describe different types of hybrids.



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**III B.Sc SEMESTER-VI Agriculture**  
**Cluster Elective-B**  
**Paper VIII B(2) - Organic Farming and Sustainable Agriculture**

Time: 3 hours

Max. Marks: 75

Section – A (5 X 5 = 25 marks)

Answer any **FIVE** of the following.

(Short questions)

1. Concept of organic farming and its development.
2. What is biodynamic farming?
3. State a brief note on organic farming systems.
4. Write about Green Manuring.
5. Bio-fertilizer.
6. Livestock component in organic farming.
7. Terrace Farming.
8. Organic Weed Management.

Section – B (5 X 10 = 50 marks)

Answer any **ALL** of the following.

(Essay type questions)

9. a. Explain Conventional Farming Vs Organic Farming.  
(or)  
b. Write the principles of organic farming and explain the benefits of organic farming.
10. a. Write an essay on composting methods and vermicomposting.  
(or)  
b. Explain land preparation and mulching in organic farming.
11. a. Write the organic crop production methods of any vegetable.  
(or)  
b. Write the policies and incentives of organic production.



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12. a. Discuss about the income generative activities in an organic farm.

(or)

b. Write about Farm Inspection & Certification.

13. a. Write about the basic concept of economics, demand & supply of an organic farm.

(or)

b. Write about organic amendments, sludges and biogas.



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**III B.Sc SEMESTER-VI Agriculture**  
**Cluster Elective-B**  
**Paper VIII B(3) - SOCIAL AND FARM FORESTRY**

Time: 3 hours

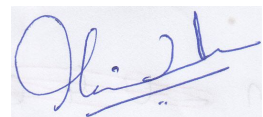
Max. Marks: 75

Section – A (5 X 5 = 25 marks)  
Answer any **FIVE** of the following.  
(Short questions)

1. Write a notes on “JFM”.
2. Write briefly on “Protein Bank”.
3. Define and Write on the following.
  - a. Home Gardens
  - b. Aqua Forestry
4. Write a note on “Criteria of good Agroforestry Design”.
5. Write short notes on “NTFP”.
6. Write briefly notes on “Classification of Agroforestry Systems”.
7. Write Silvicultural practices for “Pungam”.
8. Describe short notes on “Taungya System”.

Section – B (5 X 10 = 50 marks)  
Answer any **ALL** of the following essay type questions

9. a. Describe the “Role of Forestry”.  
(or)
  - b. What are the differences between Social Forestry and Agro forestry?  
What are the benefits of agro forestry?
10. a. Explain Agrisilvicultural Systems? Mention any five of them.  
(or)
  - b. Describe the classification of Agro forestry systems.



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11. a. Explain Planning in Agro forestry, Diagnosis and design?

(or)

b. What are Agrisilvipastural systems and other systems?

12. a. Describe the Agro forestry systems for any Four agroclimatic zones in A.P.?

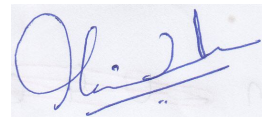
(or)

b. Explain community forestry and evolution of social forestry concepts?

13. a. Write about the practices for Teak and Eucalyptus briefly?

(or)

b. Describe the practices for “Neem”.



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