

**Model  
Curriculum of  
B.A/ B.Sc Home  
Science as a Major  
(Honours)  
1<sup>st</sup> and 2<sup>nd</sup> Semester  
(Model I A)**

**Karnataka State Higher Education Council**

# Model Curriculum

**Name of the Degree Program: BA/B.Sc**

**Total Credits for the Program: 185**

**Starting year of implementation: 2022-23**

**Eligibility:**

- II year PUC passed in any discipline ( Science, Commerce, Arts)

## **Course Objectives**

- To introduce the students to the field of Home Science.
- To produce comprehensive knowledge of each approaches.
- Put into practice decision making and problem solving skills to make informed choices, develop sensitivity towards the need of family and society.
- To help and execute need based, multidisciplinary action oriented activities for improving the quality of life.
- Develop lifelong ability to absorb knowledge and apply effectively to meet the challenges to ever changing life.
- promote entrepreneurship skill
- Develop the skills required to opt for higher education and career.

## **Learning outcomes**

By learning Home Science, the students will be capable of

1. Deliver quality tertiary education through learning while doing.
2. Reflect universal and domain-specific values in Home Science.
3. Involve, communicate and engage key stakeholders.
4. Develop the ability to address the complexities and interface among of self, societal and national priorities.
5. Generate multi-skilled leaders with a holistic perspective that cuts across disciplines.
6. Instill both generic and subject-specific skills to succeed in the employment market.
7. Foster a genre of responsible students with a passion for lifelong learning and entrepreneurship.
8. Develop sensitivity, resourcefulness and competence to render service to families, communities, and the nation at large.
9. Promote research, innovation and design (product) development favoring all the disciplines in Home Science.
10. Enhance digital literacy and apply them to engage in real time problem solving and ideation related to all fields of Home Science.
11. Appreciate and benefit from the symbiotic relationship among the five core disciplines of Home Science.

# Curriculum Structure for the Undergraduate Degree Program

## B.A/B.Sc Home Science

**Total Credits for the Program: 185 Credits**

**Starting year of implementation: 2022-2023**

**Name of the Degree Program: BA Degree/Honors**

**Discipline/Subject: Home Science**

**Discipline Program Articulation Matrix:**

This matrix lists only the core courses. Core courses are essential to earn the degree in that discipline/subject. They include courses such as theory, laboratory, project, internships etc. Elective courses may be listed separately.

<b>Sem.</b>	<b>Title /Name of the course</b>	<b>Pre-requisite course(s)</b>	<b>Pedagogy</b>	<b>Assessment</b>
1	DSC A 1 Principles of Food and Nutrition	12+/Equivalent Pass	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• lecture</li> </ul>	Formative and Summative Assessment
	OE- 1 Food Preservation	12+/Equivalent Pass	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• lecture</li> </ul>	Formative and Summative Assessment
2	DSC A2 Fundamentals of Human Development	12+/Equivalent Pass	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Field Visit</li> </ul>	Formative and Summative Assessment
	OE- 2 Teaching Materials For Early Childhood Education	12+/Equivalent Pass	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• lecture</li> </ul>	Formative and Summative Assessment

# Syllabus for B.A/B.Sc Home Science as Major Subject

## HOME SCIENCE SEMESTER 1

Course Title: <b>PRINCIPLES OF FOOD AND NUTRITION (DSC A1)</b>	
Total Contact Hours: 60Hrs	Course Credits: 4
Formative Assessment Marks: 40 marks	Duration of ESA / Exam: 2 Hrs
Model Syllabus Authors:	Summative Assessment Marks: 60 marks

**Course Pre-requisite(s):** Standard 12 and its equivalence with minimum 35%

### Course Outcomes: (COs)

At the end of the course the student should be able to:

1. Understand the role and functions of nutrients, their requirements and the effect of deficiency and excess.
2. Understand the concept of an adequate diet and the importance of meal planning for all age group

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

Course Outcomes (COs) / Program Outcomes (POs)	1	2	3	4	5	6	7	8	9	10	11	12
Understand the role and functions of nutrients, their requirements and the effect of deficiency and excess	X		X						X			
Understand the concept of an adequate diet and the importance of meal planning for all age group			X	X							X	

