PET – AGRICULTURE
AGRonomy

1. Test Structure
(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.
(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.
(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.
(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.
(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus

3. Model Questions
1. The production potential of a particular crop depends on:
   (A) Fertilizer     (B) Seed     (C) Irrigation
   (D) All of these

2. How many source of variation are there in 20 treatment CRD design?
   (A) 5           (B) 2
   (C) 40          (D) 19

3. Salinity stress in plant is often called as:
   (A) Biological drought   (B) Physiological drought
   (C) Hydrological drought (D) Agronomic drought

4. Excess fertilizer application results in:
   (A) Normal vegetative growth     (B) Poor vegetative growth
   (C) Better environment for diseases (D) Stunted growth

5. Test weight (1000-seed weight) of Phalaris minor is:
   (A) 2 g            (B) 10 g
   (C) 4 g            (D) 15 g
PET – AGRICULTURE
EXTENSION EDUCATION

1. Test Structure
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(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.
(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.
(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus

3. Model Questions
1. Which training method does not improve inter-personal competence?
   (A) Sensitivity training (B) Role playing (C) Case study (D) Transactional analysis

2. Programme development is a process that follows the:
   (A) Setting up priorities to different educational activities (B) Systematic process of preparing plan of work
   (C) Planning, implementing and evaluating educational activities (D) Evaluation of inputs, outputs and impacts

3. A good extension programme can only be developed by integrating:
   (A) Felt needs of the farmers (B) Knowledge and insight from farmers and extension agents
   (C) Knowledge and skill of the farmers (D) Knowledge and insight of the extension agents

4. Participatory planning is a:
   (A) Linear activity (B) Sequential activity (C) Formal activity (D) None of these

5. SWOT is basically a tool for:
   (A) Decision making (B) Leading (C) Controlling (D) Motivating
1. **Test Structure**

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(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   
i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   
   ii) Master’s Research by Thesis & Quality of Thesis 10%

   iii) Interview 10%

2. **Syllabus**


3. **Model Questions**

1. Who proposed the broad classification of Animal Kingdom?
   
   (A) Linnaeus  
   
   (B) Aristotle  
   
   (C) Hymen  
   
   (D) Huxley

2. The Lepidopteran family which has only 4 functional legs in adult stage:

   (A) Arctiidae  
   
   (B) Nymphalidae  
   
   (C) Noctuidae  
   
   (D) Gelechiidae

3. Juvenile hormone is secreted by:

   (A) Neurosecretory cells  
   
   (C) Corpora allata  
   
   (B) Prothoracic cells  
   
   (D) Corpora cardiaca

4. Distribution pattern of insect population is also called:

   (A) Spread  
   
   (C) Migration  
   
   (B) Dispersal  
   
   (D) None of these

5. Which of the following is a cyclodiene compound?

   (A) Endosulfan  
   
   (C) Heptachlor  
   
   (B) Endrin  
   
   (D) All of these
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer. Further, this Part will be divided into two Sections: Section-I: Food Biochemistry, Food Engineering and Food Microbiology; and Section-II: Food Technology. There will be 38 MCQs from Section-I and 112 MCQs from Section-II.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:

i) Performance in the Entrance Examination  80% (60% MCQ + 20% subjective)
ii) Master’s Research by Thesis & Quality of Thesis  10%
iii) Interview  10%

2. Syllabus


3. Model Questions

1. Chroma of colour depicts:
   (A) Hue  (B) Angle
   (C) Lightness  (D) Brightness

2. The appropriate moisture of barley for malting purpose should be:
   (A) 8-10%  (B) 10-14%
   (C) 14-17%  (D) 20-22%

3. $\alpha$-amylase is an:
   (A) Exoenzyme  (B) Endoenzyme
   (C) Debranching enzyme  (D) Complete hydrolytic enzyme

4. Flavour enhancer added during food preparation is:
   (A) Ethyl butyrate  (B) Methyl Salicylate
   (C) Mono sodium glutamate  (D) Sodium nitrate

5. Inert packaging refers to:
   (A) Packaging under carbon dioxide  (B) Packaging under vacuum.
   (C) Packaging under nitrogen  (D) Packaging under oxygen.
1. **Test Structure**

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(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   
i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)  
ii) Master’s Research by Thesis & Quality of Thesis 10%  
iii) Interview 10%

2. **Syllabus**

Area and production of fruits, origin, distribution, commercial importance, export potential, species, varieties, ecophysiological requirement and cultivation practices of major fruit crops like mango, citrus, banana, grape, papaya, guava, pineapple, litchi, loquat, phalsa, jackfruit, mangosteen, sapota, cashewnut, ber, pomegranate, date palm, aonla and temperate fruits like apple, pear, peach, almond, plum, apricot and cherry.

Canopy management, weed control, modern methods of propagation including micropropagation and use of growth regulators in fruit crops, nutrient and water management, organic farming systems, use of biofertilizers, rootstocks, stock scion relationship, incompatibility, high density orcharding, major pests & diseases, physiological disorders and their control measures.

