

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B. Sc. (Hons.) Agriculture
Midterm Examination

Academic Year: 2025-26

Semester: I

Course No.: AEC 112

Course Title: Communication Skills

Total marks: 20 (Section 'A'- 8 marks + Section 'B'- 12 marks)

Time: 1 h r (Section 'A'-15 min & Section 'B' – 45 min)

Date: 03/10/2025

Roll No:

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- Note:** 1) Use of laptop, mobile, smartwatch is prohibited.
2) Draw neat labelled diagrams wherever necessary.
3) In Section 'A' all questions are compulsory.
4) Section 'A' should be answered on OMR sheet.

SECTION "A"

(8Q x 1M =8Marks)

Multiple choice questions

- Which of the following is NOT an element of the communication process?
A) Sender
B) Message
C) Noise
D) Examination
- The main purpose of communication is to:
A) Express ideas and share information
B) Show authority
C) Fill time
D) Impress others
- Note-taking is best described as:
A) Writing everything word-for-word
B) Selecting and recording key ideas
C) Memorizing the entire lecture
D) Writing only questions
- Which method of note-taking uses keywords and arrows to show connections?
A) Sentence method
B) Cornell method
C) Mapping method
D) Charting method
- Listening differs from hearing because it involves:
A) Just receiving sound
B) Passive attention
C) Active understanding and interpretation
D) Ignoring distractions

6. Which of the following is NOT a type of listening?

- A) Appreciative listening
- B) Critical listening
- C) Empathetic listening
- D) Mechanical listening

7. Good listening skills are important for note-taking because:

- A) They help ignore unimportant points
- B) They improve handwriting
- C) They allow selection of main ideas
- D) They make lectures shorter

8. The Cornell method of note-taking includes:

- A) Notes, Cue column, and Summary
- B) Mind maps only
- C) Writing in full paragraphs
- D) Diagrams and arrows exclusively

SECTION “B”

Answer any four questions

(4Q X 3M = 12 Marks)

Q 09. Define communication and explain Rogers and Shoemaker’s model of communication.

Q 10. What is note-taking? Explain the different methods of note-taking.

Q 11. Define listening skills. List the types of note-taking and explain any four types in detail.

Q 12. Explain the process of communication.

Q 13. Define précis and write the steps involved in writing a précis.

Q 14. Enlist types of noise and explain with example.

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B. Sc. (Hons.) Agriculture Midterm Examination

Academic Year: 2025-2026

Semester: I

Course No.: MDC 111

Course Title: Farming Based Livelihood Systems

Total marks: 20 (Section 'A' - 8 marks + Section 'B' - 12 marks)

Time: 1 h r (Section 'A' - 15 min & Section 'B' - 45 min)

Date: 03/10/2025

Roll No:

- Note:** 1) Use of laptop, mobile, smartwatch is prohibited.
2) Draw neat labelled diagrams wherever necessary.
3) In Section 'A' all questions are compulsory.
4) Section 'A' should be answered on OMR sheet.

SECTION "A"

(8Q x 1M = 8Marks)

Multiple choice questions/Match the pairs

- The _____ scheme provides crop insurance against climate-related losses
A. PM-KISAN B. Fasal Bima Yojana C. MGNREGA D. E-NAM
- Which state has the highest farmer incomes exceeding Rs 26,000 - Rs 30,000 per month?
A. Punjab and Meghalaya B. Odisha and Assam C. Rajasthan and U.P
D. Bihar and Jharkhand
- The total food grains production in 2022 – 2023 is _____ million tonnes
A. 240.1 B. 198.79 C. 329.7 D. 458.12
- _____ is known as the heart of India
A. Kerala B. Maharashtra C. Rajasthan D. Madhya Pradesh
- _____ digital initiative helps Indian farmers get better price realization
A. E - NAM B. MSP C. NRLM D. PM - KISAN
- _____ is a leading agricultural state particularly known for cotton and groundnut production
A. Gujarat B. Uttar Pradesh C. Haryana D. Karnataka
- Punjab is often called the
A. Jute bowl of India B. Food basket of India
C. Silk state D. Fruit bowl of India
- _____ state has been proactive in adopting technology and sustainable practices
A. Goa B. Assam C. Tamil Nadu D. Himachal Pradesh

