

Printing Pages: 2

Paper Code: AG-507

C

(SVSU:2025-26/R)

EnrollmentNo.

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Program Name – B.Sc. Agriculture

5th Semester /3rd Year Examination

Subject Code -AG-507

Subject– Production Technology for Fruit and Plantation Crops

[Time :03:00Hours]

[Max. Marks :75]

Note : 1. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs)

[01×15=15]

- I** Pomegranate fruit cracking is caused due to
(a) Irregular watering (b) Pests (c) Nitrogen excess (d) Pruning
- II** The edible part of pineapple is
(a) Fleshy bracts (b) Pericarp (c) Endocarp (d) Seeds
- III** Date palm fruit matures in
(a) 200 days (b) 100 days (c) 300 days (d) 150 days
- IV** Pineapple contains enzyme
(a) Bromelain (b) Papain (c) Trypsin (d) Catalase
- V** The fruit type of guava is
(a) Drupe (b) Berry (c) Pome (d) Capsule
- VI** The main pollination in grapes is
(a) Self-pollination (b) Cross-pollination
(c) Wind (d) Insect
- VII** Which sector provides the highest employment in horticulture?
(a) Fruit crops (b) Plantation crops (c) Floriculture (d) None
- VIII** Guava is propagated commercially by
(a) Air layering (b) Seeds (c) Budding (d) Grafting
- IX** Acid lime belongs to species
(a) Citrus reticulata (b) Citrus aurantifolia
(c) Citrus medica (d) Citrus limon
- X** Pomegranate is propagated by
(a) Hardwood cuttings (b) Seeds (c) Budding (d) Air layering
- XI** Date palm fruit type is
(a) Berry (b) Drupe (c) Capsule (d) Nut
- XII** The ideal soil pH for pineapple is
(a) 4.5–6.0 (b) 6.5–7.5 (c) 3.0–4.0 (d) 7.0–8.0

XIII Ber fruit cracking is due to

- (a) Moisture fluctuation (b) Nutrient deficiency
(c) Insect attack (d) High temperature

XIV Litchi fruit cracking can be controlled by

- (a) Regular irrigation (b) Defoliation
(c) Root pruning (d) High nitrogen

XV Peach fruit type is

- (a) Drupe (b) Berry (c) Pome (d) Capsule

2. Answer in long (any three) [10×3=30]

- a. Discuss in detail the importance and scope of fruit cultivation in India. How does it contribute to the Indian economy?
- b. Explain the role of rootstocks in fruit crop improvement with suitable examples.
- c. Describe the classification of fruit crops based on climate and botanical characteristics.
- d. Explain the viticulture practices for grape production and discuss pruning and training systems used.

3. Answer in short (any six) [5×6=30]

- a. What is the importance of fruit crops in human nutrition?
- b. What is a rootstock? Give two examples.
- c. Differentiate between tropical, subtropical, and temperate fruit crops with examples.
- d. Write a short note on the scope of the fruit industry in India.
- e. Mention the role of the fruit industry in rural employment generation.
- f. Define the term "plantation crops." Give two examples.
- g. What are the economic benefits of fruit export from India?
- h. Name two important varieties of mango and their growing regions.

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Paper Code: AG-504

B

(SVSU:2025-26/R)

Enrollment No.

B.Sc. Agriculture

V Semester / III Year Examination

Subject Code: AG-504

Subject Name: Agricultural Marketing Trade and Prices

[Time : 03:00 Hours]

[Max. Marks : 75]

Note: 1. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs) [01×15=15]

- I Which one is consider as priority sector for financing by bank**
 (a) Industries (b) Services
 (c) Agriculture (d) Trade
- II In Monopsony market refers to?**
 (a) Single buyer (b) One seller
 (c) Two buyers (d) Two sellers.
- III Quality of agricultural commodities is ensured by:**
 (a) ISI (b) AGMARK
 (c) BSI (d) ISO
- IV What transport function of marketing generally produces?**
 (a) Place utility (b) Form utility
 (c) time utility (d) Possession utility
- V Market conduct involved with:**
 (a) Market sharing and price setting policies
 (b) Policies aimed at coercing rivals
 (c) Policies toward setting the quality of products
 (d) Efficiency in the use of resources
- VI The awareness of marketable surplus support the:**
 (a) Farming population (b) Non-farm population
 (c) Both a and b (d) Neither a nor b.
- VII Marketable surplus will be less in the case of?**
 (a) Sugarcane (b) Rice
 (c) Cotton (d) Tomato
- VIII Primary function of marketing includes?**
 (a) Procurement (b) Transport
 (c) Storage (d) Banking
- IX Which is the Exchange function of marketing:**
 (a) Processing (b) Transport
 (c) Selling (d) Standardization

