Value Added Courses (VAC)

Course Code	Course Name	Level	L	T	P	C	CIE	SEE	Total	Pre-requisite
241UC010	Indian Cultural Heritage & Fine Arts	**FC**			1	1	100	-	100	-
241PE001	Sports &Yoga	**FC**			1	1	100	-	100	-
241CS004	Internet of Things	**FC**			1	1	100	-	100	-
241CS002	Data Analysis Using Python	IC			2	2	50	50	100	-
241UC011	Employability Skills-I	FC			3	0	100	-	100	-
241UC013	Employability Skills-II	FC			3	0	100	-	100	ES-I
241UC014	Employability Skills-III	IC			3	0	100	-	100	ES-II
241UC015	Employability Skills-IV	IC			3	0	100	-	100	ES-III
241UC016	Employability Skills-V	AC			3	1	100	-	100	ES-IV
Total					**20**	**6**				

INDIAN CULTURAL HERITAGE AND FINE ARTS
(Common to all branches Except Ag. E)

I Semester	L	T	P	C
Course Code: 241UC010	0	0	1	1

Course Outcomes: At the end of the course, students will be able to:

CO1: Apply Communication Skills by participating in various language learning activities on Indian Cultural Heritage.

CO2: Develop cultural understanding and prepare for intercultural citizenship by different activities like role play, drawing, painting etc.

CO3: Describe the different horizons in the field of art and design, skilful use of elements and principles of graphic design.

CO4: Demonstrate their talent using instruments, dance, singing, seminar etc., related to Indian culture

CO5: Recall facts and basic concepts of Indian culture through article writing.

Mapping of Course Outcomes with Program Outcomes:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	-	-	-	-	-	-	1	1	2	-	-
CO2	-	-	-	-	-	-	1	1	2	-	-
CO3	-	-	-	-	-	-	1	1	1	-	-
CO4	-	-	-	-	-	-	1	1	1	-	1
CO5	-	-	-	-	-	-	1	1	1	-	1

Practice:

1. **JAM**(Just a Minute) Sessions on Indian Cultural Heritage (Speaking):
   Explain the importance of JAM sessions and their format.
   Activities:
   Just a Minute: Each student gets 1 minute to speak on a randomly assigned topic related to Indian cultural heritage.
   Topics: Ancient Indian civilization, Indus Valley, Mauryan empires, Gupta empires
2. **Role-plays** on Indian Itihasas and Puranas:
   Overview of Indian Itihasas (Ramayana, Mahabharata) and Puranas
   Activities:

   Preparation: Assign roles and prepare short scripts.
   Role-plays: Students perform their role-plays
   Topics: Ramayana, Mahabharata, Vishnu Purana, Shiva Purana, Skanda Purana
3. P**ainting:** Competition on ancient Indian Architectures and civilizations:
   Brief on ancient Indian architectures and civilizations
   Activities:

Painting Activity: Students create paintings based on the theme.
Topics: Temple Architecture (Nagara, Dravidian, Vesara), Mughal Architecture (TajMahal, Fathepur Sikhri, Humayun's Tomb)

Exhibition: Display paintings related to ancient Indian architectures and civilizations.

4. **Talent shows in singing** patriotic songs
   Explain the format and purpose of the talent show on patriotic songs.

   Activities:
   Talent Performances: Students present their talent (Singing).
   Topics: Patriotic songs
5. **Story Narration** about Ancient Historical Issues.
   Importance of storytelling in preserving history
   Activities:

   Story Narration: Students narrate stories on assigned ancient historical issues.
   Topics: Hinduism (Festivals and Temples), Buddhism Spread and Impact in Asia), Jainism (Philosophy of Non-violence, Sikhism (Teaching of the Gurus)
6. **Poster Presentations** on Epics, Puranas and Architecture of the Indian Temple.
   Guidelines for creating effective posters on Epics, Puranas and Architecture of the Indian Temple
   Activities:

   Preparation: Students create posters on assigned topics.
   Presentations: Students present their posters.
   Topics: Temple Architecture and Sculpture (Iconography, Dravidian, Nagara, Vesara)
7. **Seminars** on the importance and significance of our Indian Culture. (Speaking)
   Importance of seminars and public speaking tips on our Indian Culture
   Activities:

   Seminars: Students deliver seminars on assigned topics.
   Topics: Indian Classical Dance, Indian Music traditions, Indian festivals and Fine arts, Indian Handicrafts
8. **A. Craft works-** Displaying different models of architectures, Overview of different Indian architectural styles
   B. Musical instruments: Performance of the talent in playing different musical instruments, Introduction to various Indian musical instruments
   C. Dancing: Performance on various dance forms of Indian culture, Brief on various Indian dance forms of Indian culture
   Activities:

   Craft Activity: Students create and display models of architectures.
   Exhibition: Display and discuss the craft works.
   Performances: Students performs using different instruments.
   Appreciation & Discussion: Acknowledge performances and discuss instruments.