SECTION “B”

Answer any four questions

(4Q X 3M = 12 Marks)

Q 09. Write about the status of agriculture in India

Q 10. Mention and explain about the challenges faced by farmers in India

Q 11. Define livelihood and write about the livelihood pattern in urban and rural areas

Q 12. Enlist and explain about all the economic efficiency indicators to study livelihood systems

Q 13. Write about the status of agriculture in Gujarat and Goa

Q 14. Enlist and explain the key components of livelihood

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B.Sc.(Hons.) Agriculture

Midterm Examination

Academic Year: 2025 - 2026

Course No.: EXTN 111

Semester: I

Course Title: Rural Sociology
& Educational psychology

Total marks: 30 (Section 'A' - 15 marks + Section 'B' - 15 marks)

Time: (Section 'A' - 20 min & Section 'B' - 1.0 hr)

Date: 04.10.2025

Roll No:

Note: 1) Use of laptop, mobile, smart watch is prohibited.

2) In Section 'A' all questions are compulsory.

3) Section 'A' should be answered on OMR sheet.

SECTION "A"

All questions are compulsory (20 Q x 1 M = 20 Marks)

Multiple choice questions

1. _____ is a person who exerts an influence over a number of people.
A. Extension Personnel
B. Teacher
C. Manager
D. Leader
2. _____ is the youngest of all social sciences.
A. History
B. Sociology
C. Extension
D. Geography
3. _____ is the science of society
A. Agronomy
B. Extension
C. Sociology
D. Geography
4. _____ is the basic and important unit in the organization of Indian Society.
A. Taluka
B. District
C. State
D. Village
5. _____ is the application of scientific research and new knowledge to agricultural practices through farmer education.
A. Agricultural Extension
B. Fishery Extension
C. Veterinary Extension
D. None of the above
6. _____ as a collection of human beings who enter into distinctive social relationships with one another.
A. Social group
B. Social norms
C. Social Change
D. None of the above
7. _____ is growth like and continuous.
A. Teaching
B. Management
C. Learning
D. None of the above

8. _____ is example of permanent group.
- A. Friends B. Colleague
C. Neighbour D. Family
9. _____ is at the centre of learning process.
- A. Learner B. Teacher
C. Subject / Content D. Teaching aid
10. _____ may be defined as a group with which an individual feels identified the norms and objectives of which he accepts.
- A. Primary group B. In group
C. Informal group D. Reference group
11. Man cannot survive as man without _____
- A. Agriculture B. Culture
C. Animals D. Rules
12. _____ consists of manmade objects such as house, tools, food, clothing etc.
- A. Non material culture B. Material Culture
C. Technical culture D. None of the above
13. _____ is used to denote acquired behaviours, which are shared by and transmitted among the members of the society.
- A. Culture B. Traditions
C. Norms D. Folkways
14. _____ is the chief vehicle of culture
- A. Human B. Language
C. Traditions D. Books
15. The persons to whom people go for advice on certain issue are
- A. Opinion Leader B. Lay leader
C. Democratic leader D. None of the above

SECTION "B"

Answer any five questions (5Q X 3M = 15Marks)

- Q. 16 Define rural sociology. Explain its scope & importance of study.
- Q. 17 Explain briefly rural - urban differences and relationships.
- Q. 18 Define culture. Describe characteristics of culture in brief.
- Q. 19 Write the classification of social groups according to nature of interaction & membership type with examples.
- Q. 20 Define intelligence. Explain different types of intelligence.
- Q. 21 Explain steps in Extension Teaching with diagram.
- Q. 22 Classify diff. leaders based on the types of leadership & role they perform.