- X What is the Physical function of marketing?**
(a) Grading (b) Buying
(c) Selling (d) Financing
- XI Which bank institution providing finance for agriculture and rural development?**
(a) RBI (b) SEBI
(c) IBRD (d) NABARD
- XII Globalization of a country's economy would increase its:**
(a) Export (b) Import
(c) Both a & b (d) None of these
- XIII Facilitative function of marketing refers to...**
(a) Processing (b) Grading
(c) Buying (d) Financing
- XIV Secondary function of marketing is:**
(a) Assembling (b) Grading
(c) Insurance (d) Banking
- XV Food Corporation of India was established in:**
(a) 1955 (b) 1965
(c) 1978 (d) 1980

2. Answer in long (any three) [10×3=30]

- I Define briefly**
(i) Retail markets
(ii) Wholesale markets
(iii) Terminal markets with their characteristics
- II Write a detail note on different market structure with their importance.**
- III What do you understand by demand and supply? Discuss in detail.**
- IV Explain WTO with their history, role and importance.**

3. Answer in short (any Six) [5×6=30]

- I What is marketing? Define briefly.**
- II Differentiate between market surplus and producer's surplus.**
- III State the characteristics of agricultural markets.**
- IV What are the merits and demerits of sales promotion and publicity.**
- V Write a short note on IPR.**
- VI Differentiate between buying and selling.**
- VII Recall the stages of product life cycle**

Printing Pages: 2

Paper Code: AG-502

B

(SVSU:2025-26/R)

Enrollment No.

Program Name B.Sc. Agriculture

Fifth Semester / 3 Year

Subject Code: AG 502

Subject Name: Crop Improvement

[Time: 03:00 Hours]

[Max. Marks: 75]

Note: 1. Attempt all the questions as per the given instructions.

1. Multiple Choice Questions (MCQs) [01×15=15]

- I Gregor Mendel is known as the father of:
(a) Botany (b) Genetics (c) Plant Physiology (d) Ecology
- II Which of the following is a method of crop improvement?
(a) Irrigation (b) Fertilization
(c) Hybridization (d) Pruning
- III Which of the following is a disadvantage of pureline selection?
(a) High genetic variability
(b) Time-consuming process
(c) Low uniformity
(d) Poor disease resistance
- IV Pureline selection is used to:
(a) Create hybrids
(b) Improve cross-pollinated crops
(c) Select superior individuals from a population
(d) Increase genetic diversity
- V The centre of origin of rice is important because it helps in:
(a) Determining soil type
(b) Understanding genetic diversity
(c) Increasing rainfall
(d) Reducing pests
- VI Which region is NOT considered a centre of origin for rice?
(a) Indo-Malayan (b) Africa
(c) Australia (d) Southeast Asia
- VII Which of the following is a disadvantage of mass selection?
(a) Maintains genetic diversity (b) Time-efficient
(c) Less uniformity in the population (d) Easy to apply
- VIII Which type of pollination is essential for hybridization?
(a) Self-pollination (b) Cross-pollination
(c) Wind pollination (d) Water pollination

- IX** Which of the following is a benefit of heterosis?
 (a) Increased yield (b) Decreased growth rate
 (c) Lower resistance to diseases (d) Reduced fertility
- X** Which of the following is a commonly grown GM crop?
 (a) Barley (b) Maize (corn) (c) Oats (d) Rye
- XI** What is the process of inserting foreign genes into an organism called?
 (a) Transgenesis (b) Mutation
 (c) Cloning (d) Hybridization
- XII** Which of these is an example of a transgenic crop?
 (a) Wild rice (b) Bt cotton
 (c) Organic wheat (d) Heirloom tomato
- XIII** Which of the following is a self-pollinated crop?
 (a) Maize (b) Sunflower (c) Mustard (d) Wheat
- XIV** Which of the following is a method to promote cross-pollination in crops?
 (a) Bagging (b) Emasculation (c) Selfing (d) Cloning
- XV** Self-pollination leads to:
 (a) Greater genetic diversity (b) Uniformity in traits
 (c) Hybrid vigor (d) Increased disease resistance

2. Answer in long (any three) [10×3=30]

- I** Describe modern methods of crop improvement.
- II** Explain the roles of various committees in the regulation and approval of GM organisms.
- III** Give a detailed account of the important concepts of breeding cross-pollinated crops.
- IV** Give a detailed account of the functions of *Bacillus thuringiensis* to improve crop plants, along with a labelled diagram.