Crop improvement, Biotechnological interventions, Good agricultural practices (GAP), quality improvement, maturity indices, harvesting practices, storage and ripening techniques.

3. **Model Questions**

1. The largest producer of pear in the world is:
   (A) USA                      (B) Italy  
   (C) China                          (D) France

2. Major bottleneck in banana breeding is:
   (A) Incompatibility      (B) Parthenocarpy  
   (C) Non-receptivity of stigma     (D) All of the above

3. The highest papian yielding papaya selection is:
   (A) Co 5                    (B) Co 6  
   (C) Co 2                            (D) Honey Dew

4. Clonal rootstocks can be easily propagated through:
   (A) Stooling                (B) Grafting  
   (C) Cutting                        (D) Air layering

5. Bronzing in litchi is due to:
   (A) Zn                         (B) Mn  
   (C) Cu                               (D) Mg
PET – AGRICULTURE
HORTICULTURE (VEGETABLE SCIENCE)

1. Test Structure

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(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master's Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus

Cultural and climatic requirement for cultivation of vegetables i.e. potato, tomato, chili, brinjal, cole crops, okra, peas and beans, cucurbitaceous crops; forcing techniques of vegetable production, organic farming, post-harvest handling, physiological disorders, breeding methods of self and cross pollinated vegetable crops, micro-propagation techniques, hybrid seed production of vegetable crops, crop systems, multiple cropping, nursery raising techniques, protected cultivation, low tunnel technology, statistical tools for field experimentation, disease management in nursery and fields, determination of biochemical constituents i.e. ascorbic acid, sugars, protein, capsaicin, carotene.

3. Model Questions

1. Pusa summer prolific long is an important cultivar of
   (A) Cucumber     (B) Bottle gourd
   (C) Longmelon    (D) Snake gourd

2. Brinjal originated in:
   (A) India     (B) Netherlands
   (C) Russia    (D) China

3. Purple blotch is a serious disease of:
   (A) Tomato     (B) Brinjal
   (C) Onion      (D) None of these

4. Little leaf disease is associated with the deficiency of:
   (A) Molybdenum     (B) Copper
   (C) Nitrogen      (D) Zinc

5. Among the vegetable crops listed below, following is the climacteric vegetable:
   (A) Onion     (B) Muskmelon
   (C) Brinjal   (D) None of these
1. Test Structure

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(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination  80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions

1. Indian Floribunda rose cultivar patented in USA?
   (A) Fugitive  (B) Mohini
   (C) Sindhoor   (D) Banjaran

2. Inheritance of pigments is controlled by which gene action:
   (A) Additive (B) Epistasis
   (C) Dominance      (D) None of these

3. Change from mutant allele to wild type is known as:
   (A) Somatic mutation (B) Reverse mutation
   (C) Nuclear mutation (D) None of these

4. Which of the following is not a warm orchid?
   (A) Phalaenopsis  (B) Vanda
   (C) Dendrobium   (D) Cymbidium

5. Pyrethrum is extracted from which Chrysanthemum species?
   (A) C. indicum  (B) C. morifolium
   (C) C. cinerariefolium  (D) C. sinense
1. Test Structure
(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.
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(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.
(e) Merit list will be prepared on the basis of:
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2. Syllabus

3. Model Questions
1. Line X Tester analysis is a good approach for screening germplasm on the basis of:
   (A) GCA and SCA variances   (B) GCA and SCA effects
   (C) GCA and SCA variances and effects   (D) per se performance of hybrids
2. In case of ear-to-row method, each selection cycle requires:
   (A) One year   (B) Two years
   (C) Three years   (D) Four years
3. When a single cross hybrid is crossed with an open-pollinated variety, it is termed as:
   (A) Top cross   (B) Test cross
   (C) Double top cross   (D) Three way cross
4. Sweet potato is an auto polyploidy and has ploidy level of:
   (A) 3 x   (B) 4 x
   (C) 5 x   (D) 6 x
5. Among the given restriction enzymes, which is a type III restriction endonuclease?
   (A) Hinf III   (B) EcoP15
   (C) EcoPI   (D) All of the above
PET – AGRICULTURE
PLANT PATHOLOGY

1. Test Structure

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   iii) Interview 10%

2. Syllabus


3. Model Questions

1. The powdery mildew fungi belongs to:
   (A) Oomycetes
   (B) Ascomycetes
   (C) Deuteromycetes
   (D) Basidiomycetes

2. Trichoderma viride produces antagonistic metabolites such as:
   (A) Organic acid
   (B) Methanol
   (C) Viridin
   (D) Chrysin
1. Test Structure

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   iii) Interview 10%

2. Syllabus


3. Model Questions

1. Solubility of CaCO₃ in soils increases with:
   (A) Decrease in pH  
   (B) Increase in partial pressure of CO₂  
   (C) Both (A) and (B)  
   (D) None of these

