**B.A. - Semester-1**

**HOME SCIENCE**

**ANATOMY PHYSIOLOGY & HYGIENE**

 **M.M. 60**

 **Unit-1** Structure & functions of cell -cellular organelles and inclusions ,general introduction of Tissue and their functions- Epithelial, Connective, Osseous, Cartilage, Nervous tissue.

Skeletal system - Types of bones- Dense and Spongy classification general structure & function of bones.

Muscular system - General Structure, types and function.- Skeletal, Cardiac and Visceral.

**Unit-2** Circulatory system - General structure of organs and functions, Heart, Artery, Vein, Capillary. Composition of blood & function. RBC, WBC and Platelets, Plasma.

Respiratory system - General structure of organs and function. Lung, Alveoli, Diaphragm .

**Unit-3** Digestive system - General introduction of Nutrients, Liver and spleen organs of digestion their general structure and function-Stomach, small and large intestine

 Excretory system- Organs of excretion. Kidney -Nephron,- Malpighian Body, Urinary Tubules, Skin . Normal and abnormal composition of urine.

**Unit-4** Nervous system - Central nervous system structure and function. Brain and Spinal cord.

Senses and Sensory organs - ear and eye structure & function.

 Endocrine Glands Thyroid Gland, Pituitary Gland, Pancreas.

**Unit-5** Reproductive System-Male and Female.

 Hygiene-Personal Hygiene

 Social Hygiene

 Environmental and Industrial Hygiene

 Water - its importance and purification.

 Air - its importance and purification.

 **B.A. - Semester-II**

**HOME SCIENCE**

**HOME SCIENCE - EXTENSION EDUCATION**

 **M.M. 60**

**Unit-1 Introduction of Home Science Extension Education :**

 (a) Home Science-Concepts, goals and Areas of Home Science & their inter relationship with extension.

 (b) Principles and methods of home science extension education general concepts of extension work.

 (c) Objectives of extension education qualities to extension workers, extension education process.

**Unit-2 Community Development problems and Role of Home Scientists:**

 (a) Principles of community development6 organization and function of community development.

 (b) Role of home scientists in community development, programmes of extension education for community. Programmes of community development at central, state, district, block and village level. Family planning programme.

 Community problems, child marriage, Dowry system, parda pratha, rural indebtedness unemployment.

**Unit-3 Teaching methods & aids :**

 Methods of learning - Discussion, demonstration, observation and their application to home science teaching.

 Extension Methods - their scope advantages and application, Scope and use in Home Science teaching. Extension Methods- their scope advantages and application

**Unit-4 Attitude towards Home Science:**

 Attitudes Home Science, Motivation towards Home science. Application of Home Science towards improvement in family living. Job opportunities in Home Science National and International agencies and their collaboration with Home Science, Official organization Home Science Association of India, W.H.O. FAG, CARE, ICAR ICDS, ICSSR, ICMR, IRDP, Adult education.

**Unit-5 Curriculum Planning in Home Science :**

 Basic concept of curriculum planning components of curriculum planning

 Implementation evolution and improvement required in the existing system of H.Sc. education policy and its relevance to H.Sc. Programme planning - concept,

 principles objectives and steps in programme planning.

**Reference :**

1. Extension education and community development by Dhama O.P.

2. Co-operative extension Work bvy Kelsey, L.D. and Heame C.R.

3. Extension Education, Shri lakshmi press by Redd A.A

**B.A. - Practical**

**HOME SCIENCE**

 **dqy vad % 50**

**vadksa dk foHkktu**

1- ls'kuy 10

 2- izkFkfed mipkj 10

 3- x`g ifjp;kZ 15

 4- 'kjhj jpuk ,oa LokLF; foKku 15

**ls'kuy % ¼ijh{kk ds le; Nk=k,Wa izk;ksfxd usV cqd ,oa izkFkfed mipkj isVh tek djsa½A**

**iz;ksx Øekad&1** fjiksVZ % dkyst dh d{kkvksa dk izfrfnu dh lQkbZ ,oa ok;qfotu lacaf/kr fujh{k.kA

**iz;ksx Øekad&2** Lo;aa ds ifjokj esa ihus ds ikuh ds izkfIr ds lk/ku] laxzg ds izdkj ,oa lk/ku ikuh dh 'kq) ,oa LoPNrk ds fy;s iz;qDr fof/kA

