



I YEAR II SEMESTER BSc MECs 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 ఎస్. 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. నూరేళ్ళ తెలుగు నాటక రంగం - ఆచార్య మొదలి నాగభూషణశర్మ
7. నాటకశిల్పం - ఆచార్య మొదలి నాగభూషణశర్మ
8. సాంఘిక నవల-కథన శిల్పం - ఆచార్య సి.మృణాలిని.

◆ 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.

◆ ప్రశ్నాపత్ర నమూనా ◆

అ-విభాగము

సంక్షిప్త సమాధాన ప్రశ్నలు - ప్రతి యూనిట్ నుంచి తప్పనిసరిగా ఒక ప్రశ్న ఇస్తూ, మొత్తం ఎనిమిది ప్రశ్నలు ఇచ్చి, ఐదింటికి సమాధానం రాయమనాలి. $5 \times 5 = 25$ మా.

ఆ-విభాగము

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

◆ మాదిరి ప్రశ్నాపత్రం ◆

అ-విభాగము

క్రింది వానిలో ఐదింటికి సంక్షిప్త సమాధానాలు రాయండి.

ప్రతి సమాధానానికి 5 మార్కులు.

5×5=25 మా.

1. కొండవీడు
2. తెలుగు నవల
3. తెలుగు నాటకం
4. ఆధునిక కవిత్వం
5. కథానిక
6. విమర్శ
7. అనిసెట్టి సుబ్బారావు
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. शिष्येभ्यो दीश्राप्रदानम्

द्वितीयविभागः (Unit II) आधुनिक पद्यकाव्यम्

3. गंगावतरणं
4. मोहापनोदः
5. वन्दे काश्मीरभारतं

तृतीया विभागः (Unit III) गद्यकाव्यम्

6. अवन्तिसुन्दरीकथा
7. चारुदत्तचरितं

चतुर्थविभागः (Unit IV) व्याकरणं

8. अजन्तशब्दाः

(नद, तन, वधू, मातृ, वन, फल, वारि, मधु)

9. धातवः

(यध्, इष, लिख, कृ, क्रीञ्, कथ, रमु, वदी)

पञ्चमविभागः (Unit V) व्याकरणं

10. सन्धयः (हल् सन्धिः, विसर्गसन्धिः)

11. समासाः (अव्ययीभावः, बहुव्रीहिः)

501-B
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 of planes.
2. basic idea of lines, sphere and cones.
3. understand the properties of planes, lines, spheres and cones.
4. express the problems geometrically and then to get the solution.

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; Planes sections of a sphere; Intersection of two spheres; Equation of a circle; Sphere through a given circle; Intersection of a sphere and a line; Power of a point; Tangent plane; Plane of contact; Polar plane; Pole of a 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 form 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

UNIT – V (12 hrs)

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 common vertex.

Co-Curricular Activities(15 Hours)

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

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.Sc Vol 1, by V Krishna Murthy & Others, published by S. Chand & Company, New Delhi.
2. A text Book of Analytical Geometry of Three Dimensions, by P.K. Jain and Khaleel Ahmed, 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 University Press

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. Digital Systems-Principles and Applications 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 and design
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.

DATA STRUCTURES USING C

Semester	Course Code	Course Title	Hours	Credits
II	C2	DATA STRUCTURES USING C	60	3

Course Objectives

To introduce the fundamental concept of data structures and to emphasize the importance of various data structures in developing and implementing efficient algorithms.

Course Learning Outcomes:

Upon successful completion of the course, a student will be able to:

1. Understand available Data Structures for data storage and processing.
2. Comprehend Data Structure and their real-time applications - Stack, Queue, Linked List, Trees and Graph
3. Choose a suitable Data Structures for an application
4. Develop ability to implement different Sorting and Search methods
5. Have knowledge on Data Structures basic operations like insert, delete, search, update and traversal
6. Design and develop programs using various data structures
7. Implement the applications of algorithms for sorting, pattern matching etc

UNIT – I:

Introduction to Data Structures: Introduction to the Theory of Data Structures, Data Representation, Abstract Data Types, Data Types, Primitive Data Types, Data Structure and Structured Type, Atomic Type, Difference between Abstract Data Types, Data Types, and Data Structures, Refinement Stages

