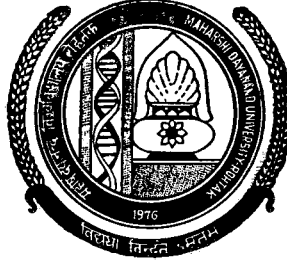


# Maharshi Dayanand University Rohtak



## Ordinances, Syllabus and Courses of Reading for B.Sc. (Home Science) Part-I, II & III Examination

Session—2002-2003

**Available from :**

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Rohtak-124 001 (Haryana)

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**ORDINANCE : B.A./B.Sc./B.Com./B.Sc. (Home Science)**

**EXAMINATIONS**

1. The duration of the course of instruction for the B.A./B.Sc./B.Com./B.Sc. (Home Science) shall be three years and the examination for Part-I shall be held at the end of 1st year, Part-II examination at the end of 2nd year and Part-III examination at the end of third year. The examination in Part-I & II shall be held once a year ordinarily in the month of April or on such dates as may be fixed by the Vice-Chancellor. The examination in Part-III shall be held twice a year ordinarily in the month of April and September or on such dates as may be fixed by the Vice-Chancellor.
- The Supplementary examination for part-I and part-II for compartment/reappear
- Candidates shall be held ordinarily in the month of September or on such dates as may be fixed by the Vice-Chancellor.
2. The date of commencement of the examination as well as the last date for the receipt of examination forms and fee as fixed by the Vice-Chancellor, shall be notified by the Registrar/ Controller of Examinations to all the colleges admitted to the privileges of the University.
3. A candidate's admission form and fee may be accepted after the last date of payment of late fee as prescribed up to the period notified by the University.
4. No one shall be eligible to join the first year (Part-I) class of B.A./B.Sc./B.Com./B.Sc. (Home Science) unless :-
  - i) he/she has passed one of the following examinations with 33% marks in aggregate for admission to B.A. Part-I, 35% for admission to B.Sc. (Home Science) Part-I, 40% for admission to B.Com. Part-I and 45% for admission to B.Sc. Part-I.
  - a) Senior Secondary Certificate Examination of Haryana Education Board, Bhiwani.

b) B.A./B.Sc. (Home Science) Part-I examination under old scheme of this University.

OR

c) Diploma in Pharmacy Course, for (B.A./B.Sc.-I only).

d) Any other examination recognised by the Academic Council as equivalent to (a) or (b) or (c) above.

Note : 1. The candidate seeking admission to B.Sc. (Non-Medical Group) Part-I should have passed the above examination with English, Physics, Chemistry and Mathematics and those seeking admission to B.Sc. (Medical Group) Part-I should have passed the above examination with English, Physics, Chemistry and Biology.

2. The admission to B.Sc. (Home Science) Course shall be open to Women candidates only.

3. If a candidate of another Board did not pass in the subject of English at 10+2 level, he/she may be allowed provisionally to join the B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-I class as the case may be under new scheme of this University subject to his/her qualifying in the subject of English of 10+2 examination at the Supplementary examination of the same year from the Board concerned. Such a candidate shall have to furnish to the Principal of the College the proof of his/her having cleared the subject of English upto 20th Dec. of the year of admission falling which his/her admission to B.A./B.Sc./B.Com./B.Sc. (Home Science) Part I examination shall stand automatically cancelled.

5. No one shall be eligible to join the second year (Part-II) class of B.A./B.Sc./B.Com./B.Sc. (Home Science) course unless he/she has passed :

a) B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-I examination as the case may be, under new scheme of this University.

OR

- b) B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-II examination as the case may be, under old scheme of this University.

OR

- c) An examination recognised as equivalent to (a) or (b) above.

A student who wishes to seek admission/migration to Part-II Course after passing the Senior Secondary Certificate Examination under (10+2 system) or an examination recognised as equivalent thereto and also after having passed the 1st year examination of any statutory University, recognised by this University as equivalent to 1st year examination of this University under new scheme may be allowed to do so provided, that he/she has secured 33% or 40% or 45% or 35% marks, as the case may be in aggregate of the Senior Secondary Certificate Examination or of any equivalent examination and the minimum percentage of marks in the 1st year examination of the degree course equivalent to the percentage of marks as laid down in Clause-16.

6. A person who has passed one of the following examinations shall be eligible to join III year (i.e. Part-III) class of B.A./B.Sc./B.Com./B.Sc. (Home Science) course :

- a) B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-II examination as the case may be, under new scheme of this University.
- b) B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-II examination as the case may be, under scheme of other statutory Universities. Provided that the subjects offered for B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-II were the same as are available at this University and the syllabi were not materially different.

In case the subject/paper offered for the B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-II were not the same as are available at this University, the candidate may be

given exemption in the Part-III for the subject(s)/paper(s) already studied /passed by the student and the subject(s)/paper(s) which the candidate has not studied/ passed in Part-I & II shall have to be Studied/Passed alongwith remaining subject(s)/paper(s) of Part-III.

7. The examination in Part-I,II & III shall be open to a student who :-

- a) has passed not less than one academic year previously the requisite examination as laid down in Clause-4, 5 & 6 above.

In case of a candidate who passed the requisite exam. under the rule relating to compartment the period of one academic year shall be counted from the examination in which he/she is first placed under compartment.

7. (a) A candidate who is placed under compartment in one subject only in 10+2 examination of the Board of School Education Haryana, Bhiwani or of any other Board/ University recognised by this University may be allowed provisionally to read for TDC-I exam. and to clear the compartment subject in the Supplementary exams. If he/ she fails to produce/submit the proof of having passed the compartment subject upto 20th Dec. of year of admission to the Principal of the College his/her admission to TDC-I exam. shall stand automatically cancelled.

Provided that a candidate who joins Part-I of B.A./B.Sc./ B.Com/ B.Sc. (Home Science), as the case may be must have obtained atleast 33%, 35%, 40%, 45% marks in the aggregate (by adding minimum qualifying marks in the compartmental subject) in the Sr. Secondary Certificate Examination (+2 Examination) or an examination recognised equivalent thereto.

A candidate who is placed under compartment/re-appear in one subject only in the lower examination of this University may be allowed to read for the next higher class and to clear the compartment subject in two consecutive chances but if he fails to pass or fails to

appear for the compartment subject at the second chance his result for the higher examination shall, unless he has passed in that exam., be cancelled and he shall not be allowed to appear for the same till he has passed in the lower examination. If he has passed in the higher examination his result for the same shall be declared provisionally subject to his passing the lower exam. within permissible chances under clause-9.1 as an ex-student.

- b) has his/her name submitted to the Controller of Examinations by the Principal of the College he/she has most recently attended and produces the following certificates signed by the Principal of that college.
- i) of having remained on the rolls of a recognised college for the academic year preceding the exam;
  - ii) of having satisfactorily performed the work of his/her class;
  - iii) of having attended not less than :
    1. 75% of the full course of lectures delivered to his/her class in each of the subjects offered, (the course to be counted from the date of admission upto the last date when the classes break up for preparatory holidays, viz. 21 working days before the commencement of the examination); and
    2. 75% of the periods assigned to Practical Work in each of the Science subject or Psychology or in the case of Geography Map Work and Practical (the minimum number of periods of Practical Work and in the case of Geography Map Work and Practical required to be arranged by each college shall not be less than 40% in each subject).
  - iv) of having obtained not less than 20% marks in each subject or 25% marks in the aggregate of all the subjects in the half yearly house examination held in November/December with 100 marks for each subject.

8. a) A student who is unable to appear in the annual examination due to shortage in attendance and has complied with the requirement in Clause-7(b) (iv) above may be exempted from this requirement while taking the examination in the following year as an ex-student in terms of Clause- 9.1.
- b) A student who has completed the required percentage of lectures but has failed to comply with the requirements in Clause-7(b) (iv) may be allowed on the recommendation of Principal of the College concerned to appear as an ex-student in the following year.
- 9.1 A student who has completed the prescribed course of instruction in recognised college for I, II, III examination, but does not appear in it or, having appeared fails, may be allowed on the recommendations of the Principal of the college concerned three consecutive chances to appear in the examination as an ex-student without attending a fresh course of instruction.
10. A candidate who re-appears in B.A. Part-I examination as an ex-student (in full subjects) may change one of his subjects.
11. The amount of examination fee to be paid by a candidate for each part shall be as prescribed from time to time  
A candidate taking up a subject which includes a practical examination shall pay an additional fee of Rs. 10/- per subject.
12. i) The medium of instruction shall be Hindi/English.
- ii) The question papers will be set in :
- a) Hindi in case of Sanskrit.
- b) the language concerned in case of other language.
- c) in both Hindi and English in case of other subjects.
- iii) The candidates shall write their answer in :
- a) the language concerned in case of English and Modern Indian and Oriental Language except Sanskrit in which case the answer may be written in Hindi; and

b) Hindi, English, Punjabi or Urdu in case of other subjects.

13.1. The examination shall be held according to the Syllabus prescribed by the Academic Council. A candidate who fails in an examination, or having been eligible fails to appear in an examination shall unless approved otherwise by the Academic Council take the examination as an ex-student according to the Syllabus prescribed by University for regular students appearing for that examination, provided that the Syllabus for the candidates for the compartment/re-appear examination to be held in September/April as the case may be shall be the same as was in force for the regular student in the last Annual Examination.

13.2 A candidate for B.A. Examination shall take up English and Hindi/Punjabi/Sanskrit/Urdu as compulsory subjects and two elective subjects in each of three parts. Two elective subjects may be selected from the subjects prescribed for the examination as per syllabus, subject to the following :

- a) A candidate shall offer Military Science if he is a regular student.
- b) A candidate shall offer Statistics if he/she offers it alongwith Mathematics/Computer Applications.
- c) Every candidate shall offer Hindi either as a compulsory subject or as an elective subject.
- d) Language offered as compulsory subject cannot be offered as an elective subject.
- e) A candidate shall offer Computer Application with Math., Statistics for B.A. only.

13.3 A candidate for B.Sc. examination shall offer one paper of English in the 1st year and one paper of Hindi/Punjabi/ Sanskrit/Urdu in the 2nd year. In addition he/she shall be required to offer the subjects of B.Sc. as the case may be, according to the scheme of examination and syllabus approved by the Academic Council.



- 13.4 A candidate for B.Com. Examination shall offer the papers according to the scheme of examination and the syllabus approved by the Academic Council.
- 13.5 A candidate for B.Sc. (Home Science) examination shall offer one paper of English in the 2nd year and the subject of B.Sc. (Home Science) in the 1st year, 2nd year and 3rd year, according to the scheme of examination and the syllabus approved by the Academic Council.

