Test Structure, Syllabus and Model Questions for

Master’s Entrance Test (MET) 2021-2022

PUNJAB AGRICULTURAL UNIVERSITY

LUDHIANA
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MET - AGRICULTURE
(For admission to M.Sc. programmes in Agronomy, Agricultural Meteorology, Entomology, Extension Education, Food Technology, Forestry, Horticulture (Floriculture & Landscaping), Horticulture (Fruit Science), Horticulture (Vegetable Science), Plant Breeding & Genetics, Plant Pathology, Soil Science, Agricultural Economics)

1. Test Structure
(a) The question paper shall have two SECTIONS:

**SECTION-I:** General Agriculture, which will be compulsory for all the candidates.

**SECTION-II:** A candidate has to opt for at least one discipline out of the following. However, a maximum of two disciplines can be selected as per candidate’s eligibility:

1. Agronomy / Agricultural Meteorology
2. Entomology
3. Extension Education
4. Food Technology
5. Forestry
6. Horticulture (Floriculture & Landscaping / Fruit Science / Vegetable Science)
7. Plant Breeding and Genetics
8. Plant Pathology
9. Soil Science
10. Agricultural Economics

Any change in choice of discipline will not be allowed after the submission of application form.

(b) There will be 150 multiple choice type questions (SECTION-I: 90; SECTION-II: 60) each carrying one mark which are to be attempted by the candidates in the allotted time of 2 hours 10 minutes.

For Agricultural Economics, weightage will be 50% for SECTION-I and 50% for SECTION-II.

(c) Candidates appearing for two disciplines will be required to sit for additional SECTION-II paper chosen by him/her consisting of 60 questions which is to be attempted in additional allotted time of 50 minutes.

(c) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer

(d) Minimum percentage of marks required in the Entrance Test to be called for Counselling is 20% with negative marking.

2. Syllabus

**SECTION - I:**

**General Agriculture**

SECTION - II:

Agronomy / Agricultural Meteorology


Entomology


Extension Education


Food Technology

Major nutritional deficiency diseases. Food groups and concepts of balanced diet. Food adulteration. Food

**Forestry**


**Horticulture**


*Fruit Science:* Seed dormancy and germination. Stock scion relationship. Dwarfing rootstocks, different methods of propagation, containers, media, mixture, propagation structure, Nursery act, quarantine and certification. Ecophysiological requirement, varieties, Horti-agro techniques, plant protection measures, cultivation practices, special problems, maturity indices, ripening, harvesting, transportation, quality improvement, processing and packaging technologies of major fruits such as citrus, mango, guava, apple, ber, grapes, papaya, pineapple, banana, pomegranate, sapota, litchi, pear, peach and plum.


**Plant Breeding and Genetics**


**Plant Pathology**

Characteristics of fungal, bacterial and viral pathogens of plants, Plant disease concepts, Classification of plant diseases, Infection, growth, reproduction and dissemination of plant pathogens, Pathogenesis, Variability in plant pathogens, Plant disease epidemics, Nature of host-resistance, Seed health testing, Methods of plant disease management. Distribution, symptoms, etiology, predisposing factors, perpetuation and control of important diseases of field crops (rice, sorghum, bajra, maize, wheat, barley, sugarcane, turmeric, tobacco, groundnut, sesamum, castor, sunflower, rapeseed & mustard, cotton, pulses, mentha and berseem), vegetables (chilli, brinjal, okra, potato, crucifers, cucurbits, tomato, pea, beans, onion, garlic, coriander), fruits (citrus, mango, banana, grapevine, pomegranate, papaya, guava, sapota, ber, apple, pear, peach, plum, coconut, betelvine, mulberry, coffee, tea) and ornamentals (rose, chrysanthemum, gladiolus, marigold and jasmine) Field diagnosis of important diseases of Rabi and Kharif crops, vegetables, fruits, forest and ornamental plants. History and principles underlying host resistance, chemical, physical, cultural, biological, and legislative measures of plant disease management. Registration, commercial development and compatibility of fungicides with other chemicals. General account of plant protection appliances. Development of resistance in pathogens against fungicides. Non-target effects of fungicide use. Methods of screening for disease resistance. Seed certification standards and phytosanitary measures. Importance of post-harvest diseases. Important post-harvest diseases of fruits and vegetables. History and economic importance of plant parasitic nematodes. General characteristics, identification, their classification and relationship with other organisms Morphology, biology and control of important genera of nematodes causing diseases of cereals, fruits and vegetables. Principles and methods of control.

**Soil Science**


**Agricultural Economics**

Micro Economics: consumption, production, costs, demand and supply and factors affecting them. Forms of market structure and price determination under perfect competition and monopoly, pricing of factors of production. Macro Economics: Basic Concepts, National income accounting, Theories of consumption, Investment and its determinants, Income determination model including money and interest. Monetary, fiscal, wage and employment policies, Measures of full employment, Inflation-Types, causes and remedies. Farm management: Typical decisions and principles of farm management, Farm records and business accounting, Farm planning, Factor-factor, factor-product and product-product relationships. Agricultural marketing: Types of markets, Methods of sale, Market functions and institutions. Agricultural Credit: Need and classification of credit, Importance of credit institutions. Three R's of credit, Repayment schedule. Role of economics liberalization in agriculture, Formulation and evaluation of different agricultural products such as dairy, poultry, fishery, floriculture under Punjab conditions. Importance of agriculture
in Indian economy, comparison with other countries. Economic problems in Indian agriculture relating to agricultural production and productivity, credit, marketing and labour. Principles and role of agricultural cooperatives.