**B.A./B.Sc HOME SCIENCE**  
**SEMESTER 1**

**Title of the Course: PRINCIPLES OF FOOD AND NUTRITION**

<b>Course : DSC A1</b>	
<b>Number of Theory Credits</b>	<b>Number of lecture hours/semester</b>
<b>4</b>	<b>60</b>

<b>CONTENT</b>	<b>60 Hrs.</b>
<b>Unit – 1 Introduction to Nutrition</b>	<b>12 Hrs</b>
<b>Chapter No. 1:</b> Definition of nutrition, Malnutrition and Health, Functions of food, Food groups -Types of food pyramids	<b>6 Hrs</b>
<b>Chapter No. 2:</b> Balanced diet - Meal planning – steps in meal planning	<b>6 Hrs</b>
<b>Unit – 2 Nutrients</b>	<b>18 Hrs</b>
<b>Chapter No. 3:</b> Nutrients Macro and Micro nutrients- classification, Sources, functions and deficiency. A) Carbohydrates, B) Proteins C) Fats D) Minerals – Calcium, Iron, Iodine. E) Vitamins – Fat soluble vitamins – A, D, E & K Water soluble vitamins – vitamin C Thiamine, Riboflavin, Niacin	<b>15 Hrs</b>
<b>Chapter No. 4:</b> A) Water – Functions, sources and water balance B) Fibre – Functions and sources, C) Energy – factors affecting BMR	<b>3 Hrs</b>
<b>Unit – 3 Methods of Cooking</b>	<b>15 Hrs</b>
<b>Chapter No. 5.</b> Methods of cooking- Advantages and disadvantages a) Water – Boiling, steaming, pressure cooking b) Oil/Fat – Shallow frying, deep frying c) Air – Baking	<b>4hrs</b>
<b>Chapter No. 6.</b> Nutrition through lifecycle Nutritional requirement, dietary guidelines: Adulthood, Pregnancy, Lactation, Infancy -Complementary feeding, Pre-school, Adolescence, Old age.	<b>11hrs</b>

<b>Unit – 4 Food Preservation</b>	<b>15 Hrs</b>
<b>Chapter No. 7 -</b> Food Preservation- Objectives and principles-Methods: dehydration, temperature regulation ,using preservatives like salt and sugar	<b>8 hrs</b>
<b>Chapter No. 8 -</b> Food Handling and storage - freezing thermal and non-thermal methods, Canning	<b>7hrs</b>

<b>Formative Assessment = 100 marks</b>	
<b>Assessment Occasion / type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment + Project	10 +10
<b>Total</b>	<b>60 marks + 40 marks = 100 marks</b>

**Practical Course: 2 Credits**

**60 Hrs**

**List of Experiments to be conducted**

**Unit 1:** a) Weights and Measures

b) Food pyramids

**Unit 2:** Methods of cooking

a) Boiling, steaming

b) Pressure cooking, shallow and deep fat Frying

c) Dry heat -baking

**Unit 3:** Identification of nutrient rich foods and preparation of any three nutrient rich foods

**Unit 4:** Food preservation – salt, sugar and dehydration.

<b>Formative Assessment = 100 marks</b>	
<b>Assessment Occasion / type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment + Project	5
<b>Total</b>	<b>25 marks + 25 marks = 50 marks</b>

### **References:**

1. Srilakshmi B, (2007), Dietetics. New Age International publishers. New Delhi
2. Srilakshmi B, (2002), Nutrition Science. New Age International publishers. New Delhi
3. Swaminathan M. (2002), Advanced text book on food and Nutrition. Volume I. Bappco.
4. Gopalan.C.,RamaSastry B.V., and S.C.Balasubramanian (2009), Nutritive value of Indian Foods.NIN.ICMR.Hyderabad.
5. Mudambi S R and Rajagopal M V, (2008), Fundamentals of Foods, Nutrition & diet therapy by New Age International Publishers, New Delhi