*Note : A candidate coming from a Non-Hindi speaking area shall if, he/she did not offer Hindi/Punjabi/Sanskrit/Urdu in the examination qualifying for admission, offer in lieu of compulsory Hindi/Punjabi/Sanskrit/Urdu, the subject of Additional English which shall carry the same marks as for Hindi/Punjabi/Sanskrit/Urdu.*

14. College students offering a U.G.C. Scheme of restructured/ vocational courses, shall be required to take up the combination of traditional and compulsory subjects in each of the TDC Part-I, II & III as mentioned against each course in the Scheme of Examination.
15. The minimum number of marks required to pass the examination shall be 35% in each subject in case of B.A./ B.Sc./B.Sc.(Home Science) examination. 35% marks in each paper in case of B.Com. examination. Provided that in a subject in which there is a practical examination, this percentage shall be required separately in written and practical parts (including map work in case of Geography) of the examination. (A candidate of the University who fails in theory or practical or both parts of subject may be allowed to re-appear/compartament in the theory or practical or both parts, as the case may be of that subject).
16. The successful candidates shall be classified in three divisions as under:-
- i) those who obtain 60% or more of the aggregate number of marks in all the subjects including the compulsory subjects in Part-I, II & III Examination taken together shall be placed in the First Division.

- ii) those who obtain less than 60% but not less than 50% marks in all the subjects including the Compulsory subjects in Part-I, II and III examinations taken together, shall be placed in the Second Division.
- iii) those who obtain below 50% marks in all the subjects including the Compulsory subjects in Part-I, II and III examination taken together, shall be placed in the Third Division.

A student who has passed B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-I and or Part-II examination under new scheme from other University, the marks obtained in B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-I and/or Part-II shall be counted towards division of successful candidates at Part-III examination by increasing or decreasing the marks obtained in accordance with the maximum marks prescribed for Part-I and Part-II by the M.D. University, Rohtak.

- 17. A candidate while appearing in the supplementary examination or the next Annual Examination shall be required to pay examination fee as for the whole examination and shall not be eligible for a scholarship, a prize or a medal.
- 18. Six weeks after the termination of the examination or as soon therefor as is possible the Registrar/Controller of Examinations shall publish a list of successful candidates. Each successful candidate of B.A./B.Sc./B.Com./B.Sc. (Home Science) Part-III examination shall be awarded a degree mentioning the division.
- 19. A candidate :-
  - i) who has passed B.A./B.Sc. Examination of this University;
  - ii) who resides within the territorial jurisdiction of this University and has passed an examination declared equivalent to the B.A./B.Sc. examination of this University may appear in a subsequent B.A./B.Sc. examination in additional subjects prescribed for the examination except the subject in which he/she has already passed the examination.

- iii) A candidate appearing under this clause shall sit for Part-III in immediate supplementary examination and for Part-I and Part-II in annual examination. For Part-I and Part-II one examination form and fee as prescribed shall be charged.

In Case, he/she fails to pass any of the part(s) in next annual examination, he/she shall appear in all the parts denovo.

Provided that if the candidate is appearing in the subject(s) involving practical, he/she shall study in a college admitted to the privileges of this University for Part-I, II & III classes and submit a certificate from the Principal for having completed the prescribed course of lectures, one month before the commencement of examination.

However, a candidate who has passed B.Sc. examination may appear in subsequent exam. In additional subject of Hindi (Elective) of B.A. (Pass Course) and a candidate who has passed B.Com. examination may appear in an additional subject of Hindi (Elective) and Mathematics in subsequent examinations of B.A. (Pass Course).

B.Com. (Vocational) students may appear and pass in all papers of B.Com. I, II & III as additional paper(s) while doing B.Com. (Vocational) and after completion of B.Com (Vocational) in the manner given above.

The minimum marks required to pass in each subject shall be 35% in theory and practical separately. The candidate may be allowed to appear in additional qualifying subject(s) simultaneously with B.A./B.Sc./ B.Com. (Hons) Part-II & III examinations. However, the marks obtained in additional subject(s) shall not be counted towards division of the candidates.

20. i) A person who has qualified for the award of B.A./B.Sc./ B.Com./B.Sc. (Home Science) (Pass and Hons.) degree from M.D. University, Rohtak may be allowed to reappear as an ex-student in subject(s) in which he/she appeared earlier, with a view to improve his/her previous

performance. He/She may re-appear in one or more paper(s) of Part-III in the immediate supplementary examination of his/her passing the 3rd year examination and thereafter in the next annual examination for Part-I & Part-II examination. Likewise a candidate passing his/her Part-III in the supplementary examination shall appear for improvement of Part-I and/or Part-II in April/May and Part-III in September of the following calendar year. However, if a candidate does not want to improve his/her performance in Part-I and/or Part-II and wants to appear in Part-III only and vice-versa, he/she may be permitted subject to the condition that he/she will have to furnish an undertaking alongwith the examination form that he/she is not interested to improve his/her performance in Part-I or Part-II of Part-III as the case may be. The candidate will have to deposit fee and form for each examination separately.

- ii) The higher score in the paper(s)/subjects in which he/she reappears for improvement will be taken into account towards the final result and the marks already obtained by the candidate in the paper/subject(s) in which he/she has not opted to improve his/her result shall be carried forward.

In case the candidate does not improve his/her result/score his/her result shall be declared as Previous Result Stands.

- 21.1. In order to provide opportunity for women candidates who have already passed B.A. examination of this University with Home Science as a subject to join the M.Sc. (Home Science) Course an examination of B.Sc. standard in the following subjects shall ordinarily be held once a year in the month of April on a date fixed by the Vice-Chancellor:-
  - a) Nutrition and Foods.
  - b) Textiles and Clothing.
  - c) Art and Everyday Life.
  - d) Home-Management.

- e) Biology.
  - f) Psychology and Human Relationship
  - g) Household Chemistry
  - h) Sociology
  - i) Principles of Economics
2. Every candidate for this examination shall be required to produce the following certificates signed by the Head of a College recognised for B.Sc. Home Science course :-
    - a) of having attended not less than 75% of the lectures delivered to the class in theory and practical of each subject during the academic year preceding the exam.
    - b) of having completed the sessional work in each subject prescribed in Clause-21(1).
  3. The last date for receipt of admission forms and fees shall be the same as for the B.Sc. Home-Science examination. The amount of admission fee to be paid by a candidate and additional fee shall be as prescribed from time to time per practical subject. Every candidate shall be examined according to the syllabus prescribed for these subjects by the Academic Council.
  4. The Minimum number of marks required to pass the examination shall be 40% in each theory and practical examination separately.
  5. Candidates who obtained pass marks in all the subjects shall be admitted to the Degree of B.Sc. Home Science and shall be eligible to join the M.Sc. Home Science Course.
22. Notwithstanding the integrated nature of the B.A./B.Sc./ B.Com./B.Sc./ (Home Science) Course which is spread over more than one academic year, the Ordinance in force at the time a student joins course shall hold good only for the examination (s) held during or at the end of the academic year and nothing in these Ordinances shall be deemed to debar the University from amending the Ordinances subsequently and the amended Ordinances, if any, shall apply to all students whether old or new.

## SCHEME OF EXAMINATION FOR B.Sc.(HOME SCIENCE)

### B.Sc. (Home Science) Part-I

Sr.No.	Paper	Periods/Week(Three Max. Marks		
		Th.	Pr. *periods)	Th. Pr.
1.	Physics	3	1	75 50
2.	Chemistry	3	1	75 50
3.	Sociology & Family Dynamics	3	-	75 -
4.	English	3	-	75 -
5.	Food Production & Gardening	3	1	75 50
6.	Biological Sciences	3	1	75 50
7.	Hygiene & Physiology	3	1	75 25

### B.Sc. (Home Science) Part-II

1.	Food & Nutrition	4	1	100 50
2.	Introduction to Textile & Clothing	4	1	100 50
3.	Family Resource Management	4	1	100 -
4.	Psychology	3	-	75 -
5.	Consumer Protection & Economics	4	-	100 -
6.	Introduction to Human development & Family Relations	4	1	100 50
7.	Ecology & Environment	3	-	75 -

### B.Sc. (Home Science) Part-III

1.	Human Nutrition & Dietetics	4	1	100 50
2.	Clothing & Textile Designing	4	1	100 50
3.	Home Management & Art in Every day Life	4	1	100 50
4.	Child care and Welfare	3	1	75 50
5.	Community Development & Extension Education	4	1	100 50
6.	Nutritional Bio-Chemistry	4	1	100 50
7.	Women Status & Population Education	3	-	75 -

\* Denotes one practical of 3 periods

#### Instructions for the Examiners :

The examiner will set nine questions in all; one compulsory objective type question covering the entire syllabus and eight other questions, two from each unit.

#### Instructions for the candidates :

The candidates will attempt five questions in all, one compulsory objective type question and four other questions selecting one from each unit.

**Note :** These instructions are common for all papers except English.

## Paper-I PHYSICS

Max. Marks : 75

Time : 3 Hours.

- Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus, of the remaining eight questions, two will be set from each of the four units.*
- 2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*
- 3. All questions carry equal marks.*

### THEORY

#### Unit-I : Properties of matter and mechanics

Units and measurements of physical quantities. Friction and laws of friction, co-efficient of friction, advantage & disadvantages of friction. Rolling frictions, work, power and energy. Types of energy and conservation of energy.

Pressure, Pascal's law, Archmede's Principles and Laws of Floatation.

#### Unit-II : Heat, Light and Sound

Units of heat, Sp. heat, thermal capacity, water equivalent, latent heat of fusion and latent heat of vapourisation. Heat lost and heat gained.

Nature of light, Idea of wave theory, Electromagnetic theory and Quantum theory of light. Velocity of light and its determination by Michelson method.

Laws of Reflection and Refraction of light, Derivation of formulae for spherical mirrors and lenses.

Wave motion and its types, production and propagation of sound, wave length, frequency, amplitude, phase, relation between velocity of sound, wave length and frequency, Newton's formula for the velocity of sound of longitudinal waves. Laplace correction. Factors on which it depends.

Transverse vibrations of a string, sonometer, Resonance tubes, Reflection of sound, Echo, Depth Sounding, sound insulation Accoustics of sound, reverberation.

### Unit-III Magnetism and Electricity

Coulomb's laws of magnetism, Magnetic field, Lines of force and their characteristics, Magnetic Intensity at a point on axial and equitorial lines of a bar magnet. Magnetic moment, neutral points.

Electrical charges, Coulomb's law, units of electric charges, electric field, electric lines of force and its properties, electric potential and potential difference and its units, electric intensity, capacity and its units, parallel plate capacitor.

Electric current, units of current, Ohm's law, specific resistance, grouping of resistances, grouping of cells. Heating effects of current, Joule's law and their verification, Electrical power and Electrical Energy, Consumption of Electrical Energy.