2. Dominant micro-flora of soil is:
   (A) Bacteria  
   (B) Actinomycetes  
   (C) Fungi  
   (D) Algae

3. Glacial parent material is:
   (A) Stratified  
   (B) Well sorted  
   (C) Ill-sorted  
   (D) None of these

4. Size range of colloidal particle is:
   (A) <0.002 mm  
   (B) <0.001 mm  
   (C) >0.002 mm  
   (D) None of these

5. Wetting of water unstable aggregates causes:
   (A) Slaking  
   (B) Compaction  
   (C) Slaking and compaction  
   (D) No effect
PET – AGROMET

1. Test Structure
   
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   (c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

   (d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

   (e) Merit list will be prepared on the basis of:

   - i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   - ii) Master’s Research by Thesis & Quality of Thesis 10%
   - iii) Interview 10%

2. Syllabus


3. Model Questions

1. The tropical / sub-tropical hot deserts are found between:
   
   (A) 15° to 35° N and S  
   (B) 35° to 45° N and S  
   (C) 50° to 60° N  
   (D) 5° to 15° N and S

2. La Nina condition indicates:

   (A) Drop in the temperature of Indian ocean  
   (B) Drop in temperature in Atlantic ocean  
   (C) Drop in the temperature in the Pacific ocean  
   (D) Drop in temperature in the Mediterranean

3. In a tropical cyclone the pattern of isobars is:

   (A) Elliptical  
   (B) Circular  
   (C) Oval  
   (D) Semi-circular
PET – BIOTECH

1. Test Structure

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   i) Performance in the Entrance Examination  80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions

1. Southern blotting technique is used to separate:
   (A) RNA fragments (B) DNA fragments
   (C) Proteins (D) Carbohydrates

2. Organelle gene transfer can be obtained through:
   (A) Agrobacterium mediated transformation of nucleus
   (B) Particle gun mediated transformation of nucleus
   (C) Particle gun mediated transformation of organelle
   (D) Electroporation of nucleus

3. Regeneration in test tube can be obtained by addition of:
   (A) Auxin in the media (B) Cytokinin in the media
   (C) Gibberellins (D) None of these

4. Molecular markers have found utility in:
   (A) Genetic transformation (B) Genome mapping
   (C) Gene sequencing (D) Gene annotation

5. Restriction endonuclease are used in molecular biology for:
   (A) Gene ligation (B) Gene amplification
   (C) Gene cutting (D) End filling
1. Test Structure

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   iii) Interview 10%

2. Syllabus


3. Model Questions

1. A stone falls from top of a building 200 m high and at the same time another is projected vertically upwards with a velocity of 50 m/s, then the two will meet:
   (A) After 1 s      (B) After 2 s
   (C) After 4 s      (D) After 8 s

2. Wear resistant soil working tools are made from the alloy of:
   (A) Copper and zinc     (B) Carbon and iron
   (C) Iron and nickel     (D) Nickel and molybdenum

3. Future price of farm equipment in the nth year at constant rate of inflation can be calculated by:
   (A) F = P (1+I)^n      (B) F = P I^n
   (C) F = P (1+I)^n      (D) F = P (1+ (1+I)^-1/n)

4. Hydraulic agitation of oil emulsions for sprayers is used for the following case:
   (A) High pressure sprayers    (B) Low capacity spray pumps
   (C) High capacity spray pumps (D) Usually used as this system is economical

5. A cultivator (11x30 cm) is operated at a depth of 10 cm. The furrow cross-section is a triangle having 90° tip angle. If the unit draft of the soil is 20 kN/m², the draft will be:
   (A) 110 N      (B) 1.1 kN
   (C) 220 N      (D) 4.4 kN
1. Test Structure

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(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

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   iii) Interview 10%

2. Syllabus

Transport Phenomena in Food Processing, applications in various unit operations of food processing. Unsteady state heat transfer, mass transfer applications in food processing. Engineering Properties of Biological Material, Physical characteristics of different food grains, fruits and vegetables; Shape and size, description of shape and size, volume and density, porosity, surface area.; Application of engineering properties in design and operation of agricultural equipment and structures. Processing of Cereals, Pulses and Oilseeds, Production and utilization of cereals, pulses and oilseeds, grain quality standards, Pre-milling treatments, conventional, modern and integrated milling operations; BIS standards for various processed products. Advanced Food Process Engineering. Microwave, irradiation, ohmic heating, pulsed electric field preservation, hydrostatic pressure technique, principles, equipments and applications. Extrusion, Cold storage, controlled atmosphere packaging of fruits and vegetables. Osmotic dehydration, foam mat drying, freeze drying, general principles of quality standards and control, FPO, quality attributes. Food Packaging. Storage Engineering and Handling of Agricultural Products. Storage of grains, biochemical changes during storage, storage capacity models, Grain markets, storage of dehydrated products. Mass and energy balance. Food plant hygiene-waste disposal methods.