**iz;ksx Øekad & 3** fjiksVZ% Lo;a ds ifjokj ,oa vU; nks iM+kslh ifjokj ds ?kj esa vxLr ls fnlEcj ¼vuqekur% ikap eghus ½ ds nkSjku gqbZ chekfj;ksa ls laca/k esa tkudkjhA

 1- jksx dk ukeA

 2- izkFkfed mipkj & tks fn;k x;kA

 3- vkgkj ¼tks mi;ksx esa yk;k x;k½**A**

**iz;ksx Øekad & 4** izkFkfed mipkj isVh ¼vko';d lkeku½

 1- ?kko /kksus ,oa cka/kus dk lkekuA

 2- nnZ de djus dh nokbZ;k¡A

 3- vikpu esa iz;qDr nokbZ;k¡A

 izkFkfed mipkj isVh Nk=k,¡ ijh{kk ds le; viuk uke ,oa ifjokj ds lnL;ksa dh la[;k fy[kdj izLrqr djsa

**iz;ksx Øekad & 5** jksxh ds fy;s mipkjkREkd O;atuksa dk v/;kid }kjk djds crkukA

 1- lfCt;ksa dk lwiA

 2- nky dk lwiA

 3- mcyk vaMkA

 4- QVs nw/k dk ikuh ¼Ogs okVj½A

 5- lCth ,oa Qyksa dk LVw ¼vegitables and fruit stew½

 bu O;atuksa dh fof/k ,oa mi;ksfxrk uksV cqd es vafdr dh tkosxhA

**iz;ksx Øekad & 6** izkFkfed mipkj

 1- fofHkUu izdkj dh fifV~V;k¡A

 2- ?kko dh ns[kHkkyA

 3- d`f=e 'oluA

**iz;ksx Øekad & 7** x`g ifjppkZ

 1- 'kjhj ds rkieku dk pkVZA

 2- xje ,oa BaMs ikuh dh FkSyh rS;kj djukA

 3- fcLrj yxkuk@pn~nj cnyukA

**iz;ksx Øekad & 8** n`'; JO; ;a= dk cukukA

**egRoiw.kZ ckrsa &** iz;ksx Øekad 1]2]3 rFkk 5 dh fjiksVZ Nk=kvksa }kjk izk;ksfxd uksV cqd esa fy[kdj ,oa v/;kid }kjk izfr gLRkk{kfjr@izekf.kr djokdj ijh{kk ds le; izLrqr dh tkosxhA

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**ch-,- semester-III**

 **x`g foKku**

rarq ,oa oL= foKku

 **dqy vad 60**

**bdkbZ & 1** rarq foKku dk ifjp; & rarqvksa dk oxhZdj.k] fo'ks"krk,Wa HkkSfrd ,oa jklk;fud ijh{k.kA

 oL= cqukbZ ¼Weaves½ ds izdkj lknh fVcsy lsfVu tSdkM ikbyA

**bdkbZ & 2** vk/kkjHkwr ifjlTtk,Wa] fo'ks"k ifjlTtk,WaA jaxksa dk oxhZdj.k ,oa fofHkUu rarqvksa ds fy;s mudh mi;qDrrkA

**bdkbZ & 3** NikbZ izdkj] yksd LVsflay LØhu] fMlpktZ jksyjA izR;sd izdkj dh NikbZ dh fof/k;kWaA VkbZ ,.M MkbZ fo'ks"krk] fof/kA

**bdkbZ & 4** /kqykbZ] ty] lkcqu] 'kqYd /kqykbZ] dyQ rFkk uhy /kCcs NqM+kuk] fofHkUu izdkj ds oL= /kksukA

**bdkbZ & 5** ifj/kku% ifj/kku ,oa O;fDrRo] ifj/kku dk pquko] Mªkf¶Vax dh fof/k lhou ¼izdkj½ ifj/kku esa iw.kZrk ¼MkMZ] IyhV~l] VDl] xsnjl½ IySDV vksifuax] QklujA