**B.A./B.Sc HOME SCIENCE**  
**SEMESTER 1**

Course Title: <b>FOOD PRESERVATION (OE1)</b>	
Total Contact Hours: 45 Hrs	Course Credits: 3
Formative Assessment Marks:40 marks	Duration of ESA/Exam: 2 hrs
Model Syllabus Authors:	Summative Assessment Marks: 60 marks

**Course Pre-requisite(s):** Standard 12 and its equivalence with minimum 35%

**Course Outcomes (COs):**

At the end of the course the student should be able to:

1. Know the principles of preservation behind the methods of preservation
2. Understand the stages of sugar cookery, quality of pectin and acidity in the development of preserved food products
3. Acquire skills to formulate food based products
4. Explore the principles of preservation in fruits and vegetables based products
5. Skills to prepare cereals and pulse based preserved products and develop new products with retention of quality course

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	1	2	3	4	5	6	7	8	9	10	11	12
Know the principles of preservation behind the methods of preservation			X		X							
Understand the stages of sugar cookery, quality of pectin and acidity in the development of preserved food products				X	X							
Acquire skills to formulate food based products							X	X				
Explore the principles of preservation in fruits and vegetables based products							X		X			
Skills to prepare cereals and pulse based preserved products and develop new products with retention of quality course					X		X					



**B.A./B.Sc HOME SCIENCE**  
**SEMESTER 1**

**Title of the Course: FOOD PRESERVATION**

<b>Course: OE 1</b>	
<b>Number of Theory Credits</b>	<b>Number of lecture hours/semester</b>
<b>3</b>	<b>45</b>

<b>CONTENT</b>	<b>45 Hrs</b>
<b>Unit-I Concept of Food Preservation</b>	<b>10 Hrs</b>
<b>Chapter No.1-</b> Importance of Food Preservation, Types of Food spoilage by Microorganisms and by Enzymes, Basic Principles of Food Preservation  Food preservatives- Use of Salt, Acid, Sugar, natural food preservatives and artificial preservatives	<b>5 Hrs</b>
<b>Chapter No. 2-</b> Starting a food preserving unit, Product Promotion strategies and marketing skills	<b>5 Hrs</b>
<b>Unit-II Preparation of dehydrated products</b>	<b>20 Hrs</b>
<b>Chapter No.3</b> Methods of drying & dehydration , different types of driers , freeze drying- lyophilization , packing & storage	<b>5 Hrs</b>
<b>Chapter No. 4-</b> Drying methods for the selected products -Rice, Sago, Wheat, Maida, Rice flakes, black gram dhal, green gram dhal, Horse gram dhal Roots and Tubers.  Preparation of salted, dehydrated, preserves (Traditional Indian varieties of chips, Papads, Khakharas etc and Masala Powders, onion, garlic, ginger powder etc )	<b>7 Hrs</b>
<b>Chapter No. 5-</b> Hands on experience :Drying of vegetables- peas, potato, carrot, French beans, Reconstitution of dried vegetables, Drying & preparation of powders- garlic, ginger, spices mix etc	<b>8 Hrs</b>

<b>Unit -III Preservation by Using Sugar, Chemicals, Salts and Fermentation</b>	<b>15 Hrs</b>
<p><b>Chapter No. 7</b> - Role of Pectin in Preserved foods, Stages in Sugar Cookery, Sugar Concentrates – Principles of Gel Formation.</p> <p>Hands on Experience: Preparation of Jam, Jelly, Marmalades, Sauce and Squash, Preserves, Candied, Glazed, Crystallized Fruits, Toffee, Evaluation of pH, Acidity and pectin quality, Preparation and Preservation of Fruit Juices, RTS</p> <p>Visit to Fruits and Vegetable processing industry</p>	<b>8 Hrs</b>
<p><b>Chapter No. 8</b> - Pickling – Principles Involved and Types of Pickles, Chemical Preservatives – Definition, Role of Preservation, Permitted Preservatives, FSSAI guidelines, Foods fermented by Yeasts and Bacteria, Wine and Cheese Making</p>	<b>3 Hrs</b>
<p><b>Chapter No. 9</b> - Hands on experience: Pickle making, Visit to Commercial Pickle Manufacturing/ Food Industry / Wine industry</p>	<b>4 Hrs</b>