3. Answer in short (any six) [5×6=30]

- I** Explain the terms' introduction, transgene, transgenic, and backcrossing.
- II** What are the steps to develop genetically modified crops?
- III** Explain mutation and its types with the help of a flow chart.
- IV** Write down the progenitors of rice, sorghum, red gram, and groundnut.
- V** What are the potential drawbacks of GM crops in agriculture?
- VI** Describe the steps involved in the process of hybridization.
- VII** What are the various types of polyploidies, and how can polyploidy be artificially induced in crop plants?

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Paper Code: AG-506

B

(SVSU:2025-26/R)

Enrollment No.

Program Name: B. Sc. Agriculture

5th Semester / 3rd Year Examination

Subject Code: AG-506

Subject Name: Diseases of Field and Horticultural Crops
and Their Management-I

[Time : 03:00 Hours]

[Max. Marks : 75]

Note : I. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs) [01×15=15]
- I The fungus transforms individual grains into yellow or greenish spore balls of velvety appearance in..... the disease?
 (a) Smut of wheat (b) Rust of wheat
 (c) Actinomycetes (d) False smut of paddy
- II The Chlamydospore formed in the genus:
 (a) *Alternaria* (b) *Fusarium* (c) *Pithium* (d) All of these
- III Rice Tungro Disease (RTD) caused by
 (a) *Rice tungro bacilliform virus* (b) *Rice tungro spherical virus*
 (c) both a and b (d) Nematodes only
- IV Component of disease triangle is:
 (a) Host-Fungicides-Environment
 (b) Host-Pathogen-Environment
 (c) Host-leaf-Environment
 (d) All of the above
- V Bacterial leaf blight of Rice disease caused by
 (a) Bacteria (b) Fungi and bacteria
 (c) Virus (d) Spiral form Virus
- VI Which one of the following causal organism of Bacterial leaf blight of Rice disease
 (a) *Bacillus subtilis* (b) *Pyricularia pv.oryzae*
 (c) *Xanthomonas citri.oryzae* (d) *Xanthomonas pv.oryzae*
- VII *Trichoderma* is thebioagent?
 (a) Viral (b) Bacterial
 (c) Fungal (d) All of the above
- VIII Wilt syndrome in the rice known as..... ?
 (a) Dieback (b) Rot
 (c) Kresek (d) All of these
- IX Grain smut of sorghum caused by:
 (a) *Ustilago* (b) *Sphacelotheca sorghi*
 (c) *Sclerospora* (d) None of these

- X** Primary infection of grain smut of sorghum disease ?
 (a) Soil (b) Air
 (c) Seed (d) None of these
- XI** Stalk rot of maize caused by
 (a) *Cephalosporium acremonium*. (b) *Colletotrichum falcatum*
 (c) *Fusarium oxysporum* (d) *Alternaria*
- XII** Downy mildew of maize caused by?
 (a) *Phytophthora infestans*
 (b) *Fusarium oxysporum sp. udum*
 (c) *Perenosclespora sorghi*
 (d) *Xanthomonas sorghi*
- XIII** Secondary infection by of bacterial leaf blight of rice disease?
 (a) Root ooze (b) Bacterial ooze
 (c) Bath a and b (d) air
- XIV** Who was the identification of khiara disease of rice
 (a) E. J. Butler (b) R.S. Singh (c) Y.L. nene (d) B.D. Singh
- XV** Wilt of groundnut caused by.....
 (a) *Pseudomonas solanacearum* (b) *Pseudomonas groundnutacae*
 (c) *Fusarium oxysporum* (d) All of these

2. Answer in long (any three) [10×3=30]

- Discuss briefly on causal organism, symptoms, disease cycle, favorable condition & management of Rice-tungro disease.
- Explain the causal organism, symptoms, disease cycle, favorable condition & management of leaf spot/blight of maize disease.
- Explain the causal organism, symptoms, disease cycle, favorable condition & management of grain smut of sorghum disease.
- Write down the causal organism, symptoms, disease cycle, favorable condition & management of downy mildew of bajra disease.

3. Answer in short (any six) [5x6=30]

- Differentiate between the term : Hyperplasia and Hypertrophy symptoms
- Writes the causal organism & symptoms of ergot or sugary disease of bajara.
- Writes the causal organism & symptoms of *Rhizoctonia* blight of soyabean disease.
- Define symptoms and Etiology.
- Write the 5 five fungicides name with trade name.
- Define Mosaic and Blight symptom .
- Differentiate between spot and smut symptom .

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Paper Code: AG-503

B

(SVSU:2025-26/R)

Enrollment No.

Program Name B.Sc. (Ag)

V Semester /3rd Year Examination

Subject Code 503

Subject Name Pest of crops and stored grain and their management

[Time : 03:00 Hours]

[Max. Marks : 75]

Note : 1. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs) [01×15=15]

I Which of the following is a major pest of stored grain

- A) Bollworm B) Rice weevil
C) Aphid D) Grasshopper

II The larva of which insect is known as 'grain borer'

- A) Khapra beetle B) Pulse beetle
C) Angoumois grain moth D) Rice moth

III Which of the following is a field pest of rice crop?

