

SMART SKILLS**SYLLABUS FOR CLASS IX****Unit I: Concept and Scope of Home Science Education and Recent Trends**

1. Home Science and its scope.
2. Fields of Home Science
3. Relevance of study of Home Science and career options
4. Recent trends

Unit II: Human Development (Part I)

1. Concept of growth and development
2. Principles of growth and development
3. Factors affecting growth and development
4. Age specific milestones

Unit III: Family and values

1. Concept and types of family
2. Role of family in holistic development of an individual
3. Ethical and value based society
4. Importance of girl child
5. Influence of various factors on a family

Unit IV : Food, Nutrition, Health and Fitness

1. Definition of food, nutrition, (WHO) health and Nutritional status.
Functions of food:
 2. Physiological (body building, energy giving, protective, regulatory), psychological and social functions.
 3. Selection of foods for optimum nutrition and good health:
 - (i) Nutrients :
 4. Concept of Balanced diet
- Maximum nutritive value from food by proper selection, preparation, cooking and storage:
5. Cooking :
 - (a) Principles of cooking
 - (b) Methods of cooking - boiling, steaming, pressure cooking, deep and shallow frying, baking, sauteing, roasting, grilling, solar cooking and microwave cooking.

- (c) Effect of cooking on the nutritive value of food.
- (d) Methods of enhancing nutritive value-germination, fermentation, fortification and food combination.

Unit V: Fibre and Fabric

1. Definition of fibre and yarn
2. Classification of fibre on the basis of origin and length
3. Characteristics of fibre: feel, appearance, colour fastness. Length, strength, absorbency, shrinkage, elasticity, effects of heat and sunlight.
4. Methods of construction of fabric
5. Selection of fabrics

Unit VI: Resource Management

Family and Community Resources

- (i) Resources: Meaning, characteristics and types:
 - (a) Human / Personal Resources : knowledge, skills, time, energy, attitudes;
 - (b) Non-human / material resources : money, goods, property;
 - (c) Community facilities / shared resources : Schools, parks, hospitals, roads, transport, water, electricity, library, fuel and fodder.
 - (d) Need to manage the resources and methods of conservation of shared resources.
 - (e) Proper disposal of kitchen waste

Unit VII: Measures of safety and management of emergencies

1. Accident prone/ unsafe zones at home
2. Need and safety at home
3. Measures of safety against burns, electric shocks, cuts, fractures, bites, poisoning
4. First Aid: Concept and importance

Learning Objectives: The syllabus at Secondary level develops an

understanding in **the learners that the knowledge and skills** acquired through

Home Science **facilitates** development of self, family and community. It

endeavours to -

- Acquaint learners with the basics of human development with specific

reference to self and child.

- Help to develop skills of judicious management of various resources.
- Enable **learners to become alert and aware consumers.**

- Impart knowledge of nutrition and lifestyles to enable prevention and management of diseases.
- Inculcate healthy food habits.
- Help to develop understanding of textiles for selection and care of clothes.
- **Develop** skills of communication to assist in advocacy and dissemination of knowledge to community.

PRACTICALS

- 1) **Observation** of physical development in a child from birth to three years
- 2) **Observation** of motor skills in a child from birth to 3 years.
- 3) Role of family members: collage / chart etc.
- 4) Design educational games specific to functions / sources of nutrients.
- 5) Weights and measures: Equivalents / conversions of Ounce, gram, cup, teaspoon, tablespoon, how to use a kitchen weighing scale.
- 6) Identification of fruits, vegetables, spices, oils, sugars, cereals, and lentils
- 7) Food processing method demonstration: Germination and Fermentation.
- 8) Collection and Identification of fibre: physical and burning tests.
- 9) Create a slogan/poster for proper disposal of domestic waste.
- 10) Prepare a first aid kit and practice giving first aid for burns, cuts, bites, fractures, electric shocks (group activity)

UNIT I**Concept and Scope of Home Science Education and Recent Trends**

- Q1. Why do you think that home science is a study of Science and Art?
- Q2. What do you understand by the term 'Home Science'?
- Q3. List the areas of Home Science included in your curriculum.
- Q4. Discuss the role of Home Science in career development or discuss the scope of Home Science.
- Q5. "Home Science aims to provide better quality of life" Justify.
- Q6. Discuss the role of home science for proper development of an individual.
- Q7. Give a brief account of the scope of Home Science study.
- Q8. "Home Science studies provide vast career opportunities." Discuss in detail.