3. Model Questions

1. The moisture content on dry basis in comparison with wet basis can be:
   (A) 50%      (B) More than 100%
   (C) Less than or equal to 100%   (D) None of these

2. Food properties like chewiness, gumminess, springiness and adhesiveness are measured by:
   (A) Spectronic-20    (B) Instron
   (C) Instron and Texture analyzer   (D) Texture analyzer

3. Process of reducing fat droplet size in milk to prevent cream separation is known as:
   (A) Pasteurization    (B) Centrifugation
   (C) Crystallization    (D) Homogenization

4. The process of removal of field heat from fruits and vegetables is known as:
   (A) Cold storage     (B) CA storage
   (C) Hypobaric storage    (D) Pre-cooling

5. The most efficient oil extraction process is:
   (A) Hydraulic press    (B) Mechanical expression
   (C) Solvent extraction    (D) None of these
1. Test Structure
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   iii) Interview 10%

2. Syllabus
   **Section I:** Watershed characteristics, hydrologic parameters, frequency analysis. Hydrograph analysis, theory of unit hydrograph, synthetic hydrograph, S-hydrograph and instantaneous unit hydrograph. Flood routing methods. Reservoir sedimentation. Hydrologic modeling.
   **Section II:** Irrigation water requirement, conveyance, distribution, application, water budgeting, irrigation efficiencies, water quality and salinity management. Hydraulics, design, operation and evaluation of border, check basin, furrow, sprinkler and trickle irrigation systems.
   **Section III:** Design of surface and subsurface drainage. multiple well point system. Steady and unsteady state drainage equations for layered and non-layered soils. Principle and applications of Hooghoudt, Kirkham, Earnst, Glover Dumm, Kraijenhoff-van-de-leur equations. Salt balance, leaching requirement and management practices.

3. Model Questions
   1. The equation for unsteady radial flow in leaky aquifer was developed by:
      (A) Thesis     (B) Theim
      (C) Dupuit     (D) Hantush and Jacob
   2. Aquifer diffusivity is:
      (A) S/T     (B) T/S
      (C) (T/C)^1/2     (D) b/k
   3. In small watersheds, the following process dominate:
      (A) Overland flow     (B) Channel flow
      (C) River flow     (D) Both (A) & (B)
   4. Spacing between the drains under unsteady condition is determined by the equation:
      (A) Hooghoudt     (B) Kirkham
      (C) Glover-Dumm     (D) Earnst
   5. The most important parameter for designing sub-surface drainage system is:
      (A) Drain depth     (B) Drain spacing
      (C) Hydraulic conductivity     (D) Drain layout
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer. Further, this Part will be divided into two sections: Section-I and Section-II. The weightage for Section-I and Section-II will be 40% and 60%, respectively. Section-I will have 60 MCQs whereas Section-II will have 90 MCQs. Candidate will have an option to answer questions from any one of the three specializations in Agricultural Engineering viz. Farm Machinery & Power Engineering, Processing & Food Engineering, and Soil & Water Engineering.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 60% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus

Section I: Energy sources and their classification, Energy conservation; Biomass: resources, fuel related properties of biomass, collection, handling and pre-conditioning processes such as cutting, grinding, bailing, briquetting, densification etc, equipments and techniques for biomass harvest, collection, handling and pre-conditioning processes. Principle of combustion, pyrolysis and gasification; furnaces for biomass combustion, gasifiers, operating parameters of gasifiers, design of gasifiers, utilization of producer gas for thermal application and electricity generation. Biogas plants, working, performance and maintenance of plants, design of different types of biogas plants, application of biogas for thermal, lighting and engine operation. Solar radiation, design and performance of flat plate and concentrating solar collectors, solar devices, principle and applications of solar photovoltaic, solar pond, etc.

Section II: A candidate can choose to answer questions from anyone of the three specializations in Agricultural Engineering. For each specialization, the syllabus is same as that for entrance tests for Ph.D. programme of that specialization.

3. Model Questions

1. A bomb calorimeter is used to determine:
   (A) Lower heating value       (B) Higher heating value
   (C) Temperature              (D) None of these

2. Solar energy is distributed over entire surface of earth facing the sun and it seldom exceeds:
   (A) 1.0 MW/m²              (B) 1.0 kW/m²
   (C) 1.0 W/m²               (D) 1.0 J/m²

3. The vertical angle between the projection of the sun’s ray on the horizontal plane and the direction of sun’s rays passing through the point is called:
   (A) Solar angle           (B) Altitude angle
   (C) Zenith angle      (D) Latitude

4. Density of a single piece of biomass is:
   (A) Bulk density        (B) True density
   (C) Both (A) and (B) (D) None of these

5. Calorific value of Producer gas is:
   (A) 4.0-6.0 MJ/Nm³       (B) 4.0-6.0 kJ/ Nm³
   (C) 4.0-6.0 J/ Nm³      (D) 4.0-6.0 calories/ Nm³
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will **carry one mark** whereas **1/4 mark** will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:

   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


Enzymology: Enzyme nomenclature and classification. Isolation and purification of enzymes, Ribozymes, isozymes, abzymes, enzyme structure, enzyme specificity, active site, active site mapping, mechanism of enzyme catalysis. Cofactors, coenzymes their structure and role, enzyme kinetics, enzyme inhibition and activation, multienzyme complexes, allosteric enzymes and their kinetics, regulation of enzyme activity. Applications of enzymes in chemical and food industry, enzyme immobilization, biosensors and clinical applications of enzymes.