<b>Formative Assessment = 100 marks</b>	
<b>Assessment Occasion / type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment + Project	10+10
<b>3 Total</b>	<b>60 marks + 40 marks = 100 marks</b>

**Reference:**

1. Maney S (2008). Foods, Facts and Principles, 3 rd Edition Published by Wiley Eastern, New Delhi. Usha Chandrasekhar (2002) Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi.
2. Raina U, Kashyap S, Narula V, Thomas S Suvira, VirS, Chopra S (2010) Basic Food Preparation: A Complete Manual, 4th Edition, Orient Black Swan Ltd, Mumbai
3. Srivastava R.P. (2012),Fruit and vegetable preservation – Principles and Practices, International Book Distributing Co., (IBDC), New Delhi.
4. Maria Parloa (2009), canned fruit, preserves and jellies: Household methods of preparation, US Department of Agriculture, Washington. 5
5. Shafiur, Rahman, M. (2007), Handbook of Food Preservation, 2 nd edition, CRC press, New Delhi

**B.A./B.Sc HOME SCIENCE  
SEMESTER 2**

<b>Course Title: Fundamentals of Human Development (DSC A2)</b>	
Total Contact Hours: 60 Hrs.	Course Credits: 4
Formative Assessment Marks:40 marks	Duration of ESA / Exam: 2 hrs.
Model Syllabus Authors:	Summative Assessment Marks: 60 marks

**Course Pre-requisite(s): Standard 12 and its equivalence with minimum 35%**

**Course Outcomes (COs):**

At the end of the course the student should be able to:

1. Explain the need and the importance of studying human growth and development across life span.
2. Identify the biological and environmental factors affecting human development.
3. Describe the characteristics, needs and developmental tasks of different stages in the human life cycle
4. Discuss the special features characteristic of each stage and its impact on the next stage
5. Explain the broad theoretical perspectives of different researchers.

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

<b>Course Outcomes (COs) / Program Outcomes (POs)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Explain the need for and importance of studying human growth and development across life span.		X		X	X						X	
Identify the biological and environmental factors affecting human development.								X	X		X	
Describe the characteristics, needs and developmental tasks of different stages in the human life cycle								X		X		X
Discuss the special features characteristic of each stage and its impact on the next stage			X	X								
Explain the broad theoretical perspectives of different researchers.			X	X					X			

**B.A./B.Sc HOME SCIENCE**  
**SEMESTER 2**

**Title of the Course: FUNDAMENTALS OF HUMAN DEVELOPMENT**

<b>Course : DSC A2</b>	
<b>Number of Theory Credits</b>	<b>Number of lecture hours/semester</b>
4	60

<b>CONTENT</b>	<b>60 Hrs</b>
<b>Unit – 1 Introduction</b>	<b>20 Hrs</b>
<b>Chapter No. 1</b> Human Development – Definition, needs, and Scope; Domains of Development:	<b>3 Hrs</b>
<b>Chapter No. 2</b> Concept and principles of Growth and development; Factors influencing growth and development.	<b>5 Hrs</b>
<b>Chapter No. 3</b> Methods of studying Human development, Prenatal development	<b>3 Hrs</b>
<b>Chapter No. 4</b> Fertilization, Pregnancy–Signs, Symptoms, Complications, Discomforts; Stages of Prenatal Development	<b>5 Hrs</b>
<b>Chapter No. 5</b> Child Birth - Process and types, Birth complications	<b>4 Hrs</b>
<b>Unit – 2 Infancy and Early childhood Years</b>	<b>20 Hrs</b>
<b>Chapter No. 6.</b> Infancy - Definition, Significance, Developmental Tasks, and developmental milestones; Physical growth, reflexes and perceptual abilities, Immunization Schedule;	<b>8 Hrs</b>
<b>Chapter No. 7.</b> Early Childhood Years- Definition, Developmental tasks; physical, motor, intellectual, language, emotional, social developmental milestones. importance of preschool education and Significance of play for all-round development	<b>8 Hrs</b>
<b>Chapter No. 8.</b> Piaget’s cognitive Theory and Erik Erickson’s Personality Theory.	<b>4 Hrs</b>