**LohÑr iqLrdsa &**

 1- oL= foKku ,oa ifj/kku & MkW- izfeykA

 2- oL= foKku ds ewy fl)kar & MkW- th-ih- 'ksjhA

 3- gkmlgksYM fQftDl & MkW- xqyJs"BA

 4- x`g O;oLFkk ,oa x`glTtk & Jherh ds- cD'kh

 5- x`g O;oLFkk ,oa x`glTtk & panzdkark xkMfyd

 6- x`g O;oLFkk ,oa x`g dyk & th-ih- 'ksjhA

 7- x`g O;oLFkk ,oa x`g dyk & Jherh dkafr ikaMs;

 8- ikfjokfjd ifj/kku ,oa O;oLFkk & eatq ikVuh o liuk gsujh

 9- x`g O;oLFkk & MkW- d:.kk 'kekZA

**ch-,- SEMESTER- IV**

 **x`g foKku**

**ikfjokfjd lalk/ku izca/ku**

 **dqy vad 60**

**bdkbZ & 1 x`g izca/k**

 x`g izca/k dh ifjHkk"kk] x`g izca/k izfØ;k] ifjokj esa x`g.kh ds drZO; ,oa mRrjnkf;Ro & ewY;] y{; Lrj vFkZ fo'ks"krk oxhZdj.k ,oa fodkl fu.kZ; izfØ;kA

**bdkbZ & 2 x`g lTtkA**

 dyk ds fl)kar ,oa dyk ds rRoA uewuk & jpukRed ,oa vyadkje; uewuk] uewus ds fl)karA jax&jax ds egRo ,oa izHkko] QuhZpj dk pquko ,oa egRo x`g lTtk ds milk/kuA iq"i lTtk] izdkj] fl)kar mi;ksxA

**bdkbZ & 3 ikfjokfjd lk/ku**

ikfjokfjd lk/ku] oxhZdj.k] fo'ks"krk;sa mi;ksx dh izekf.kr djus okys le;& vo/kkj.kkle;] O;oLFkkiu ds lk/kuA le; O;oLFkkid dh izfØ;k 'kfDr & vo/kkj.kk] fofHkUu ?kjsyw dk;ksZa esa 'kfDr dk ewY;] 'kfDr O;oLFkkiu dh izfØ;kA

 vk; ds lk/ku ,oa izdkj] ikfjokfjd ctV] O;; cpr jgu&lgu dk Lrj] vk; O;; dk ys[kk tks[kk ¼,dkÅaV dhfiax½A

**bdkbZ & 4** jlksbZ ?kj] vk/kqfud jlksbZ ?kj] izdkj] jlkbZ ?kj ds dk;Z{ks= bZa/ku ds xSj ijEijkxr lzksr] lkSj ÅtkZ ty forj.k iz.kkyh] ok;q chtu] izdk'k dh O;oLFkk laxzg O;oLFkk

**bdkbZ & 5 dk;Z dk ljyhdj.kA**

 vFkZ dk;Z fof/k;kWa ,oa vknrksa esa lq/kkj dh rduhd] izkslsl pkVZ] ikFkos pkVZ] ifjorZu dh Jsf.k;kWaA le; 'kfDr ,oa Je cpr dh midj.kA

**ch-,- -III & IV SEMESTER**

**izk;ksfxd dk;Z**

 **vad 50**

**1- flykbZ] CykÅt] csch Qzkd] >cyk] ckck lwV] iatkch dqjrk] lyokj] isVhdksVA**

**2- /kqykbZ] fofHkUu oL=ksa dh /kqykbZ] /kCcs NqM+kuk] cka/kuh dk dk;Z**

**3- iq"i lTtk &**

 **vad fooj.k & lw=h; 10] flykbZ & 20**

 **/kqykbZ & 15 ¼/kqykbZ dk cka/kuh & 10] /kCck NqM+kuk 5½**

 **iq"i lTtk & 5**

**LohÑr iqLrdsa &**

 1- oL= foKku ,oa ifj/kku & MkW- izfeyk

 2- oL= foKku ds ewy fl)kar & MkW- th-ih- 'ksjhA

 3- gkmlgksYM fQftDl & MkW- dqyJs"BA

 4- izkjafHkd Ñf"k foKku & jktsUnz izlknA

 5- m|ku foKku & MkW- ,l-,l- JhokLroA

 6- x`gO;oLFkk ,oa x`glTtk & Jherh ds cDlhA

 7- x`gO;oLFkk ,oa x`glTtk & panzdkark xkMfyd

 8- x`gO;oLFkk ,oa x`g dyk & th-ih- 'ksjh

 9- x`g O;oLFkk ,oa x`g dyk & Jherh dkafr ikaMs;

 10- Ñf"k foKku & Ñiky flag fHkaMj

 11- m|ku 'kkL= & clar baxksys

 12- ikfjokfjd ifj/kku ,oa O;oLFkk& eatw ikVuh o liuk gsujhA

&&&&

**B.A. - semester-v**

**HOME SCIENCE**

 **"HUMAN DEVELOPMENT”**

 **dqy vad 60**

**Unit-1** 1. Development-meaning of child growth and development. Different aspects of growth, principles of development, factors affecting child development, heredity and environment.