Chemical effects of current, theory of electrolysis, Faraday's laws of electrolysis, sources of electric energy. Brief accounts of Alternative sources of Energy (solar, wind, sea waves, Biogas)

### Unit-IV

Working and principle of washing machines, cream separator, vaccum cleaner, pressure cooker, thermostat, refrigerator, airconditioner, thermoflask, desert air cooler, ventilation. Working and principle of Photographic Camera, microscopes, telescopes, Binoculars, Cinematography, Organ pipes and flute, Television, Stereophonic sound, Electric bell, Telephone. Application of T.V. , Tape-recorder, radio and VCR.

Lightening conductor, Gold leaf Electroscope, Moving coil Galvanometer, Electroplating, Electrotyping, Toaster, Geysers, Transformers, a.c. generator, d.c. electric motor.



3  
**PHYSICS**  
**(Practical)**

Max. Marks : 50  
Time : 3 Hours

**Section-A**

1. To find the volume of a given cylinder by vernier calipers.
2. To determine diameter of a wire by screw gauge.
3. To determine the radius of curvature of a given spherical surface using a spherometer.
4. To determine the Sp. gat of a solid which sinks in water and is also insoluble in it by making use of the Archmede's Principle.
5. To determine the value of gat/place by simple pendulum.
6. To trace the path of light rays passing through a prism and verify the relation, i.e.  $\angle A + \delta$ .
7. To verify the formula  $\frac{1}{u} + \frac{1}{v} = -\frac{1}{f}$  for a concave mirror.
8. To trace the course of rays of light through a glass slab and find the value of refractive index.

**Section-B**

9. To determine the frequency of unknown tuning for using sonometer.
10. To plot magnetic lines of force due to bar magnet by placing its south pole towards geographical north and hence locate neutral points.
11. (a) To verify Ohm's law  
(b) To verify grouping of resistances in series and parallels.
12. To study the variation of potential drop with the lenth of wire.
13. Study of electric power consumption for-
  - (i) given bulb and fluorescent tube.
  - (ii) given Iron by using voltmeter and ammeter.
14. Transistor characterstics expt.
15. Newton's Laws of Coolling expt.  
Visit : To Radio station and T.V. station.

Max. Marks : 75

Time : 3 Hours

- Note* : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus, of the remaining eight questions two will be set from each of the four units.
2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.
3. All questions carry equal marks.

**Unit-I**

Atoms, molecules, atomic weights and molecular formulas, the mole concept, concentrations units, mole fraction, molality, molarity, formality, chemical equations and reactions.

Exothermic and endothermic reactions, Enthalpies of formation, combustion, neutralization, solution, fusion, vapourisation and sublimation, Hess's law, calorific values of foods and fuels, numerical problems.

**Acids and Bases** : Modern concept of acids and bases, acid-base equilibrium,  $\text{pH}$ ,  $\text{pH}$  scale self ionisation of water, weak acids and bases, hydrolysis of salts, buffer solutions.

**Unit-II**

Surface Chemistry, absorption, absorption of gases on solids, absorption from solution, application, role of absorption in catalytic reaction, colloidal state, colloidal state of matter, multi-molecular colloids, preparation, purification and properties of colloids (electrical, mechanical, optical, etc.), gold number, coagulation, emulsions.

Electro-chemistry : Galvanic cells, redox reactions in galvanic cells, representation of galvanic cells, salt bridge, electrode potential, standard electrode potential, emf of a cell and its measurement, electro-chemical series and its importance.

**Unit-III**

Classification and nomenclature of organic compounds, Tetrahedral nature of carbon, isomerism, types of isomerism, structural isomerism, stereoisomerism, elementary idea of geometric isomerism, optical isomerism and conformational isomerism, Hybridization, different types of hybridization of carbon ( $sp^3$ ,  $sp^2$  and  $sp$ ), orbital pictures of alkanes, alkenes, alkynes and arenes.

Hydrocarbons, Methods of preparation and important chemical reactions of alkanes, alkenes, alkynes and arenes, Elementary idea of resonance and resonance energy, resonance structure of benzene.

**Unit-IV**

Petroleum, origin, constituents and refining; uses of various fractions, cracking and reforming, synthetic petrol. Polymers, natural and synthetic Polymers, Polymerisation addition and condensation polymerization, structures and uses of some important polymers, polyethene, polyvinyl chloride, polyacrylonitrile, polystyrene, nylon, bakelite, urea- formaldehyde resins, terylene and decron.

Antibiotics and Drugs, elementary knowledge of analgesics, antipyretics, antimalarials, antibiotics, antiseptics, disinfectants, and germicides, soaps and Detergents.

**CHEMISTRY****(Practical)**

Max. Marks : 50

Time : 3 Hours

1. To determine the normality of the given solution of sodium hydroxide using hydrochloride acid.
2. To prepare a standard solution of oxalic acid and to find the strength of the given NaOH solution.
3. Distillation of carbon tetrachloride.
4. Hydrolysis of an ester of acid.
5. Study of some simple reactions of carbohydrates, Fats and proteins (in pure form) and detection of their presence in food stuffs).

6. Qualitative analysis of an inorganic compound containing one cation and one anion.
7. Preparation of crystals.
8. To find out the percentage purity of the given sample of soda ash (strength of which is given).

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**Paper-III Family Resource Management**

Max. Marks : 100

Time : 3 Hours

- Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions, two will be set from each of the four units.*
2. *The candidate shall attempt five questions in all including the compulsory question one question from each of the four units.*
  3. *All questions carry equal marks.*

**Unit-I**

**Introduction to Management :** Meaning, Definition and Concept of Home Management.

Significance and Challenge of Management.

Management tools.

**Decision Making :** Types and characteristics of decisions -

- (a) Factors affecting decisions.
- (b) Steps in decision-making.

- (c) Inter-relatedness of decisions.
- (d) Time perspective.

### Unit-II

#### Management factors:

Values-Introduction, Types-Intrinsic and Extrinsic, personal and social, dominant & recessive, Values and Attitudes. Goals-Types of goals-Long term, Short term, Means Standards-Introduction, Classification-conventional & flexible.

### Unit-III

#### Resources :

- (a) Human Resources-Knowledge, Skills, Abilities, Energy, Interest, Aptitude, Time.
- (b) Non-human Resources-Money, Material goods, Community facilities.
- (c) Factors effecting the use of resources.
- (d) Similarities among the resources.

#### Management of specific Resources :

- (a) Money-Types of income, Budgeting, Budget-making, Advantages.
- (b) Time-Introduction, steps in Time plans, Tools in time plan.
- (c) Energy-Fatigue, boredom, frustration, fatigue, causes and effects of fatigue, managing energy.

### Unit-IV

#### Work Simplification

Inter-relationship of time & energy.

Body Mechanics-Body posture, movements of hand and body, momentum and rhythm in work, General principles of work simplification-use of proper equipment & tools. Use of raw material, production sequence in work, finished product.

#### Management of economic resources of the family :

Payment of taxes, Importance of insurance, use of bank account use of credit for family consumption purposes, problems and hazards, Indian standard of living, Importance in the management of economic resources of Individual families and in the use of national resources, Govt. and Non-Govt. programmes and means of raising the standard of living.

Paper-IV

ENGLISH

Max. Marks : 75

Time : 3 Hours

## Part-A

The following books are prescribed for intensive study :

## I. Textbook of English poems consisting of the following :

- |                                       |                            |
|---------------------------------------|----------------------------|
| 1. Solitude                           | A. Pope                    |
| 2. The Daffodiles                     | W. Wordsworth              |
| 3. Leisure                            | W.H. Davies                |
| 4. If thou Love me                    | Elizabeth Barrett Browning |
| 5. The Village School Master          | Oliver Goldsmith           |
| 6. The Highway Man                    | Alfred Naves               |
| 7. Ozymandias                         | P.B. Shelley               |
| 8. The Quality of Mercy               | Shakespeare                |
| 9. He fell among Thieves              | Sir Henry Newbolt          |
| 10. Lochinvar                         | Scot                       |
| 11. The Brook                         | Tennyson                   |
| 12. All the World a Stage             | W. Shakespeare             |
| 13. Cargoes                           | John Masefield             |
| 14. Where the mind is without<br>Fear | R.N. Tagore                |
| 15. On his Blindness                  | John Milton                |

## 2. Textbook of Prose Selection consisting of the following :

1. The Model Millionaire  
Oscar Wilde (1854-1900)
2. The Gift of Magi  
O'Henry (1862-1910)
3. The Judgement Seat of Vikramaditya  
Sister Nivedita (1867-1911)
4. Fur  
Saki (1870-1916)
5. A Marriage Proposal  
Anton Chekhov (1860-1904)
6. Chandalika  
Rabindranath Tagore (1801-1941)
7. A Bachelor's Complaint of the Behaviour of  
Married People  
Charles Lamb (1775-1834)

8. El Dorado  
R.L. Stevenson (1850-1894)
9. Bores  
E.V. Lucas (1868-1938)
10. The Art of the Essayist  
A.C. Benson (1862-1925)

**Part-B****Paper-IV General English**

Max. Marks : 75

Time : 3 Hours

Textbook of Composition and Grammar :

1. Translation from Hindi to English 5 Marks
2. Paragraph writing 8 Marks
3. Precis 7 Marks

*Note : This paper will have 8 questions as per details given here-under :*

Question : 1. The candidate will be asked to explain with reference to the context two passages-one each from each of the two prescribed textbooks. There will be internal choice in both the cases. Marks 5x2=10

Question There will be essay type questions (may have parts I,II) II & III on the two prescribed textbooks. Marks 10x2=20

Question-IV Translation of a passage of about 10 sentences

Marks : 5

Question-V Paragraph writing (The candidates will be required to write about 200 words on any one of the five given topics) Marks: 8

Question-VI **Precis** : The candidates will be required to summarise a given passage in contemporary English of about 250 words to one-third of its length and also give it a suitable heading. Marks: 7

Question VII Grammar and Usage

- i) Use of Prepositions
- ii) Phrasal Verbs
- iii) Voice
- iv) Modes of Narration-Direct & Indirect
- v) Modal use of auxiliaries

Marks : 15

Question VIII Letter Writing (Personal/Official) Marks : 10

**Paper-V Food Production & Gardening** Max. Marks : 75

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire Syllabus of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*

*3. All questions carry equal Marks.*

### **Unit-I**

**Agriculture** : Major food crops-cereals, pulses, oil-seeds, fruits and vegetables. Crop cycles in relation to rural economy and development; pests and diseases-different types and their general control measures. Manures, Bio-fertilizers and Bio-pesticides.