- A) Rice stem borer B) Khapra beetle
C) Rice weevil D) Flour beetle

IV The pest that cuts young seedlings at ground level is known as

- A) Termite B) Cutworm
C) Stem borer D) Aphid

V Khapra beetle mainly attacks which type of product

- A) Fresh vegetables B) Stored grains
C) Oilseeds D) Fruits

VI Which of the following is a pest of pulses in storage?

- A) Pulse beetle B) Cotton bollworm
C) Armyworm D) Red flour beetle

VII Which of the following is a biological method of pest control

- A) Spraying insecticides B) Burning crop residues
C) Using natural predators D) Deep ploughing

VIII The most effective temperature for killing stored grain pests is:

- A) 10°C B) 20°C
C) 55°C D) 80°C

IX Which of these pests is known to attack cotton plants?

- A) Pink bollworm B) Rice stem borer
C) Sugarcane borer D) Maize weevil

X Fumigation is commonly used for:

- A) Field pest control B) Soil treatment
C) Stored grain pest control D) Weed management

- XI** The scientific name of the Rice weevil is
A) *Sitophilus oryzae* B) *Trogoderma granarium*
C) *Callosobruchus chinensis* D) *Tribolium castaneum*
- XII** Which of the following is a preventive measure for stored grain pest management?
A) Mixing insecticides with grains
B) Sun drying grains before storage
C) Using fumigants only
D) Storing grains in open containers
- XIII** The red flour beetle is scientifically known as:
A) *Sitophilus oryzae* B) *Trogoderma granarium*
C) *Tribolium castaneum* D) *Callosobruchus maculatus*
- XIV** Which insect pest causes "dead heart" symptoms in sugarcane?
A) Root grub B) Sugarcane borer
C) Termite D) Whitefly
- XV** Integrated Pest Management (IPM) emphasizes:
A) Only chemical control
B) Only mechanical control
C) Combining biological, cultural, and chemical methods
D) Use of synthetic pesticides

- 2. Answer in long (any three) [10×3=30]**
- a. Describe the major pests of stored grains, their life cycle, nature of damage, and management practices.
 - b. Explain the different methods of pest management in crops, highlighting Integrated Pest Management (IPM).
 - c. Discuss the preventive and curative measures used to protect stored grains from pest infestation.
 - d. Describe the major pests of important field crops and their management

- 3. Answer in short (any six) [5×6=30]**
- a. Write a short note on pest.
 - b. Write four major pests of stored grains.
 - c. What are the basic symptoms of pest damage in stored grains?
 - d. Mention any two cultural methods of pest control.
 - e. What is Integrated Pest Management?
 - f. Write three biological control agents and the pests they manage.
 - g. Define preventive steps should be taken before storing grains.

Printing Pages: 2

Paper Code: AG-501

A

(SVSU:2025-26/R)

Enrollment No.

Program NameB.SC. (Ag)

V Semester / III Year Examination

Subject CodeAG-501

Subject Name: Rainfed & Dryland Agriculture

[Time : 03:00 Hours]

[Max. Marks : 75]

Note : 1. Attempt all the questions as per given instructions.

I. Multiple Choice Questions (MCQs)

[01×15=15]

1. Temporary moisture less condition in soil is called as-----

- a. Drought soil b. Famine c. Aridity d. Dry Land

2. ICRISAT was established in the year

- a. 1972 b. 1977 c. 1978 d. None of Above

3. 1 st KVK initiated in the year

- a. 1974 b. 1966 c. 1978 d. 1977

4. ICAR located at

- a. New Delhi b. Jaipur c. Ludhiana d. None of Above

5. Water Harvesting is a method which

- a. Increase the ground level b. Not practiced in a modern day
c. Has no relation with ground level d. None of Above

6. Full form of MSP:

- a. Maximum Support Price b. Minimum support Price
c. Market Support Price d. None of Above

7. The most appropriate use of rain water harvesting is

- a. Agriculture b. Irrigation c. Drinking water d. None of Above

8. Which irrigation practice lead to maximum water conservation

- a. Water Wheel b. Tube well c. Drip irrigation d. Sprinkle Irrigation

9. IARI located at

- a. New Delhi b. Bihar c. Punjab d. UP

10. Rainwater Harvesting is a techniques in which

- a. Collect and storage of use water b. Collected and storage of Rain water
c. Both A and B d. None of Above

