

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : AGRO 3610	Title : Farming Systems and Sustainable Agriculture	
Credits : 2 (1+1)		
Day & Date : Monday, 02.05.2016	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 different basis for classification of farming systems? Explain any one of them.
- Q.2 Explain advantages of Integrated Farming Systems.
- Q.3 Give classification of cropping system and explain monoculture.
- Q.4 What are the basic principles of organic farming?
- Q.5 Explain factors affecting ecological balance.
- Q.6 Write in short about the basic components of organic farming.
- Q.7 What are the various non-monetary inputs in agriculture?
- Q.8 Write short note on goals of sustainable agriculture.
- Q.9 What problems arise due to use of poor quality water for irrigation?
- Q.10 Write about concept of LEIA

SECTION "B"

- Q.11 Define the following terms.
 - 1) Afforestation
 - 2) Strip inter-cropping
 - 3) Agrisiviculture
 - 4) Allelopathy
- Q.12 Fill in the blanks
 1. *Neochitina eichorniae* weevil is used against _____.
 2. Murrah is a important _____ breed of buffalo.
 3. Catla is mainly a _____ feeder.
 4. NWDB refers to _____.



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SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : AGRO 3611	Title : Organic and Rainfed Farming	
Credits : 2 (1+1)	Time : 09.00 to 11.00	Total Marks : 40
Day & Date : Tuesday, 26.04.2016		

- 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 IPM? Give its importance in organic farming.
- Q.2 What is drought? What are the mechanisms plants adopt to overcome drought and describe any one of them.
- Q.3 Enlist the different organic sources of plant nutrients.
- Q.4 Differentiate between organic farming and conventional farming.
- Q.5 Elaborate scope of organic farming. What are the constraints of organic farming?
- Q.6 Describe the recycling of crop residues in organic farming.
- Q.7 What is contingent crop planning? Suggest contingency crop plan under delayed monsoon.
- Q.8 What is water harvesting? Discuss in short the technique of water harvesting and recycling of runoff water.
- Q.9 Explain the term dry farming, dryland farming and rainfed farming. Write down the characteristics of rainfed farming.
- Q.10 Write short notes on (Any two).
- 1) Green manuring
 - 2) Antitranspirant
 - 3) Mulching

SECTION "B"

- Q.11 Fill in the blanks
- 1) NADEP is the method of _____.
 - 2) The father of organic farming is _____.
 - 3) *Parthenium hysterophorus* weed can be controlled by _____ insect.
 - 4) The biological fungicide is _____.
- Q.12 Give full form of the following.
- 1) IFOAM
 - 2) APEDA
 - 3) NPOP
 - 4) VAM

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : ASDS 364	Title : Sheep and Goat Production	
Credits : 2 (1+1)		
Day & Date : Tuesday, 03.05.2016	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 utility classification of goat breeds with two examples each. Describe in detail Osmanabadi breed.
- Q.2 Enlist the mating systems in sheep and goat followed in India. Explain in detail flock system.
- Q.3 What is wool? Give the systems of grading of wool and explain American system.
- Q.4 Give the importance of sheep and goat production in Indian economy.
- Q.5 What do you mean by culling? Discuss different reasons for culling in sheep and goat.
- Q.6 What are the different methods of slaughtering? Explain in brief the halal method of slaughtering.
- Q.7 Discuss the care and management of kid.
- Q.8 Enlist the different feeding systems of goat. Explain intensive feeding system.
- Q.9 Write short notes on (Any two).
- 1) Flushing
 - 2) Housing of sheep
 - 3) Vaccination of sheep and goat
 - 4) Care and management of rams
- Q.10 Classify the diseases of sheep and goat and give the control measures of ecto-parasites.

SECTION "B"

- Q.11 Define the following terms.
- 1) Lambing
 - 2) Docking
 - 3) Topping
 - 4) Dipping
- Q.12 State True or False.
1. Saanen goat breed is known as milk queen in the world.
 2. Angora goat is famous for mohair production.
 3. Goat is called as weed destroyer.
 4. Hissardale breed of sheep is evolved in India.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : BOT 367	Title : Principles of Seed Technology	
Credits : 3 (2+1)		
Day & Date : Monday, 25.04.2016	Time : 09.00 to 12.00	Total Marks : 80