3. Model questions

**General Agriculture**
1. NAARM is located at
   - (A) New Delhi
   - (B) Hyderabad
   - (C) Karnal
   - (D) Cuttack

2. Percentage of net sown area in India which is irrigated is:
   - (A) 62
   - (B) 38
   - (C) 65
   - (D) 35

**Agronomy / Agricultural Meteorology**
1. Puddling operation is followed in
   - (A) Wheat
   - (B) Cotton
   - (C) Rice
   - (D) Sugarcane

2. Sensor in the minimum thermometer is
   - (A) Water
   - (B) HCI
   - (C) Mercury
   - (D) Alcohol

**Entomology**
1. Whole of the sugarcane plant above attacked portion dries up due to attack of
   - (A) Top borer
   - (B) Shoot borer
   - (C) Root borer
   - (D) Gurdaspur borer

2. The digestion and absorption of food in insects take place in
   - (A) Proctodaeum
   - (B) Stomodaeum
   - (C) Mesentron
   - (D) Proventriculus

**Extension Education**
1. When something is put forth as a point of view or an assumption and its proof is not known, it is called
   - (A) Hypothesis
   - (B) Theory
   - (C) Principle
   - (D) Objective

2. The term Human Resource Development covers the area of
   - (A) Education
   - (B) Training
   - (C) Development
   - (D) All the three

**Food Technology**
1. Maize protein is known as
   - (A) Gluten
   - (B) Zein
   - (C) Hordein
   - (D) Oryzin

2. The enzyme used for tenderization of meat is
   - (A) Papain
   - (B) Invertase
   - (C) Bacterial peptidase
   - (D) Runnel
Forestry
1. Main component in wood is
   (A) Cellulose  (B) Hemicellulose
   (C) Lignin    (D) Extractives
2. Lignotubers are found in
   (A) Kikar      (B) Poplar
   (C) Eucalyptus (D) Neem

Horticulture (Floriculture & Landscaping / Fruit Science / Vegetable Science)
1. The nutrient which improve fruit quality
   (A) Zinc      (B) Calcium
   (C) Nitrogen  (D) Potassium
2. Buttoning is a physiological disorder in
   (A) Cauliflower (B) Cabbage
   (C) Tomato     (D) Onion

Plant Breeding & Genetics
1. Multiline variety is a mixture of
   (A) Pure lines   (B) Inbred lines
   (C) Isogenic lines (D) Hybrids
2. Selection is more effective if heritability is
   (A) High        (B) Low
   (C) Zero        (D) Negative

Plant Pathology
1. Loose smut of wheat caused by Ustilago tritici completes following number of life cycles during crop season
   (A) One         (B) Two
   (C) Three       (D) Four
2. Phytoplasma are sensitive to
   (A) Penicillin  (B) Bavistin
   (C) Tetracycline (D) Calixin

Soil Science
1. Which one is immobile plant nutrient
   (A) Potassium   (B) Sulphur
   (C) Phosphorus (D) Calcium
2. Which nutrients soil gets from Diammonium phosphate
   (A) Nitrogen    (B) Phosphorus
   (C) Potash     (D) Nitrogen and Phosphorus

Agricultural Economics
1. Consumption function studies the relationship between consumption and
   (A) Saving     (B) Investment
   (C) Income     (D) None
2. Inflation is due to
   (A) Increase in demand  (B) Decrease in money supply
   (C) Increase in commodities supply (D) All the above
1. Test Structure
(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(b) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
(c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus


3. Model questions
1. A segment of a eukaryotic gene that code for a specific protein segment is called:
   (A) An intron (B) An exon
   (C) A promoter (D) An Enhancer

2. Which one is the natural auxin?
   (A) 2,4 D (B) NAA
   (C) IAA (D) IBA

3. Hybrids are generally superior to parents because of:
   (A) Homozygosity (B) Hybrid vigor
   (C) Parents are generally weak (D) None of these

4. The preferred organism for lactic acid production is:
   (A) Streptococcus lactis (B) Lactobacillus bulgaricus
   (C) L. delbrueekii (D) L. casei

5. How many nucleotides in DNA code for one amino acid in the protein:
   (A) Two (B) Three
   (C) Four (D) Five
MET - AE
(For admission to M.Tech. programmes in Farm Machinery & Power Engineering, Processing & Food Engineering, Soil & Water Engineering)

1. Test Structure
(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(b) There will be 60 questions each from Farm Machinery & Power Engineering, Processing & Food Engineering; Soil & Water Engineering and 20 questions from Mathematics & Statistics.
(c) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus

Farm Machinery & Power Engineering:

Processing & Food Engineering:
Engineering properties of biological materials; material and energy balances in unit operations; particle size analysis; size separation and screening; centrifugal separation; fluidization of granular solids. Thermal process calculations; Principles of food preservation ; psychrometry; conditioning and drying of food grains; concentration and dehydration of foods; evaporators, tray, drum and spray dryers; processes and machines for processing of cereals pulses and oil seeds. Grain conveying and handling equipments-operation and maintenance. Planning and design of farmstead, livestock and animal housing; poultry shed; animal feed handling and waste disposal system; storage of fruit vegetable and other perishable products, estimating and cost analysis of farm buildings.

Soil & Water Engineering:
Water resources of India. Hydrologic cycle; principles and mechanics of soil erosion; land leveling criteria, equipment; biological and engineering measures to control erosion; ponds and earth embankments; watershed management; well hydraulics; tube well design, construction, development; type of irrigation pumps and design; water measuring devices and conveyance systems; soil plant water relationship, irrigation methods design and evaluation; efficiencies, surface drainage of agricultural lands, sub surface drainage; reclamation of saline/alkaline soils; command area development; land use capability. classifications; irrigation scheduling; canal outlets types, design; conjunctive use of water; economical irrigation.
**Mathematics & Statistics:**

Introduction to mathematical statistics. Differential and integral calculus. Matrices and Fourier series; differential equations; vector algebra & vector calculus; elementary numerical analysis.

**3. Model Questions**

**Farm Machinery & Power Engineering:**

1. When plates of a battery cell are made larger in size, we get increased:
   - (A) Current
   - (B) Voltage
   - (C) Cell resistance
   - (D) No change

2. Net traction coefficient is the ratio of net pull produced to the
   - (A) Normal load
   - (B) Dynamic normal load
   - (C) Weight transfer
   - (D) Total soil reaction

3. Which of the following is generally checked during wheel alignment in a garage
   - (A) Camber angle
   - (B) Caster angle
   - (C) Toe-in
   - (D) Kingpin inclination

4. Which of the following is a deep tillage implement
   - (A) Mould-board plough
   - (B) Disc plough
   - (C) Chisel plough
   - (D) Rotary plough

**Processing & Food Engineering:**

1. In Cryogenic freezer, the most commonly refrigerant (Cryogen) used is:
   - (A) Ammonia
   - (B) Helium
   - (C) Oxygen
   - (D) Liquid nitorgen and liquid carbon dioxide

2. Which of the following is not a processing operation?
   - (A) Winnowing
   - (B) Size reduction
   - (C) Dehusking
   - (D) Digestion