**Fruits and Vegetable Crop Cultivation** : General methods of propagation of fruit & vegetable plants. Natural and Artificial methods of vegetative propagation (Bulbs, Rhizome, Suchkers, Runners, Tubers, Cuttings, Layering and Grafting), use of growth regulators in plant propagation (elementary knowledge).

### **Unit-II**

**Economic Botany** : Botanical name, Family, part used.

(i) **Fibres** : Cotton, Jute, Coir.

(ii) **Beverages** : Tea, Coffee.

(iii) **Spices** : Condiments : Coriander, Cardamom, Turmeric, and pepper.

(iv) **Oils** : Mustard, Groundnut.

(v) **Medicinal Plants** : Poppy, Cinchona, Amla, Cannabis.

**Microbiology** :

(i) Role of bacteria in soil fertility and milk, industry and brief idea of harmful bacteria.

(ii) Economic importance of moulds, pencillium and Yeasts.



**Unit-III**

**Grain Storage** : Principles and Toxicology with reference to home.

**Bee-Keeping** : Elementary knowledge, Maintenance of bee-hives, extraction of honey.

**Poultry** : Habitat, Food & Feeding, Breeding, Rearing of Chickens, Diseases of poultry.

**Piggery** : Habitat, Rearing of animals, Piggery Products.

**Cattle Keeping** : Habitat General upkeep and sanitation, Fodder and balanced feeding, Breeding; care during diseases, Vaccines.

**Fishery** : Habitat, Fish culture, Harvesting, Methods of Fishing, preservation of Fish, Composite fish Farming.

**Unit-IV**

**Laying out of Kitchen Garden** : Care of lawns and hedges. Cultivation of Ornamental Plants and Importance of cultivating them.

(i) Flowers-Rose, Dahlia, Chrysanthemum, Gladioli.

(ii) Green Plants-Money-Plant, Crotons, Coleus, Ferns.

(iii) Bonsai-Cultivation, maintenance and care.

Planning of vegetable garden for self-sufficiency at home with special reference to common vegetables like potato, tomato, onion, brinjal, lady-finger and spinach.

**Paper-V FOOD PRODUCTION AND GARDENING**

**(Practical)**

Max. Marks : 50

Time : 3 Hours

1. Study of garden implements (Garden tools and accessories).
2. Preparation of soil-drainage, digging, trenching, manuring
  - (a) To prepare a seed bed for raising seedlings.
  - (b) To prepare a bed for sowing potatoes and cultivate them.

3. **Plant Propagation :**

Guiding rules for seed sowing. Planting and maintenance of :

- (a) Vegetables like potato, onion, brinjal, ladyfinger and spinech.
- (b) Ornamental Plants-Rose, Dahlia, Crysanthemum, Gladioli, Money-plant, Crotons, Coleus, Fern.
- (c) Bonsai-Cultivation, maintenance and care.

4. **Economically Important plants : Identify the following :**

Giving two important Points of identification:

- (a) Cereals-Wheat & Rice
  - (b) Fibres-Cotton, Jute, Coir.
  - (c) Beverages-Tea, Coffee.
  - (d) Spices and Condiments-Coriander, Cardamom, Turmeric and pepper.
  - (e) Oils-Mustard, Groundnut.
  - (f) Medicinal Plants-Poppy, Amla, Cannabis.
5. Identification of the important plant disease of the area:
- (a) Loose Smut of wheat, (b) Citrus Canker, and
  - (b) Red Rot of sugarcane.
6. Identification of common insect pests of cereals and pulses-  
cockroach, Rice weevil, Cowpea weevil.
7. (a) Collection of ornamental plants.  
(b) Preparation of herbarium of economically important plants.

**Paper- VI      BIOLOGICAL SCIENCES**

Max. Marks : 75

Time : 3 Hours

- Note :*
1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.
  2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.
  3. All questions carry equal marks.

**Unit-I**

Definition and scope of Biological Science, characteristics of all living beings.

**Systematics** : Elementary classification of plant and animal kingdom. Binomial nomenclature.

**Morphology Anatomy and Taxonomy** : Anatomy of Root, Stem (excluding secondary growth) economic importance of the following angiospermic families with detail structure of their representative flowers.

- (a) Solanaceae
- (b) Malvaceae
- (c) Cucurbitaceae
- (d) Graminae.

**Unit-II**

**Cell Biology** : Cell structure and cell division, functions of cell, organelle, vitamins, R.N.A., D.N.A., Enzymes, differences between animal and plant cells, plant tissues and animal tissues, root, stem, leaf, flower fruit.

**Unit-III****Life Process :**

- a) **Nutrition**-Definition micro and macro nutrients and their importance.
- b) **Photosynthesis**-Definition, mechanism (light and dark actions) factor affecting photosynthesis translocation of food minerals in plants.  
**Respiration in plants**-Aerobic and anaerobic mechanism. Reproduction in animals, flowering and juvenility in plants. Study of life history and economic importance of the following organisms :

**Amoeba**

Tape worm (Taenia Solium)

Thread worm

Earth worm

House fly, Honey bee,

Mosquito (Culex and Anopheles)

**Unit-IV**

**Genetics :** Mendel's Law of inheritance linkage and Crossing over, Mutation and variations Polyplody.

**Human Genetics** Chromosomes, Karyotype Abnormalities, due to chromosomal aberrations Sex determination and sex linked diseases. Some congenital disorders, haemophiliam, Colour blindness and diabetes.

**Evoenies :** Genetic counselling.

**Euoheatics-**Gene pool and its conservation.

**Paper-VI****PRACTICALS**

Max. Marks : 50

Time : 3 Hours

1. Demonstration to show simple life processes.
  - a) To demonstrate evolution of oxygen in photosynthesis.
  - b) To demonstrate the necessity of chlorophyll in photosynthesis.
  - c) To demonstrate necessity of  $\text{CO}_2$  in photosynthesis.
  - d) To demonstrate aerobic respiration (controlled experiment)
2. Study of the slides of T.S. of dicot, monocot stem, root, and leaf.
3. Study of parts of flowers belonging to mentioned families.
4. Cytological preparations showing various parts of the cell.
5. Slides of cell division (Mitosis and Meiosis).
6. Preparation of slides for Mitosis (Using Onion, root tip).
7. Microscope study of all animal cells and different types of animal tissues.
8. Identification and classification of types mentioned as under- Amoeba, Tape-worm, Thread worm, Housefly, Honey bee, Mosquito and Earth worm.

**References**

1. Buffaloe, N.D., Principles of Biology, Prentice Hall of India, Pvt. Ltd. New Delhi.
2. Weisz, P.B., Biology, McGraw-Hill, Book Company, New York, 1954.
3. Jones C, and Gandin. J. Introductory Biology, John Wiley and Sons. Inc. New York.

4. Grandbard M. The Foundation of Life Science, D Van. Nostrand Reinhold Company. New York. 1970.
5. Nason, A. Text Book of Modern Biology. John Wiley and Sons, Inc. New York.

**Paper-VII**

**HYGIENE AND PHYSIOLOGY**

Max. Marks : 75

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus of the remaining eight questions, two will be set from each of the four units.*

2. *The candidate shall attempt five questions in all including the compulsory question and one question each from the four units.*
3. *All questions carry equal marks.*

**Unit-I**

**Define :** Hygiene, Physical and Mental Health.

**Mental Health :** Role of mental health in maintaining the physical health. Rest Exercise, eating and elimination, importance of regular habit & good body posture.

**The House:** Site, surroundings, sanitation and environment.

**Water Supply :** Purification of water for home and community.

**Ventilation :** Air and its impurities, importance of ventilated house. Ventilation ways used in India.

**Unit-II**

Infection, pathogen, Incubation period, Toxin, modes of transmission, Immunity-protective measures produced in the body against infection. Notification and Isolation. Brief study of following diseases (giving cause, mode of spread, incubation period, symptoms and preventive measures, immunization); Diseases caused by indigestion : Dysentery, cholera, infective hyapatitis.

Diseases caused by insects :- Malaria.

Diseases spread by droplet infection and air : Pulmonary Tuberculosis, measles, chickenpox and smallpox, polio, diphtheria, whooping cough, plague.

Diseases caused by direct contact : Leprosy, rabies, syphilis, gonorrhoea, tetanus.

Immune disorders : Aids.

### Unit-III

**General Principles of Physiology :** a) homeostatus b) Heredity.

Elementary anatomy of various systems :

Digestive system and digestive enzymes- saliva, gastric juice, bile, pancreatic juice and intestinal juice. Digestion, absorption and assimilation of carbohydrates, protein and fat. Thirst, hunger, vomiting and constipation.

**Circulatory system :** Structure and functions of heart, blood vessels, Lymphs vessels and their functions. Composition and functions of blood and lymph. RBC and WBC. Coagulation of blood, blood groups, blood pressure and its regulation, blood transfusion.

**Respiratory system :** Basic anatomy and mechanism of respiration, transport and exchange of  $O_2$  and  $CO_2$  in blood. Endocrine glands, structure and functions, Thyroid, pituitary, pancreas, Adrenals.

### Unit-IV

**Excretory system :** Structure and functions of kidney. Formation and composition of urine, skin and its functions, regulation of body temperature.

**Reproductive system :** Anatomy of male and female reproductive systems, puberty, menstrual cycle, menopause, external sex, characters, conception ultrasound, contraception and parturition.

**Nervous system** : Physiology of nerve cell parts and functions of central nervous system. Automatic system and different parts of brain, reflexaction.

**Locomotor system** : Functions of skeleton, names of various bones and joints, muscle fatigue.

**Sense organs** : Structure and functions of Eye, Ear, Nose, Tongue, Skin. Elementary knowledge of body fluids, water and electrostyle balance.

### PRACTICALS

Max. Marks : 25

Time : 3 Hours

#### Study of human skeleton.

Study of human systems through charts and models.

Dissection of rat to show general viscera, digestive system and urinogenital system. (Demonstration only)

**Blood cells** : fresh mount and stained.

R.B.C. and W.B.C. count.

Determination of hemoglobin-salish method.

Demonstration of coagulation of blood and blood grouping.

Recording pulse rate and measurement of blood pressure.

Quality tests with urine (benedict, febling solution).

Taking body temperature and making temperature chart.

Recording pulse rate and measurement of blood pressure using sphygmanometer, effect of exercise on pulse and blood pressure. (Demonstration only)

#### References

1. A Text Book of Biology for Class XII-2 Stage.  
P.S. Dharni and R.C. Mahindru.
2. Biology Part-II for Class XII  
Maheshwari and Sharma.
3. A New Approach to Biology for Class XII-2 Stage.
4. NCERT Biology Class XII, Part-I.
5. A Textbook of Biology for Class XII.  
V. Verma and Girish Chopra.

