I YEAR II SEMESTER BSc MPCs SYLLABUS

SRI RAMAKRISHNA DEGREE COLLEGE (AUTONOMOUS)

NANDYAL

English Syllabus-Semester-II

English Praxis Course-II

A Course in Reading & Writing Skills

Learning Outcomes

By the end of the course the learner will be able to :

- Use reading skills effectively
- Comprehend different texts
- Interpret different types of texts
- Analyse what is being read
- Build up a repository of active vocabulary
- Use good writing strategies
- Write well for any purpose
- Improve writing skills independently for future needs

I. UNIT
Prose	: 1. How to Avoid Foolish Opinions	Bertrand Russell
Skills	: 2. Vocabulary: Conversion of Words	
	: 3. One Word Substitutes	
	: 4. Collocations	

II. UNIT
Prose	: 1. The Doll's House	Katherine Mansfield
Poetry	: 2. Ode to the West Wind	P B Shelley
Non-Detailed Text	: 3. Florence Nightingale	Abrar Mohsin
Skills	: 4. Skimming and Scanning	

III. UNIT
Prose	: 1. The Night Train at Deoli	Ruskin Bond
Poetry	: 2. Upagupta	Rabindranath Tagore
Skills	: 3. Reading Comprehension	
	: 4. Note Making/Taking	

IV. UNIT
Poetry	: 1. Coromandel Fishers	Sarojini Naidu
Skills	: 2. Expansion of Ideas	
	: 3. Notices, Agendas and Minutes	

V.UNIT
Non-Detailed Text	: 1. An Astrologer's Day	R K Narayan
Skills	: 2. Curriculum Vitae and Resume	
	: 3. Letters	
	: 4. E-Correspondence	

బి.ఏ., బి.కాం., బి.యస్.సి., తదితర ప్రోగ్రాములు

అంశం: జనరల్ తెలుగు సెమిస్టర్–2

కోర్సు–2 : ఆధునిక తెలుగు సాహిత్యం

యూనిట్ల సంఖ్య:5 పీరియడ్ల సంఖ్య:60

✦ అభ్యసన ఫలితాలు:–

ఈ కోర్సు విజయవంతంగా ముగించాక, విద్యార్థులు క్రింది అభ్యసన ఫలితాలను పొందగలరు.

1. ఆంగ్లభాష ప్రభావం కారణంగా తెలుగులో వచ్చిన ఆధునిక సాహిత్యాన్ని, దాని విశిష్టతను గుర్తిస్తారు.

2. సమకాలీన ఆధునిక సాహిత్య ప్రక్రియలైన "వచన కవిత్వం, కథ, నవల, నాటకం, విమర్శ"లపై అవగాహన పొందుతారు.

3. భావకవిత, అభ్యుదయ కవితాలక్ష్యాలను గూర్చిన జ్ఞానాన్ని పొందుతారు.అస్తిత్వవాద ఉద్యమాలపుట్టుకను, ఆవశ్యకతను గుర్తిస్తారు.

4. కథాసాహిత్యం ద్వారా సామాజిక చైతన్యాన్ని పొందుతారు. సిద్ధాంతాల ద్వారా కాకుండా, వాస్తవ పరిస్థితులను తెలుసుకోవడం ద్వారా సిద్ధాంతాన్ని సమీక్షించగలరు.

5. ఆధునిక తెలుగు కల్పనాసాహిత్యం ద్వారా సామాజిక, సాంస్కృతిక,రాజకీయ చైతన్యాన్ని పొందుతారు.

పాఠ్య ప్రణాళిక

యూనిట్-I : ఆధునిక కవిత్వం

1. ఆధునిక కవిత్వం- పరిచయం

2. కొండవీడు   – దువ్వూరి రామిరెడ్డి

                       ('కవికోకిల' గ్రంథావళి-ఖండకావ్యాలు-నక్షత్రమాల సంపుటి నుండి)

3. మాతృసంగీతం   – అనిసెట్టి సుబ్బారావు ('అగ్నివీణ' కవితాసంపుటి నుండి)

4. 'తాతకో నూలుపోగు'   – బండారు ప్రసాదమూర్తి ('కలనేత' కవితాసంపుటి నుండి)