Performances: Students perform different dance forms.
Topics: Indian Handicrafts, Musical Instruments (Veena, Sitar, Tabla, Mridangam), **Indian Classical Dance** (Bharathanatyam, Kuchipudi, Kathakhali, Khathak, Odissi)
(Note: Students can choose either Craft works, Musical instruments or dancing activities)

9. **Drawing:** Theme based art on Indian Religious Traditions.
   Overview of drawing techniques and themes on Indian Religious Traditions
   Activities:

   Drawing Activity: Students create drawings based on historical themes.
   Topics: Rituals, Festivals and Temples (Hinduism, Buddhism, Jainism, Sikhism etc.)

   Exhibition: Display drawings and provide feedback.
10. **Article Writing:** On Indian Ancient Period/Heritage and Culture.(Writing)
    Guidelines for writing informative articles on Indian Ancient Period / Heritage and Culture
    Activities:
    Topics: Indian Culture, Indian art architecture and monuments, Indian Civilization, Indian Philosophy, Indian religious Traditions

    Writing Activity: Students write articles on assigned topics.

Reference Books:

1. History of India and Culture (Upto 1964)-Telugu Academy, ISBN-*1*3: 978-8*1*8*1*80434*1*ISBN-*1*0: 8*1*8*1*80434*1*
2. R.S. Sharma., Ancient India, New Delhi, 1996, ISBN-*1*3: 978-0-19-568785-9ISBN-*1*0: 0-19-568785-X
3. D.D. Kosambi, the Culture and Civilization of Ancient India in Historical Outline, Vikas Publishing, 1965, ISBN-1000653471, ISBN-9781000653472
4. V. Rama Krishna, Social Reform Moment Andhra, Vikas Publications, ISBN–0706923499, ISBN–9780706923490
5. Romila Thaper., History of India, Penguin, 1965, ISBN: 978-0-14-194976-5

Evaluation Guidelines:

- Each activity carries 10 marks for day to day assessment.
- The Continuous evaluation will be awarded based on day to day performances.

Sports & Yoga
(CE, EEE, ME, ECE, CSE, IT, AIML, CSE (DS), PT, Min. E)

Course Code: 241PE001	**L**	**T**	**P**	**C**
	0	**0**	**1**	**1**

Course Objectives:

The main objective of introducing this course is to make the students understand the importance of sound health and fitness principles asthey relate to better health.

Course Outcomes:

After completion of the course the student will be able to:

CO1: Identify their physical and mental health, including their concentration, motivation, and productivity
CO2: Demonstrate the need for health-related fitness requirements.
CO3: Develop an appreciation of physical activity as a lifetime pursuit and a means to better health.
CO4: Apply current personal fitness levels in their day-to-day lifestyle.
CO5: Recall specific facts about safety measurements, and efficiently use the techniques to minimize the risk of injury

Mapping of Course Outcomes with Program Outcomes

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	-	-	-	-	-	-	-	-	-	-	1
CO2	-	-	-	-	-	-	-	-	-	-	1
CO3	-	-	-	-	-	-	-	-	-	-	1
CO4	-	-	-	-	-	-	-	-	-	-	1
CO5	-	-	-	-	-	-	-	-	-	-	1

Practice:

1. **a) B.M.I (Measurement and BMI Chart Preparation)**
   - Height
   - Weight
   - Age

   Activities:
   - Students are informed to find out BMI for any 5 members of different age groups.

   b) AAHPER Fitness Test (American Alliance for Health, Physical Education and Recreation)

Category 1	**Category 2**
50mts	Pull Ups
Standing Broad Jump	Sit-ups
Shuttle Run	600 Mts

Activities:

- Students are informed to find out BMI for any 5 members of different age groups.
- Students are instructed to perform all activities under Category-I (or) II