Answer Key :

1. D

2. B

3. C

4. D

5. A

6. A

7. C

8. D

9. A

10.D

11.B

12.B

13.A

14.B

15.A

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B. Sc. (Hons.) Agriculture

Midterm Examination

Academic Year: 2025-26

Semester: I

Course No.: AGRO-111

Course Title: Fundamentals of Agronomy

Total marks: 20 (Section 'A'- 08 marks + Section 'B'- 12 marks)

Time: Section 'A'- 15 min & Section 'B' – 45 min)

Date: 04.10.2025

Roll No:

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- Note: 1) Use of laptop, mobile, smart watch is prohibited.**
2) Draw neat labelled diagrams wherever necessary.
3) In Section 'A' all questions are compulsory.
4) Section 'A' should be answered on OMR sheet.
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SECTION "A"

(8Q x 1M =8 Marks)

Multiple choice questions

1. The Father of Agronomy is.....
 - A. Norman Borlaug
 - B. Peter De-Crescenzi
 - C. Jethro Tull
 - D. C. V. Raman
2. Field crops are mainly grown for.....
 - A. Ornamental purposes
 - B. Food, feed, fiber, fodder, and industrial uses
 - C. Only soil improvement
 - D. Only medicinal value
3. Which of the following is a pulse crop?
 - A. Groundnut
 - B. Green gram
 - C. Soybean
 - D. Sunflower
4. Which of the following is a primary tillage implement?
 - A. Cultivator
 - B. Harrow
 - C. Mouldboard plough
 - D. Clod crusher
5. The typical growth curve of plants is:
 - A. Linear
 - B. Sigmoid (S-shaped)
 - C. Exponential
 - D. Logarithmic
6. In conservation tillage, the minimum crop residue cover required on the soil surface is.....
 - A. 10%
 - B. 20%
 - C. 30%
 - D. 50%

7. Which of the following is a suggested book for the fundamentals of Agronomy course?
- A. Principles of Agronomy – S.R. Reddy
 - B. Principles of Agronomy – Yellamanda Reddy & Sankara Reddy
 - C. Handbook of Agriculture – ICAR Publication
 - D. All of these
8. How many criteria of essentiality were given by Arnon and Stout?
- A. Two
 - B. Three
 - C. Four
 - D. Five

SECTION “B”

Answer any four questions

(4 X 3 = 12 Marks)

- Q1.** Define Agronomy and explain its scope
- Q2.** Classify field crops on the basis of their agronomic use and growing season.
- Q3.** Define seed and list the characteristics of an ideal seed.
- Q4.** Define tillage and explain its types.
- Q5.** Write a short note on (Any two)
- a. Growth curve
 - b. Dibbling method
 - c. Crop geometry
- Q6.** Explain in detail modern concepts of tillage

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B. Sc. (Hons.) Agriculture
Midterm Examination

Academic Year: 2025-26

Semester: I

Course No.: SSAC-111

Course Title: Fundamentals of Soil Science

Total marks: 20 (Section 'A'- 8 marks + Section 'B'- 12 marks)

Time: 1 h r (Section 'A'-15 min & Section 'B' – 45 min)

Date:06.10.2025

Roll No:

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- Note:** 1) Use of laptop, mobile, smartwatch is prohibited.
2) Draw neat labelled diagrams wherever necessary.
3) In Section 'A' all questions are compulsory.
4) Section 'A' should be answered on OMR sheet.