యూనిట్-II : కథానిక

5. తెలుగు కథానిక – పరిచయం

6. భయం (కథ)   – కాళీపట్నం రామారావు

7. స్వేదం ఖరీదు....? – (కథ)   – రెంటాల నాగేశ్వరరావు

యూనిట్-III : నవల

8. తెలుగు 'నవల'   – పరిచయం

9. రథచక్రాలు (నవల) – మహీధర రామ్మోహన రావు (సంక్షిప్త ఇతివృత్తం మాత్రం)

10. రథచక్రాలు (సమీక్షా వ్యాసం)   – డా॥ యల్లాప్రగడ మల్లికార్జునరావు

యూనిట్-IV: నాటకం

11. తెలుగు 'నాటకం' – పరిచయం

12. యక్షగానము (నాటిక)   – ఎం.వి.ఎస్. హరనాథరావు.

13."అపురూప కళారూపాల విధ్వంసదృశ్యం 'యక్షగానము' (సమీక్షా వ్యాసం)"

      –డా॥కందిమళ్ళసాంబశివరావు

యూనిట్-V: విమర్శ

14. తెలుగు సాహిత్య విమర్శ – పరిచయం

15. విమర్శ-స్వరూప స్వభావాలు; ఉత్తమ విమర్శకుడు-లక్షణాలు

ఆధార గ్రంథాలు/వ్యాసాలు:

1. ఆధునిక కవిత్వం-పరిచయం : చూ. 'దృక్పథాలు' పుట 1-22, ఆచార్య ఎస్వీ. సత్యనారాయణ

2. తెలుగు కథానిక-పరిచయం : చూ. మన నవలలు-మన కథానికలు, పుట 118-130,
                           ఆచార్య రాచపాళెం చంద్రశేఖర రెడ్డి

3. తెలుగు నవల-పరిచయం : చూ. నవలాశిల్పం, పుట 1-17, వల్లంపాటి వెంకటసుబ్బయ్య

4. తెలుగు నాటకం-పరిచయం : చూ. తెలుగు నాటకరంగం, పుట 17-25 ఆచార్య ఎస్.గంగప్ప

5. తెలుగుసాహిత్య విమర్శ-పరిచయం: చూ.తెలుగుసాహిత్య విమర్శ-నాడు,నేడు పుట 213-217
   తెలుగువాణి, అయిదవ అఖిలభారత తెలుగు మహాసభల ప్రత్యేక సంచిక
                           ఆచార్య జి.వి.సుబ్రహ్మణ్యం

6. నూరేళ్ల తెలుగు నాటక రంగం   – ఆచార్య మొదలి నాగభూషణశర్మ

7. నాటకశిల్పం   – ఆచార్య మొదలి నాగభూషణశర్మ

8. సాంఘిక నవల-కథన శిల్పం   – ఆచార్య సి.మృణాళిని.

✦ సూచించబడిన సహపాఠ్య కార్యక్రమాలు:

1. ఆధునిక కవిత్వానికి సంబంధించిన కొత్త కవితలను/అంశాలను ఇచ్చి, విద్యార్థులచేత
   వాటిమీద అసైన్‌మెంట్లు రాయించడం

2. పాఠ్యాంశాలకు సంబంధించిన విషయాలపై వ్యాసాలు రాయించడం (సెమినార్/అసైన్‌మెంట్)

3. తెలుగు సాహిత్యంలోని ప్రసిద్ధ కథలపై, కవితలపై సమీక్షలు రాయించడం.

4. ఆధునిక పద్యనిర్మాణ రచన చేయించడం.

5. విద్యార్థులను బృందాలుగా విభజించి, నాటకలపై/నవలలపై సమీక్షలు రాయించడం.

6. సాహిత్యవ్యాసాలు సేకరించడం, బృందచర్చ నిర్వహించడం, క్షేత్రపర్యటనలు.

7. ప్రసిద్ధుల విమర్శావ్యాసాలు చదివించి, వాటిని విద్యార్థుల సొంత మాటల్లో రాయించడం.