2. **Surya Namaskar**
   - **Pranamasana (Prayer Pose)**
   - **Hasta Uttanasana (Raised Arms Pose)**
   - **Hasta Padasana (Hand to Foot Pose)**
   - **Ashwa Sanchalanasana (Equestrian Pose)**
   - **Dandasana (Stick Pose)**
   - **Ashtanga Namaskara (Salute with Eight Parts or Points)**
   - **Bhujangasana (Cobra Pose)**
   - **Parvatasana (Mountain Pose)**
   - **Ashwa Sanchalanasana (Equestrian Pose)**
   - **Hasta Padasana (Hand to Foot Pose)**
   - **Hasta Uttanasana (Raised Arms Pose)**
   - **Pranamasana (Prayer Pose)**

Activities:

- Students are given practice on all Surya Namaskar Asanas.
- Students must participate and perform any 2 or 3 Surya Namaskar Asanas

3. **Asanas**
   - Standing Asanas
   - Sitting Asanas
   - Supine Postures
   - Prone Asanas

Activities:

- Students are given practice on all above Asanas.
- Students must participate and perform any 2 Asanas.

4. **CPR (**Cardiopulmonary resuscitation)

Activities:

- Practical demo session on CPR by a healthcare professional.
- Quiz is conducted on the above topic.

5. **Games Activities**
   - Kabaddi
   - Volleyball
   - Basketball
   - Tennikoit
   - Badminton
   - Hand ball
   - Kho Kho

Activities:

- Practice is given in all the above major games.
- Students must participate and perform in any one major game.

6. **JCR Test (Jumping, Chinning, Running)**
   - 100mts-(Shuttle Run)
   - Vertical Jump
   - Chin up

   Activities:
   - Practice is given in all the above.
   - Students must participate and perform in anyone activity.
7. **Kriyas**
   - Dhouti,
   - Bastirika
   - Neti,
   - Navali
   - Kapalabati
   - Trataka
   - Nauli

   Activities:

   - Practice is given in all the above Kriyas.
   - Students must participate and perform in any two Kriya's.

8. **Sports Activities: (Athletics Throws & Jumps)**
   - Shotput
   - Discuss
   - Long jump

   Activities:

   - Practice is given in all the above Sports activities.
   - Students must participate and perform in any one activity.

9. **Pranayama**
   - **Nadi Shodhana (Alternate Nostril Breathing**
   - **Ujjayi Pranayama (Victorious Breath)**
   - **Kapalabhati (Skull Shining Breath)**
   - **Bhastrika Pranayama (Bellows Breath)**
   - **Sheetali Pranayama (Cooling Breath)**
   - **Sheetkari Pranayama (Hissing Breath**
   - **Bhramari Pranayama (Bee Breath)**
   - **Sitali Pranayama (Cooling Breath)**

   Activities:

- Practice is given in all the above Pranayama's.
- Students must practice and perform any 2 Pranayama's.

10. Sports Activities :(Athletics-Runs)

- 100Mts
- 400Mts
- 5000Mts

Activities:

- Practice is given in all the above activities.
- Students must practice and perform any 1 activity.

Reference Books:

1. Health & Wellness, Yoga Education, Sports and Fitness-S.Chand Publication-2024. ISBN: 9789358704372
2. Health and Wellness, Gordon Edlin, Eric Golanty. 14th Edn. Jones & Bartlett Learning 2022 ISBN: 978-1284235197
3. First Aid- Dr.Rajeev Sharma. ISBN: 9788171826933
4. Health and Fitness-Bharani Publications. ISBN: 978-0880115995
5. The Sports Rules Gordon Edlin, Eric Golanty. / Human Kinetics with Thomas Hanlon. -- 3rd ed. HumanKinetics, Inc.
6. A Text book Yoga-Dr.Guneet Monga Bhargava Richa Talreja

General Guidelines:

- Participation in all activities is mandatory.
- Students should carry proper sports dress to carry out Yoga Practice and regular Sports activities.

Evaluation Guidelines:

- The Continuous Internal Evaluation for this course is 100 marks.
- Each activity shall be evaluated by the concerned teacher for 10 marks as day-to-day performance. For 10 activities the students will be evaluated for 100 marks.