11. Which factor is not responsible for deficiency of water

- a. Excess Rain fall b. Increase population
c. Both A and B c. None of Above

12. Which of the following man made resources

- a. River b. Sea c. Wells d. None of Above

13. What is called for the collection of rainwater for use
a. Rain water Harvesting b. Rain collection
c. Rain digging d. None of Above
14. What is the name of process to clean the water by filter
a. Purification b. Sublimation
c. Rainwater Harvesting d. None of Above
15. Water evaporate in more quantity in.....Irrigation
a. Drip b. Sprinkle c. Both A and B d. None of Above

II. Answer in long (any three) [10×3=30]

- a. Classify the Key Issues and Concerns for Precision Agriculture in India.
- b. Describe the 'Challenges of Precision Agriculture.
- c. Explain the Efficient utilization of water through soil and crop management practices.
- d. Explain the advantages and disadvantages of Rainfed & Dry land farming.

III. Answer in short (any six) [6×5=30]

- a. Explain the Problems & prospects of Rainfed Agriculture in India.
- b. Describe the mechanism of crop adoption under moisture deficit conditions.
- c. Examine the Prospects and Opportunities for Dry/Dryland Farming
- d. Define Benefits of Precision Agriculture.
- e. Define the Atmospheric drought & Agriculture Drought..
- f. Examine the Soil Fertility and Soil Productivity.
- g. Define Water Management Practices In Rainfed & Dry land Agriculture.

Printing Pages: 2

Paper Code: (AG-505)

C

(SVSU:2025-26/R)

Enrollment No.

Program NameB.Sc Agriculture

...V Semester / ...III.... Year Examination

Subject name-Protected Structure and Secondary Agriculture

Subject Code: AG-505

[Time : 03:00 Hours]

[Max. Marks : 75]

Note: 1. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQ)

1×15=15]

1. Sponge is a.....nature

A. Elastic

B. Plastic

B. Both A and B

D. None of Above

2. Density equal to

A. Mass/volume

B. Volume/Mass

B. Volume/Cube

D. None of Above

3. The inside temperature of the polyhouse isthen the outside temperature

A. Higher

B. Lower

C. Equal

D. Constant

4. LTT green house should be

A. Near to home

B. Attach to Home

C. Both A and B

D. None of Above

5. Angle of repose rye.....

A. 23

B. 35

C. 40

D. 60

6. Hot Air Oven method is used in determination of

A. Moisture Content

B. Dry rate period

B. Moisture Ratio

D. Dehydrated Ratio

7. CPRI located at

A. Shimla

B. Lucknow

B. Karnal

D. New Delhi

8. CIPHET located at

A. Ludhiana

B. Karnal

B. New Delhi

D. Jaipur

9. LSU Dryer was develop in

A. Louisiana State University

B. Ludhiana State University

C. Luianasana State University

D. None of Above

10 Angle of Reposeof Wheat

- A. 23
- B. 28
- C. 20
- D. 25

11. Plasticity is a..... property

- A. Physical
- B. Thermal
- C. Rheological
- D. None of Above

12 Thermal Conductivity is a property

- A. Physical
- B. Thermal
- C. Rheological
- D. None of Above

13 Hectometer is used to measure the

- A. Evaporation
- B. Evapotranspiration
- C. RH
- D. temperature

14. President of ICAR

- A. Shivraj Singh Chauhan
- B. Arjun Munda
- C. Somender Tomar
- D. S. Ayyapan

15. Impact is a

- A. Physical
- B. Mechanical
- C. Rheological
- D. None of Above

II Long Question: Answer Any Three [10×3=30]

1. Describe the different tools used in green house
2. Define the natural methods of drying and their advantages and disadvantages.
3. Discuss about the classification of green house.
4. Explain the any two EMC models
5. Clarify the different materials which are used in construction of Green house?

III. Short Question: Answer any Six [6×5=30]

1. How to calculate the moisture content on wet basis if moisture content on dry basis is 25%?
2. Define Henderson equation.
3. Describe drying and their different advantages
4. Elaborate Sprinkle irrigation and their advantages
5. Explain the Rigid Furrow type greenhouse with neat and clean Diagram ?
6. What is Irrigation and discuss about the different advantages and disadvantages of irrigation
7. Describe the bucket elevator in short

Printing Pages: 2

Paper Code: AG-508

A

(SVSU:2025-26/R)

Enrollment No.

Program Name: B.Sc. Agriculture
 5th Semester / 3rd Year Examination
 Subject Code: AG-508

Subject Name: Communication Skills and Personality Development

[Time : 03:00 Hours]

[Max. Marks : 75]

Note: 1. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs) [01×15=15]**I** The process of changing an idea into symbols or words is called

- (a) Decoding (b) Encoding
 (c) Feedback (d) Transmission

II Which element of communication acts as the medium?