3. The equipment used for size reduction in roller flour milling of wheat is
   - (A) Reduction roll
   - (B) Hammer mill
   - (C) Rubber roll
   - (D) Attrition mill

4. The most efficient oil extraction process is:
   - (A) Hydraulic Press
   - (B) Mechanical Expression
   - (C) Solvent Extraction
   - (D) None of the above

**Soil & Water Engineering:**

1. At drop of less than 3 m, which of the following structures is recommended?
   - (A) Drop spillway
   - (B) Chute spillway
   - (C) Pipe spillway
   - (D) Temporary check dam

2. When the speed of a centrifugal pump is changed, the head varies as:
   - (A) Square of the speed
   - (B) Square root of the speed
   - (C) Cube of the speed
   - (D) None of these

3. The natural grassed waterways are generally found in the shape of
   - (A) Square
   - (B) Triangular
   - (C) Parabolic
   - (D) Rectangular
4. In underground pipeline system the line terminates at
   (A) Air vent                     (B) End plug
   (C) Riser valve                 (D) Pump stand

Mathematics & Statistics:
1. The particular integral of the differential equation $y''-2y'=e^x+x$ is
   (A) $xe^x$                      (B) $2x+x^2e^x$
   (C) $2+x+\frac{1}{2}xe^x$       (D) $xe^x+4$
1. Test structure
(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(b) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer,
(c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus
Force, moment, equilibrium, friction, moment of inertia, Simple stresses and strains, strain energy, shear force and bending moment, Direct and bending stresses, deflection, fixed and continuous beams, torsion, principal stresses and strains, thick and thin cylinders, columns and struts, rolling loads and influence lines, Design of various RCC and steel structural members. Laminar and turbulent flow, open channel flow, flow measurement, dimensional analysis. Hydrological cycle, hydrographs, stream flow, flood estimation, reservoir and channel routing. Duty, delta, evapo-transpiration, canals, waterways, head works, dams and spillways, irrigation methods. Index and engineering properties, consolidation, compaction, sub soil exploration, foundations. Surface and subsurface water resources, demand for water standards for potable water. Intake of water, Water treatment, storage and distribution. Domestic and industrial wastes, flow through sewers, sewer appurtenances, plumbing. Sewage characterization, standards of disposal, sewage treatment, recycling of waste water.

3. Model Questions
1. The loss of head due to sudden expansion in a pipe flow is given by
(A) \( f \frac{L V^2}{2gd} \) (B) \( \frac{(V_2^2-V_1^2)}{2g} \)
(C) \( \frac{(V_1-V_2)^2}{2g} \) (D) None of the above

2. For the upstream slope of an earth dam, the most critical condition is
(A) Sudden draw down condition (B) Steady seepage condition
(C) Neither sudden draw down nor steady (D) During construction when reservoir is allowed seepage to be filled

3. Garnett’s diagrams are used for graphical solution of design equations of a canal by
(A) Lacey’s theory (B) Kennedy’s theory
(C) Gibb’s theory (D) Lindlay Theory

4. The characteristic strength of concrete is defined as that compressive strength below which not more than
(A) 10% of results fall (B) 5% of results fall
(C) 2% of results fall (D) None of the above

5. Temporary hardness in water is caused by the presence of
(A) Bicarbonates of Ca and Mg (B) Sulphates of Ca and Mg
(C) Chlorides of Ca and Mg (D) Nitrates of Ca and Mg
1. Test Structure
(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(b) Each correct answer will carry one mark whereas \(\frac{1}{4}\) mark will be deducted for every wrong answer.
(c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus

**Computer Fundamentals and Programming:** Computer fundamentals, number systems, representation of integers, fixed and floating point numbers, character representation, Logic Gates and circuits. Functional units of computer, I/O devices, primary and secondary memories. Programming fundamentals with C/C++, loops, etc.

**Operating System:** Operating system overview, Operating system architecture. Process, process model, process scheduling, operations on process, inter process communication. Process synchronization, critical section problem, producer consumer problem, bounded buffer problem, CPU scheduling, long term schedulers, middle term schedulers, short term schedulers, basic concepts, scheduling criteria, scheduling algorithms, first come first serve, shortest job first, priority scheduling, round robin, multilevel queue, multilevel feedback, deadlocks, system model, race condition, deadlock prevention, deadlock avoidance, deadlock detection.

**Data Structures and Algorithms:** Programming design and development. Algorithms, programming constructs algorithm complexity, big O notation, and concept of recursion. Arrays and matrices, stack, stack insertion and deletion, queue, circular queues, priority queues, link list, Representation and processing of linear linked lists, bubble sort, selection sort, insertion sort, radix sort, merge sort algorithm, quick sort, heap sort, shell sort.

**Data Base Management System:** Overview of DBMS, basic DBMS terminology, advantages and disadvantages of DBMS, file approach and its limitations, DBMS approach, advantages of DBMS, DBMS components. Design, logical and physical data independence, three level architecture of DBMS, entities and types of entities, relationships, entity relationship model. Data models, relational model, network model, hierarchical model, comparison of data models. Relational model, Functional relational query language, SQL commands. PL/SQL, variables, control structures, decisions and loops, functions and procedures, cursors and triggers.


3. Model Questions

1. Applying DeMorgan's theorem to the expression \((A'B')C\), we get
   (A) \((A+B) + (C)\)  
   (B) \(A (B+C)\)  
   (C) Both A & B  
   (D) None of the above

2. Express the decimal number 57 in binary
   (A) 100101  
   (B) 111010  
   (C) 110010  
   (D) 111001

3. An organization has a class B network and wishes to form subnets for 64 departments. The subnet mask would be
   (A) 255.255.0.0  
   (B) 255.255.64.0  
   (C) 255.255.128.0  
   (D) 255.255.252.0
4. The best data structure to check whether an arithmetic expression has balanced parentheses is a
   (A) Queue  (B) Stack
   (C) Tree   (D) List

5. Which BJT amplifier(s) has (have) a phase inversion between input and output signals?
   (A) Common-base  (B) Common-collector
   (C) Common-emitter  (D) All of the above
1. **Test structure**
   (a) There will be 100 multiple choice type questions each of one mark to be attempted in allotted time of 1½ hours.
   (b) The question paper shall have three sections as under:

   **Section - I** : General English (20 questions)
   **Section - II** : General Awareness (20 questions)
   **Section - III** : Reasoning and Mental Ability (60 questions)

   (c) Each correct answer will **carry one mark** whereas ¼ **mark** will be **deducted** for every wrong answer
   (d) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. **Syllabus**
   **General English**: Error Correction, Tenses, Sentence Rearrangement, Articles, Vocabulary, Idioms & Phrases, etc.
   **General Awareness**: National/International awareness, Abbreviations, Awards & Honour, Sports, Country & Capital, etc.
   **Reasoning and Mental Ability**: Number series, Coding-Decoding, Alphabet Series, blood relation, Shapes, Mirror Image, Insert missing character, Water images, Analytical reasoning, etc.