Principles of Programming and Analysis of Algorithms: Software Engineering, Program Design, Algorithms, Different Approaches to Designing an Algorithm, Complexity, Big „O“ Notation, Algorithm Analysis, Structured Approach to Programming, Recursion, Tips and Techniques for Writing Programs in „C“

UNIT – II:

Arrays: Introduction to Linear and Non- Linear Data Structures, One- Dimensional Arrays, Array Operations, Two- Dimensional arrays, Multidimensional Arrays, Pointers and Arrays, an Overview of Pointers

Linked Lists: Introduction to Lists and Linked Lists, Dynamic Memory Allocation, Basic Linked List Operations, Doubly Linked List, Circular Linked List, Atomic Linked List, Linked List in Arrays, Linked List versus Arrays

UNIT – III:

Stacks: Introduction to Stacks, Stack as an Abstract Data Type, Representation of Stacks through Arrays, Representation of Stacks through Linked Lists, Applications of Stacks, Stacks and Recursion

Queues: Introduction, Queue as an Abstract data Type, Representation of Queues, Circular Queues, Double Ended Queues- Deques, Priority Queues, Application of Queues

UNIT – IV:

Binary Trees: Introduction to Non- Linear Data Structures, Introduction Binary Trees, Types of Trees, Basic Definition of Binary Trees, Properties of Binary Trees, Representation of Binary Trees, Operations on a Binary Search Tree, Binary Tree Traversal, Counting Number of Binary Trees, Applications of Binary Tree

UNIT – V:

Searching and sorting: Sorting – An Introduction, Bubble Sort, Insertion Sort, Merge Sort, Searching – An Introduction, Linear or Sequential Search, Binary Search, Indexed Sequential Search

Graphs: Introduction to Graphs, Terms Associated with Graphs, Sequential Representation of Graphs, Linked Representation of Graphs, Traversal of Graphs, Spanning Trees, Shortest Path, Application of Graphs.

BOOKS:

1. “Data Structures using C”, ISRD group Second Edition, TMH
2. “Data Structures through C”, Yashavant Kanetkar, BPB Publications
3. “Data Structures Using C” Balagurusamy E. TMH

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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

A. Measurable

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))
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams))
4. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity))

B. General

1. Group Discussion
2. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Programming exercises,
4. Practical assignments and laboratory reports,
5. Observation of practical skills,
6. Individual and group project reports.
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work

Semester	Course Code	Course Title	Hours	Credits
II	C2-P	DATA STRUCTURES USING C LAB	30	2

1. Write a program to read „N“ numbers of elements into an array and also perform the following operation on an array
 - a. Add an element at the begging of an array
 - b. Insert an element at given index of array
 - c. Update a element using a values and index
 - d. Delete an existing element
2. Write a program using stacks to convert a given
 - a. postfix expression to prefix
 - b. prefix expression to postfix
 - c. infix expression to postfix
3. Write Programs to implement the Stack operations using an array
4. Write Programs to implement the Stack operations using Liked List.
5. Write Programs to implement the Queue operations using an array.
6. Write Programs to implement the Queue operations using Liked List.
7. Write a program for arithmetic expression evaluation.
8. Write a program for Binary Search Tree Traversals
9. Write a program to implement dequeue using a doubly linked list.
10. Write a program to search an item in a given list using the following Searching Algorithms
 - a. Linear Search
 - b. Binary Search.
11. Write a program for implementation of the following Sorting Algorithms
 - a. Bubble Sort
 - b. Insertion Sort
 - c. Quick Sort
12. Write a program for polynomial addition using single linked list
13. Write a program to find out shortest path between given Source Node and Destination Node in a given graph using Dijkstrar"s algorithm.
14. Write a program to implement Depth First Search graph traversals algorithm
15. Write a program to implement Breadth First Search graph traversals algorithm

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:

After successful 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 an 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, TCMPPF)(1hr)
- 1.2 Constraints of Present Dairy Farming and 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 Processing – Ananthkrishnan, 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, Message Composition, 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 and Group 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 – by Raymond 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.

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

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 on solar radiation 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.*