UNIT – II**Human Development (Part I)**

Q1. Define:

- a) Growth
- b) Development
- c) Maturation
- d) Milestones

Q2. Differentiate between:

- a) Growth and Development
- b) Cephalocaudal and proximodistal Development
- c) Homosexual and Heterosexual stage

Q3. Briefly discuss the important factors affecting growth and development of an individual.

Q4. Discuss the role of milestones in the development of an individual. What can be done if the milestones are delayed?

Q5. With suitable examples, discuss any six principles of development.

Q6. Nature vs Nurture is an ongoing debate and highlights the role of heredity and environment in the development of a child. Giving suitable examples, explain how both play important roles in shaping an individual.

Q7. Briefly discuss the important stages of development as discussed by ‘Hurlock’.

Q8. How are the following factors crucial in the development of an individual?

- a) Maturation
- b) Individual differences

Unit III

Family and values

Q1. Define:

- a) Family
- b) Globalisation
- c) Urbanisation
- d) Migration
- e) Patriarchal family
- f) Patrilocal family

Q2. With suitable examples, differentiate between nuclear and joint family.

Q3. Briefly discuss the role of family in the life of an individual.

Q4. List the common characteristics of a traditional Indian Joint family.

Q5. Compare the advantages of living in a nuclear family with those of living in a joint family.

Q6. With suitable examples, discuss the role of the following individuals in the life of a child:

- a) Parents
- b) Grandparents
- c) Siblings

Q7. How does the family help in the process of socialization? Explain with suitable examples.

Q8. Briefly explain the role of family in creating an ethical and value-based society.

Q9. Why is it important to nurture a girl child in any society? Why do girls face discrimination in Indian culture?

Q10. List down the steps highlighting the government initiatives and schemes, that are being taken in an attempt to uplift the status of girls and women.

Q11. With suitable examples, discuss the factors that are responsible for the breakdown of the traditional Indian Joint family.

UNIT IV

FOOD, NUTRITION AND HEALTH

- Q1. Define health.
- Q2. What is meant by complete health?
- Q3. What are nutrients? Give the energy value of energy giving nutrients.
- Q4. How food reduces mental tension?
- Q5. Priya has come back from hostel. Her sister has prepared tea and snacks of her liking. What purpose does food serve in such a situation?
- Q6. List two forms of malnutrition.
- Q7. List the various dimensions of health.
- Q8. Give the nutrient classification of food.
- Q9. Differentiate between
- nutrients and nutrition.
 - morbidity and mortality
- Q10. 'Physical ill health leads to mental ill health'. Comment
- Q11. What are protective elements?
- Q12. Which food products can be termed 'food'?
- Q13. How is energy continuously utilised in our body?
- Q14. Explain the functions of body- building elements.
- Q15. Food is an integral part of society. Comment
- Q16. 'A healthy mind lives in a healthy body.' Explain.
- Q17. 'Nutrients are continuously required for a healthy life'. Justify
- Q18. Classify foods on the basis of their nutrients and functions.

- Q19. Differentiate between optimum nutrition and malnutrition.
- Q20. How can nutritional status be judged?
- Q21. Define 'amino acids'
- Q22. How is carbohydrate different from protein and fats in chemical composition?
- Q23. How are fats a concentrated source of energy? What is the chemical composition of fats?
- Q24. 'Vitamin C is called fresh food vitamin'. Justify
- Q25. What is the best source of vitamin D?
- Q26. Why is blood red in colour?
- Q27. What helps in absorption of iron?
- Q28. Which nutrients affect our bones?
- Q29. List the sources of zinc. What is the adverse effect of zinc on skin?
- Q30. How do carbohydrates save fats and protein?
- Q31. Classify vitamins and explain why is it essential for our body?
- Q32. Classify minerals on the basis of their amounts required in the body.
- Q33. What are food groups?
- Q34. 'A balanced diet for a person may not be a balanced one for the other.'
Justify the statement.
- Q35. 'A balanced diet does not mean an expensive diet.' Justify.
- Q36. Explain how are Foods of any two families not similar.
- Q37. Explain availability of food stuffs.
- Q38. Explain the relationship between purchasing power and selection of food. How can we save money by the proper selection of food products?
- Q39. Why should food be bought according to the purpose?