3. **Model Questions:**

   **General English**
   1. She (as well as) her sister is engaged:
      (A) Adverb (B) Adjective
      (C) Preposition (D) Conjunction
   2. They usually spend their holidays in _______ mountains:
      (A) an (B) the
      (C) for (D) a

   **General Awareness**
   1. First President of India:
      (A) Dr Natwar Singh (B) Dr. Rajinder Prasad
      (C) Dr. RadhaKrishan (D) Dr. JakirHussain
   2. There are _______ members of SAARC:
      (A) 5 (B) 6
      (C) 7 (D) 8

   **Reasoning and Mental Ability**
   1. What number should come next 7, 10, 8, 11, 9, 12, ...?
      (A) 7 (B) 10
      (C) 12 (D) 13
   2. In a certain case INSTITUTION is written as NOITUTITSNI. How is PERFECTION written in that code:
      (A) NOICTEFREP (B) NOITCEFERP
      (C) NOITCEFREP (D) NOITCEFPER
1. Test structure
(a) There will be 100 multiple choice questions to be attempted in allotted time of 1½ hours.
(b) Each correct answer will **Carry One Mark** whereas **¼ Mark** will be **deducted** for every wrong answer.
(c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus
   Computer Basics: Organization of a Computer, Central Processing Unit (CPU), Structure of Instructions in CPU, Input/output devices, Computer Memory, Memory organization, back-up devices.
   Data Representation: Representation of characters, integers and fractions, binary and hexadecimal representations, Binary Arithmetic: Addition, subtraction, division, multiplication, floating point representation of numbers, normalized floating point representation, Boolean algebra: truth tables, Venn diagrams.
   Computer Architecture: Block structure of Computers, communications between processor and I/O devices, Interrupts.
   Computer Language and Operating Systems: Flowcharts and algorithms, Concepts of low level and high level Languages, Computer Programming in C (data types, loop and control statements, functions), Fundamentals of operating systems: multiprogramming, multitasking and time sharing systems.
   Concepts of Data Base Management System, Data Structures and Internet Web Technologies.

3. Model Questions:
   1. An 8-bit unit of data is called:
      (A) Word  
      (B) Data set  
      (C) Byte  
      (D) K
   2. Pick the odd man out:
      (A) Internet Explorer  
      (B) Windows Explorer  
      (C) Netscape Navigator  
      (D) Mosaic
   3. Which of the following is not an operating system?
      (A) DOS  
      (B) JAVA  
      (C) LINUX  
      (D) WINDOWS XP
   4. The standard number of characters in the Extension of file name are:
      (A) 2  
      (B) 3  
      (C) 4  
      (D) 5
   5. The operator `==` is
      (A) Assignment operator  
      (B) Relational operator  
      (C) Logical operator  
      (D) None of the above
1. **Test Structure**

(a) The objective of this test is to measure the development of mental abilities and aptitude for studies in Agribusiness Management. The score of this test together with the score of group discussion and interview will determine the merit for admission to MBA Agribusiness programme in the University.

(b) There will be 300 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.

(c) There will be two parts of the Question Paper. Part-I will contain 60 questions each from Written Communication Ability, Numerical Ability and Management Aptitude, and Part-II will contain 120 questions of General Knowledge.

(d) The weightage of Part-I will be 60% and Part-II will be 20%. Group Discussion and Interview will have weightage of 10% each.

(e) Each correct answer will **carry one mark** whereas ¼ mark will be **deducted** for every wrong answer.

(f) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. **Model Questions**

**PART-I:**

**Written Communication Ability:** The questions for the Written Communication Ability Test attempt to measure the communication skills of the students. This may include comprehension, vocabulary test, English usage, English structure, word usage, synonyms and antonyms etc. Some examples are given below:

1. Choose the word that has nearly the same meaning of the word given:

   METAMORPHOSIS
   
   (A) Transformation    (B) Catharsis
   (C) Fossils           (D) Violent explosion

2. Choose the word that has an opposite meaning of the word given:

   VILIFY
   
   (A) Sing the praise of    (B) Show satisfaction with
   (C) Regard with distrust   (D) Welcome with glee

3. Fill in the blanks:

   He managed to ............... several times, but was finally ............... by the police.
   (A) Absconded       Kidnapped   (B) Deceive     Cheated
   (C) Cheat          Robbed      (D) Escape    Arrested

**Numerical Ability:** The questions relating to Numerical Ability are to test student’s proficiency in using the various numerical techniques. For example:

1. One metre is equal to:

   (A) 3.281 ft.         (B) 3.126 ft.
   (C) 3.250 ft.         (D) None of these

2. The cost of cultivating a square field at the rate of Rs. 160 per hectare is Rs. 1440/-. The cost of putting a fence around it at 75 paise per meter is:

   (A) Rs. 900/-          (B) Rs. 18/-
   (C) Rs. 360/-          (D) Rs. 810/-
Management Aptitude: It includes general aptitude of the candidate towards Agri-Business Management. For example:

1. NABARD is a/an
   (A) Manufacturing company   (B) Export house
   (C) Financial institution     (D) Teak Department

2. The term ‘future and option’ trading is associated with:
   (A) Capital market   (B) Home furnishing market
   (C) Restaurant       (D) Hotels

PART-II:

General Knowledge: It tests general awareness of the candidate from diversified areas such as Agriculture and allied sciences, Social Sciences, National and International Current Affairs. For example:

1. ICAR stands for
   (A) International Center for Agricultural Research
   (B) Institute for Central Agricultural Research
   (C) Indian Council of Agricultural Research
   (D) Indian Commodity of Agricultural Research

2. Which is the biggest oil consuming country in the world:
   (A) USA               (B) UK
   (C) France            (D) India
**MET - BASIC SCIENCES**
(For admission to M.Sc. programmes in Biochemistry, Botany, Microbiology, Zoology)

1. Test structure
   (a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
   (b) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
   (c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus
   Morphology and life history of important genera of algae, fungi, bacteria, viruses, lichens, bryophytes, pteridophytes and gymnosperms. Basic knowledge of anatomy, embryology and systematics of angiosperms. Economically important plants. Thermodynamics of plant water relationships, mineral nutrition, photosynthesis, nitrogen metabolism, translocation of photoassimilates, growth and growth hormones, photoperiodism, vernalization, senescence and aging, morphogenesis, dormancy, fruit growth and fruit ripening, abiotic stresses in plants. Cell structure and function Community structure and dynamics, ecosystem, biogeochemical cycles, pollution (air, water and soil), bioindicators, conservation and management of natural resources.