**B.SC. (HOME SCIENCE) PART-II****Paper-I Foods and Nutrition**

Max. Marks : 100

Time : 3 Hours.

- Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus of the remaining eight questions two will be set from each of the four units.*
- 2. The candidate shall attempt five questions in all including the compulsory questions and one question from each of the four units.*
- 3. All questions carry equal marks.*

**Unit-I**

Food Definition &amp; Functions of Food.

**Nutrition** : Definition, Inter-relation between health & nutrition balanced diet.

Classification, Functions sources, deficiency, excess and daily requirements of the following :

Carbohydrates, Proteins, Lipids, Vitamins, Minerals-Major &amp; minor.

**Water as nutrient** : Functions, requirement, sources, deficiency.**Unit-II**

Food composition in groups and their nutritive contribution

1. Cereals & Pulses.
  2. Nuts & Oilseeds.
  3. Fats & Oils.
  4. Milk & Milk Products.
  5. Egg, Fish & Poultry.
  6. Meat.
  7. Vegetables & Fruits.
  8. Sugar & Jaggery.
  9. Flavouring gents (Spices and condiments)
- Food Acceptability-Importance & factors affecting food acceptability



Food Preservation-Food spoilage, general principle and causes.

- (ii) Principles of preservation.
- (iii) Methods of preservation-Home & Commercial-Preservation by low and high temperature, drying, radiation, canning, bottling & pickling and use of food preservatives.

### Unit-III

Different Basic terms used in Cookery.

- (i) Methods of cooking-their merits and demerits with regard to retaining food value.
- (ii) Effect of different cooking methods on different nutrients-BHO, Proteins, Vegetables and animal proteins, fats, & Oils, Sugars.
- (iii) Methods of improving nutritional quality of food.
  - (a) Germination.
  - (b) Fermentation.
  - (c) Supplementation.
  - (d) Fortification.
  - (e) Enrichment.

### Unit-IV

- (i) Food Sanitation & Hygiene. Food Intoxication & Food Defection.
- (ii)
  - (a) Food Adulteration.
  - (b) Food Laws and Standards.
- (iii) **Food Storage** : Storage Methods, Wastage and losses in nutrients during storage; Rodent control.

## FOODS AND NUTRITION

(Practical)

Max. Marks : 50

Time : 3 Hours

### Topics :

1. Weights, measures & their equivalent.  
Operation and care of gadgets in the lab.
2. Food preparation:
  - (a) Beverages-tea, coffee, fruit and milk.
  - (b) Vegetables-methods of retaining colour and texture-

- curries, dry vegetables cutlets and baked. Any two.
- (c) Cereals-Starch Cookery, rice-boiled and variations, flour mixture-batters and dough. Samosas and mathries, Italian Pastas. Any three.
- (d) Pulses-dals, vedas, sprouts and stuffing. Any three.
- (e) Milk-Puddings, Khir, Panir and Khoya preparations. Any three.
- (f) Meat-Curries, Kabab and staws. } (Optional)  
 (g) Fish-Steamed, fried, baked and curried } Any two  
 (h) Poultry-Roast.
- (i) Egg-Hard and Soft, cooked poached scrambled, omelette-plain and souffls and fried.  
 Custards-soft, steamed and baked. Any two.
- (j) Soups-Plain, cream of tomato and broath. Any three.
- (k) Salads tossed and jellied, Salad dressings-French dressing.  
 Mayonnaise. Any two.
- (l) Nuts-Peanut chikki, til laddoo Any two.
- (m) Baked products-Cakes biscuits jamtarts, apple pie and patties. Any four.
- (n) Frozen desserts-Souffles and icecreams. Any two.
- (o) Serving and fancy preparation involving different methods of cooking as frying, fermentation, germination, steaming, grilling, baking.
- (p) Food for festivals. Any three
- (q) Food preservation: Squashes, Jams, Jellies, Sauces, Pickles and Chutneys. (2 preparations each)

### 3. Demonstration of table setting.

#### References

1. Bennion Marion, Introductory foods, MC Millan & Co., New York 1980.
2. Packham G.C., Fundamentals of food preparations, MC Millan Co., New York 1978.
3. ICMR, Nutritive value of Indian foods, New Delhi, 1978,
4. Frozer W.C. Food Microbiology, MC Graw Hill Book Co, 1978.
5. Dessessler N.W. The Technology of food preservation, The Avi Publishing Co.. 1976.

6. Jay J.N., Modern Food Microbiology. Van Nostrand Reinhold Co. 1978.
7. Mudambi S.R. & Rajagpal H.V. Fundamentals of Food & Nutrition.

### **Paper-II Introduction to Textiles & Clothing**

Max. Marks : 100

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory questions and one question from each of the four units.*

*3. All questions carry equal marks.*

#### **Unit-I**

##### **Introduction**

- (a) Scope of Textiles
- (b) General properties & classification of textile fibres

##### **Textile Fibres**

- (a) Brief historical development
- (b) Manufacture, properties & their importance to the consumers of the following fibres:
  - (i) Natural fibers-Cotton, Linen, Wool, Silk
  - (ii) Man made fibres-Rayons, Nylon, Polyester, Acrylic.

#### **Unit-II**

##### **Yarn Construction**

- (a) Yarn making-Mechanical Spinning, chemical spinning, yarn numbering & yarn twist.
- (b) Types of yarns-Simple, complex, novelty textured.

##### **Fabric construction**

- (a) Weaving-types of weaves i.e. plain & twill & their variations. Satin, pile, jacquard.
- (b) Knitted, knotting, braiding.
- (c) Felts & bonded fibre fabrics.

**Fabric Finishing**

- (a) Basic-Bleaching, tentering, singeing, sizing, mercerizing and calendering.
- (b) Textural-Stiffening, weighting, Embossing, Moiring, Napping and flocking.
- (c) Functional-Shrinkage control, water proof and water repellants, Flame retarding, moth proofing,

**Unit-III****Introduction**

- (a) Scope of clothing
- (b) Importance of clothing.

Equipment & Supplies used in clothing, their use & care.

**General principles of clothing construction & their application**

- (a) Importance of drafting & making paper patterns.
- (b) Taking body measurement for different types of garments.
- (c) Preparation of fabric for clothing construction.
- (d) Placing & cutting of paper patterns in relation to texture & design of fabrics.
- (e) Calculating the amount of material required for different types of garments.

**Unit-IV**

Laundry-Equipments & its use.

**Soap & supplies**

- (i) Soaps & detergents
- (ii) Stiffening agent
- (iii) Blues
- (iv) Bleaching agents.
- (v) Grease absorbants & solvents.

**Introduction to Textiles & Clothing**

(Practical)

Max. Marks : 50

Time : 3 Hours

1. Use and care of equipment & supplies for clothing construction.

2. Application of principles of clothing construction.
3. **Making samples of seams**
  - (i) Plain
  - (ii) French Seam
  - (iii) Lapped Seam
  - (iv) Run & fell
  - (v) Mantua Maker.
- Pleats :**
  - (1) Knife Pleats, Box Pleats, Inverted Box.
  - (2) Darts-Full darts, half darts.
  - (3) Placket openings, continuous and simple.
  - (4) Gathers & various necklines.
4. Basic Stitches of embroidery-Minimum-5.
5. Basic Stitches of knitting.
6. Knitting of booties & patterns (at least 2).
6. Drafting of basic blocks, adaptations, selecting suitable materials.
7. Stitchings of basic garments like-
  - (a) Panty
  - (b) A line Frock with peter pan collar & puff sleeves.
  - (c) Saree Petticoat.

### **Practical Textiles**

#### **Fabric study-**

- (a) Fibre identification-Microscopic Physical & chemical tests for cotton, linen, wool and nylon.
  - (b) Fabric-Thread count and balance
  - (ii) Weaves : Making samples of various types of weaves e.g. plain Twill, Basket, Satin & Sateen.
  - (iii) Identification of weaves.
- Stain Removal-Removal of any ten stains.
- Washing & Finishing of cotton, wool, silk & man-made fabrics.
- Spot cleaning of shawl.

#### **References**

1. Dentyabg S., Fundamentals of Textiles & their Care, Orients N. Delhi, 1982.
2. Joseph M., Essentials of Textiles, Holt Remehart & Winston New York 1980.

3. Joseph M. Essentials of Textiles, Holt Remehart & Winston New York 1980.
4. Hess K.P. Textile Fibres & their use, Oxford & IHM Publishing Co., New Delhi:
5. Doonganiji.S & Deshpande R., Basic Process of clothing construction, New Delhi Raj Book, Depot, New Delhi 1948.
6. Deulkar D., Household textiles & Laundry Work, Atma Ram & Sons, New Delhi-1948.
7. Gohl E.P. & Vilensky L.D., Teextiles for Modern Living, Longman Melsource 1977.

### **Paper-III      SOCIOLOGY AND FAMILY DYNAMICS**

Max. Marks : 75

Time : 3 Hours

- Note : 1. The examiner will set nine questions including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions, two will be set from each of the four units.*
2. *The candidate shall attempt five questions in all including the compulsory question one question from each of the four units.*
  3. *All questions carry equal marks.*

#### **Objectives**

1. To introduce the student basic sociological concepts.
2. To acquaint the student with the reality of urban and rural areas.
3. To provide information about social changes taking place in Indian Society.

#### **Contents**

##### **Unit-I**

**Introduction** : Definition of Sociology, scope branches and relationship to other social sciences. Methods of data collection and importance of empirical studies.

**Sociological Concepts** : Society and Culture and cultural social structure lag, relationship between individual and society.

**Groups** : Primary, Secondary, Family, Community class and caste, religions, political and economic groups.

##### **Unit-II**

**Social Processes** : Co-operation, accommodation, competition, conflict, assimilation.

**Collective Behaviour** : Crowd, Public, audience.  
**Social Change** : Theories of social change with reference to Indian situations, Industrialization, Urbanization, Modernism, Sanskritization and Westernization.

### Unit-III

**Social Institutions and Organizations** : Their structure and function, economic and political institution and their relationship.

**Agencies of Social Control** : Custom, Religion, Morality, Fashion, Law.

### Unit-IV

- I. a) Family definition, compositions and Types of families, their merits and demerits, function of family.
- b) Roles and relationship within the family, family-interaction as a function of changing times. Intergenerational relationships. Sex role differentiation, Hierarchy of age of sex.
- II. a) **Marriage** : Definition, customs and practices in different religions.
- b) Marriage legislation according to Indian Law.
- III. a) Philosophy needs preparation and adjustment in marriage, criteria for a successful marriage.
- b) **Family relationship** : Significance of healthy family, relationship in family, husband and wife, parents and children in laws and sibling relationship.
- c) **Crisis in family** : Prolonged illness, death, suicide, mental illness and unemployment.
- IV. a) **Divorce** : Definition and legislation.
- b) **Marriage** need aims, adjustment in marriage inter caste marriages in India.
- c) Break up in family, divorce, separation, desertion, death parents, single parenthood.