Internet of Things

(Common to EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT & Min.E)

	L	T	P	C
Course Code: 241CS004	**0**	**0**	**1**	**1**

Course Outcomes:
At the end of the course, student will be able to:

CO1: Choose the sensors and actuators for an IoT application.
CO2: Select protocols for a specific IoT application**.**
CO3: Utilize the cloud platform and APIs for IoT application.
CO4: Experiment with embedded boards for creating IoT prototypes.
CO5: Design a solution for a given IoT application.
t

Mapping of Course Outcomes with Program Outcomes:

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
CO1	2	1			1						
CO2	1	2	1								
CO3	1	1	2	1							
CO4	1	2			1						1
CO5	1	2	2	1	2			1	1	1	1

Mapping of Course Outcomes with Program Specific Outcomes:

CO/PSO	PSO1	PSO2
CO1	1	
CO2	2	
CO3	2	
CO4	2	
CO5	2	

Practice:

1. Study of active and passive sensors: Light, Temperature and Humidity, Force, Pressure, Speed, Sound etc

2. Study of Arduino, Raspberry Pi, Beagle Bone

3. Select any one development board (Ex. Arduino or Raspberry Pi) to control LED and Motor

4. Demonstrate the working of temperature and humidity sensor, level sensor, moisture sensor, distance sensor

5. Using the same board as in (3), read data from a sensor. Experiment with both analog and digital sensors.

6. Write a program to Control any two actuators connected to the development board using Bluetooth.
7. Implement Socket communication to Read data from sensor and send it to a requesting client.

8. Create any cloud platform account, explore IoT services and register a thing on the platform.

9. Write a program to push sensor data to cloud

10. Write a program to Control an actuator through cloud

11. Access the data pushed from sensor to cloud and applies any data analytics or visualization services

12. Identify a problem in your local area or college which can be solved by integrating the things you learned so far and create a prototype to solve it (Mini Project).

Additional Practice:

1. **Lighting as a service**: Smart Lightening for smart homes and smart cities helps in saving energy by adapting the lighting to ambient conditions and switching on/off or dimming the lights when needed.
   Simulate the energy savings environment with LED lights or IP enabled lights or anyother variants by monitoring human movements and their environments and controlling the lights accordingly

2. **Intelligent Traffic systems**: Smart cities have vital aspects in relation with sub domains like smart parking, surveillance, emergency response and many more. Among all, smart traffic systems or intelligent traffic systems are one such criticalinfrastructure needed.
   Design an automated environment that controls vehicle traffic on busy roads. Alsoinclude the emergency control and response mechanisms (like ambulance) at signalposts

3. **Smart Parking**: Finding a parking space during rush hours in crowded cities can be time consuming and frustrating.
   Design a prototype smart parking system based on sensor technology with anyone ofthe following features: Space allocation or remote parking monitoring or automatedguidance

4. **Air Pollution Monitoring**: IoT based air pollution monitoring systems can monitor emission of harmful gases like CO2, CO, NO etc by factories and automobiles.
   Simulate an environment with help of any gaseous or meteorological sensors thatchecks level of gases in the air and specify whether it is dangerous or not

Reference Books:

1 An Introduction to Internet of Things, Connecting devices, Edge Gateway and Cloud with Applications, Rahul Dubey, Cengage, 2019, ISBN: 9789353501020
2 Adrian McEwen, Designing the Internet of Things, Wiley Publishers, 2013, ISBN:

978-1118430620
3 IoT Fundamentals, Networking Technologies, Protocols and Use Cases for the Internet of Things, David Hanes, Gonzalo Salgueiro, Patrick Grossetette, rob Barton, Jerome Henry, CISCO, Pearson, 2018, ISBN: 9789386873743
4 Designing the Internet of Things, Adrian McEwen and Hakim Cassimally, Wiley, ISBN: 978-1-118-43065-1
5 Internet of Things by Vengalapudi Appalakonda, prof.Sangareddy B.Krutakoti from Scientific International Publishing House ,First Edition 2024, ISBN: 978-93-6132-958-6

Web Links:

1 https://iotvirtuallab.github.io/vlab/Experiments/index.html
2 https://onlinecourses.nptel.ac.in/noc21_cs17/preview
3 https://www.electronicsforu.com/electronics-projects/internet-of-things-iot
4 https://www.coursera.org/specializations/iot
5 https://projecthub.arduino.cc/
6 https://www.edureka.co/iot-certification-training

Data Analysis Using Python
(Common to CE, EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT & Min.E)

	L	T	P	C
Course Code: 241CS002	**0**	**0**	**2**	**2**

Course Outcomes:
At the end of the course, student will be able to:

CO1:	Make use of control statements and data structures to solve problems
CO2:	Apply OOPs concepts and files to develop applications.
CO3:	Explain the data collection, management and storage for processing using Numpy
CO4:	Make use of Pandas to create and manipulate data structures like Series and DataFrames.
CO5:	Create plots using Matplotlib library for better visualization.