SECTION "A"

(8Q x 1M =8Marks)

Multiple choice questions/Match the pairs

- The rock is termed as breccia, if the fragments are angular rather than rounded.
A. Shale
B. Breccia
C. Limestone
D. Sandstone
- _____ type of chemical weathering is considered as the forerunner in clay formation (secondary clay minerals)
A. Solution
B. Oxidation
C. Reduction
D. hydrolysis
- _____ horizon includes both organic and mineral limnic materials that are deposited in water by precipitation or through the action of algae and diatoms.
A. L
B. M
C. A
D. B
- In transitional horizon, horizon dominated by properties of one master horizon but having subordinate properties of another is denoted by.
A. A-B
B. A+B
C. AB
D. A/B
- Size of cobbles
A. 2-4 mm
B. 4-76mm
C. 76-250mm
D. 250-600mm
- Mixing of soil by the churning and process caused by selling and shrinkage of clays is due to
A. Faunal pedoturbation
B. Cryo-pedoturbation
C. Floral pedoturbation
D. Agrillipedoturbation

7. _____ structure is inherited from parent material and may also be formed formed due to compaction of clayey soils by heavy machinery.

A. Blocky

C. Platy

B. Laminar

D. Columnar

8. Structural coefficient is given by

A. $D+S/S$

C. $D-S/D$

B. $D*S/S$

D. $D-S/S$

SECTION “B”

Answer any four questions

(4Q X 3M = 12 Marks)

Q 09. Define Rocks. Give the brief classification of Rocks.

Q 10. Define Minerals. Write detail about the properties of minerals.

Q 11. Enlist Zonal and Intrazonal Soil forming processes and explain Fundamentals soil forming processes.

Q 12. Define Peds and Clods. Explain in detail about Types of Soil Structures.

Q 13. Define Soil Monolith and explain about Master Horizons

Q 14. Define Stoke's Law. Write assumptions and limitations of Stoke's Law.

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B. Sc. (Hons.) Agriculture Midterm Examination

Academic Year: 2025-2026

Semester: I

Course No.: HORT 111

Course Title: Fundamentals of Horticulture

Total marks: 20 (Section 'A'- 8 marks + Section 'B'- 12 marks)

Time: 1 h r (Section 'A'-15 min & Section 'B' – 45 min)

Date: 07/10/2025

Roll No:

- Note:** 1) Use of laptop, mobile, smartwatch is prohibited.
2) Draw neat labelled diagrams wherever necessary.
3) In Section 'A' all questions are compulsory.
4) Section 'A' should be answered on OMR sheet.

SECTION "A"

(8Q x 1M =8Marks)

Multiple choice questions/Match the pairs

- Pineapple is which kind of fruit?
A. Sorosis B.Capsule C.Synconus D. Drupe
- Which is not a berry fruit?
A.Banana B.Papaya C.Sapota D.Bael
- Which is climacteric fruit?
A. Grape B. Citrus C. Banana D.Pineapple
- Horticulture is derived from ____ word
A. Greek B. Latin C. Persian D.Spanish
- Indian Institute of Vegetable research is located at ____
A.Delhi B.Varanasi C.Hydrabad D. Shillong
- Specialized vegetative propogation structure found in gladiolus is ____
A. . Bulb B. Rhizome C. . Corm D. Stolon
- Edible part in Broccoli is ____
A.Stem B. Leaf C.Flower D. roots
- Family of jackfruit is ____
A. Moraceae B.Myrtaceae C. Caricaceae D. Rutaceae

SECTION "B"

Answer any four questions

(4Q X 3M = 12 Marks)

Q 09. write scope of horticulture in brief.

- Q 10. Enlist different basis of classification of horticultural plants and write in detail about classification on basis of rate of respiration
- Q 11. Write in brief about horticultural zones in India.
- Q 12. Enlist different methods of layering and write in detail about air layering.
- Q 13. Give merits and demerits of sexual propagation method.
- Q 14. Enlist different methods of grafting and write in detail about stone grafting.