### References

1. Gilbert, D. : Fundamentals of Sociology, Orient Longmans Bombay, 1973.
2. Desai, A.R. : Rural Society in India, Popular Parkashan Bombay-1975.
3. Kapadia, K.M. : Marriage and Family-India Oxford University Press, Bombay 1975.
4. Kuppaswamy, B. : Social Change in India, Vikas, Delhi-1972.
5. Rao, M.S.A. : Urbanization and Social Change, Orient Longmans, Delhi, 1970.

**Unit-III****Resources :**

- (a) Human Resources-Knowledge, Skills, Abilities, Energy, Interest, Interest, Aptitude, Time.
- (b) Non-human Resources-Money, Material goods, Community facilities.
- (c) Factors effecting the use of resources.
- (d) Similarities among the resources.

**Management of Specific Resources :**

- (a) Money-Types of income, Budgeting, Budget-making, Advantages .
- (b) Time-Introduction, steps in Time plans, Tools in time plan.
- (c) Energy-Fatigue, boredom, frustration, fatigue, causes and effects of fatigue, managing energy.

**Unit-IV****Work Simplification**

Inter-relationship of time & energy.

Body Mechanics-Body posture, movements of hand and body, momentum and rhythm in work.

General principles of work simplification-use of proper equipment & tools. Use of raw material, production sequence in work, finished product.

**Management of economic resources of the family :**

Payment of taxes, Importance of insurance, Use of bank account use of credit for family consumption purposes, problems and hazards, Indian standard of living, Importance in the management of economic resources of Individual families and in the use of national resources, Govt. and Non-govt. programmes and means of raising the standard of living.



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*2. The candidate shall attempt five questions in all including the compulsory question one question from each of the four units.*

*3. All questions carry equal marks.*

### **Unit-I**

Psychology-meaning, scope & nature; relationship with Home Science.

Methods of psychological studies with merits & demerits-observation, experimental methods, interview technique, questionnaire & case study method.

### **Unit-II**

**Relation between Mind and Body**

**Sensation & Perception** : Nature, attributes, special sensations, Fundamental characteristics of perception, Function of sensation & perception.

**Attention** : Nature & conditions of attention, Intention.

**Emotions & Motivation** : Theories of emotions, Basic emotions in childhood, Emotional development, Influence of environment on emotions.

### **Unit-III**

**Learning** : Meaning, Nature & types of Learning, Principles of learning Effect of motivation on learning, Factors affecting learning.

**Memory** : (a) Definition & Analysis  
(b) Forgetting  
(c) Improvement

**Intelligence** : Definition, Theories of Intelligence, Development & measurement.

**Unit-IV****Thinking & Imagination**

- (a) Concepts & other tools of thinking.
- (b) Reasoning as related to Imagination & thinking.
- (c) Imagination-Nature & development.

**Personality**

- (a) Definition & Concept, types & Freuds theory of personality.
- (b) Assessment of Personality.
- (c) Factors influencing personality (Biological & Social).

**References**

1. Hilgard E.R., Introduction to Psychology, Barcourt 1958, New York.
2. Margan C.T., Introduction to Psychology, McGraw Hill 1956, New York.
3. Jalota S.S., Intorduction to Psychology.
4. Murphy G, An Introduction to Psychology; Harper & Row, New York.
5. Woodworth R.S. & Mangoes G.S., Psychology, A Study Mathueu & Co., 1949, London.
6. Boaz G.D., General Psychology, Gunalya Press 1971.
7. Sinha S., A Manual of Psychology, Guhal Book 1963, Agency Calcutta.
8. Sharma, General Psychology.

**Paper-V****Consumer Protection and Economics**

Max. Marks : 100

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*

*3. All questions carry equal marks.*

**Unit-I**

Definition of consumer choice and buying problems of consumers, Fraude and faulty weights measures, Adulteration and other mal-practices-causes and consequences; consumer decision making; Buymanship skills, process of consumer decision making. Consumer resistance & consumerism.

**Unit-II**

**Consumer Education** : Scope of consumer education, consumer rights and responsibility, consumer protection; Public private aids, standards, standardization, I.S.I., Agmark and other quality assurance scale; consumer guidance.

Producer's Aids to consumer; Advertisement, brand, packaging labelling, grading, fair-trade practices and consumer-associations.

**Unit-III**

Definition of Economics & Scope, Importance of Economics in Home Science.

**Basic concepts** : Price, value, income, capital, wealth, goods utility, economic & non-economic activities.

Distinction between necessities, luxuries and comforts.

Nature and functions of money. Supply of money, nature and functions of commercial banks. Family budget; standard of living, Direct and indirect taxes, canons of taxation.

**Unit-IV**

Concept of Marginal Utility and price; law of Diminishing Marginal Utility and Equi-Marginal Utility as the objective of household expenditure. The Law of Demand, Elasticity of Demand, Consumer & Market, functions and types of markets, price determination in perfect competition and monopoly (inshort); Market devices as aids to consumer.

Market demand curve, demand desire, extension and contraction of demand, increase and decrease in demand.

**Paper-VI Introduction to Human Development and Family Relations**

Max. Marks : 100

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*

*3. All questions carry equal marks.*

**Unit-I**

Historical trends in fields of Child Development.

Significance of study of Child Development.

Growth and Development-Definition, Principles related factors-environment and heredity.

Mile stones of development.

**Unit-II**

Prenatal development and factors influencing it.

Areas of development and problems in each of the stages.

In fancy (0-2), Childhood (2-11).

Physical-Motor, social cognitive, emotional, moral and language development.

**Adolescence :** (A)

Characteristics

(B)

Areas of Development

(i) Physical, Motor

(ii) Social

(iii) Mental

(iv) Emotional

(v) Moral

(C)

Problems of Adolescence.

(D)

How parents can help them to adjust.

**Unit-III**

Family definition, its importance in the the life of the child. Philosophy, needs preparation and adjustment in

marriage. Criteria of a successful marriage. Family relationship; significance of healthy family relationship in family, husband and wife, parents and children, inlaws and sibling relationship and their individual effects on the child.

**Crisis in family** : Prolonged illness death.

Suicide, mental illness and unemployment and its effects on child development.

#### **Unit-IV**

Marriage, need, aims, adjustment in marriage inter-caste marriages of India.

Break up in family, divorce, separation, desertion, death of parents, single parenthood and their implications on the life of the child.

## INTRODUCTION TO HUMAN DEVELOPMENT AND FAMILY RELATIONS

**Practical**

Max. Marks : 50

Time : 3 Hours

Methods and Materials used in the study of children and adolescents.

### **Techniques and Basic Tests :**

Intelligence tests : Bayleys Scale of Infant Development, WISC, CIE test of Intelligence. Projective Tests: CAT, TAT. Aptitude-Differential Aptitude Test.

Observation of Infants and children for stage of language development and speech analysis.

Observing play preferences and other social activities in children.

### **Obervation of**

- (i) Parent child interaction outside home.
- (ii) Children's interaction with other children and adults.

### **Sociometry**

Visit to Bal Bhavan, Aanganwadi and other institutions of child welfare.

Preparing a report of these visits.

Planning and conducting recreational activities for children  
Rhymes, songs, stories, plays, creative activities, play activities.

**Paper-VII Ecology & Environment**

Max. Marks : 75

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

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*3. All questions carry equal marks.*

**Unit-I : Ecology**

Meaning, Definition, Scope of the subject.  
Ecological System, Crisis, Maintenance of equilibrium in nature.

**Unit-II : Human Ecology**

Man & environment, population growth, uncontrol growth of population, poverty, illiteracy, and unbalanced growth of cities, problems of housing & assential services, measures of population control.

**Unit-III : Resources & Energy**

- a) Land & Mineral reasources, cultivable & non-cultivable land, land erosion, de-forestation, world food problem, onservation of wild life.
- b) Major sources of energy-Renewable.

**Resources**

- a) Solar energy, harness in of solar-energy other recent technology.
- b) Recycling of waste resources, recovery from agricultural waste, biogas plants.

**Non-renewable resources :**

Coal, petroleum, their excessive use in different countries.

**Unit-IV : Environmental Pollution**

Distribution of ecological system, causes of air, water behaviour of man towards environment. Social and political systems to overcome pollution.

**References**

1. Enrlct P.R. & Heldren J.P., Human Ecology 1973.
2. Owen D.P. What is Ecology Oxford University, 1974.

**B.Sc. Home Science Part-III****Paper-I Human Nutrition and Dietetics**

Max. Marks : 100

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question one question from each of the four units.*

*3. All questions carry equal marks.*

**Unit-I**

1. Nutrition, Malnutrition-Definition, relationship between Health & Nutrition.
2. Food at Work in the Body.
  - a) Digestion, absorption & Metabolism of the following :
    1. Carbohydrates
    2. Protein
    3. Lipids



4. Vitamins

5. Minerals, major and minor.

Energy Metabolism-Based metabolism, total energy requirement, Measurement and factors affecting it. Specific Dynamic action of food.

## Unit-II

Basic Principles of Meal Planning-Nutritional requirement, Social & Psychological satisfaction. Factors involved in Meal Planning-Family size & composition, Socio-Economics status, Food availability, Climatic condition, Socio-cultural factors.

Nutrition for infants growth during infancy, difference between animal and human milk, bottle feeding versus breast feeding, nutritional and anti-bacterial qualities of Breast milk. Weaning food supplementary foods, problem in bottle feeding, methods of formula preparation. Nutritional requirement of infants.

Nutrition for School Children-Nutritional requirement : packed lunch, food selection related to behavioural changes.

## Unit-III

**Nutrition for Adolescent** : Nutritional requirement, food pattern and acceptance, Snacking & other problems.

Nutrition for pregnancy, complication in pregnancy, physiological changes due to age, nutritional requirements, Complication in Pregnancy :

Nutrition for a Lactating lady factors affecting milk output. Nutrition in old age, Physiological problems and other changes.

**Unit-IV Therapeutic Nutrition**

Nutrition & infection : Diet therapy-Principles of diet therapy, Adaptations of normal diet, Regular diet, light, soft, full, liquid, clear liquid, bland diets.

Causes, Symptoms, treatment and Diet modifications of the following :

- a) Gastro, intestinal diseases-diarhoea, dysentery & constipation.
- b) Obesity, Peptic Ulcer, Diabetes Mellitus, Hypertension.
- c) Fever, Jaundice & Typhoid.