   Importance of Biochemistry: Concept of buffers in living system; Cell structure and function of biomolecules; structural organization of proteins and their sequencing, enzymes their general mechanism of action, classification, kinetics and regulation; concept of bioenergetics and respiratory chain, Concepts of intermediary metabolism and major pathways. Role of vitamins. Principles of centrifugation, chromatographic, electrophoretic, spectrophotometric, immunological and radioisotopic techniques.

3. Model questions
   1. The two heavy chains of immunoglobulins are joined by how many disulfide linkages
      (A) One
      (B) Three
      (C) Two
      (D) Four
   2. Cells of aleurone layer contain
      (A) Fats
      (B) Starch
      (C) Protein
      (D) Sugars
   3. Which one of the following is called Father of Genetics
      (A) J.D. Watson
      (B) G.J. Mendel
      (C) H.G. Khurana
      (D) M.S. Swaminathan
   4. Nitrogen fixation is a process that require
      (A) Energy
      (B) Anaerobic conditions
      (C) Aerobic conditions
      (D) Both A and B
   5. The skeletal ossicles of starfish arise from
      (A) Ectoderm
      (B) Mesoderm
      (C) Endoderm
      (D) None of these
1. **Test structure**

(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.

(b) Each correct answer will **carry one mark** whereas ¼ mark will be **deducted** for every wrong answer.

(c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. **Syllabus**


**Spectroscopy:** Application of IR, NMR, UV spectroscopy and mass spectrometry in structure elucidation of simple organic compounds. Reaction mechanism involving reactive intermediates; carbanions, carbocations, free radicals and benzyynes. Heterocyclics: Chemistry and reactions of five and six membered heterocyclics with one hetero atom., Natural Products: General introduction and chemistry of terpenoids, steroids, carbohydrates and alkaloids.


3. **Model questions**

1. Hoffmann's Bromamide reaction involves the intermediate
   - (A) Carbene
   - (B) Carbanion
   - (C) Nitrene
   - (D) Carbocation

2. Which of the following is most acidic in nature
   - (A) Ethyl alcohol
   - (B) Phenol
   - (C) Ethane
   - (D) Formaldehyde

3. The ground state of O₂ molecule is
   - (A) Diamagnetic
   - (B) Paramagnetic
   - (C) Triple state
   - (D) None of these
4. Ni (CO)₄ is
   (A) Paramagnetic  (B) Diamagnetic
   (C) Ferromagnetic  (D) Antiferromagnetic

5. How many layers are absorbed in chemisorption?
   (A) Many  (B) Two
   (C) Zero  (D) One
1. **Test structure**
   (a) The objective of this test is to check general awareness, mental ability, English language and familiarity with the latest in the news.
   (b) There will be 100 multiple choice questions each of one mark to be attempted in allotted time of one hour.
   (c) There will be 4 parts in the question paper viz. Part I - General Awareness, Part II - Mental Ability, Part III - English, Part IV - Journalism. Each part will contain 25 questions.
   (d) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
   (e) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. **Model Questions**

**Part I - General Awareness**

1. Who is the Agriculture Minister of India?
   (A) Sharad Pawar  
   (B) Pranab Mukherjee  
   (C) Somnath Chatterjee  
   (D) None of these

2. Which of the following UN programmes concentrates its assistance on development activities for improving the quality of life of children and mothers in developing countries?
   (A) UNEP  
   (B) UNIDO  
   (C) UNICEF  
   (D) UNHCR

**Part II - Mental Ability**

   (A) 6  
   (B) 9  
   (C) 7  
   (D) 10

2. Taj Mahal : India : Leaning Tower of Pisa : ?
   (A) USA  
   (B) Italy  
   (C) Australia  
   (D) Denmark

**Part III - English**

1. The most appropriate synonym of POLITY is ….
   (A) Courtesy  
   (B) Trickery  
   (C) Methods of government  
   (D) Freedom

2. Choose an antonym of AMPLIFY:
   (A) Decrease  
   (B) Multiply  
   (C) Deceive  
   (D) Bless

**Part IV - Journalism**

1. Legal protection for an intellectual work is called….
   (A) Cheesecake  
   (B) Copyright  
   (C) Centre Spread  
   (D) Credit Line

2. Choose the full form of TRAI
   (A) Telephone Regularity Authority of India  
   (B) Telephone Regulatory Association of India  
   (C) Telecom Regulatory Appellate of India  
   (D) Telecom Regulatory Authority of India
1. Test Structure
(a) The objective of this test is to measure the development of mental ability and aptitude for studies in Business Management. The score of this test together with the score of group discussion and interview will determine the merit for admission to MBA programme in the University.
(b) There will be 300 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(c) The paper will be divided into four sections consisting of 60 questions each from Verbal Ability, Numerical Ability, Management Aptitude and 120 questions from General Knowledge. Each section will carry equal weightage i.e. 25%.
(d) The weightage for the Entrance Test will be 80%. Group Discussion and Interview will have weightage of 10% each.
(e) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
(f) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Model Questions

Verbal Ability: The questions for the Verbal Ability Test attempt to measure the communication skills of the students. This may include comprehension, vocabulary test, English usage, English structure, word usage, synonyms and antonyms etc. Some examples are given below:

1. Choose the best option to complete the conversation
   When can we meet again?
   (A) When you are free
   (B) It was two days ago
   (C) Can you help me
   (D) None of these

2. Choose the word that has an opposite meaning of the word given below:
   VILIFY
   (A) Sing the praise of
   (B) Show satisfaction with
   (C) Regard with distrust
   (D) Welcome with glee