Mapping of Course Outcomes with Program Outcomes:

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
CO1	2	2	1		2			1	1		1
CO2	1	2	3		2			1	1		1
CO3	1	3	2		2			1	1		1
CO4	1	2	3		2			1	1		1
CO5	1	2	3		2			1	1		1

Mapping of Course Outcomes with Program Specific Outcomes:

CO/PSO	PSO1	PSO2
CO1	2	
CO2		2
CO3	2	
CO4		1
CO5	2	
CO6		

UNIT-I

Introduction: History of Python, Applications of Python,Running Python Scripts, Variables, Assignment, Keywords, Input-Output, Indentation, Operators and Expressions, Control Flow- if, if-elif-else, for, while, break, continue, Data Structures Lists - Operations, Slicing, Methods; Tuples, Sets, Dictionaries, Sequences. Comprehensions, Defining Functions, Calling Functions, Passing Arguments.

Practice:

1. Write a program that asks the user for a weight in kilograms and converts it to pounds. There are 2.2 pounds in a kilogram.
2. Write a program that uses a for loop to print the numbers 8, 11, 14, 17, 20, . . . , 83, 86, 89.
3. Split a string into array of characters in Python.
4. Write a Python program to get the largest number from a list.
5. Write a Python program to calculate the nth Fibonacci number using a function.

UNIT-II

Object Oriented Programming: Concept of class, object and instances, Constructor, class attributes and destructors, Real time use of class in live projects, Inheritance , overlapping and overloading operators, Adding and retrieving dynamic attributes of classes, Programming using Oops support Design with Classes: Objects and Classes, Data modeling Examples, Errors and Exceptions: Syntax Errors, Exceptions, Handling Exceptions, Raising Exceptions, Userdefined Exceptions.

Practice:

1. Write a Python program that defines a Car class with attributes like make, model, and year, and methods like start() to start the car and stop() to stop it.
2. Write a Python program that demonstrates inheritance by creating a base class Animal and derived classes like Dog, Cat, etc., each with their specific behaviors.
3. Define a base class called Animal with a method make_sound(). Implement derived classes like Dog, Cat, and Bird that override the make_sound() method to produce different sounds. Demonstrate polymorphism by calling the method on objects of different classes.
4. Write a Python program that demonstrates error handling using the try-except block to handle division by zero.

UNIT-III

Numpy: Introduction to numpy, creating arrays, using arrays and scalars, Indexing Arrays, Array transposition, Universal array function, Array Processing, Array Input and Output, Examples.

Practice:

1. Write a NumPy program using methods – info, add, array, all, greater, greater_equal, less and less_equal,equal, allclose, zeros, ones, linspace, tolist.
   a. To get help on the add function
   b. To test whether none of the elements of a given array is zero.
   c. To create an element-wise comparison (greater, greater_equal, less and less_equal, equal, equal within a tolerance) of two given arrays.
2. Write a NumPy program using NumPy methods - max, min, argmax, argmin, argmax, repr, count, bincount, unique.
   a. To extract all numbers from a given array which are less and greater than a specified number.
   b. To find the indices of the maximum and minimum numbers along the given axis of an array.

UNIT-IV

Pandas: Exploring Data using Series, Exploring Data using DataFrames, Index objects, Re index, Drop Entry, Selecting Entries, Data Alignment, Rank and Sort, Summary Statistics, Data Munging in Python using Pandas, Index Hierarchy, Example Problem.

Practice:

1. Pandas DataSeries:
   a. Write a Pandas program to create and display a one-dimensional array-like object containing an array of data using Pandas module.
   b. Write a Pandas program to convert a Panda module Series to Python list and it's type.
2. Pandas DataFrames:
   Consider Sample Python dictionary data and list labels:
   exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily','Michael', 'Matthew', 'Laura', 'Kevin', 'Jonas'],
   'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
   'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
   'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
   labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']
   a. Write a Pandas program to create and display a DataFrame from a specified dictionary data which has the index labels.
   b. Write a Pandas program to change the name 'James' to 'Suresh' in name column of the DataFrame.
   c. Write a Pandas program to insert a new column in existing DataFrame. iv)Write a Pandas program to get list from DataFrame column headers. v)Write a Pandas program to get list from DataFrame column headers.