Molecular Biochemistry: Historical development of molecular biology, Genome organization in prokaryotes and eukaryotes, super coiling. DNA replication, DNA repair, recombination, reverse transcriptase, repetitive and non-repetitive DNA, satellite DNA. Transcription in prokaryotes and eukaryotes, RNA editing, RNA processing. Genetic code, ribosome structure and function, transcription and translation. Post translational modifications; protein targeting, Regulation of gene expression, molecular mechanism of mutations.DNA sequencing, recombinant DNA technology, different types of vectors, genomic and cDNA library, PCR, site directed mutagenesis.


3. Model questions:

1. The primary structure of proteins have
   (A) Peptide bonds
   (C) Ionic bonds
   (D) Disulphide bonds

2. Different codons that specify the same amino acid are called
   (A) Degenerate
   (A) Synonymous
   (D) None of these

3. Visible light has wavelength range of
   (A) 200-400 nm
   (C) 700-900 nm
   (D) Lesser than 200 nm

4. Reversible inhibition of enzyme can be reversed by
   (A) Filtering the inhibitor from the assay system
   (C) centrifugation
   (D) None of these

5. Which one of the following is non-saponifiable lipid?
   (A) Cholesterol
   (C) Diglyceride
   (D) Phosphatidic acid
1. Test Structure

(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will **carry one mark** whereas **1/4 mark**will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   
   - Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   - Master's Research by Thesis & Quality of Thesis 10%
   - Interview 10%

2. Syllabus

   Nomenclature, classical & quantitative methods of taxonomy of plants, structural, biochemical and molecular systematics. Levels of organization of tissues, organs & systems. Comparative anatomy and adaptive modifications, tissue ontogeny in relation to functional specialization, transfer cells. Embryogenesis, polyembryony, parthenogenesis and parthenocarpy; pollen-pistil interactions; fertilization, establishment of symmetry in plants; seed formation and germination. Organization of shoot and root apexal meristem; shoot and root development; leaf development and phyllotaxy; transition to flowering, floral meristems and floral development.

   Light harvesting complexes; mechanisms of electron transport; photoprotective mechanisms; CO₂ fixation-C₃, C₄ and CAM pathways, importance of photosynthesis in bioproductivity. Citric acid cycle; plant mitochondrial electron transport and ATP synthesis; alternate oxidase; photorespiratory pathway. Nitrate and ammonium assimilation; amino acid biosynthesis. Biosynthesis, storage, breakdown and transport; physiological effects and mechanisms of action; signal transduction in plant cells.

   Structure, function and mechanism of action of phytochromes, cryptochromes and phototropins; stomatal movement; photoperiodism and biological clocks; vernalization. Uptake, transport and translocation of water, ions, solutes and macromolecules from soil, through cells, across membranes, through xylem and phloem; transpiration; mechanisms of loading and unloading of photoassimilates. Nutrient deficiency and toxicity, N, P and S metabolism. Response of plants to biotic and abiotic (water, temperature, salt, anoxic and radiation) stress, adaptation mechanisms of plants.

   Ecosystem structure; ecosystem function; energy flow and mineral cycling (C, N, P); primary production and decomposition; structure and function of some Indian ecosystems: terrestrial and aquatic. Agro biodiversity, its missions and concerns; Environmental pollution; global environmental change; biodiversity status; major drivers of biodiversity change; biodiversity management approaches Environmental monitoring, impact assessment.

   Principles and methods of genetic engineering of plants with particular reference to photosynthesis, nitrogen fixation and seed proteins; rapid plant propagation by tissue culture; cell lines; cell clones; in vitro approaches to the genetic manipulation of plants; somatic embryogenesis and artificial seeds; prospects of Plant Biotechnology in crop improvement; omics technologies and their applications.

3. Model questions:

   1. Classification based on chromosome number is
      
      (A) Cytotaxonomy   (B) Numerical taxonomy
      (C) Karyotaxonomy   (D) Biochemical taxonomy

   2. The transfer of electrons through cytochrome b₆f complex involves:
      
      (A) One cyt b, one quinone oxidation reduction site and two Rieske Fe-S proteins
      (B) Two cyt b, one cyt c, a Rieske Fe-S protein and two quinone oxidation – reduction sites
      (C) One cyt c, two Rieske Fe-S proteins and two cyt. B
      (D) Two cyt.b, one cyt, c, two Rieske Fe-S proteins and one quinone oxidation reduction site

   3. The internal rotenone-insensitive NADH dehydrogenase in mitochondria works as:
      
      (A) Non proton pumping bypass when complex-II is overloaded
      (B) Non proton pumping bypass when complex-I is overloaded
      (C) Proton pumping channel when complex-I is unloaded
      (D) None of these

   4. A conservation ecologist will study
      
      (A) Adaptation of organisms to particular substance
      (B) Population, community and ecosystem ecology
      (C) Remote sensing
      (D) Flow of energy within ecosystem

   5. The protected areas have been categorized on the basis of GIS by
      
      (A) UNEP
      (B) IUCN
      (C) SAARC
      (D) CBD
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling/Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus

Research Aptitude and General Awareness: Research methodology, research process, research designs, quantitative and qualitative data, measurement and scaling techniques, questionnaire design, sampling design and procedures, analysis of collected data, hypothesis testing, parametric and non-parametric statistics, factor analysis, cluster analysis and discriminant analysis, report writing. Effective communication, logical and analytical reasoning, data interpretation.