 2. Stages of development -

 1. Physiology of pregnancy

 2. Prenatal (a) Reproductive system

 (b) Prenatal development

 3. Infancy (a) Early infancy

 (b) Babyhood

 4. Childhood (a) Early childhood

 (b) Late childhood

 5. Adolescence (a) Early adolescence

 (b) Late adolescence

 (ii) Prenatal growth and development -

 (a) Sources of studying prenatal life

 (b) Stages of growth prenatal and development

 (c) Factors affecting prenatal development and growth

 (1) Mother's food

 (2) Health of mother

 (3) Narcotics

 (4) Age of parents

 (5) Effect of season

 (6) Emotion of mother

**Unit-2** 1. Effect of normal and caesarean delivery.

 2. Adjustment to new environment -

 (a) Temperature

 (b) Respiration

 (c) Food consumption

 (d) Excretion

 3. Physical development of infant-

 (a) Physical proportion

 (b) Height

 (c) Weight

 (d) Pulse rate

 (e) Respiration rate

 (f) Body temperature

 (g) Frequency of hunger.

 4. Sensory development of infant

 (a) Light

 (b) Sound

 (c) Taste

 (d) Smell

 (e) Skin sensitivity

 5. Motor activity of infants

 (a) Mass activities

 (b) Specific activities

 (i) Reflex activities

 (ii) Advantages of reflex action

 6. Emotions of infants -

 (a) Types of emotions

 (b) Significance of emotions

 7. Characteristics of infant behavior -

 (a) Dependency

 (b) Individual difference

 (c) Adjustment

**Unit-3** Childhood : Adolescence.

 1. Characteristics of this stage.

 2. Factors affecting growth and development during childhood and adolescence.

 3. Physical growth height, weight, body proportion, teeth

 4. Growth and development of internal organs (a) Nervous (b) Mental (c) Circulatory system (d) Digestive system, (e) Respiratory system (f) Tissues and muscles systems.

 5. Development of motor abilities (i) Types of motor abilities (ii) importance and characteristics of motor abilities in childhood (iii) Development of motor skills, Types of motor skills (iv) Delayed motor development.

**Unit-4** 6. Development of emotional behaviour characteristics special emotions (affection, anger, fear, jealousy and worries) factors affecting emotional behaviour.

 7. Social developments stages - (a) during infancy, (b) nursery school period (c) elementory school period (d) Factor affecting social development.

 8. Development of intelligence - Types according to throndyke, theories regarding intelligence.

**Unit-5** 9. Play meaning of play, work and play, theories of play, characteristics of children's play, types of play, factors effecting play and importance of play.

 10. Habits :

 1. Definition.

 2. Functions performed by habits.

 3. Habits and learning

 4. Laws of habit formation-identical to laws of learning.

 5. Habit formation.

 (a) Principles of habit formation.

 (b) Rules for habit formation.

 Child delinquency- Types causes and remedial measures.

**B.A. SEMESTER-VI**

**Home Science**

**vkgkj ,oa iks"k.k foKku**

 **dqy vad 60**

**;wfuV&1 iks"k.k**

 1- iks"k.k dh ifjHkk"kkA

 2- dk;ksZa ds vk/kkj ij ikSf"Vd rRoksa dk oxhZdj.kA

 ¼v½ m"ek iznku djus okys dkcksZt] olkA

 ¼c½ 'kjhj dk fuekZ.k djus okys&izksVhu] [kfut rRoA

 ¼l½ lqj{kk o fu;eu djus okys ty] thou rRoA

 **3- dkcksZt &** ifjHkk"kk] dk;Z ikpu] vfHkiks"k.k] p;kip;]jDr 'kadZjk Lrj o blds fu;eu vf/kdrk dk izHkko izkfIr dk lk/ku ,oa nSfud vko';drkA