8. పాఠ్యాంశాలపై స్వీయ విమర్శావ్యాసాలు రాయించడం.

✦ప్రశ్నపత్ర నమూనా ✦

అ-విభాగము

సంక్షిప్త సమాధాన ప్రశ్నలు – ప్రతి యూనిట్ నుంచి తప్పనిసరిగా ఒక ప్రశ్న ఇస్తూ, మొత్తం ఎనిమిది
పశ్నలు ఇచ్చి, ఐదింటికి సమాధానం రాయమనాలి.   5×5=25 మా.

ఆ-విభాగము

వ్యాసరూప సమాధాన ప్రశ్నలు-ప్రతి యూనిట్ నుంచి తప్పనిసరిగా రెండు ప్రశ్నలు ఇచ్చి ఒక ప్రశ్నకు
సమాధానం రాయమనాలి. మొత్తం ప్రశ్నలు 5.   5×10=50 మా.

✦ మాదిరి ప్రశ్నాపత్రం ✦

అ-విభాగము

క్రింది వానిలో ఐదింటికి సంక్షిప్త సమాధానాలు రాయండి.

ప్రతి సమాధానానికి 5 మార్కులు.   5×5=25 మా.

1. కొండవీడు   5. కథానిక

2. తెలుగు నవల   6. విమర్శ

3. తెలుగు నాటకం   7. అనిసెట్టి సుబ్బారావు

4. ఆధునిక కవిత్వం   8. కాళీపట్నం రామారావు

ఆ-విభాగము

క్రింది వానిలో అన్ని ప్రశ్నలకు సమాధానాలు రాయండి.

ప్రతి సమాధానానికి 10 మార్కులు.   5×10=50 మా.

9. ఆధునిక కవిత్వ ఆవిర్భావ వికాసాలను వివరించండి.

       (లేదా)

    కొండవీడులో దువ్వూరి రామిరెడ్డి గారి సందేశాన్ని వివరించండి.

10. తెలుగు కథానికను పరిచయం చేయండి.

       (లేదా)

    భయం కథలోని రచయిత సందేశాన్ని రాయండి.

11. సాహిత్య ప్రక్రియగా నవల స్థానాన్ని విమర్శించండి.

       (లేదా)

    రథచక్రాలు నవలలోని ఇతివృత్తాన్ని విశ్లేషించండి.

12. తెలుగు నాటక పరిణామాన్ని గూర్చి రాయండి.

       (లేదా)

    యక్షగానం నాటికపై సమీక్షా వ్యాసం రాయండి.

13. తెలుగు సాహిత్య విమర్శను పరిచయం చేయండి

       (లేదా)

    విమర్శ స్వరూప స్వభావాలను వివరిస్తూ, ఉత్తమ విమర్శకుని లక్షణాలను రాయండి.

Sri Ramakrishna Degree College(A) :Nandyal
Dept. Of Sanskrit
First Year, Semester -II, Syllabus

प्रथमविभागः (Unit-I) प्राचीनपद्यकाव्यम्

1. इन्दुमती स्वयंवरम्

2.शिष्येभ्योदीश्राप्रदानम्

द्वितीयविभाग: (Unit II) आधुनिक पद्यकाव्यम्

3. गंगावतरणं

4.मोहापनोदः

5.वन्देकाश्मीरभारतं

तृतीया विभाग: (Unit III) गद्यकाव्यम्

6. अवन्तिसुन्दरीकथा

7. चारुदत्तचरितं

चतुर्थविभागः (Unit IV) व्याकरणं

8.**अज**न्तशब्दा:

(**नद, तन**, वधू,मातृ,वन,फल,वारि,मधु)

9.धातवः

(यध्,इष,लिख,कृ,क्रीञ्,कथ,रमु,वदी)

पञ्चमविभागः (Unit V) व्याकरणं

10.**स**न्धयःहल् सन्धिः,विसर्गसन्धिः)

11.**स**मासाः (अव्ययीभावः, बहुव्रीहि:)

SRI RAMAKRISHNA DEGREE (AUTONOMOUS) COLLEGE :NANDYAL
B.Sc FIRST YEAR MATHEMATICS SYLLABUS (2022-2023)
SEMESTER-II PAPER-2
THREE DIMENSIONAL ANALYTICAL SOLID GEOMETRY-2

Course Outcomes:

After successful completion of this course, the student will be able to;

1. get the knowledge ofplanes.