<b>Unit – 3 Middle Childhood Years</b>	<b>20 Hrs</b>
<b>Chapter No. 9</b> The Middle Childhood Years - Definition, Developmental tasks. Highlights of Physical, Social, Emotional, Intellectual development. Significance of school and functions; Importance of extra-curricular activities, Peers - Importance and Influence, Interest development	<b>12 Hrs</b>
<b>Chapter No. 10</b> Role of Parents and Disciplinary Techniques; Role of siblings, peers and others in the development; Behavior problems	<b>8 Hrs</b>

<b>Formative Assessment = 100 marks</b>	
<b>Assessment Occasion / type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment + Project	10 + 10
<b>3 Total</b>	<b>60 marks + 40 marks = 100 marks</b>

**Practical: 2 Credits**

**60 Hrs**

**List of Experiments to be conducted**

1. Prepare an album on the stages of prenatal development.
2. Organize a lecture/workshop for parents on importance of the nutrition/ Needs of preschool children.
3. Develop an activity to foster cognitive development in school children

<b>Formative Assessment 100</b>	
<b>Assessment Occasion/ type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment /Project	5
<b>Total</b>	<b>25 marks + 25marks = 50 marks</b>

## References

1. Berk, L.E. (2005). Child development (5th ed.). New Delhi: Prentice Hall.
2. Bhangaokar, R., & Kapadia, S. (in press). Human Development Research in India: A historical overview. In G. Misra (Ed.), Hundred years of Psychology in India. New Delhi: Springer.
3. Feldman, R., & Babu, N. (2009). Discovering the life span. New Delhi: Pearson
4. Kakar, S. (1998). The inner world. Psychoanalytic study of childhood and society in India. Delhi: Oxford University Press.
5. Kapadia, S. (2011). Psychology and human development in India. Country paper. International Society for the Study of Behavioural Development Bulletin Number 2, Serial No. 60, pp.37-42.
6. Keenan, T., Evans, S., & Crowley, K. (2016). An introduction to child development. Sage.
7. Lightfoot, C., Cole, M., & Cole, S. (2012). The development of children  
8. (7<sup>th</sup> ed.). New York: Worth Publishers.
9. Santrock, J. (2017). A topical approach to life span development (9th ed.). New York: McGraw-Hill Higher Education.
10. Singh, A. (2015). Foundations of Human Development: A life span approach. ND: Orient Black Swan.
11. Walsh, B.A., DeFlorio, L., Burnham, M.M., & Weiser, D.A. (2017). Introduction to Human Development and Family Studies. NY: Routledge
12. Baradha, G. 'Basics of Human Development' Saradalaya Press, Sri Avinashilingam Education Trust Institutions, Coimbatore 2008.
13. Hurlock, B. Elizabeth 'Developmental Psychology – A Life Span Approach' Tata McGraw Hill Publications, New Delhi Latest Edition. 3.
14. Suriakanthi, A. (2015) 'Child Development' Kavitha Publications, Gandhigram, Tamil Nadu.

## B.A./B.Sc HOME SCIENCE

### SEMESTER 2

<b>Course Title: TEACHING MATERIALS FOR EARLY CHILDHOOD EDUCATION (OE 2)</b>	
<b>Total Contact Hours: 45 Hrs</b>	<b>Course Credits: 3</b>
<b>Formative Assessment Marks: 40 marks</b>	<b>Duration of ESA/Exam: 2 Hrs</b>
<b>Model Syllabus Authors:</b>	<b>Summative Assessment Marks:60 marks</b>

**Course Pre-requisite(s):** Standard 12 and its equivalence with minimum 35%

**Course Outcomes (COs):**

At the end of the course the student should be able to:

1. Understand the importance of teaching learning materials.
2. Understand the different teaching methods & materials for early years
3. Understand the different teaching methods & materials developmentally challenged children

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

<b>Course Outcomes (COs) / Program Outcomes (POs)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Understand the importance of teaching learning materials		x		x			x					
Understand the different teaching methods & materials for early years			x				x		x			
Understand the different teaching methods & materials developmentally challenged children			x				x		x			