**Human Nutrition & Dietetics****(Practical)**

Max. Marks : 50

Time : 3 Hours

1. **Dietary Calculations using :**
  - (1) Nutritive value tables.
  - (2) Food Exchange lists.
2. To determine portion sizes of raw and cooked foods and calculations of important nutrients.
3. Planning, calculation and preparation of diets for different socio-economic groups.
  - (a) Infant, with special reference to weaning foods.
  - (b) Children :
    - (i) 1-3 years
    - (ii) 4-6 years
    - (iii) 7-12 years
  - (c) Adolescents-boys & girls
  - (d) Adult-Men and Women engaged in sedentary.
  - (e) Pregnant and lactating women
  - (f) Old men and women.
4. Planning, Calculation and preparation of the following :
  - (a) Snaks for young children emphasizing calories. Vitamin A and iron contents.
  - (b) Packed lunch for school going children.
  - (c) Picnic lunch for the family.

5. Planning Calculation & Preparation of the diets for :
  - a) G.I.T. disorders.
  - b) Ulcer,
  - c) Diabetes
  - d) Hypertension
  - e) Fever
  - f) Obese patients.

### References

1. Davidson S. Passmore R. Brock J.P. & Truswell A.S. Human Nutrition & Dietetics. The English Language book Society & Churchill Livingstone 1975.
2. Kinder F. Meal Management, Mac Millan Co. 1973.
3. Mundambi S.R. & Rajagopal M.Y.; Fundamentals of Food & Nutrition, Wiley Eastern Ltd. 1983.
4. Gosh S. The feedings & Case of Inputs & Young Children, VHAI, 1976.
5. Anita F.P. Clinical dietics Nutrition, Oxford Univ., 1973.
6. Robinson E.H. Normal & Therapeutic Nutrition., Mc Millan Co. 1976.
7. Kraus M.V. & Hunsclier M: Food Nutrition Diet Therapy W.B. Saunders Co. 1976.

### Paper-II Clothing and Textile Designing

Max. Marks : 100

Time : 3 Hours.

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

2. *The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*
3. *All questions carry equal marks.*

**Unit-I****Aesthetics in Dress**

**Design-Principles-balance, harmony, rhythm proportion & emphasis.**

**Elements-(i) Colour-its dimension, harmonies and effect, its use in relation to season, occasion, size, figure and complexion.**

(ii) Texture analysis and its use in relation to size, figure, occasion, season.

(iii) Line and shape analysis and its appropriate use.

**Unit-II****Fashion in Dress**

(a) Sources of fashion

(b) Factors favouring & retarding fashion

**Figure Analysis**

(a) Body Proportions.

(b) Figure Types.

(c) Selection of design in relation to figure type.

**Fitting- Common fitting Problems and how to remedy fitting defects.**

**Unit-III**

Intelligent buying of fabrics and ready-made garments and comparative study of Home made-Tailor made & ready made garments.

**Care of clothing :**

(a) Renovation

(b) Mending

(c) Storage

**Unit-IV**

Selection of suitable fabrics for clothing according to age, climate, occupation, figure and fashion.

**Desgning Techniques :**

- (a) Dyes : Classification, Household dying, tie and dye.
- (b) Printing : Block, Roller, Stencil, Screen, Batik Printing.

**Traditional Textiles of India**

1. Kantha-Bengal
2. Kutch Singh, Patolas-Gujrat.
3. Phulkari-Punjab
4. Shawls and Carpets-Kashmir
5. Chikan work, Brocades-U.P.
6. Bandhini-Rajasthan.
7. Pochampalis & Kalamkari-Andhra Pradesh.

**Clothing and Textile Designing****(Practical)****Max. Marks : 50****Time : 3 Hours**

1. **Drafting of Basic blocks, adaptations to required designs**  
(i) Blouse, (ii) Jum Suit, (iii) Boy's bushirt, (iv) Boy's shirts(v)Pyjamas, (vi) Salwar & Shirt (ladies) (vii) House Coat, (viii) Gent's Kurta, (ix) Churidar.
2. **Stitching of following garments :**  
(i) Blouse, (ii) Gathered Frock with fancy sleeves & collar, (iii) Jumpsuit, (iv) Ladies suit (Salvar or Churidar & Shirt),(v) House Coat, (vi) Boy's Bushirt.
3. **Drafting of collars-Baby collar, Peterpan-flat & shawl collar, sailor collar, chinease collar.**
4. **Drafting of sleeves-Puff sleeves, Reflam sleeves, Magyor sleeves, Legomutton sleeves.**
5. (a) Darning-hole, edge and tear  
(b) Patching.
6. **Atleast 2 traditional embroidery stitches.**
7. **To prepare one article of each**  
(a) Tie & dye  
(b) Block printing  
(c) Batik.

## References

1. Bane. Tailoring. Mc Graw Hill Book Co., Inc. New York.
2. Lewis D.S. Bowers M.G. & Ketteinen M. Clothing Construction & Wardrobe Planning.
3. Rathbore L. & Tarpley E. Fabrics & Dress, Roughton Mittilin Co. Cambridge.
4. Harriet T. Me Jinsey, Art & Fashion in Clothing selection  
Lowa State University Press.
5. Bakhni A.D., Usha Tailoring Guide, The Jay Engineering Works Ltd.

## Paper-III Home Management & Art in Everyday Life

Max. Marks : 100

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*

*3. All questions carry equal marks.*

### Unit-I

#### 1. Family Housing

Family's housing needs protective economic effectional, social status. Defining housing values, housing goals, housing decisions.

#### Principles of Housing Planning

Site selection-orientation, view natural features of the site location, neighbourhood, external services, practical consideration.

### **Principles of Planning Room Orientation, grouping of rooms**

Functionalism, circulation flexible appearance, lighting ventilation and sanitation, privacy, spaciousness roominess and economy.

#### **3. Space Designing**

- a) Activities in the family
  - i) Assessing family activities.
  - ii) Estimating space requirement for each family.
- b) **Space location**  
Planning of different rooms, kitchen, living room, bedroom, bathroom and toilets.

#### **4. Building Material**

- a) Conventional and moderning building materials  
brick, wood, mortar, lime mortar , glass cement, stone tiles, plastics etc.
- b) Cheaper substitutes and pre-fabricated materials for construction.

#### **5. Economy in construction : General factors of consideration, Methods of calculating the cost of construction.**

### **Unit-II**

#### **Furnishing a House for a Family**

- a) Planning the use of available space for family living. Family activities to be accommodated. Furniture and equipment needs and arrangement.
- b) Selection of furniture and furnishings for sleeping, dining, social work and play areas:  
Furniture-kinds, suitability to purpose, construction cost and design and care.

#### **Furnishings**

- a) Floor covering, kinds suitability to purpose and costs.
- b) Wall treatment, paints, plaster, wood panels, wall paper
- c) Window treatment, curtains, venetian blinds, shutters,
- d) Accessories and decorative objects.

**Unit-III**

Selection of equipment, furniture and furnishings for work areas, kitchen, laundry and store,

1. Kinds, suitability to purpose, design, construction and costs.
2. Principles of arrangement of items in work areas for convenience, safety and sanitation.

Maintenance and renovation of furniture and furnishings:

1. Wood furniture
2. Upholstery and slip-covers.
3. Draperies and curtains.
4. Floor covering.

**Selection, care and storage of household equipments :**

Selection and care of the kitchen utensils.

Selection and care of electrical equipment.

Like Refrigerator, mixi ovens, iron, washing machine, T.V. Video. etc.

**Unit-IV**

**Art in every day life**

Importance of good taste in every day life

What is an art object/design?

**Types of Design**

Structural and decorative traditional, and modern.

**Aims of Design**

Beauty, functional and expressiveness.

**Elements of Arts**

Line, form colour, texture, space, volume, pattern, light.

**Principles of Design**

Harmony, balance, rhythm, proportion, emphasis.

**Design and Colour**

Colour theory, dimensions, classification, Sociological, Psychological and Physical reactions of colours, colour schemes in different media and for different rooms.



**Flower arrangement Design :**

Types of flower arrangement, principles of design, containers accessories in flower arrangement. Accessories, kinds of accessories, placing accessories.

**Home Management and Art in Every Day Life****(Practicals)****Max. Marks : 50****Time : 3 Hours**

1. **Cleaning and polishing of :**  
Glass, china brass, silver, electroplated objects, gold carved wood and metal article, rusted iron articles, copper anamel and aluminium.
- II. **Cleaning, polishing and removing of stain from the wooden furniture.**
- III. **Cleaning, polishing and stain removing from leather articles, such as upholstered furniture purses bag, attache, cases and suit cases, shoes etc.**
- IV. **Preparation of polishes for wood and metals (Any three).**
- V. **Washing and cleaning of plastic and rexin.**
- VI. **Cleaning and care of a refrigerator and other household electrical equipment.**
- VII. **Cleaning of sinks, buckets and bathroom.**
- VIII. **Care, storage and cleaning of carpets, rugs and dures linoleum.**
- IX. **Reading and evaluating house plan for LIG, MIG, HIG.**
- X. a) **Arrangement of different rooms.**  
b) **Arrangement of multipurposes rooms (Preparing of colour schemes for furnishings, wall and floor, treatment of different rooms.)**
- XI. **Budgeting and account keeping.**
- XII. **Selection and choice of different types of :**
  - a) **Furniture for different rooms.**
  - b) **Household electrical equipments by conducting market surveys.**

XIII. Planning and arranging of different types of kitchens (Charts and demonstration in the laboratory)

XIV. Planning of household storage space for different rooms (by charts and demonstration).

Evaluation will be external if practical are conducted.

XV.a) Simple electrical repairs in the home, like fuse, repair of plug, iron element, etc.

b) Plumping repairs like leaking taps and changing taps.

XVI.a) Evaluation of design of art objects equipment, furniture.

b) Preparation of colour wheel and various colour schemes.

XVII. Application of design principles in

a) Preparation of greeting cards, menu cards.

b) Poster making

c) Making of an art object.

d) Arranging displays.

e) Floor decoration rangoli and alpana.

f) Flower arrangement-fresh and dry.

XVIII Table manners and Ettiquettes.

XIX Preparing one art object

XX. Pottery decoration.

OR

### **Cottage Project**

Max. Marks : 50

Cottage Project is applied Management programme for testing out the knowledge accuired by the student regarding management use of daily equipment and maintenance of the home. In this the student as a home manager will function in a number of capacities-as planner, organiser, decision-maker,

director interior decorator, consumer, buyer, co-ordinator and worker.

The Principles, theories, philosophies and skills acquired through the different courses in Home Science are seen as component parts of home-making. Six to eight students are required to stay in the cottage with one staff member for a period of approximately six weeks during this time.

They are responsible for the use of available making decisions and running of the cottage. In the process, they will also evaluate their own performance as a hostess, a cook, a waitress, an assistant cook, room maker and an accountant.