 **4- olk &** ifjHkk"kk] dk;Z] oxhZdj.k] ikpu] vfHk'kks"k.k] p;kip;] lar`Ir o vlar`Ir olh; vEy] vko';d olh; vEy] dksysLVksjkWy deh o vf/kdrk ds ziHkko ,oa nSfud vko';drkA

 **5- izksVhu &** ifjHkk"kk] dk;Z] oxhZdj.k] ikpu] vfHkiks"k.k] p;kip;] ukbVªkstu larqyu] izksVhu dk tSfod ewY;] izksVhu dk iwjd ewY;] izksVhu o dSyksjh dqiks"k.k] izkfIr ds lk/ku ,oa nSfud vko';drkA

 **6- [kfut rRo &** lkekU; oxhZdj.k o dk;Z] dk;Z] vfHkiks"k.k dks izHkkfor djus okys rRo deh o vf/kdrk ds izHkko] lk/ku ¼dSfY'k;e] QkLQksjl] ykSgyo.k] vk;ksMhu lksfM;e] o DyksjkbZM½

 **7- foVkfeUl &** ¼thou rRo½ lkekU; oxhZdj.k o dk;Z] deh o vf/kdrk ds izHkko] izkfIr ds lk/ku] ¼thou lRo ,-ch-lh-Mh-bZ-ds½

 **8- ty &** lkekU; dk;Z] ty dk larqyu vf/kdrk ds izHkko futZyhdj.kA

**;wfuV&2 vkgkj**

 1- vkgkj dk oxhZdj.k o dk;Z] vk/kkjh; pkj&HkksT; lewg o lzksr&HkksT; lewg

 2- **vukt &** izdkj] jpuk] laxBu] idkus ls igys dh izfØ;k & ekSfyax] ikfyf'kax] ikjokbZfyax] Quksfjax] ikjfpax] vukt dks mi;ksx djus ds fofHkUu rjhds] vukt&rki] {kkj] [kehjhdj.;k o czhfMax ds izHkkoA

 **3- nkysa &** izdkj] layXu] vadqj.k o [kehjhdj.k ds izHkko

 **4- nw/k &** izdkj] laxBu] nw/k ls cus inkFkZ & ngh] eD[ku] pkht vkfn ik'P;qjkbys'ku ,oe~ gkseksthukbts'kuA

 **5- Qyo o lfCt;kWa &** oxhZdj.k] laxBu] o.kZd] izksVhu dk egRo] ifjiDo gksus dh izfØ;kA

 **6- v.Mk &** laxBu] idkus dk izHkko

 **7- ekal eNyh] iksYVªh** & laxBu] idkus ls gksus okys ifjorZuA

 **8- 'kDdj] xqM+] 'kgn** & laxBu] izdkj] fof/k;ksa esa mi;ksxA

 **9- is; inkFkZ &** oxhZdj.k] iks"k.k dh n`f"V ls egRo] vR;kf/kd mi;ksx dk izHkkoA

 **10- elkys &** izdkj] laxBu] iks"k.k dh n`f"V ls egRoA

**;wfuV&3 1- [kk| laj{k.k** & mn~ns';] fof/k;kWa] ?kjsyw laj{k.k] vkS|ksfxd laj{k.kA

 **2- [kk| inkFkksZa esa lM+u &** dkj.k] igpku] mipkjkRed fof/k;kWa

 **3- HkksT; fo"kkDrrk &** dkj.k] izdkj] igpku] mipkjkRed rjhds

 **4- [kk| feykoV &** vko';drk] izdkj] egRoiw.kZ feykoVh inkFkZ] feykoVh inkFkksZa dks igpkuus dh ljy fof/k;kWaA

 **5 [kk| laxzg.k &** vko';drk] izdkj] mi;ksx esa gksus okys egRoiw.kZ jlk;uA

**;wfuV&4 vkgkj fu;kstu A**

 **1- egRo &** vkgkj fu;kstu ds fl)kar izfrfnu dh fu/kkZfjr ek=k ¼vkj-Mh-,-½ vkgkj vk;kstu dks izHkkfor djus okys rRo ¼

 2- f'k'kq q esa ikSf"Vd rRoksa o [kk| inkFkksZa dh vko';drk] vkgkj ekrk dk nw/k] QkewZyk QhfMaxA