Managerial accounting and control, financial accounting, cost accounting, budget and budgetary control. Financial management, capital budgeting, capital structure and cost of capital, dividend policy, mergers and acquisitions. Marketing management, market segmentation, targeting and positioning, marketing mix, buyer behaviour, marketing potential and forecasting, marketing of services, customer relationship management. Human resource management, recruitment and selection process, training and development, performance appraisal, industrial relations and trade unions.

Production and operations management, production functions, work and job design, facilities planning, product and process selection, facilities location, production planning and control. Strategic management, corporate governance and social responsibility, environmental scanning and industry analysis, strategy formulation, evaluation and control. Management Information System, design and implementation of MIS, Enterprise Resource Planning (ERP). Quantitative and optimization techniques, probability and decision making under risk and uncertainty, optimization models, linear programming, game theory, queuing models.

Project management, formulation of projects, technical and financial feasibility, preparation of feasibility report, implementation of project. Concept and theories of entrepreneurship, entrepreneurship development programmes and role of various institutions in developing entrepreneurship.

3. Model Questions:

1. One of the essential characteristics of research is:
   (A) Replicability    (B) Generalizability
   (C) Usability       (D) Objectivity

2. ICT stands for
   (A) Information common technology     (B) Information and communication technology
   (C) Information and computer technology (D) Inter connected technology

3. What is the basis of monopolistic competition?
   (A) Product differentiation      (B) Agreement among producers
   (C) Cost of production          (D) None of these

4. Out of the following, which one is a source of internal recruitment?
   (A) Casual Caller       (B) Hiring agency
   (C) Promotion          (D) Campus placement

5. Which one of the following is a sales promotion method?
   (A) Advertising                      (B) Discount offers
   (C) Word of mouth (D) Publicity
PET-BASIC SCIENCES
CHEMISTRY

1. Test Structure

(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   - Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   - Master’s Research by Thesis & Quality of Thesis 10%
   - Interview 10%

2. Syllabus

Physical Chemistry: Free energy, entropy and laws of thermodynamics; partial molar properties; thermodynamics of ideal and real gases. Activity, activity coefficients of electrolytes and their determination; Debye-Huckel theory; Debye-Onsager theory of conductance; theories of electrical double layer; Overvoltage potential; derivation of Butler-Volmer equation; Tafel Plot; Electrocatalysis. Hydrogen electrode. Polarography; half wave potential and its significance.

Techniques and Spectroscopy: Types of chromatography; Methods of extraction of organic compounds; Principles of commonly used Instruments; Application of UV, FT-IR, Nuclear Magnetic Resonance spectroscopy and Mass spectrometry for structural Elucidation. Molecular structure-molecular orbital methods for H₂ and H₂ molecule; the valence bond description H₂; correlation diagram for diatomic molecules. Huckel method for calculating resonance energy, rotation and vibration of molecules-linear and non-linear molecules; Rotational vibrational spectroscopy; electron spectroscopy. Raman Spectroscopy.


Agrochemicals and Natural Products: Some important terms used in study of agrochemicals; Synthesis, mode of action, metabolism and structure activity relationship of some common pesticides like insecticides and fungicides. Isolation, structure elucidation, synthesis of common terpenes, steroids, alkaloids and flavonoids.

Inorganic Chemistry: Application of Valence bond, Molecular orbital and VSEPR theories; Group theory. Bioinorganic chemistry; Photosynthesis; Metalloenzymes; Inorganic free radicals-their general reactions, preparation and uses; measurement of free radical concentration and decomposition rate. Hard and soft acids and bases. Supramolecular chemistry.

3. Model Questions:

1. H₂ gas is not liberated when the following metal is added to dilute HCl:
   - (A) Mg
   - (B) Sn
   - (C) Ag
   - (D) Zn

2. Which is a Supramolecule?
   - (A) 18-Crown 6
   - (B) Haemoglobin
   - (C) Chlorophyll
   - (D) Both (B) and (C)

3. Which of the following is not an electrophile?
   - (A) CH₄
   - (B) SO₃
   - (C) Br⁺
   - (D) BF₃

4. How many signals in the NMR spectrum are expected from the compound with structure CH₃-O-CH₂-CH₃?
   - (A) 3
   - (B) 4
   - (C) 5
   - (D) 8

5. Which of the following is not an insecticide?
   - (A) Warfarin
   - (B) Endosulfan
   - (C) Methyl Parathion
   - (D) Triazofos
1. Test Structure

(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions:

1. Recombinant DNA is:
   (A) A type of DNA in bacteria       (B) The study of how genes work
   (C) The DNA resulting when DNA of two different organisms are manipulated to produce hybrid DNA
   (D) The use of bacteria in the production of foods