GOA COLLEGE OF AGRICULTURE

B.Sc.(Hons) Agriculture

Academic Year: 2025-26

Semester - I

Course NO: MATH-III

Course Title: Introductory
Mathematics

Total Marks: 30 (Section 'A' - 15 Marks + Section 'B' - 15 Marks)

Date: 06.10.2025

Roll No:

SECTION 'A'

* MULTIPLE CHOICE QUESTIONS

(15Q x 1M = 10 Marks)

1. Give the Relationship between A, G, H

A. $A > G < H$ C. $A < G < H$ B. $A > G > H$ D. $A < G > H$

2. How Harmonic Mean (H) of a and b is calculated

A. $ab/a+b$ C. $ab/2a+2b$ B. $2ab/a+b$ D. $2ab/a-b$

3. A Matrix in which the numbers of rows are equal to the numbers of columns, is said to be Matrix.

A. Column

C. Square

B. Row

D. Scalar

4. If $A = [a_{ij}]$, $B = [b_{ij}]$ are matrices of the same order, say $m \times n$, then $A+B = B+A$, then it is a Law.

A. Commutative law

C. Existence of additive identity

B. Associative law

D. The existence of additive inverse.

5. Let $A = [a_{ij}]$ be an $m \times n$ matrix and O be an $m \times n$ zero matrix, then $A+O = O+A = A$, In other words, O is the for matrix addition.

A. The existence of additive inverse

B. Existence of additive identity

C. Commutative law

D. Associative law

6. $A = \begin{bmatrix} \sqrt{3} & 0 & 0 \\ 0 & \sqrt{3} & 0 \\ 0 & 0 & \sqrt{3} \end{bmatrix}$ is an example of.....

A. Column matrix

B. Row matrix

C. Scalar matrix

D. Zero matrix

7. Relationship between A, G and H

A. $G^2 = AH$

C. $G = AH^2$

B. $G = HA$

D. $\sqrt{G} = AH$

8. Find the Sum of first 100 Natural numbers.

A. 4050

C. 6050

B. 5050

D. 7050

9. 3rd term in Arithmetic Progression..... when first term is 3 and the common difference is 2.

A. 6

B. 7

C. 8

D. 9

10. Find the 13th term of G.P from given series.

2, 4, 8, 16, 32 nth

A. 131072

C. 132074

B. 262144

D. 282144

11. Sum of infinite terms of G.P is given by

A. $S_{\infty} = \frac{a}{1-r}$

C. $S_{\infty} = \frac{a}{2-r}$

B. $S_{\infty} = \frac{a}{1-r}$

D. $S_{\infty} = \frac{a}{2-r}$

12. To calculate the Sum of n terms in A.P when first and last terms are known.

A. $S_n = \frac{n}{2} (T_1 + T_n)$

C. $S_n = a(m-1)$

B. $S_n = \frac{n}{2} [2a + (n-1)d]$

D. $S_n = a \frac{(1-r^n)}{1-r}$

13. If $A = \begin{bmatrix} -2 \\ 4 \\ 5 \end{bmatrix}$, then $A' =$

A. $\begin{bmatrix} 5 \\ 4 \\ -2 \end{bmatrix}$

B. $\begin{bmatrix} 1 \\ 3 \\ -4 \end{bmatrix}$

C. $\begin{bmatrix} -2 & 4 & 5 \end{bmatrix}$

D. $\begin{bmatrix} 5 & 4 & -2 \end{bmatrix}$

14. Find AB , if $A = \begin{bmatrix} 0 & -1 \\ 0 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & 5 \\ 0 & 0 \end{bmatrix}$

A. $\begin{bmatrix} 1 & 0 \\ 1 & 0 \end{bmatrix}$

B. $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$

C. $\begin{bmatrix} 3 & 2 \\ 1 & 0 \end{bmatrix}$

D. $\begin{bmatrix} 0 & 2 \\ 3 & 1 \end{bmatrix}$

15. Transpose of the Matrices $(A')' = \dots\dots\dots$

A. A^2

B. $\sqrt{A}$

C. A^3

D. A

SECTION 'B'

Answer any five questions (50 x 3M = 15 Marks)

Q.16 Construct a 3×2 matrix whose elements are given by $a_{ij} = \frac{1}{2}|i-3j|$

Q.17. IF $\begin{bmatrix} x+3 & z+4 & 2y-7 \\ -6 & a-1 & 0 \\ b-3 & -21 & 0 \end{bmatrix} = \begin{bmatrix} 0 & 6 & 3y-2 \\ -6 & -3 & 2c+2 \\ 2b+4 & -21 & 0 \end{bmatrix}$

Find the values of a, b, c, x, y and z .