- 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 Elaborate in brief the role of seed production organizations in India
- Q.2 What is seed certification? Give basic requirements of seed certification and explain the procedure of seed certification.
- Q.3 a) What are the causes of deterioration in seed quality of self and cross pollinated crops
b) What are the precaution needed to avoid deterioration at different stages of seed multiplication and maintenance of genetic purity?
- Q.4 Define Seed Quality. What are the characteristics of good Seed? Explain classes of improved seed.
- Q.5 Discuss main principles of seed processing and enlist various steps in seed processing. What are the advantages of seed treatment? Discuss on kinds of seed treatment.
- Q.6 Describe in brief about maintenance of nucleus and breeder seed of inbred line.
- Q.7 Define seed marketing. Describe marketing structure with suitable diagram illustrating central marketing cell.
- Q.8 Explain in brief various factors to be considered in planning and designing a seed processing plant.
- Q.9 Enlist types of storage and principles of storage. Explain in brief factors affecting seed longevity in storage.
- Q.10 Write short notes on (Any two)
- 1) New seed Policy
 - 2) The Indian Seeds Act
 - 3) Role of seed technology

SECTION "B"

- Q.11 Define the following terms
- 1) Seed viability
 - 2) Seed Vigour
 - 3) Seed Processing
 - 4) Nucleus seed
 - 5) Isolation
 - 6) Inert matter
 - 7) Variety
 - 8) Seed Testing
- Q.12 Give full forms of the following
- 1) ICIA
 - 2) AOSCA
 - 3) CSTL
 - 4) PPVFRA
 - 5) SVRC
 - 6) CSCB
 - 7) SSCB
 - 8) CVT

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SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : ECON 365	Title : Agri-Business Management	
Credits : 2 (1+1)		
Day & Date : Wednesday, 27.04.2016	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 Agri-Business and explain different sectors of Agri-Business.
- Q.2 Define planning? State and explain the steps in planning process.
- Q.3 What is Management? Discuss the importance of good management.
- Q.4 Explain Mallovs theory hierarchy of motivation.
- Q.5 State the types of agro based industries? Explain the phases in project cycle.
- Q.6 What do you mean by marketing? Discuss the 4 P's of marketing.
- Q.7 Write in short about market segmentation and methods of market segmentation.
- Q.8 Explain profit and loss statement.
- Q.9 Give the difference between marketing and selling.
- Q.10 What is project? Describe the methods of project appraisal.

SECTION "B"

- Q.11 Define the following terms.

- | | |
|---------------|----------------|
| 1) Directing | 2) Staffing |
| 3) Organizing | 4) Controlling |

- Q.12 Fill in the blanks

- 1) Liability in case of partnership is _____
- 2) Majority of sugar factories are working on _____ basis in Maharashtra.
- 3) _____ form of business organization is known as corporation.
- 4) Agricultural marketing involves the movement of produce from producer to _____.



MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: VI (New)	Term	: II	Academic Year	: 2015-16
Course No.	: ENGG 364	Title	: Protected Cultivation and Post-harvest Technology		
Credits	: 2 (1+1)				
Day & Date	: Saturday, 30.04.2016	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 green house. Explain the green house effect.
- Q.2 Determine the total energy required to raise the dry clay soil temperature from 40°C to 82°C in a effective area of 0.2 ha upto a depth of 0.6 m for 30 min. Assume density of root media = 1458kg/m³, specific heat (Cp) = 880J/kg°C.
- Q.3 Classify the green houses on various basis and explain in detail about saw tooth type
- Q.4 Enlist various irrigation methods used in green houses and explain with figure the Perimeter Watering
- Q.5 Enlist the various cooling systems used in green houses and explain high and low pressure mist system
- Q.6 Explain in detail the Baffle dryer with neat diagram.
- Q.7 Classify the different types of food grain storage structures. Explain in detail about the Bunker storage structure.
- Q.8 Explain the Magnetic Separator with neat sketch.
- Q.9 Classify the different machinery used for size reduction and explain Jaw crusher with neat figure.
- Q.10 Explain in detail about grading of vegetables.

SECTION "B"

- Q.11 Fill in the blanks.
- 1) The percentage of carbon dioxide in the atmosphere is approximately _____.
 - 2) The visible spectrum of light useful in photosynthesis, have wave length ranging from _____ nm.
 - 3) In _____ mill, the grains are reduced by shear force.
 - 4) Roller grader is suitable for _____ fruits.
- Q.12 State True or False
- 1) Ultra violet light is available in the short wave length of less than 400 nm.
 - 2) Trees should be 40.5 m away from the greenhouse, where snow is expected.
 - 3) In ball mill the centrifugal force is important in size reduction.
 - 4) The holding capacity of flat bed type dryer per batch ranges from 1-2 tonnes.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : ENTO 364	Title : Introductory Nematology	
Credits : 2 (1+1)	Time : 09.00 to 11.00	Total Marks : 40
Day & Date : Wednesday, 04.05.2016		

- 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 nematode and explain biology of nematode.
- Q.2 Classify nematodes based on the place of plant where they attack/feeding with example.
- Q.3 Enlist general characteristics of plant parasitic nematodes
- Q.4 Write in detail about symptoms of damage caused by plant parasitic nematodes with one example.
- Q.5 Explain in detail the digestive system of nematodes.
- Q.6 Enlist the different methods of nematode management and explain the physical method of nematode management.
- Q.7 Explain the role of nematodes as a vector in transmission of plant diseases.
- Q.8 Write a short note on (Any two)
- 1) Historical events in nematology in India
 - 2) Treatment types of nematicides
 - 3) Excretory system of nematode
- Q.9 Explain the characteristics and symptomatology of genus *Ditylenchus* and *Heterodera*.
- Q.10 Explain in brief the economic importance of nematodes in agriculture.