The Student will also learn to live and adjust in a group, to be a leader and a follower, to be an efficient consumer of time, energy and money. The evaluation will be internal.

*Note : Students will have to Opt. in the Paper "Home Management and Art in Everyday Life" either Practicals or Cottage Project. The former will be evaluated by the University and the latter internally.*

#### **Paper-IV**

#### **Child Care and Welfare**

Max. Marks : 75

Time : 3 Hours

*Note:1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

- 2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*
- 3. All questions carry equal marks.*

#### **Unit-I Prenatal Period**

Signs of pregnancy, care of expectant mother, Discomforts in pregnancy, Delivery, Confinement, Types of deliveries. Post natal care of newborn baby.

## **Unit-II Children in Infancy and Pre-school Years**

Feeding, weaning, supplementary feeding, toilet training, sleep routine, hygiene practice, maternal role in training the infant role of other members of the family.

### **Common Problems**

Problems related to sleep and eating bed wetting, speech difficulty, withdrawal excessive fears, sibling rivalry separation anxiety.

Problems related to Poverty-deprivation-economic, nutritional educational especially to girls. Juvenildeling quency crim, shop lifting .

## **Unit-III**

Definition, objectives, philosophy of child weifare.Relevance of Child Welfare in India. National Policy and Legislature related to women and children. Welfare Agencies : Government and Voluntary.

## **Unit-IV**

Institutions, Programmes and Services for children with special needs.

### **Practicals**

Max. Mark : 50

Time : 3 Hours

Surveys of feeding and weaning practices among diffierent socio-economic groups.

Taking height and weight of infants and pre-school children. Observation of infants and children for stages of language development, mental awareness.

Observing play preferences and other social activities in children. Planning and conducting recreational activities for young children. Soft toy making, Rhymes, stories, creative plays.

Visit to Bal Bhawan, Cresh and Day care Centres and preparing report of these visits.

Making a resource file collecting material related to children. Involvement in child welfare activities with some Institution.

**References**

1. Arya and Subhash C. Infant Child Care for the mother. Vikas New Delhi, 1972.
2. Bernard, H.W. and Fullner, D.W. Principles of Guidance, Allied Publishers, 1972
3. Handerson, R.W. and Bergan, J.R. The Cultural Context of Childhood Charles E. Marril, Ohio, 1976.
4. Ambron, S.R. The Developing Child, Chase Burelle, Illinois, 1975.

**Paper-V Community Development & Extension Education**

Max. Marks : 100

Time : 3 Hours

- Note .1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*
- 2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*
- 3. All questions carry equal marks.*

**Unit-I**

**Concept of Extension Education**

Meaning, Principles, Philosophy and Objective of Extension Education. Extension Education approach-individual, group & mass approach. Qualities of Extension education workers.

**Unit-II**

**Community Development Programmes and Panchiyati Raj**

Origin, History of Community Development. Principles & Philosophy of Community Development. Set up & functions of Community Development programmes at central, State, District, Block and Village levels. Programmes

of Central Social Welfare Board. Development Programmes for Women and Children.

Rural Development Programmes-IROP, NREP, ICDS, DWACRA, TRYSEM, ANP, SNP.

Self Sufficiency Scheme, Family Planning programme, National Adult Education Programme, Small Farmers Development Programme, Minimum Needs Programme, Intensive Agriculture Development Programme.

Evaluation of the Panchaiyati Raj. Three tier system of administration, Principles of Democratic decentralization. Role of voluntary organization in rural development.

Role of Home Science in solving rural problems of illiteracy poverty and poor health.

### **Unit-III**

#### **Communication**

Meaning, scope and importance of communication. Elements. Problems in communication with special reference to India, Communication in Home Science.

#### **Methods of approaching People :**

Classification of teaching methods according to form and use. The scope, advantages and limitations of different extension methods.

Programme Planning Definition, Meaning of Programme Planning, Steps in Programme Planning.

### **Unit-IV**

#### **Audio-Visual Aids in Extension:**

Classification of audio-visual aids, different audio-

visual aids, their scope advantages and limitation, factor limiting the selection and use of audio-visual aids.

### **Community Development & Extension Education**

**(Practical)**

Max. Marks : 50

Time : 3 Hours

#### **1. Preparation and use of different audio-visual aids :**

Charts, Posters, film, gards, pamphlets, flip cards leaflets  
book-set, film strips.

2. Workshop on puppetory and folk media of communication.
3. Preparation and use of suitable material for rural women regarding health, nutrition, family planning and supplementary occupation.
4. Observing activities of women extension workers in the field.
5. Visit to a Block to learn the set up and functions.
6. Visit to villages to see ICAS, DWACRA, and voluntary organisations in action and prepare report to be submitted in the final exam.

#### **References :**

1. Reddy A.A., Extension Education, Shri Laxmi Press, Bapatla 1971.
2. Directorate of Extension, Extension Education in Community Development, Ministry of Agriculture, Govt. of India-1971.
3. Dutt. R.H. & Sundaram, K.P.M., Indian Economy, S.Chand & Co.,Ltd. 1980.
4. Devadas Rajmal, Measuring of Home Science, Shri Rama Krishna Vidyala Coimbatore, 1970.
5. Sovile A.H., Extension in Rural Communities, Oxord University Press, 1965.
6. Shiwalkar R.S. The Twin Problems of Rural Development, Kitab Mahal 1968.
7. The Home Science Association of India, Perspective in Home Science Coimbatore 1977.
8. Daham O.P. & Bhatnagar O.D., Education & Communication for Development, Oxford & IBM Publishing Co. 1980.
9. Rudaramurti V., Extension in Planned Social Chances, Allied Publishers, Madras 1964.

**Journals :**

Rural India, Yojana, Kurukshetra.

**Paper-VI**

**Nutritional Biochemistry**

Max. Marks: 100

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*

*3. All questions carry equal marks.*

**Unit-I**

**Chemical structure and properties of Physiologically important Compounds :**

**Carbohydrates:** glucose, fructose, sucrose, maltose, Galactose lactose, starch, glycogen

**Lipids:** fatty acids, triglycerides, phospholipid, sterols, proteins : amino-acids.

**Nucleic Acids :**

Physiology and functions of vitamin A, D, Thiamine, Niacin, Pyridoxine folic acid B<sub>12</sub>, ascorbic acid.

**Unit-II**

**Enzymes :** Classification, elementary treatment of enzymes, Kinetics, including factors which effects rates of enzymes, catalysed reactions, Metabolic of enzymes and co-enzymes.

**Biologic Oxidation :** Combustion & Biologic Oxidation. The respiratory chain, the electron transport particles-Oxidative phosphorylation.



**Specification Biochemical role of minerals in metabolism:**

Calcium phosphorus, Magnesium and iron. Role of Hormones.

**Unit-III**

**Digestion, Absorption and Metabolism of**

(a) Carbohydrates-glycolysis, Tricarboxylic acid cycle, Gluconeogenesis, glycogenesis, glycogenolysis.

(b) **Lipids:** Oxidation of fatty acid liver-ketosis, Biosynthesis of fatty acids. Principles of estimation, function, requirement and effect of deficiency.

(c) **Proteins:** Definition composition, classification, elementary Chemistry of amine acids. Peptide bonds, classification and function of proteins. Essential amino acids. Nitrogen balance protein efficiency ratio and biological value of proteins. Elementary study of general metabolism of proteins building up of amino acids pool, general reactions of amino acid metabolism urea cycle.

**Unit-IV**

Urine composition, normal and abnormal constituents of urine. Energy value of foods: Methods of determination. Total value, physiological value and Basal Metabolism.

**Biochemical Change in**

(a) Protein-energy Malnutrition

(b) Anemia

(c) Vit A deficiency

(d) Riboflavin

(e) Thiamin

(f) Nicotin deficiency.

**Nutritional Bio-Chemistry****(Practical)**

Max. Marks : 50

Time : 3 Hours

1. Qualitative analysis of mono-di & Polysaccharide.
2. Estimation of total & reducing sugars and polysaccharides.
3. Estimation of lactose in milk.
4. Estimation of total fat content of foods, Saponification value, iodine value.
5. Determination of calcium, phosphorus and iron.
6. Estimation of urea in urine.
7. Qualitative estimation of normal and abnormal constituents of urine.
8. Reactions of protein.
9. To test reactions of proteins, fats, and carbohydrates in milk, egg and wheat flour.
10. Paper Chromatography.

**References :**

1. Orten J.M. & Neyhand O.V., Human Biochemistry, C.V. Mosby Co. St. Louis U.S.A.
2. Lenninger A.L., Biochemistry, Wealth Publisher Inc.
3. Harper H.A. et al., A review of Physiological Chemistry.
4. Person D., The Chemical Analysis of Foods, Churchill, Livingstone.
5. Biochemistry E.S. West, W.R. Todd and others.
6. Practical Physiological Chemistry by Hawk, Oser and Summerson,
7. Principles of Biochemistry by A.White, P.Handler and E.L. Smith.

**Paper-VII Women's Status & Population Education**

Max. Marks : 75

Time : 3 Hours

*Note : 1. The examiner will set nine questions in all including one objective type compulsory question covering the entire syllabus. Of the remaining eight questions, two will be set from each of the four units.*

*2. The candidate shall attempt five questions in all including the compulsory question and one question from each of the four units.*

*3. All questions carry equal marks.*

**Unit-I****Introduction**

- a) Sex role development, biological, psychological and socio-cultural factors.
- b) Sexual exploitation/discrimination of Indian women.

**Unit-II****Status of Indian Women**

- a) Trends in women's movements with special reference to India
- b) Status of Indian Women.  
Post Independence, legal, political, economical social & educational status (relevant statistics)

**Unit-III****Contemporary Problems & Issues related to Women**

- a) Education and employment.
- b) Health and Family size focussing on
  - i) Population situation, statistical profile.
  - ii) Factors affecting population growth.
  - iii) Reform through population education its meaning, objectives, contents, need for curriculum in school and colleges.

**Unit-IV****Problems & Issues related to Women**

- a) Women and Mass Media.
- b) Social Welfare programmes and their impact.
- c) Issues related to women studies and policy implications (dowry, divorce, suicide)

**References**

1. Bhatnager K.M. & Jain M. Population Education & Child Development, Naland a Institute of Public Co-Operation & Child Development, New Delhi-1983.
2. Gopal Rao D. Population Education Sterling Publication, New Delhi-1974.
3. Chandrakala a. Hail Changing Status of Women, Allied Publishers Private Ltd., Bombay 1969.
4. Agarwal S.N., India's Population Problems, Mc - Graw Hill-1977.
5. Perikah Population Education & Discussion, Institute of Sociological & Psychological Research. 1970.