2. Which of the following is not distinguishing characteristic of prokaryotic cells?
   (A) They have a single, circular chromosome  (B) They lack membrane enclosed organelles
   (C) They have cell walls containing peptidoglycan  (D) They lack a plasma membrane

3. Which of the following reactions produces the maximum number of molecules of ATP during aerobic metabolism?
   (A) Glucose → Glucose-6-P         (B) Phosphoenolpyruvic acid → Pyruvic acid
   (C) Glucose → Pyruvic acid        (D) Acetyle CoA → CO₂ + H₂O

4. Isolation of *E.coli* from a stool sample is diagnostic proof that the patient has:
   (A) Cholera    (B) *E. coli* gastroenteritis
   (C) Salmonellosis  (D) Typhoid fever

5. Which of the following reactions is undesirable in wine making?
   (A) Sucrose → Ethanol          (B) Ethanol → Acetic acid
   (B) Malic acid → Lactic acid   (D) Glucose → Pyruvic acid
1. Test Structure
(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.
(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.
(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.
(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.
(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus
   Cell Biology: Organization and functions of cell membrane and intracellular organelles. Cell division and cell cycle, cell communication and cell signalling.
   Anatomy, Physiology and Development: Structural and functional anatomy of different systems of vertebrates and invertebrates. Basic concepts of development, gametes, fertilization, cleavage, early development, differentiation, morphogenesis and organogenesis.
   Human Welfare: Important organisms in human health and agriculture. Innate and adaptive immune system vaccines and vaccination.

3. Model questions
1. Different concentrations of Na⁺, K⁺ and organic molecules during resting potential are maintained by an interplay of factor(s):
   (A) Electrical attractions and repulsions  (B) Active transport across the cell membrane
   (C) Selective permeability of the axon membrane  (D) All of these
2. Receptors which transduce sound, touch and pressure are the:
   (A) Mechanoreceptors  (B) Chemoreceptors
   (C) Thermoreceptors  (D) Electromagnetic receptors
3. The inner ear and eye lens are formed from:
   (A) Mesoderm  (B) Ectoderm
   (C) Endoderm  (D) Dorsal mesoderm
4. Carrying capacity of a population is determined by its:
   (A) Birth rate  (B) Death rate
   (C) Resource limit  (D) Growth rate
5. A modification of behaviour towards a stimulus is called:
   (A) Inherited  (B) Learned
   (C) Intrinsic  (D) Innate
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling/Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions

1. Fiscal Policy is connected with:
   (A) Issue of currency  (B) Exports and imports
   (C) Public revenue and expenditure  (D) None of these

2. A firm is in equilibrium if:
   (A) MR < MC  (B) MR=MC
   (C) MR> MC  (D) None of these

3. In classical production function, rational zone is always:
   (A) First zone  (B) Third zone
   (C) Second zone  (D) None of these

4. World trade organization (WTO) came into existence on:
   (A) 1st January 1948  (B) 1st January 1995
   (C) 30th October 1947  (D) 15th April 1994

5. Which of the following is not a type of non-probability sampling?
   (A) Snowball sampling  (B) Stratified random sampling
   (C) Quota sampling  (D) Convenience sampling
1. **Test Structure**

(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will **carry one mark** whereas **1/4 mark** will be **deducted** for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:

   i) Performance in the Entrance Examination  **80% (60% MCQ + 20% subjective)**
   ii) Master’s Research by Thesis & Quality of Thesis  **10%**
   iii) Interview  **10%**

2. **Syllabus**


Rural social problems, indebtedness, poverty, declining sex ratio, dowry and labour shortage. Social and cultural change, Factors of social change, demographic, economic, technological and legislative.

Processes of social change, sanskritization and de-sanskritization, westernization, secularization, industrialization, urbanization, modernization and globalization.

Theories of social change, cyclic theories, ancient theories and evolutionary theories. Sociological theories: Functionalism, Conflict theory, Symbolic interactionism, Phenomenology and Ethno-methodology.


3. **Model questions**

1. Which of the following is not rural social problem?
   (A) Slums   (B) Drug addiction
   (C) Declining sex ratio   (D) Poverty

2. Who said that mode of production determines culture?
   (A) Karl marx   (B) Hegel
   (C) Lundberg   (D) Maciver

3. What ended the feudal culture?
   (A) Growth of International commerce   (B) Discovery of sea routes
   (C) Wars   (D) All of these

4. Herbert Spencer’s contribution to sociology is:
   (A) Cultural evolution   (B) Organic analogy
   (C) Social contract   (D) Neo-positivism

5. Tentative generalization the validity of which is yet to be tested is called:
   (A) Proposition   (B) Hypothesis
   (C) Scientific report   (D) Synopsis
1. Test Structure

(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will **carry one mark** whereas 1/4 mark will be **deducted** for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions

1. A dummy is also known as:
   (A) Mannequin     (B) Human body
   (C) Dress Form     (D) All of these

2. Maximum number of jute mills are found in:
   (A) Rajasthan     (B) West Bengal
   (C) Uttar Pradesh   (D) Punjab

3. Which of the following are cultural gatekeepers?
   (A) Magazine editors    (B) Reviewers
   (C) Retail buyers    (D) All of these

4. Following is not a direct system of yarn numbering:
   (A) Cotton Count    (B) Metric Count
   (C) Denier    (D) Tex

5. The coherence of polymer system is not due to:
   (A) Vander Waals’ forces    (B) Hydroxyl group
   (C) Salt linkage    (D) Cross links
PET - COMMUNITY SCIENCE
FAMILY RESOURCE MANAGEMENT

1. Test Structure
(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.
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(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.
(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.
(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master's Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus

3. Model Questions
1. When two identical houses are attached by a common entrance and staircase, it is called:
   (A) Semi-detached house  (B) Apartment  
   (C) Detached house        (D) Terrace housing
2. The diastolic pressure of healthy human being is:
   (A) 40 mm Hg       (B) 80 mm Hg
   (C) 120 mm Hg      (D) 160 mm Hg
3. According to Munsell's colour system, 5Y 8/12 means:
   (A) Less pure yellow, light and bright
   (B) Pure yellow, dark and bright
   (C) Pure yellow, light and dull
   (D) Pure yellow, light and bright
4. The father of scientific management is:
   (A) C. Babbage
   (B) Chris Argyris
   (C) C. Mayo
   (D) Fredric W. Taylor
5. Patent is a contract between:
   (A) Inventor and consumer
   (B) Inventor, consumer and government
   (C) Consumer and government
   (D) Inventor and government
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will carry one mark whereas 1/4 mark will be deducted for every wrong answer.

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(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master’s Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions:

1. Vitamin A deficiency leads to:
   (A) Osteomalacia  (B) Keratomalacia
   (C) Encephalopathy  (D) Neuropathy

2. Iodine is an important part of:
   (A) Thyroxine  (B) Thiamine
   (C) Tocopherol  (D) Polyphenol

3. Substance used for primary standards must have high:
   (A) Atomic weight  (B) Equivalent weight
   (C) Molecular weight  (D) Molar ratio

4. Immunoglobins present during allergies:
   (A) IgE  (B) IgG
   (C) IgM  (D) IgA

5. Low weight for height is known as:
   (A) Under nutrition  (B) Stunting
   (C) Wasting  (D) Over nutrition
PET - COMMUNITY SCIENCE
EXTENSION EDUCATION & COMMUNICATION MANAGEMENT

1. Test Structure

(a) The question booklet will have two parts: **Part-A** and **Part-B** to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

(b) Part-A will carry 150 multiple choice questions (MCQs) to be attempted on the OMR sheet. Each correct answer will **carry one mark** whereas 1/4 mark will be **deducted** for every wrong answer.

(c) Part-B will contain two subjective type questions to be attempted in the space provided along with the questions in the question booklet.

(d) Minimum 20% marks are required in the Entrance Test to be called for Counselling / Interview in Part-A and Part-B, individually.

(e) Merit list will be prepared on the basis of:
   i) Performance in the Entrance Examination 80% (60% MCQ + 20% subjective)
   ii) Master's Research by Thesis & Quality of Thesis 10%
   iii) Interview 10%

2. Syllabus


3. Model Questions

1. Beneficiaries of SGSY scheme are known as:
   (A) Entrepreneurs (B) Swarozgaris (C) Shilpkar (D) All these

2. Trustworthiness and competency are elements of:
   (A) Credibility (B) Fidelity (C) Empathy (D) None of these

3. Selection of objectives and the activities for the achievement of goals is called:
   (A) Planning (B) Organizing (C) Leading (D) Coordinating

4. IADP programme was initiated on the recommendations of:
   (A) State government (B) Balwant Rai Mehta Committee (C) Dhama & Committee (D) Ford Foundation Team

5. Which among the following is the testable form in a scientific research?
   (A) Research problem (B) Research hypothesis (C) Research variable (D) All of these
1. Test Structure

(a) The question booklet will have two parts: Part-A and Part-B to be attempted in 3 hours. Weightage for Part-A and Part-B will be 60% and 20%, respectively.

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(e) Merit list will be prepared on the basis of:
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   2) Master’s Research by Thesis & Quality of Thesis 10%
   3) Interview 10%

2. Syllabus


3. Model Questions

1. Which of the following works on reality principle?
   (A) The Id (B) The Ego (C) The Superego (D) Instincts

2. Metacognitive knowledge refers to acquired knowledge about:
   (A) Social processes (B) Physiological processes (C) Cognitive processes (D) Emotional processes

3. The macro system layer in the child’s environment comprises of:
   (A) Family (B) Friends (C) School and health services (D) Customs and cultural values

4. The part of the brain specialized in language processing:
   (A) Corpus callosum (B) Right hemisphere (C) Left hemisphere (D) Cortex

5. An aid that uses sight and sound to present information to parents and community is known as:
   (A) Projected-aid (B) Audio-aid (C) Visual - aid (D) Audio-visual aid