2. basic idea of lines, sphere andcones.

3. understand the properties of planes, lines, spheres andcones.

4. express the problems geometrically and then to get thesolution.

UNIT-I (12 Hours)

The plane

Equation of plane in terms of its intercepts on the axis, Equations of the plane through the given points, Length of the perpendicular from a given point to a given plane, Bisectors of angles between two planes, Combined equation of two planes, Orthogonal projection on a plane.

UNIT – II (12 hrs)

The Line :

Equation of a line; Angle between a line and a plane; The condition that a given line may lie in a given plane; The condition that two given lines are coplanar; Number of arbitrary constants in the equations of straight line; Sets of conditions which determine a line; The shortest distance between two lines; The length and equations of the line of shortest distance between two straight lines; Length of the perpendicular from a given point to a given line.

UNIT – III (12 hrs)

The Sphere :

Definition and equation of the sphere; Equation of the sphere through four given points; Planesections of a sphere; Intersection of two spheres; Equation of a circle; Sphere through a givencircle;Intersection of a sphere and a line; Power of a point; Tangent plane; Plane of contact; Polar plane; Pole ofa Plane; Conjugate points; Conjugate planes;

UNIT – IV (12 hrs)

The Sphere and Cones :

Angle of intersection of two spheres; Conditions for two spheres to be orthogonal; Radical plane; Coaxial system of spheres; Simplified from of the equation of two spheres.

Definitions of a cone; vertex; guiding curve; generators; Equation of the cone with a given vertex and guiding curve; equations of cones with vertex at origin are homogenous; Condition that the general equation of the second degree should represent a cone

Cones:

Enveloping cone of a sphere; right circular cone: equation of the right circular cone with a given vertex, axis and semi vertical angle: Condition that a cone may have three mutually perpendicular generators; intersection of a line and a quadric cone; Tangent lines and tangent plane at a point; Condition that a plane may touch a cone; Reciprocal cones; Intersection of two cones with a commonvertex.

Co-Curricular Activities(15 Hours)

Seminar/ Quiz/ Assignments/Three dimensional analytical Solid geometry and its applications/ ProblemSolving.

Text Book :

Analytical Solid Geometry by Shanti Narayan and P.K. Mittal, published by S. Chand & Company Ltd. 7th Edition.

Reference Books :

1. A text book of Mathematics for BA/B.ScVol 1, by V Krishna Murthy & Others, publishedby

   S. Chand & Company, New Delhi.

2. A text Book of Analytical Geometry of ThreeDimensions,by   P.K. Jain and

   KhaleelAhmed,published by Wiley Eastern Ltd.,1999.

3. Co-ordinate Geometry of two and three dimensions by P. Balasubrahmanyam,K.Y. Subrahmanyam,

   4. G.R. Venkataraman published by Tata-MC Gran-Hill Publishers Company Ltd., New Delhi.
Solid Geometry by B.RamaBhupal Reddy, published by Spectrum UniversityPres

PHYSICS SYLLABUS
For Mathematics Combinations [2020-21 Batch]

I Year B.Sc.-Physics, II Semester WAVE OPTICS

UNIT-I

Interference of light:

Introduction, Conditions for interference of light, Interference of light by division of wave front and amplitude, Phase change on reflection- Stokes' treatment, Lloyd's single mirror, Interference in thin films: Plane parallel and wedge- shaped films, colours in thin films, Newton's rings in reflected light-Theory and experiment, Determination of wavelength of monochromatic light, Michelson interferometer and determination of wavelength.

UNIT-II

Diffraction of light:

Introduction, Types of diffraction: Fresnel and Fraunhoffer diffractions, Distinction between Fresnel and Fraunhoffer diffraction, Fraunhoffer diffraction at a single slit, Plane diffraction grating, Determination of wavelength of light using diffraction grating, Resolving power of grating, Fresnel's half period zones, Explanation of rectilinear propagation of light, Zone plate, comparison of zone plate with convex lens.