Numerical Ability: The questions relating to Numerical Ability are to test student’s proficiency in using the various numerical techniques. For example:

1. The simplification of $(2^{-1} - 3^{-1})$ is:
   (A) 1/6
   (B) 6
   (C) 1
   (D) 3

2. Two boys A and B start at the same time to ride from Delhi to Meerut 60 km away. A travels 4 km/hour slower than B. B reaches Meerut and at the same time turns back meeting A at a distance of 12 km away from Meerut. The speed of A was:
   (A) 4 km/hour
   (B) 8 km/hour
   (C) 12 km/hour
   (D) 16 km/hour

Management Aptitude: It includes general aptitude of the candidate towards Agri-Business Management. For example:

1. SEBI is:
   (A) A manufacturing organization
   (B) Regulatory body
   (C) Export house
   (D) Financial institution
2. The term ‘interest rate futures’ is associated with:
   (A) Capital markets                (B) Home furnishing market
   (C) Hotels                         (D) Spot trade

**General Knowledge:** It tests general awareness of the candidate from diversified areas such as Agriculture and allied sciences, Social Sciences, National and International Current Affairs. For example:

1. UGC stands for
   (A) Universal grants commission    (B) University grants commission
   (C) Undergraduate grants commission (D) University generals commission

2. Which is the biggest Oil producing country?
   (A) USA                            (B) Russia
   (C) Saudi Arabia                   (D) Iran
MET-MATHEMATICS
(For admission to M.Sc. Programme in Mathematics)

1. Test Structure
(a) There will be 75 multiple choice questions each of two mark to be attempted in allotted time of 3 hours.
(b) Each correct answer will carry two marks whereas \( \frac{1}{2} \) mark will be deducted for every wrong answer.
(c) Minimum 20% marks are required in entrance test to be called for counseling/interview.

2. Syllabus

Countable and uncountable sets. Riemann integral, Integrability of continuous and monotonic functions, Properties of integrable functions, The fundamental theorem of integral calculus, Mean value theorems of integral calculus. Beta and Gamma functions. Improper integrals and their convergence, Double Integral over A Rectangle, Repeated Integrals in \( R^2 \), Double Integrals over Bounded Non-rectangular Regions, Area of Bounded Regions in Plane, Double Integrals as Volumes, Change of Variables in Double Integrals, Change to Polar Coordinates, Area in Polar Coordinates, Triple Integral in Rectangular Coordinates, Triple Integrals over General Regions in \( R^3 \), Repeated Integrals in \( R^3 \), Volume of a Region in \( R^3 \), Change of Variables in a Triple Integral to Cylindrical and Spherical Coordinates Vector Line, Surface and Volume integration. Gauss divergence theorem, Stokes’ theorem, Green's theorem. Riemann integration, uniform convergence and differentiation, Weierstrass approximation theorem, Abel's and Taylor's theorems for power series.

Groups, Subgroups, Lagrange's Theorem, Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems, Conjugate elements, Class equation, Permutation Groups, Alternating groups, Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings, Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings. Vector Space: Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors, Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements.

3. Model Questions

1. The value of ‘c’ for \( f(x) = x(x-2) \) in \([1,2]\) using Lagrange value theorem is
   (A) \( \frac{3}{2} \)   (B) 2   (C) 1   (D) \( \frac{1}{2} \)

2. \( 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - ... \) is expansion of
   (A) \( \cos x \)   (B) \( \sin x \)   (C) \( \tan x \)   (D) \( \cot x \)

3. \( \int_2^3 x^2 \, dx = \)
   (A) \( \frac{1}{6} \)   (B) \( \frac{19}{6} \)   (C) \( \frac{1}{3} \)   (D) \( \frac{19}{3} \)

4. Degree of differential equation \( y = \sin \frac{dy}{dx} \) is
   (A) 1   (B) 2   (C) 3   (D) None of these

5. \( Mdx + Ndy = 0 \) is exact if
   (A) \( \frac{\partial M}{\partial x} = \frac{\partial N}{\partial y} \)   (B) \( \frac{\partial M}{\partial y} = \frac{\partial N}{\partial x} \)   (C) \( \frac{\partial M}{\partial y} = \frac{\partial N}{\partial x} \)   (D) \( \frac{\partial M}{\partial y} = \frac{\partial N}{\partial y} \)
1. Test structure
(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(b) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
(c) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus

Quantum mechanics: Origin of quantum mechanics; Wave functions and the Schrödinger equation, group velocity, Uncertainty principle; Operators, Eigen values and Eigen functions-Gaussian wave packet, Ehrenfest theorem; Solutions of time independent Schrödinger equation, one dimensional box, step potential, potential barrier, harmonic oscillator, Hydrogen atom; Atoms with one and many electrons, Fine structure of hydrogen and sodium, electron spin, angular momentum, SG experiment.

Electricity & Magnetism: Vector algebra; Coulomb's law and electric field; Gauss's law and its applications; Electric potential and current; Fields of moving charges; Magnetic field; Electromagnetic induction; Electric field in dielectric; Magnetic field in matter; Wave motion; Electromagnetic waves.

Electronics: Junction diode, zener diode, Tunnell diode; LED, LCD; Rectification-Half and full wave rectifier; Filter circuits, voltage regulation; Junction transistor, structure and working; Characteristics of JFET; Transistor biasing, working of common emitter amplifier; Analysis using h-parameters; FET amplifier; Feedback amplifiers; Oscillators-LC and RC oscillators.

Statistical Physics: Basic Ideas; Maxwell-Boltzmann Statistics, law of distribution of molecular speeds; B-E and F-D statistics. Wein's displacement law and Stefan's law; Statistical interpretation of entropy and Carnot's cycle, equation of state; Maxwell's thermodynamic relations and their applications.

Mechanics: Co-ordinate systems and motion of a particle; Relationship of space time symmetries and conservation laws; Relativity: Special theory of relativity, Lorentz transformations, simultaneity principle, length contraction and time dilation, relativistic addition of velocities, mass energy equivalence, Minskowski space; Elastic and Inelastic collisions; Frames of references; Hamilton's principle.

Nuclear Physics: Constituents of nucleus and their intrinsic properties. Properties of nuclear forces, Liquid drop model, Nuclear shell model, Radioactive decays, alpha, electron, positron and gamma ray emission; Nuclear reactions; Interaction of gamma rays with matter; Cyclotron; Betatron; Linear accelerator; Ionization chamber; proportional Counter; GM counter; Scintillation counter; elementary particles-classification; Conservation laws; quark-model.