Q.18. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -1 & 3 \\ -1 & 0 & 2 \end{bmatrix}$, then find $2A-B$

Q.19. Find x and y , if $x+y = \begin{bmatrix} 5 & 2 \\ 0 & 9 \end{bmatrix}$ and $x-y = \begin{bmatrix} 3 & 6 \\ 0 & -1 \end{bmatrix}$

Q.20. If $A = \begin{bmatrix} 3 & \sqrt{3} & 2 \\ 4 & 2 & 0 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & -1 & 2 \\ 1 & 2 & 4 \end{bmatrix}$, verify that

i) $(A')' = A$

ii) $(A+B)' = A' + B'$

Q.21. Evaluate the determinant $\Delta = \begin{vmatrix} 1 & 2 & 4 \\ -1 & 3 & 0 \\ 4 & 1 & 0 \end{vmatrix}$

Q.22. Find the area of the triangle whose vertices are $(3, 8)$, $(-4, 2)$ and $(5, 1)$

GOA COLLEGE OF AGRICULTURE

Affiliated to Goa University

B. Sc. (Hons.) Agriculture

Midterm Examination

Academic Year: 2025-26

Semester: I

Course No.: BIO 111

Course Title: Introductory Biology

Total marks: 20 (Section 'A'- 8 marks + Section 'B'- 12 marks)

Time: 1hr (Section 'A'-15 min & Section 'B' – 45 min)

Date: 06.10.2025

Roll No:

- Note:**
- 1) Use of laptop, mobile, smartwatch is prohibited.
 - 2) Draw neat labelled diagrams wherever necessary.
 - 3) In Section 'A' all questions are compulsory.
 - 4) Section 'A' should be answered on OMR sheet.

SECTION "A"

(8Q x 1M =8Marks)

Multiple choice questions

1. Which of the following is NOT a characteristic of living organisms?
 - A. Response to stimuli
 - B. Reproduction
 - C. Inert Composition
 - D. Growth
2. The process of naming, defining, and classifying groups of organisms is called:
 - A. Phylogeny
 - B. Ecology
 - C. Taxonomy
 - D. Evolution
3. The herbarium specimen on whose basis a new species is described for the first time is called as.....
 - A. Syntype
 - B. Holotype
 - C. Paratype
 - D. Neotype
4. Who is considered the "Father of Biology"?
 - A. Carl Linnaeus
 - B. Charles Darwin
 - C. Aristotle
 - D. Gregor Mendel
5. Artificial system of classification classifies plants on the basis of-
 - A. One or two characters
 - B. Phylogenetic trends
 - C. Many naturally existing characters
 - D. None of the above

6. Through the selective cross-breeding of common pea plants (*Pisum sativum*), Mendel observed traits.

- A. Six
- B. Eight

- C. Seven
- D. Nine

7. Who performed an experiment under support Oparin's theory of origin of life, that red substance was analysed and it was found to contain amino acids, Glycine and nitrogenous bases which are found in the nucleus of a cell.

- A. Haldane
- B. Stanley Miller

- C. Mendel
- D. Lamarck

8. The branch of science concerned with genes, heredity, and variation in living organisms is known as.....

- A. Eugenics
- B. Cytogenetics

- C. Genetics
- D. Molecular Genetics

SECTION “B”

Answer any four questions

(4Q X 3M = 12 Marks)

Q 09. Why mendel picked garden pea plants for his research study and write down traits he observed during studies?

Q 10. Explain Oparin-Haldane theory of chemical origin of life and list out steps of chemical evolution.

Q 11. Write down the main rules of ICBN.

Q 12. Define biological classification and explain types of classifications?

Q 13. Explain Herbarium and its types.

Q.14. Describe about the Museum and botanical garden