**B.A./B.Sc HOME SCIENCE  
SEMESTER 2**

**Title of the Course: TEACHING MATERIALS FOR EARLY CHILDHOOD EDUCATION**

<b>Course: OE 2</b>	
<b>Number of Theory Credits</b>	<b>Number of lecture hours/semester</b>
<b>3</b>	<b>45</b>

<b>CONTENT</b>	<b>45 Hrs</b>
<b>Unit-I - Concept &amp; need for teaching learning materials</b>	<b>15 Hrs</b>
<p><b>Chapter No. 1-</b> Objectives of Teaching-Learning Materials, Orientation on different methods and materials used for teaching young children and studying the techniques of different methods.</p> <ul style="list-style-type: none"> <li>• The oral communication methods: (stories, songs, Music, description, explanation, etc.) and conversational methods (conversation, heuristic conversation, questioning on a special subject, etc.).</li> <li>• Exploratory learning methods: direct exploration of objects and phenomena (systematic and independent observation, small experiments, etc.) and indirect exploration (demonstration through pictures, films, etc.).</li> <li>• Methods based on the pupils' direct voluntary action (exercises, practical work, etc.) and simulated action (didactic games, learning through drama, etc.).</li> <li>• Use of natural materials (plants, shells, seeds, insects, rocks, sand, etc.)</li> <li>• Intuitive materials (cast and clay models, Puppets, blocks, puzzles, mazes, etc)</li> <li>• Figurative aids (pictures, photographs, atlas books, maps, albums, table games, etc.)</li> <li>• Printed teaching aids (children's books, workbooks, etc.). Printed teaching aids</li> </ul>	<b>15 Hrs</b>

<ul style="list-style-type: none"> <li>Digital material (audio &amp; video)</li> </ul>	
<b>Unit-II – Development of Materials for Early years</b>	<b>13 Hrs</b>
<p><b>Chapter No. 2-</b> Design and development of developmentally appropriate play materials to foster all round development in children using indigenous materials, Developing stories, songs with music and rhythm appropriate for infancy through early childhood</p> <p><b>Chapter No. 3 -</b> Creative Activities - importance, Types and values promoted, method of giving instructions. Process of scripting for puppet plays and creative drama.</p> <p>a) Painting – free hand, finger, thread, wax resist &amp; spray</p> <p>b) Printing -block, leaf, stencil, thumb</p> <p>c) Pasting – collage, paper mosaic, sand</p> <p>d) Miscellaneous-etching, marbling, dough modelling</p>	<p><b>8 Hrs</b></p> <p><b>5 Hrs</b></p>
<b>Unit –III- Development of Materials for developmentally challenged children</b>	<b>12 Hrs</b>
<p><b>Chapter No. 4-</b> Creating teaching learning materials for developmentally challenged children ( Blind, Dum&amp; deaf, Learning disabilities, Speech disorders, Mentally retarded, Gifted children, Slow learners)</p> <p><b>Chapter No. 5 -</b> Designing &amp; developing digital play materials like videos, audio aids or audio- Visual aids</p>	<p><b>8 Hrs</b></p> <p><b>4 Hrs</b></p>

<b>Formative Assessment = 100 marks</b>	
<b>Assessment Occasion / type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment + Project	10 + 10
<b>3 Total</b>	<b>60 marks +40 marks = 100 marks</b>

**Reference:**

1. Contractor, M., 1984, Creative drama and puppetry in education, National book trust of India, Delhi
2. Devadas P. Rajammal and N. Jaya (1996), "A Textbook on child development", Mac Millan India Ltd. New Delhi.
3. Nasim Siddiqi, Suman Bhatia and Suptika Biswas (2007) Early Childhood Care and Education –Book IV, DOABA HOUSE, New Delhi.
4. Sen Gupta, M. (2009). Early Childhood Care and Education. New Delhi: PHI Learning Pvt. Ltd.
5. Soni, R., 2015, Theme based early childhood care and education programme- A Resource Book, NCERT