UNIT-III

Polarisation of light:

Polarized light: Methods of production of plane polarized light, Double refraction, Brewster's law, Malus law, Nicol prism, Nicol prism as polarizer and analyzer, Quarter wave plate, Half wave plate, Plane, Circularly and Elliptically polarized light- Production and detection, Optical activity, Laurent's half shade polarimeter: determination of specific rotation

UNIT-IV

Aberrations and Fibre Optics:

Monochromatic aberrations, Spherical aberration, Methods of minimizing spherical aberration,Coma, Astigmatism and Curvature of field, Distortion;

Chromatic aberration-the achromatic doublet; Achromatism for two lenses (i) in contact and (ii) separated by a distance.

Fibre optics: Introduction to Fibers, different types of fibers, rays and modes in an

optical fiber, Principles of fiber communication (qualitative treatment only), Advantages of fiber optic communication.

UNIT-V

Lasers and Holography

Lasers: Introduction, Spontaneous emission, stimulated emission, Population Inversion, Laser principle, Einstein coefficients, Types of lasers-He-Ne laser, Ruby laser, Applications of lasers; Holography: Basic principle of holography, Applications of holography

Time: 3 Hours   Max.Marks: 70

SECTION-A

Answer any **FIVE** of the following questions   5X4=20 Marks

1. Discuss the important conditions for interference of light.

2. Explain the formation of colours in thin films.

3. Distinguish between Fresnel and Fraunhofer classes of diffraction

4. Distinguish between zone plate and a convex lens.

5. Write a short note on the law of Malus

6. Explain what is meant of Quarter-wave plate and Half-wave plate.

7. What is spherical aberration? How it can be minimized?

8. State some applications of LASERS.

SECTION-B

Answer **ALL** the following questions   5X10=50 Marks

9. Describe Newton's ring method for measuring the wavelength of monochromatic light. Give the necessary theory.
    OR
    Describe the principle, construction and working of Michelson interferometer. Explain how the wavelength of light is determined with it.

10 Describe Fraunhofer diffraction due to a single slit and deduce the positions of Maxima and minima. Draw the representative graph of the intensity distribution.
    OR
    Describe the construction and working of zone plate. Derive the formula for its focal length.

11. Explain Brewster's law. Show from this law that when light is incident on the transparent substance at polarising angle, the reflected and refracted rays are at right angles.
    OR
    What is double refraction? Describe the construction and working of Nicols prism. Explain how it is used as polariser and analyser.

12. Explain the phenomenon of chromatic aberration. Derive an expression for the separation between the two lenses if chromatic aberration is to be minimized in the case of separated doublet.
    OR
    Discuss the modes step and graded index fibres and their structures.

13. Describe the construction and working of Ruby LASER

OR

What is Holography? Write the difference between Holography and Photography.
Explain the recording of a Hologram and reconstruction of image from Hologram.

SRI RAMAKRISHNA DEGREE (AUTONOMOUS) COLLEGE
I B.Sc., DEGREE – SEMESTER – II
Paper – II – Digital Electronics
(CBCS) w.e.f. 2020-21

Total Lectures: 60 Hours   04 Hours /week

UNIT- I: **12 Hours**

NUMBER SYSTEM AND CODES:
Decimal, Binary, Octal. Hexadecimal, Codes: BCD, Gray and Excess-3 codes- code conversions- Complements (1's, 2's,), Addition – Subtraction using complement methods

UNIT: II: **12 Hours**
BOOLEAN ALGEBRA AND THEOREMS:

Boolean Theorems, De Morgan's Theorems. Positive and negative logic, Logic gates: OR, AND, NOT -Truth tables.(Diode-Resistor) . Multi level NAND & NOR gates. Standard representation of logic functions (SOP and POS). Minimization Techniques (Karnaugh Map Method: 2,3 variables).

UNIT: III: **12Hours**
COMBINATIONAL LOGIC CIRCUITS:

Adders-Half & full adder, Parallel binary adder, Multiplexers (4:1)) and De multiplexers (1:4), Encoder (8-line-to-3- line) and Decoder (3- line-to-8-line). IC-LOGIC FAMILIES**:** TTL logic, CMOS Logic families (NAND&NOR Gates).