- Q40. How should green leafy vegetables be stored?
- Q41. Priya has purchased 50kg of wheat two months back. How would you check that these are not spoiled? Also give two causes of its spoilage?
- Q42. Why is proper selection and storage of food products essential?
- Q43. Make a list of 'convenient foods' in your home. Also specify what precautions would you take in their storage?
- Q44. Write a note on the selection, purchase and storage of dry foods, meat, fish, chicken, eggs, fruits and vegetables.
- Q45. Illustrate a flow chart defining the methods of cooking.
- Q46. What is the best method of cooking food?
- Q47. Fruits and vegetables should be eaten raw. Justify
- Q48. Differentiate between
- deep frying and shallow frying
 - steaming and pressure cooking
 - direct and indirect steaming
 - cutting and grinding
- Q49. Explain the effects of acids and baking soda on foods during cooking.
- Q50. How does germination increases the nutritive value of food items?
- Q51. How is khichari more nutritious than plain rice? Give one example of nutritive food based on this.
- Q53. 'An appropriate temperature is essential in frying' explain.
- Q54. Why is pre-preparation of foods important?
- Q55. Why do we cook food?
- Q56. Give advantages and disadvantages of pressure cooking.
- Q57. Which method would you employ to make soup?
- Q58. Write in detail the method used to prepare chapatti.
- Q59. Write in detail the method used for the preparation of cake and pastry.

Q60. Do food products undergo any change in colour and flavour? Justify your answer

Q61. Which nutrients are lost maximum in cooking? Why?

Q62. Idli is a nutritive food. Which methods are used for enhancing its nutritive value? Which nutrients are enhanced by use of these methods?

Q63. What are preservatives? Name the preservatives used in preparation of chutney.

Q64. Define shelf life. How can we increase the shelf life of various food products?

Long answer questions

Q1. Write in detail the physical, psychological and socio-cultural functions of food.

Q2. Give the symptoms of good health.

Q3. Classify foods on the basis of their nutrients and functions.

Q4. 'Food, nutrition and health are interrelated.' justify the statement.

Q5. A child does not eat green and yellow fruits and vegetables. Name the disease he might suffer from. Give two symptoms of it.

Q6. How is meal planning without the help of food groups is very laborious and time consuming? Write in detail the factors affecting the selection of food stuff.

Q7. Write the aims of cooking food.

Q8. How can you retain the nutrients during cooking?

Q9. How can we enhance the nutritive value of food without spending extra money? Write in detail.

UNIT V**FIBER AND FABRICS**

- Q1. Fibres are the building blocks of a textile product. Justify
- Q2. What are the sources of animal and vegetable fibre?
- Q3. Define blending. Why is blending done?
- Q4. Give examples of protein, cellulosic and blended fibres.
- Q5. Which fibres are not affected by moth and mildew?
- Q6. Name the strongest and weakest natural fibre.
- Q7. Mention the properties of cotton fibres.
- Q8. Differentiate between
- natural and man-made fibre
 - polyester and silk
- Q9. Give the microscopic structure of cotton fibre.
- Q10. Why is silk called 'queen of fabrics'?
- Q11. In which season woollen clothes are more suitable and why?
- Q12. What is the effect of acid and alkali on silk fabrics?
- Q13. Why is nylon easy to wash?
- Q14. What precautions should be taken in washing of woollen clothes and why?
- Q15. What is the effect of heat on polyester and silk fabric?
- Q16. Explain chemical properties of cotton.
- Q17. Why is nylon called 'magic fabric'?
- Q18. Suggest a blended fabric suitable for cold climate and damp climate.
- Q19. Differentiate between:

- fibre and yarn
- warp and weft yarn
- satin and sateen weave
- simple and novelty yarn
- knitting and felting
- mechanical and chemical spinning
- plain and twill weave

Q20. Suggest a weave for making a strong and durable cloth.

Q21. Define twisting. Why is twisting necessary in threads?

Q22. What are the various helping instruments used along with loom?