Solid State Physics: Crystal structure: Two and three dimensional bravais lattices, miller indices, diamond and sodium chloride structure; Crystal diffraction-Bragg's law, Laue's equation, reciprocal lattices of SC, BCC and FCC structures; Lattice vibrations, Einstein and Debye model of specific heat; Free electron model of metals, Fermi gas and Fermi energy; Band theory, Brillouin Zones, Kroning Penny model; Metals and insulators; Superconductivity, Properties of Magentic materials.

3. Model questions
1. An oscillator is nothing but an amplifier with:
   (A) Positive feedback  (B) Negative feedback
   (C) No feedback       (D) Large gain

2. Photon is a quantum of energy of:
   (A) Electromagnetic energy (B) Elasic energy
   (C) Magnetic energy       (D) Electrostatic energy

3. The number of atoms in a unit cell of an fcc structure (with lattice constant) is
   (A) One                (B) Four
   (C) Two               (D) Ten

4. An accelerator which cannot accelerate protons is:
   (A) linear accelerator (B) Cyclotron
   (C) Betatron          (D) Van de Graff generator

5. Nuclear cross section has the dimensions of:
   (A) Area             (B) Length
   (C) Volume           (D) Density
1. Test Structure
(a) There will be 200 multiple choice type questions each of one mark to be attempted in allotted time of 3 hours.
(b) The question paper shall have two sections as under:

   **Section I:** General Agriculture (Code AG) or General Home Science (Code HS). This section will carry 100 questions with 30% weightage. The candidate can attempt either General Agriculture (Code AG) or General Home Science (Code: HS).

   **Section II:** Sociology. This section will carry 100 questions with 70% weightage.

(c) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
(d) Minimum percentage of marks required to be obtained in the Entrance Test to be called for Counselling is 20% with negative marking.

2. Syllabus

**Section I:**

**General Agriculture (Code: AG)**


**General Home Science (Code: HS)**

Section-II:


Model Questions

1. Primary and secondary group typology was given by:
   (A) W.G. Sumner  (B) C.H. Cooley
   (C) F. Tonnies  (D) H.P. Fairchild

2. Restriction on beef eating in Hindu society is:
   (A) Idea  (B) Taboo
   (C) Tradition  (D) Belief
MET - STATISTICS
(For admission to M.Sc. programme in Statistics)

1. Test structure
   (a) The question paper will have to be attempted in 3 hours.
   (b) There will be two sections in the paper as under:
       **Section-I** (for students of B.Sc. Non-Medical and B.A. with Mathematics). This section will carry 100 questions of two marks each.
       **Section-II** (for students of B.Sc. with Statistics and B.Sc. CSM). This section will carry 150 questions (50 questions of two marks each and 100 questions of one mark each)
       Choice of Section-I or Section-II will have to be given at the time of submitting application form at Sr. No. 6. Choice once selected will not be changed later on.
   (c) Each correct answer will carry two marks / one mark whereas ½ / ¼ mark (as applicable) will be deducted for every wrong answer.
   (d) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus

**SECTION – I (MATHEMATICS)**

Countable and uncountable sets, Riemann integral, Mean value theorems of integral calculus, Improper integrals and their convergence, Comparison tests, Abel's and dirichlet's tests, Beta and gamma functions, Double and triple integrals, Fourier series.

Groups, Vector Spaces, Linear transformations, Matrices and linear transformations.

Probability theory, Bayes' theorem, Random variables, Expectation, Mean, Variance, Moment generating function, Distributions: Binomial, Geometric, Poisson, Uniform, Exponential, Gamma and Normal.


Sequence and series, Infinite series, vector calculus and its applications, Continuity, Sequential continuity, Uniform continuity, Limit and continuity of functions of two and three variables, Partial differentiation and its applications.

Exact differential equations, of first order and first degree; first order and higher degree, Orthogonal trajectories, Linear differential equations with constant coefficients

**SECTION – II (STATISTICS)**

Classification, tabulation and presentation of data, population, sample, Measures of location, Dispersion, Skewness and kurtosis, Two dimensional random variable, Joint probability distributions, Marginal and conditional probability distributions, Conditional expectation, Measures of association and contingency, Correlation and simple linear-regression, Coefficient of determination, Spearman's rank correlation coefficient, Multiple and partial correlation in three variables, Multiple regression.

Probability, Bayes' theorem and its applications, Random variable, Probability mass function, Probability density function, Distribution function and its properties, Moment generating function, Two dimensional random variables: Joint, Marginal, Conditional distributions, Uniform, Binomial, Poisson, Normal, Exponential, Gamma and Beta distributions, Chebyshev's inequality and its applications, Weak law of large numbers, Central limit theorem.

Point and interval estimation, Unbiasedness, Consistency, Efficiency and sufficiency, Methods of moments, Maximum likelihood estimators for the parameters of Binomial, Poisson and normal distributions, Confidence intervals, Hypothesis testing, Sampling distributions of Chi-square, t & F distributions and their relationships, Large
and small sample tests, Testing of correlation coefficient, Fisher’s Z-transformation, Chi-square test for goodness of fit and independence of attributes.

Census and sample surveys, Basic concepts in sampling, sample size, Sampling methods for estimation of population mean, variance and standard error of estimates: simple random sampling (SRS), Stratified random sampling and systematic sampling. Fixed, random and mixed effects models, Analysis of variance for one-way and two-way classifications under the fixed effect models, Fundamental principles of design, CRD, RBD, LSD and their analysis.

Limits and continuity, Derivatives and their applications, Exponential and logarithmic functions, Integration and their applications, Definition of an angle its various measures and relations between them, Circular functions.

The solution of linear and quadratic equations in one variable, Arithmetic, Geometric and harmonic progressions, Permutations and combinations, Principle of induction, Binomial theorem for positive integral index.