UNIT –IV: **12 Hours**
SEQUENTIAL LOGIC CIRCUITS:

Flip Flops: S-R FF , SR-T FF, D-T FF, J-K FF, Master-Slave FFs, Excitation tables, **Registers**:-Serial In Serial Out and Parallel In and Parallel Out, **Counters:** Asynchronous-Mod-3,Mod-10,Synchronous-4-bit &Ring counter.

UNIT-V: **12 Hours**

MEMORY DEVICES
General Memory Operations, ROM, RAM (Static and Dynamic), PROM, EPROM, EEPROM, EAROM. Semiconductor Memories: Bipolar and MOS.

Text Books:

1. M. Morris Mano, Digital Design 3rd Edition, PHI, New Delhi.
2. Ronald J. Tocci. ìDigital Systems-Principles and Applications î 6/e. PHI. New Delhi. 1999.(UNITS I to IV)
3. G.K.Kharate-Digital electronics-oxford universitypress
4. S.Salivahana & S. Arivazhagan-Digital circuits anddesign
5. Fundamentals of Digital Circuits by Anand Kumar

Reference books:

1. Digital Principles and Applications- Malvino & Leach- TMH
2. Digital Fundamentals . F.Loyd & Jain- Pearson Education
3. Modern Digital Electronics- R.P Jain-TMH
4. Fundamentals of Digital Circuits- Anand Kumar- PHI
5. Digital Systems . Rajkamal- Pearson Education
6. Digital Electronic Principles and Integrated Circuits- Maini- Willey India
7. Digital Electronics- Gothman-
8. Digital Electronics .J.W. Bignel & Robert Donova- Thomson Publishers (Indian 5th Ed)

SRI RAMAKRISHNA DEGREE (AUTONOMOUS) COLLEGE
I B.Sc., DEGREE – SEMESTER – II
Paper – II – Digital Electronics (CBCS) w.e.f. 2020-21
MODEL PAPER

TIME:3Hrs   **TOTAL MARKS:70M**

SECTION – A

Answer any five of the following questions: **5x4M=20M**

1. A) Convert $(512)_{10}$ into binary. B) Convert $(101010)_2$ into decimal.
2. Explain Excess-3 code.
3. Write a short note on SOP and POS.
4. State and Prove DeMorgan's theorems.
5. Explain the functioning of 4:1 multiplexer with truth table.
6. Explain functioning of S-R Flip-flop.
7. Write a note on RTL logic family.
8. Write a note on EPROM.

SECTION –B

Answer all the following questions: **5x10M=50M**

9. Explain the 1's compliment and 2's compliment method of subtraction with one example of each.

Or

Explain in detail the various Boolean theorems.

10. Explain the implementation of OR and AND gates using diodes.

Or

What is K-map. Explain the 2-variable and 3-variable K-maps.

11. Explain the Half adder and Full adder circuits with the help of truth tables.

Or

Explain the TTL logic family with neat circuit diagram.

12. Explain the working of JK flip-flop with neat diagram.

Or

Explain the working of MOD-10 counter with neat diagram.

13. Explain in detail PROMs and EPROMs.

Or

Explain various semiconductor memories.

A.P. STATE COUNCIL OF HIGHER EDUCATION
B A, B Com & B Sc Programmes

Revised CBCS w.e.f. 2020-21
SKILL DEVELOPMENT COURSES
To be Offered from Semesters I to IV

ZOOLOGY STREAM
Syllabus of
DAIRY TECHNOLOGY
Total 30 hrs (02h/wk), 02 Credits & Max 50 Marks

Learning Outcomes:
 Aftersuccessful completion of the course, students will be able to;
1. Understand the pre-requisites for starting a Dairy farm
2. Recognize different breeds of Cows & buffaloes following safety precautions.
3. Prepare and give recommended feed and water for livestock
4. Maintain health of livestock along with productivity
5. Vaccination of cattle, nutrients requirements
6. Entrepreneurship i.e., Effectively market dairy products
7. Ensure safe and clean dairy farm and Standard safety measures to be taken in establishing am industry
8. Efficiently start and manage to establish or develop a Dairy Industry