Q23. How is chemical spinning done? Which types of clothes undergo chemical spinning?

Q24. Why is fabric made attractive?

Q25. What do you understand by the 'finishing of fabrics'?

Q26. Explain the importance of bringing variety to the fabrics.

Q27. What do you mean by basic finishes?

Q28. Which colours should be used on clothes to be washed regularly? Why?

Q29. What can be done to subdue the defects in the fabric?

Q30. Why is it essential to make fabrics shrink resistant?

Q31. Explain the principle behind tie and dye.

Q32. Define 'printing'.

Q33. Define bleaching and its advantages.

Q34. Explain how can cotton fabric be made to appear silky?

Q35. How can a fabric be made durable?

Q36. Briefly discuss the factors affecting selection of clothes .

UNIT VI**RESOURCES MANAGEMENT**

Q1. Define:

- a) Resources
- b) Community facilities
- c) Incineration
- d) Bio- gas

Q2. Differentiate Between:

- a) Human and Non- human resources
- b) Biodegradable and non- biodegradable
- c) Compost and Manure

Q3. Classify the resources with the help pf a flow chart.

Q4. Briefly explain any five characteristics of resources.

Q5. Why is it important to manage resources?

Q6. Explain the role of three R's in keeping the environment clean and healthy.

Q7. Why is it important to segregate waste? How can you segregate waste?

Q8. What are the most crucial points to keep in mind while disposing plastics?

Q9. What are landfill areas?

Unit VII

Measures of safety and management of emergencies

Q1. Define first- aid.

Q2. Why is it important to follow safety in the home?

Q3. Discuss in detail the safety rules to be followed in:



a) Kitchen

b) Bathroom

Q4. Briefly explain the difference between burns and scalds.

Q5. List a few preventive measures to avoid:

a) Poisoning

b) Falls

Q6. What first- aid will you give in the following cases:

a) Animal bite

b) Snake bite

c) Insect bite

Q7. What first- aid can be provided in case of:

a) Shock

b) Fracture

c) Burns

d) Scalds

Practice Paper

Time: 3 hrs

M.M. 70

General Instructions

1. All questions are compulsory.
2. There are total 36 questions.
3. Question paper is divided into three sections-A, B and C.
4. Section A has question no.1 to 14 (objective type questions) and are of 1 mark each.
5. Section B has question no. 15 to 21 (case study based multiple choice questions) and are of 1 mark each.
6. Section C has question no.22 to 27 of 2 marks each, question no.28 and 29 of 3 marks each, question no.30 to 33 of 4 marks each and question no.34 to 36 of 5 marks each.
7. Support your answers with suitable examples wherever possible.

SECTION A (OBJECTIVE TYPE QUESTIONS)

S. No.	Multiple choice questions	Marks
1.	Manvi is a freelance interior designer. She also conducts hobby courses in making decorative items and sells some of these creations in her home-based craft centre. Which field of Home Science is Manvi from? a. Communication and Extension b. Resource Management c. Human Development d. Fabric and apparel science	1
2.	Which of the following statements is false? a. Growth is quantitative. b. Growth and development start before birth. c. Growth and development take place till death. d. All of the above.	1
3.	A child first uses a his palms to hold the pencil and then slowly and gradually she learns to use his fingers to write properly. Which principle of development is the above statement based on? a. Development has a fixed pattern. b. Development is cephalocaudal. c. Development is from general to specific. d. Development is sequential and orderly.	1
4.	The value of believing that all work is equal and respectable is also known as: a. Dignity of labour b. Respecting labour c. Value based society d. Ethnicity	1

5. Which of the following set of foods is rich in proteins? 1
- Tofu, eggs and chana
 - Lettuce, apple and butter
 - Jaggery, apple and cinnamon
 - Potato, rice and pasta
6. Which of the following is a natural filament fibre 1
- Silk
 - Cotton
 - Flax
 - All of the above
7. The true potential of human resource is often not realized and they tend to be overlooked because: 1
- human resources are tangible.
 - they are used for productive purposes.
 - they originate internally and everyone utilises them differently.
 - non-human resources are less important.
8. Mandeep's little brother was bitten by a bee. To give immediate relief from pain, what can Mandeep apply on the bee sting site? 1
- baking soda
 - vinegar
 - potassium permanganate
 - none of the above
- Fill in the blanks:**
9. _____ is a process whereby populations move from rural to urban area, enabling cities and towns to grow. 1
10. The assessment of the state of nourishment of a person is called _____. 1
11. Two synthetic fibres are _____ and _____. 1
12. Two non-human resources that you would require to make a dress are _____ and _____. 1
13. A nutrient rich substance prepared by worms that can be added to soil to increase its fertility is _____. 1
- In case of a cut, if an _____ is cut, tie the bandage on the side closest to the heart. 1