3. Model Questions

Section –I

1. The sum of the series

\[ \frac{1}{1!} + \frac{1+2}{2!} + \frac{1+2+3}{3!} + \ldots \]

(A) \( e \) \hspace{1cm} (B) \( e/2 \) \hspace{1cm} (C) \( 3e/2 \) \hspace{1cm} (D) \( 1+e/2 \)

2. The row space of a 20 X 50 matrix A has dimension 13. What is the dimension of the space of solutions of \( AX=0 \)?

(A) 7 \hspace{1cm} (B) 13 \hspace{1cm} (C) 37 \hspace{1cm} (D) 33

3. Up to isomorphism, the number of abelian groups of order 108 are:

(A) 12 \hspace{1cm} (B) 9 \hspace{1cm} (C) 6 \hspace{1cm} (D) 5

Section-II

1. Which one of the following is true?

(A) The sample mean is always less than the population mean.
(B) The sample mean is always more than the population mean.
(C) The sample mean is an unbiased estimate of population mean.
(D) None of the above is true.

2. If ‘O’ and ‘E’ be the observed and expected frequencies, then the \( \chi^2 \) is equal to:

(A) \( \sum \frac{(O-E)^2}{N} \) \hspace{1cm} (B) \( \sum \frac{(O-E)^2}{E} \) \hspace{1cm} (C) \( \sum \frac{(O+E)^2}{E} \) \hspace{1cm} (D) None of the above.

3. Numerical value of correlation coefficient \( r \) can never be:

(A) Greater than unity \hspace{1cm} (B) Less than unity
(C) Greater than zero \hspace{1cm} (D) None of the above
MET - FASHION DESIGNING
(For admission to M.Sc. programme in Fashion Designing)

1. Test structure
(a) The question paper will have to be attempted in 3 hours.
(b) Candidates will attempt 200 multiple choice type questions each of one mark, based on general aptitude of fashion designing.
(c) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer.
(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling/interview.

2. Syllabus

3. Model Questions
1. The measure of thickness or thinness of a yarn is called:
   (A) Yarn crimp
   (B) Yarn count
   (C) Yarn twist
   (D) Yarn blend

2. Pop-up retail stores are also called:
   (A) Temporary stores
   (B) Departmental stores
   (C) Discount stores
   (D) Mom and Pop stores

3. Which of the following is not a lead firm in an apparel value chain?
   (A) Customer
   (B) Wholesaler
   (C) Marketer
   (D) Manufacturer

4. Which of the following can be used for protein fibers?
   (A) Basic dyes
   (B) Sulphur dyes
   (C) Acid dyes
   (D) Vat dyes

5. Sheer fabrics are woven in which weave:
   (A) Rib weave
   (B) Basket weave
   (C) Dobby weave
   (D) Plain weave
MET - COMMUNITY SCIENCE

1. Test Structure
(a) The question paper shall have two SECTIONS:

SECTION - I: General Home Science, which will be compulsory for all the candidates.

SECTION - II: A candidate has to opt for at least one discipline out of the following. However, a maximum of two disciplines can be selected as per candidate’s eligibility:
1. Apparel & Textile Science
2. Family Resource Management
3. Food & Nutrition
4. Extension Education & Communication Management
5. Human Development & Family Studies

Any change in choice of discipline will not be allowed after the submission of application form.

(b) There will be 150 multiple choice type questions (SECTION - I: 90; SECTION - II: 60) each carrying one mark which are to be attempted by the candidate in the allotted time of 2 hours 10 minutes.

(c) Candidate appearing for two disciplines will be required to sit for additional SECTION-II paper chosen by him/her consisting of 60 questions to be attempted in additional allotted time of 50 minutes.

(d) Each correct answer will carry one mark whereas ¼ mark will be deducted for every wrong answer

Minimum percentage of marks required in the Entrance Test to be called for Counselling is 20% with negative marking.

2. Syllabus

Section I

General Home Science


Extension education- concept, need, importance, principles and objectives. Concept and need of rural development. Panchayati raj institutions- concept, structure and functions. Indian Council of Agricultural Research,


Home Management/Family Resource Management - Concept and principles of management, management process, work, work environment, work simplification, fundamentals of housing, principles of design and home furnishing, selection, care and maintenance of household equipment and furniture, family finance and consumer education. Functional interiors for special needs.

Section II

Apparel & Textile Science


Family Resource Management

Material used for furniture, types of furniture, their selection and furniture arrangement. Selection, care and maintenance of hard floor material, soft floor coverings and resilient floor materials. Exterior and interior wall materials, types of windows and window treatments. Types of flower arrangements and application of colour in interiors. Historic overview of interior design and Indian handicrafts. Types of accessories, their selection and placement.

Food & Nutrition


Extension Education & Communication Management


Human Development & Family Studies


3. Model Questions

Section I:

General Home Science

1. Sodium in the body is present in:
   (A) Extracellular fluid
   (B) Intracellular fluid
   (C) None
   (D) Both

2. Jean Piaget is known for his contribution to:
   (A) Physical development
   (B) Social Development
   (C) Cognitive development
   (D) Emotional development

Section II:

Apparel & Textile Science

1. Denim is an example of:
   (A) Plain weave
   (B) Rib weave
   (C) Twill weave
   (D) Basket weave

2. The quality of the final garment depends upon:
   (A) Construction
   (B) Finishing
   (C) Inspection
   (D) All of the above

Family Resource Management

1. Which of the following flooring material is not natural?
   (A) Brick
   (B) Marble
   (C) Mosaic
   (D) Linoleum

2. This type of blind pulls up with a cord into accordion folds and are particularly suited to some traditional interiors.
   (A) Slat blinds
   (B) Roller blinds
   (C) Austrian blinds
   (D) Venetian blinds

Food & Nutrition

1. HACCP principles are most widely applied to:
   (A) Chemical hazards
   (B) Microbiological hazards
   (C) Physical hazards
   (D) All of the above
2. The goal of every food service established is to make:
   (A) Sales  (B) Preparations
   (C) Profits  (D) Money

**Extension Education & Communication Management**

1. The process by which a communicator ciphers a message:
   (A) Decoding  (B) Encoding
   (C) Understanding  (D) Communication fidelity

2. The part of camera that controls the amount of the light entering the camera:
   (A) Shutter  (B) ASA
   (C) Screen  (D) Lenses

**Human Development & Family Studies**

1. The appropriate disciplinary technique used by parents for a school age child should be:
   (A) Authoritative  (B) Permissive
   (C) Democratic  (D) Over protective

2. The fact that an infant's head and upper body develop before the lower body, it illustrates the:
   (A) Cephalocaudal principle  (B) Integrational principle
   (C) Maturational principle  (D) Proximodistal principle