SYLLABUS:

Section I (Introduction and Establishment of a Dairy Farm): 05 Hrs
> 1.1 Dairy development in India – Dairy Cooperatives (NDRI, NDDB, TCMPF)(1hr)
> 1.2 Constraintsof Present Dairy Farmingand Future Scope of Dairy Farmer.(1 hr)
> 1.3 Selection of site for dairy farm; Systems of housing – Loose housing system, Conventional Dairy Farm; Records to be maintained in a dairy farm. (2 hrs)

Section II (Livestock Identification and Management): 13 Hrs
> 2.1 Breeds of Dairy Cattle and Buffaloes – Identification of Indian cattle and buffalo breeds and Exotic breeds; Methods of selection of Dairy animals. (5 hrs)
> 2.2 Systems of inbreeding and crossbreeding. (2 hrs)
> 2.3 Weaning of calf, Castration, Dehorning, Deworming and Vaccination programme (3 hrs)
> 2.4 Care and management of calf, heifer, milk animal, dry and pregnant animal, bulls and bullocks. (3 hrs)

Section III (Feed Management, Dairy Management, Cleaning and Sanitation): 8 Hrs

    3.1 Basic Principles of Feed, Important Feed Ingredients, Feed formulation and Feed Mixing(2 hrs)

    3.2 Operation Flood –Definition of Milk and Nutritive value of milk and ICMR recommendation of nutrients –Per Capita Milk production and availability in India and Andhra Pradesh -Methods of Collection and Storage of Milk–Labelling and Storage of milk products (4 hrs)

    3.3 Cleaning and sanitation of dairy farm – Safety precautions to prevent accidents in an industry. (2 hrs)

Co-curricular Activities Suggested: (4 hrs)
1. Group discussion&SWOT analysis
2. Visit to a Dairy Farm
3. Visit to Milk Cooperative Societies
4. Visit to Feed Milling Plants
5. Market Study and Identification of Government Schemes, Insurance and Bank Loans in relation to dairy farming

Reference books:
1. Dairy Science: Petersen (W.E.) Publisher – Lippincott & Company
2. Principles and practices of Dairy Farm –Jagdish Prasad
3. Text book of Animal Husbandry - G C Benarjee
4. Hand book of Animal Husbandry - ICAR Edition
5. Outlines of Dairy Technology – Sukumar (De) – Oxford University press
6. Indian Dairy Products – Rangappa (K.S.) & Acharya (KT) – Asia Publishing House.
7. The technology of milk Proceesing – Ananthakrishnan, C.P., Khan, A.Q. and Padmanabhan, P.N. – Shri Lakshmi Publications.
8. Dairy India 2007, Sixth edititon
9. Economics of Milk Production – Bharati Pratima Acharya Publishers.
10. http://www.asci-india.com/BooksPDF/Dairy%20Farmer%20or%20Entrepreneur.pdf
11. https://labour.gov.in/industrial-safety-health

ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
B.Sc./B.Com/B.A
Syllabus under CBCS w.e.f.2020-21

INFORMATION & COMMUNICATION TECHNOLOGY

Semester	Course Code	Course Title	Hours	Credits
I	**Life skill Course**	**INFORMATION & COMMUNICATION TECHNOLOGY**	**30**	**2**

Objectives:

This course aims at acquainting the students with basic ICT tools which help them in their day to day and life as well as in office and research.

Course outcomes: After completion of the course, student will be able to;

1. Understand the literature of social networks and their properties.
2. Explain which network is suitable for whom.
3. Develop skills to use various social networking sites like twitter, flickr, etc.
4. Learn few GOI digital initiatives in higher education.
5. Apply skills to use online forums, docs, spreadsheets, etc for communication, collaboration and research.
6. Get acquainted with internet threats and security mechanisms.

SYLLABUS:

UNIT-I: (08 hrs)

Fundamentals of Internet: What is Internet?, Internet applications,Internet Addressing – Entering a Web Site Address, URL–Components of URL, Searching the Internet, Browser –Types of Browsers,Introduction to Social Networking: Twitter, Tumblr, LinkedIn, Facebook, flickr, Skype, yahoo, YouTube, WhatsApp .