SECTION B (CASE STUDY BASED QUESTIONS)**Case Study-1**

15. Medha is an adolescent and in her school she is a member of the basketball team. Medha is active in the class yet she is a fussy eater. She hates eating green leafy vegetables and dislikes the taste of milk. Even if her mother tries to give her milk in various forms like chocolate flavoured milk, strawberry/mango/banana shakes, etc. still she does not like them. 1
16. Since there are particular foods Medha does not like, which nutrient is she missing from her diet is she likely to have? 1
- a. Vitamin A
 - b. Calcium
 - c. Phosphorus
 - d. Vitamin C
17. Based on the information given above which deficiency disease can she suffer from? 1
- a. Scurvy
 - b. Rickets
 - c. Night blindness
 - d. Goitre
18. If Medha does not like milk at all, two food alternatives that can compensate for the nutrients she is losing are _____ and _____. 1
- Few other foods that are also significantly rich in the major nutrient provided by green leafy vegetables are:
- a. Sugar
 - b. Orange
 - c. Rajma
 - d. Carrots

Case Study-2

Manish is visiting his family in Delhi and would later go on a trek in Manali. He has packed several cotton t-shirts and denims his stay in Delhi. He has also packed one woollen sweater and a denim jacket for the trek with cotton track pants and lowers. His mom is saying that instead of taking woollen sweater, denim jacket and cotton track pants, he should prefer to take nylon/polyester jacket.

19. The most valid reason behind Manish's mom's suggestion of trekking clothes is:
- Woollen sweater and denim jacket are expensive so they will get spoilt. 1
 - Woollen sweater will be too hot for Manali in May.
 - Polyester and nylon are warm, light and dirt resistant.
 - None of the above.
20. If Manish also has to attend a wedding in Manali, the most suitable fibre for a kurta would be 1
- Cotton
 - Silk
 - Polyester
 - Wool
21. Why do you think Manish has selected to pack cotton t-shirts for his trip to Delhi? 1
- Because cotton is a good conductor of heat hence it will keep him cool.
 - Because cotton is a good absorbent so it will absorb sweat.
 - Both (a) and (b)
 - Neither (a) nor (b)

SECTION C

22. Home Science is both an art and a science. Justify this statement with an example. 2
23. What are the milestones of development and why are they important? 2
24. In what ways does the family helps in the social development of an individual? 2
25. Comment on the strength, water absorbency, heat conductivity and elasticity of cotton fibres. 2
26. Write four uses of Bio-gas. 2
27. Differentiate between burns and scalds. Mention one thing that you will NOT do in case of a burn and a scald. 2
28. Your grandfather wants to bring awareness to reduce waste production in the society. Suggest six practical ideas that he can tell people about. 3
29. What is first aid? Write four general rules a first aider should follow. 3
30. List the functions of Vitamin C. 4
31. Compare the advantages of living in a joint and a nuclear family. 4
32. a. What is a balanced diet? 4
b. Mention two qualities of a balanced diet.

- c. Rohan's breakfast for tomorrow includes bread, butter and lichi juice. Name one nutrient that this menu is rich in. Suggest any one way in which you can make this menu balanced.
33. Give reasons 4
- a. Why is wool suitable for winters?
- b. Why is silk called the queen of fibres?
- c. Why should wool be washed gently with mild detergents?
- d. Which fibre is called as the Magic fibre?
34. Name two major nutrients that provide energy to our body. List four more functions that both of them serve in our body. 5
35. a. What are resources? 5
- b. Differentiate between human and non- human resources.
- c. List 4 characteristics of resources.
36. What is a fibre? Classify fibres on the basis of their length and origin with examples. 5