SECTION "B"

- Q.11 Do as directed
- a) Define agricultural nematology.
 - b) Name the reference book on nematology along with author.
 - c) The largest plant parasitic nematode is _____.
 - d) The male nematode with two testes is called _____.
- Q.12 Match the pairs
- | 'A' | 'B' |
|--------------------------|----------------------------------------|
| 1) Root galling in crop | a) Father of American Nematology |
| 2) Hot water treatment | b) <i>Rotylenchulus reniformis</i> |
| 3) Kidney shaped females | c) Physical control method of nematode |
| 4) N.A. Cobb | d) Meloidogyne |

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : EXTN 364	Title : Entrepreneurship Development and	
Credits : 2 (1+1)	Communication Skills	
Day & Date : Friday, 29.04.2016	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 project. State the aspects of project formulation?
- Q.2 State and explain the incentives for promotion of small scale industries provided by the government.
- Q.3 What is Entrepreneurship Development Programmes? Explain its functions.
- Q.4 What do you understand by SWOT analysis? Explain in brief.
- Q.5 Define entrepreneur. Explain characteristics of entrepreneur?
- Q.6 Explain in brief importance of monitoring and follow-up of entrepreneurship development programmes.
- Q.7 The stock of a product is exhausted with the retailer. Write an inquiry letter to the whole sale dealer about availability of the product.
- Q.8 What is entrepreneurial behaviour? Explain the factors affecting entrepreneurial behaviour.
- Q.9 Define advertisement. Explain the type of advertisement and give the specification of good advertisement.
- Q.10 Write short notes on (Any two).
 1. Role of entrepreneur
 2. Market Survey
 3. Identifying potential entrepreneur.

SECTION "B"

- Q.11 Give full forms of the following:
 - 1) EDPs
 - 2) NABARD
 - 3) SEZ
 - 4) SMEs
- Q.12 Define the following terms :
 - 1) Monitoring
 - 2) Motivation
 - 3) Feedback
 - 4) Planning

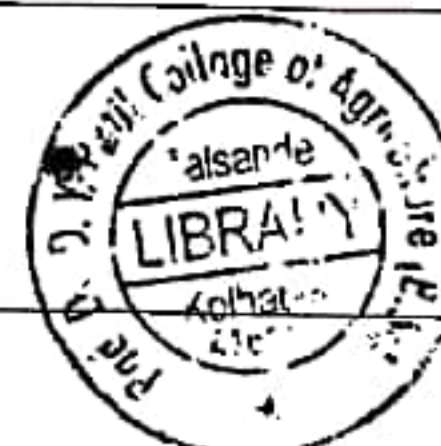
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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2015-16
Course No. : HORT 364	Title : Post-Harvest Management and Value Addition of Fruits and Vegetables	
Credits : 2 (1+1)		
Day & Date : Thursday, 28.04.2016	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 Enlist the modern methods of storage of fruits and vegetables. Write in brief about controlled atmospheric storage.
- Q.2 What do you mean by horticultural maturity? How to judge the maturity of custard apple and onion?
- Q.3 Define ripening. Describe in brief the biochemical changes which occur during ripening of fruits.
- Q.4 Enlist methods of preservation of fruits and vegetables. Describe preservation by chemical preservatives.
- Q.5 State the different pre-harvest factors affecting post harvest quality of fruits and vegetables. Explain in brief about environmental factors.
- Q.6 What is regulation of ripening? Discuss in brief advantages of accelerated ripening and chemicals used to accelerate ripening.
- Q.7 Write short notes on (Any two).
- 1) Freeze drying.
 - 2) Cushioning in packaging of fruits and vegetables.
 - 3) Modified atmospheric packaging
- Q.8 State different methods of pre-cooling and discuss in brief about the vacuum cooling method.
- Q.9 Enlist the factors responsible for spoilage of food. Describe in brief enzymatic spoilage.
- Q.10 Explain in brief the points to be considered while establishing the fruit and vegetable processing unit.

SECTION "B"

- Q.11 Do as directed
- 1) Expand the acronym CIPHET.
 - 2) How sugar act as a preservative?
 - 3) State the object of blanching.
 - 4) Why KMS is not used in naturally coloured juices?
- Q.12 Define the following terms.
- 1) Dehydration
 - 2) Springer
 - 3) Pre-packaging.
 - 4) Climacteric period

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