UNIT-II:(08 hrs)

E-mail: Definition of E-mail -Advantages and Disadvantages –User Ids, Passwords, Email Addresses, Domain Names, Mailers, Message Components, MessageComposition, Mail Management.

G-Suite: Google drive, Google documents, Google spread sheets, Google Slides and Google forms.

UNIT-III:(10 hrs)

Overview of Internet security, E-mail threats and secure E-mail, Viruses and antivirus software, Firewalls, Cryptography, Digital signatures, Copyright issues.

What are GOI digital initiatives in higher education? (SWAYAM, SwayamPrabha, National Academic Depository, National Digital Library of India, E-Sodh-Sindhu, Virtual labs, e-acharya, e-Yantra and NPTEL).

RECOMMENDED CO-CURRICULAR ACTIVITIES: (04 hrs)

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

1.   Assignments(in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2.   Student seminars (on topics of the syllabus and related aspects (individual activity))
1.   Quiz andGroup Discussion
3.   Slip Test
4.   Try to solve MCQ's available online.
5.   Suggested student hands on activities :
   a.   Create your accounts for the above social networking sites and explore them, establish a video conference using Skype.
   b.   Create an Email account for yourself- Send an email with two attachments to another friend. Group the email addresses use address folder.
   c.   Register for one online course through any of the online learning platforms like NPTEL, SWAYAM, Alison, Codecademy, Coursera. Create a registration form for your college campus placement through Google forms.

Reference Books :

1. In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e – byRaymond Greenlaw and Ellen Hepp, Publishers : TMH
2. Internet technology and Web design, ISRD group, TMH.
3. Information Technology – The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.

Revised CBCS w.e.f. 2020-21
SKILL DEVELOPMENT COURSES

Science Stream

Syllabus of
SOLAR ENERGY

Total 30 hrs (02h/wk),   *02 Credits & Max Marks: 50*

Learning Outcomes:
After successful completion of the course, students will be able to:
1. *Acquire knowledge onsolarradiation principles with respect to solar energy estimation.*
2. *Get familiarized with various collecting techniques of solar energy and its storage*
3. *Learn the solar photovoltaic technology principles and different types of solar cells for energy conversion and different photovoltaic applications.*
4. *Understand the working principles of several solar appliances like Solar cookers, Solar hot water systems, Solar dryers, Solar Distillation, Solar greenhouses*

SYLLABUS:
UNIT-I – Solar Radiation: **(6 hrs)**
Sun as a source of energy, Solar radiation, Solar radiation at the Earth's surface, Measurement of Solar radiation-Pyroheliometer, Pyranometer, Sunshine recorder, Prediction of available solar radiation, Solar energy-Importance, Storage of solar energy, Solar pond

UNIT-II – Solar Thermal Systems: **(10 hrs)**
Principle of conversion of solar radiation into heat, Collectors used for solar thermal conversion: Flat plate collectors and Concentrating collectors, Solar Thermal Power Plant, Solar cookers, Solar hot water systems, Solar dryers, Solar Distillation, Solar greenhouses.

UNIT-III – Solar Photovoltaic Systems: **(10 hrs)**
Conversion of Solar energy into Electricity - Photovoltaic Effect, Solar photovoltaic cell and its working principle, Different types of Solar cells, Series and parallel connections, Photovoltaic applications: Battery chargers, domestic lighting, street lighting and water pumping

Co-curricular Activities (Hands on Exercises): (04 hrs)
[Any four of the following may be taken up]
1. *Plot sun chart and locate the sun at your location for a given time of the day.*
2. *Analyse shadow effect on incident solar radiation and find out contributors.*
3. *Connect solar panels in series & parallel and measure voltage and current.*
4. *Measure intensity of solar radiation using Pyranometer and radiometers.*
5. *Construct a solar lantern using Solar PV panel (15W)*
6. *Assemble solar cooker*
7. *Designing and constructing photovoltaic system for a domestic house requiring 5kVA power*
8. Assignments/Model Exam.