- (a) Message (b) Channel (c) Feedback (d) Receiver

III Feedback helps in making communication _____.

- (a) One-way (b) Effective and two-way
 (c) Complex (d) Delayed

IV Which of the following is an example of a communication barrier?

- (a) Feedback (b) Noise
 (c) Clarity (d) Courtesy

V Which of the following is NOT a barrier to listening?

- (a) Distraction (b) Concentration
 (c) Prejudice (d) Lack of interest

VI The Cornell Method is used for:

- (a) Speaking practice (b) Essay writing
 (c) Organised note taking (d) Summarising

VII Academic writing includes:

- (a) Letters to friends (b) Advertisements
 (c) Essays and reports (d) Social media posts

VIII A good presentation includes:

- (a) Nervous tone (b) Clear structure and visuals
 (c) Overuse of jargon (d) No preparation

IX A _____ diary is used to record daily activities, observations and reflections.

- (a) field (b) office (c) record (d) research

- X** Which of the following represents the final stage of communication?
 (a) Encoding (b) Decoding
 (c) Feedback (d) Message
- XI** What is the meaning of préciswriting?
 (a) Paraphrasing (b) Comprehending
 (c) Summarising (d) Proofreading
- XII** Which one is not a part of good body language?
 (a) smiling (b) signaling
 (c) waving hand (d) abusing
- XIII** Who can organize a seminar/conference?
 (a) Institution (b) College
 (c) University (d) All of these
- XIV** Which of these must be avoided in any presentation?
 (a) Proper grammar (b) Complex words
 (c) Short sentences (d) Clear voice
- XV** Which is NOT a type of communication barrier?
 (a) Semantic barrier (b) Rational barriers
 (c) Organizational barriers (d) Psychological barriers
- 2. Answer in long (any three)** [10×3=30]
- I** Discuss the principles of communication.
- II** Explain the types of listening with examples.
- III** Explain the steps of the writing process with examples.
- IV** Evaluate the various stages of the adoption process.
- 3. Answer in short (any six)** [5×6=30]
- I** Discuss the importance of communication in daily life.
- II** What is 'noise' in communication with examples? Define it.
- III** What are the benefits of note taking?
- IV** What is précis writing?
- V** What is a key difference between a seminar and a conference?
- VI** Describe any three barriers to communication.
- VII** Discuss the advantages and limitations of Lass well model.

Printing Pages: 2

Paper Code: AG-55

C

(SVSU:2025-26/R)

Enrollment No.														
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B.Sc. Agriculture

5th Semester / 3rd Year Examination

Subject Code- AG-55

Subject Name: Food Safety and Standard

[Time : 03:00 Hours]

[Max. Marks : 75]

Note : 1. Attempt all the questions as per given instructions.

1. Fill in the blanks

[01×15=15]

- I** Pasteurization temperature range is
A. 62 °C B. 12 °C C. 34 °C D. 88 °C
- II** Sterilization temperature range is
A. 121 °C B. 12 °C C. 34 °C D. 68 °C
- III** Fermentation dairy products is
A. Idli B. Lassi C. Wine D. All of the above
- IV** Bactofugation is the process of removal of microorganism from milk by
A. Gravity force B. Centrifugal force C. Density D. TSS
- V** Unit of TSS is
A. °Brix B. Kg C. Meter D. Inch
- VI** How many layer in tetra packaging
A. 3 B. 2 C. 09 D. 06
- VII** During pasteurization kill only _____ bacteria
A. All types B. Pathogen
C. Lactobacillus D. Both B & C
- VIII** pH range is
A. 0 to 14 B. 0 to 11 C. 0 to 18 D. 0 to 25
- IX** Citrus fruit is
A. Lemon B. Apple C. Cucumber D. All of the above
- X** Yoghurt milk is
A. Fermented B. Unfermented
C. Carbonated D. None of the above
- XI** Fat soluble vitamin is
A. B & C B. A & D C. E & K D. Both B & C

- XII** Water soluble vitamin is
A. B & C B. A & D C. E & K D. Both B & C
- XIII** Vitamin A deficiency is
A. Rickets B. Night blindness C. Scury D. Both A & B
- XIV** Vitamin D deficiency is
A. Rickets B. Night blindness
C. Scury D. None of the above
- XV** Vitamin B₁₂ deficiency is
A. Rickets B. Night blindness C. Scury D. Anemia

2. Answer in long (any three) [10×3=30]

- a. Explain the pasteurization and define their types?
- b. Explain the fermentation process with chemical reaction?
- c. Describe the LTLT, HTST and UHT?
- d. Explain the food safety management?