 **3- ckyd dk iks"k.k &**  vk;q lewg dh fo'ks"krk,Wa] ikSf"Vd rRo ,oa vkgkj dks vko';drk] 'kkys; vkgkj dk;ZØe & izdkj] egRo]

 **4- xHkkZoLFkk o Nk=hoLFkk esa iks"k.k &**  'kkjhfjd ifjorZu] ikSf"Vd rRoksa dh vko';drk] vlkekU; ifjfLFkfr;kWa]

 **5- o`)koLFkk esa vkgkj ,oe~ iks"k.k &** 'kkjhfjd ifjorZu] ikSf"Vd rRoksa dh vko';drkA vlkekU; fLFkfr;kWa

**;wfuV&5 mipkjkRed iks"k.k & ifjHkk"kk**

 lkekU; vkgkj ifjorZu **p;kip;h jksx &**

1. **e/kqesg &**  ifjHkk"kk] y{k.k] dkj.k] bUlqys'ku ds izdkj] vkgkjdk izHkko] gkbiksXykslsfdd nokbZ;kWa] e/kqesg esa vlkekU; fLFkfr;kWa]
2. **2- vf/kd otu@de otu &** ifjHkk"kk] dkj.k] mipkjkRed rjhds] **iksf"Vd rRoksa dh deh ls gksus okys jksx &**

 **1- jDrghurk &** izdkj] dkj.k] igpku] vkgkjA

 **2- ,&foVkehuksfll &** izdkj] dkj.k] mipkjA

 **3- izksVhu dSyksjh dqiks"k.k &** dkj.k] mipkjkRed rjhdsA

 **jksx ftlesa vkgkjh; fpfdRlk lfEefyr gS&**

 **1- ;Ñr ds jksx &** izdkj] dkj.k] vkgkj ¼ikSf"Vd rRoksa dh vko';drk½

  **1- isfIVd vYlj &** dkj.k] y{k.k] vkgkj ¼ikSf"Vd rRoksa dh vko';drk½

 **2- vipu &** dkj.k] ikSf"Vd rRoksa dh vko';drkA

 **3- vfrlkj &** izdkj] dkj.k] vkgkjA

 **4- dCt &** izdkj] dkj.k] vkgkjA

 **5- mDr jDrpki &** dkj.k] vkgkjA

**B.A. -semester V & VI**

**x`g foKku**

**izk;ksfxd**

 **dqy vad 50**

1- vukt & nkysa] v.Mk] nw/k] esos] lfCt;kWa] Qyksa ds mi;ksx rS;kj djuk] gj HkksT; inkFkZ dh dksbZ Hkh rhu ik= fof/k;ksa ds izk;ksfxd fjdkMZ cqd esa fy[kukA dSyksjh ,oa izksVhu dh x.kukA

2- vkgkj vk;kstu &

 ¼v½ xHkZorh efgyk

 ¼c½ dCt dh fLFkfr

 ¼l½ e/kqesg jksx

 ¼n½ vf/kd otu dh fLFkfr

3- fofHkUu vkfFkZd fLFkfr esa vkgkj ;kstukA

4- [kk| laj{k.k dksbZ Hkh pkj ikd fof/k ls cuk;h tk;sA

5- lEiwjd Hkkstu & vk;kstu] x.kuk

6- O;fDrRo ekiu fof/k

7- cqf)ekiu fof/k

 **izk;ksfxd ijh{kk vadksa dk foHkktu**

 ls'kuy 10

 ;kstuk 10

 rS;kjh 10

 x.kuk 10

 ekSf[kd iz'u 10

 **dqy vad 50**

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**Normal & Theropentic Nutrituon.**

1. C.H. Robinson - Normal & Therapetic Nutrition.

2. F.P. Antia - Clinical Nutrition & Dicterics.

3. M.Rajalaxmi - Essentials of Nutrition Vol. I & II.

4. P. Rajalaxmi - Applied Nutrition.

5. C. Gopalan-etal - The Nutrition value of Indian Foods. ICHR. 1991.

6. Mangode Konge - Normal & Therapentic Nutrition (In Hindi).

7. Jyoti kulkarni - Normal & Therapentic Nutrition.

8. Geeta Pushpa Shaw -

9. Kreuse M.N. - Food Nutrition & Diet Therapy.