3. Answer in short (any six) [5×6=30]

- a. Define the sterilization?
- b. Define the ISO 9001 and ISO 27001?
- c. Define the SWMA and MMP?
- d. What is HACCP and write the 7 point of HACCP?
- e. Describe the fruit beverage and write their types with example?
- f. Describe the food hazard and define their types?
- g. Define the total quality management?

Printing Pages: 2

Paper Code: AG-511

C

(SVSU:2025-26/R)

Enrollment No.

Program Name: B.Sc. Agriculture

5th Semester / 3rd Year Examination

Subject Code: AG-511

Subject Name: Geo-Informatics and Nano-technology

[Time : 03:00 Hours]

[Max. Marks : 75]

Note : 1. Attempt all the questions as per given instructions.

I. Multiple Choice Questions (MCQs)**[01×15=15]**

- I** The navigation system based on a network of satellites that helps users to record positional information
A) GPS B) GIS C) Remote sensing D) All the above
- II** The concept of SSNM in rice was developed in cooperation with researchers across _____.
A) Africa B) Asia C) South America D) Europe
- III** The required fertilizer N is distributed in several applications during the crop growing season using tool like the _____.
A) Leaf colour chart B) Leaf area index
C) Specific leaf area D) None of the above
- IV** _____ are automatic and may be applied to numerous farming operations.
A) Variable rate application B) Variable rate technologies
C) Variable rate applicator D) All the above
- V** Geoinformatics is a new discipline concerned with the _____ of spatial data and the processing techniques in spatial information systems.
A) Modelling B) Probabilistic model
C) Deterministic model D) None of the above
- VI** _____ Can be defined as a system for capturing, storing, checking and displaying data which are spatially referenced to the earth.
A) GPS B) GIS C) Variable rate applicator D) Remote sensing
- VII** _____ is used to operationalise precision farming at the farm level
A) Variable rate applicator B) Variable rate technology
C) Variable rate application D) None of the above
- VIII** _____ is the process of defining image characteristics or features which effectively provides meaningful information for image interpretation.
A) Spectro radiometer GIS B) Feature extraction
C) Hydro spectral data D) None of the above
- IX** Band selection is one of the important steps in _____.
A) Hyperspectral remote sensing B) Hydrospectral data
C) Remote sensing D) All the above

- X _____ can be used as potential variables for crop type discrimination.
 A) Physiological indices B) Narrow band vegetation indices
 C) Stress indices D) All the above
- XI _____ includes water, pigments, other nitrogen – rich compounds and plant structural materials.
 A) Biochemical properties B) Structural properties
 C) Spectral indices D) None
- XII _____ information is used in conjunction with crop area statistics to obtain crop production
 A) Crop productivity B) Crop yield
 C) Both A & B D) None of the above
- XIII Scale used for mapping multispectral satellite data is _____
 A) 1:50,000 B) 1:500 C) 1:20000 D) 1:5000
- XIV The ratio between distance or area on a map and corresponding distance or area on ground is _____
 A) Model B) Scale C) Chart D) Image
- XV Size range on a nanoscale usually ranges from
 A) 1-100 nm B) 1-10 nm C) 100-200nm D) 0-1 nm

2. Answer in long (any three)

[10×3=30]

- Explain tools of precision farming.
- Explain in detail different steps involved in precision farming and what are the advantages of precision farming to farming?
- Define GIS, GPS and write for specific advantages of GPS in farm operations?
- Role of nanotechnology in agriculture and explain in brief?

3. Answer in short (any Six)

[5×6=30]

- Define Precision Farming? Enlist the components of Precision Farming?
- Write the specific uses of sensor technologies in farm operations?
- Enlist the steps in technology development and strategies for precision farming?
- Define Geo-informatics? What is the role of geoinformatic in agriculture.
- Define Agro-geo-informatics?
- Enlist the agricultural applications of remote sensing? Explain in detail?
- What are the applications of GPS?
- Explain the role of Nanotechnology in agriculture.

- XII** The Berne Convention originated in –
 (a) Germany (b) Switzerland (c) France (d) Italy
- XIII** TRIPS Agreement was signed at –
 (a) Marrakesh (b) Paris (c) Geneva (d) Rome
- XIV** GATT was replaced by –
 (a) IMF (b) WTO (c) WIPO (d) FAO
- XV** Intellectual Property refers to –
 (a) Physical assets (b) Tangible resources
 (c) Creations of the mind (d) Government property
- 2. Answer in long (any three) [10×3=30]**
- I** Define Intellectual Property and discuss its major types with examples.
- II** Explain the objectives, structure, and importance of the WTO.
- III** Describe the TRIPS Agreement and its relevance to developing countries.
- IV** Discuss various international treaties related to IPR protection
- 3. Answer in short (any six) [5×6=30]**
- I** Write a short note on GATT
- II** Explain the main functions of WIPO.
- III** What is the significance of the Madrid Protocol?
- IV** Define Patent and Copyright.
- V** Mention the objectives of the Paris Convention.
- VI** Write the full form and year of establishment of WIPO.
- VII** What is the importance of IPR in agriculture?

Printing Pages: 2

Paper Code: AG-509

A

(SVSU:2025-26/R)

Enrollment No.

Program Name: B.Sc Agriculture

5th Semester / 3rd Year Examination

Subject Code- AG-509

Subject Name- Intellectual Property Rights

[Time :03:00 Hours]

[Max. Marks :75]

Note :1: Attempt all the questions as per given instructions.

- 1. Multiple Choice Questions (MCQs) [01×15=15]**
- I** The full form of WIPO is –
 (a) World International Property Organization
 (b) World Intellectual Property Organization
 (c) World Industrial Patent Office
 (d) World Innovation Property Office
- II** GATT was signed in –
 (a) 1947 (b) 1945 (c) 1950 (d) 1995
- III** WTO came into existence in –
 (a) 1989 (b) 1991 (c) 1995 (d) 2001
- IV** The headquarters of WTO is located in –
 (a) Paris (b) Geneva (c) London (d) New York
- V** TRIPS is related to –
 (a) Agriculture (b) Intellectual Property Rights
 (c) Food Security (d) Climate Change
- VI** The Berne Convention deals with –
 (a) Trademarks (b) Copyrights
 (c) Industrial Designs (d) Patents
- VII** The Madrid Protocol is used for –
 (a) Patent registration (b) Trademark protection
 (c) Copyright claim (d) Plant variety protection
- VIII** The Budapest Treaty was signed in –
 (a) 1886 (b) 1947 (c) 1977 (d) 1983
- IX** Paris Convention was established in –
 (a) 1970 (b) 1883 (c) 1995 (d) 2000
- X** The Patent Cooperation Treaty (PCT) was established in –
 (a) 1970 (b) 1995 (c) 1989 (d) 2001
- XI** WIPO headquarters is in –
 (a) Geneva (b) Paris (c) Washington (d) New Delhi

Enrollment No.

Course: B.Sc. (Agriculture)

3rd Year / 5th Sem Examination

Subject Name: Principles of Food Science and Nutrition

Subject Code: AG-510

[Time: - 3:00 Hours]

[Max. Marks: 75]

I. Objectives Question: Answer All Question

[15×1=15]

- Nichol Appert is the father of
 - Canning
 - Appetizing
 - Both A and B
 - None of Above
- In pasteurization temperature should be kept.....°C
 - 72
 - 60
 - 65
 - All of Above wrong
- In sensory evaluation 5 number in the product means
 - Like slightly
 - Dislike very much
 - Neither like nor dislike
 - None of Above
- In acidity determination the drop of phenolphthalein indicator should be used....
 - 4
 - 2
 - 6
 - 5
- In water bath .at the time ..sterilizationis used
 - Stem
 - flamee
 - Burner
 - None of Above
- Evapotranspirationis measurement by
 - Lysimeter
 - Pyranometer
 - Lactometer
 - None of Above
- Disaccharides are a class of carbohydrates made up of.....
 - Single molecule
 - Double molecule
 - More then two molecules
 - None of Above

- In LTLT method the temperature should be kept.....°C
 - 62
 - 58
 - 68
 - 72
- Canning process was invented in the.....year
 - 1908
 - 1809
 - 1819
 - 1920
- Sugar is a
 - Solvent
 - Both A and C
 - Solute
 - None of Above
- If Acidity is increase then pH
 - Decrease
 - Increase
 - Constant
 - None of Above
- Vitamin D isSoluble
 - Fat
 - Water
 - Both A and B
 - None of Above
- In the deficiency of Vitamin C
 - Night Blindness
 - Scurvy Disease
 - Beri-Beri
 - None of Above
- Lycopene is responsible for redcolour in
 - Tomato
 - Apple
 - Banana
 - Red chili
- In temples serve the food is afunction
 - social
 - Physiological
 - Psychological
 - All of Above

II Long Question: Answer Any Three

[10×3=30]

- Define Classification of carbohydrates in brief.
- Discuss about the different functions of food in our body in brief
- Explain the different methods of preservation with flow chart in brief.
- Elaborate the different types of microorganism in brief.
- Describe the major causes of food spoilage.

III. Short Question: Answer any Six

[6×5=30]

- Explain the fat-soluble vitamins in brief.
- Clarify the pasteurization and its classification.
- Define hydronic rating test in short.
- Discuss about the various operations of food processing.
- Elaborate the procedure for density determination in milk.
- What is the osmosis and reverse osmosis?
- Explain the procedure for acidity determination?