UNIT-V

Introduction to Matplotlib: Introduction to Matplotlib Library, Plotting Data: Line Plots, Scatter Plots, Customizing Plots, Common Types of Plots Bar Charts: Simple Bar Plot, Horizontal Bar Plot, Advanced Plot Customizations.

Practice:

1. Create a series of plots to analyze a given dataset.
2. Generate a subplot layout with various plot types (scatter, line, bar).
3. Visualize time-series data and customize axis labels and date formats.
4. Create a 3D plot.

Additional Practice:

1. Write a program to find the greatest number that can be formed by using given set of numbers.
2. Write a Python program to develop a GUI based Calculator application.
3. Write a Python program to develop a GUI based todo list application for adding, deleting and updating tasks.

Reference Books:

1 Python for Everybody Exploring Data in Python 3, Charles Russell Severance, SueBlumenberg, ISBN:978-1530051120

2 Code with Python: Suresh Sundaradasu,S.Rama Sree, ISBN: 978-9355017574
3 Python Programming, Dr.Maganti Venkatesh,Monelli Ayyavaraiah,Niveditha Ravindra Pandey, NeethumolSabu,Charulatha Publications ISBN:978-93-5577-695-6
4 Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython, Wes McKinney, O'Reilly Media, ISBN**:** 978-1491957660

Web Links:

1 https://www.hackerrank.com/
2 https://www.codechef.com/
3 https://www.topcoder.com/
4 https://code-cracker.github.io/

Employability Skills- I

(Common to CE, EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT, Min.E & Agri.E)

	L	T	P	C
Course Code: 241UC011	**0**	**0**	**3**	**0**

Aptitude:
Number System, LCM & HCF, Ratio and Proportion, Averages

Reasoning:
Number Series, Letter Series, Number Analogy, Letter Analogy, Odd Man Out, Logical Sequence of Words.

Verbal:
Introduction to soft skills, how to improve communication? Parts of Speech, Mind your language towards better English, Vocabulary Expansion

Text Books

1. Quantitative Aptitude –Dr. R. S. Aggarwal, S CHAND, **ISBN:** 9789355012326
2. A Modern Approach to Verbal and Non-Verbal Reasoning – Dr. R. S. Aggarwal, **ISBN**-13: 978-9352832163.
3. Quick Learning Objective General English – Dr. R. S. Aggarwal, S CHAND, **ISBN**-13: 978-8121922111.

Reference Books:

1. Quantitative Aptitude – Abhijit Guha Mc Graw Hill Publications, **ISBN-13** 9789389957426.
2. How To Crack Test of Reasoning Verbal , Non-Verbal & Analytical – Jaikishan and Premkishan,Arihant Publications, NEW EDITION 2024, **ASIN : B0CRQ9BVBC**.
3. A New Approach to Objective English – R. S. Dhillon DGP Publications, ISBN-13: **978-8186651032**.

Web Links:

1. www.indiabix.com
2. www.bankersadda.com

Employability Skills- II

(Common to CE, EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT, Min.E & Agri.E)

	L	T	P	C
Course Code: 241UC013	**0**	**0**	**3**	**0**

Aptitude:
Problems on Ages, Partnership, Percentages, Profit and Loss

Reasoning:
Coding and Decoding, Ranking Test, Alphabet Test, Direction Test

Verbal:
Written communication skill practice, Grammatical use, Concept of 4 step method for presentation, Present Tense

Text Books

1. Quantitative Aptitude –Dr. R. S. Aggarwal, S CHAND, **ISBN** · 9789355012326
2. A Modern Approach to Verbal and Non-Verbal Reasoning – Dr. R. S. Aggarwal, **ISBN**-13. 978-9352832163.
3. Quick Learning Objective General English – Dr. R. S. Aggarwal, S CHAND, **ISBN**-13. 978-8121922111.

Reference Books:

1. Quantitative Aptitude – Abhijit Guha Mc Graw Hill Publications, **ISBN-13** 9789389957426.
2. How To Crack Test of Reasoning Verbal , Non-Verbal & Analytical – Jaikishan and Premkishan,Arihant Publications, NEW EDITION 2024, **ASIN : B0CRQ9BVBC**
3. A New Approach to Objective English – R. S. Dhillon DGP Publications, isbn-13:978-8186651032

Web Links:

1. www.indiabix.com
2. www.bankersadda.com

Employability Skills- III

(Common to CE, EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT, Min.E & Agri.E**)**

	L	T	P	C
Course Code: 241UC014	**0**	**0**	**3**	**0**

Aptitude:
Simple Interest, Compound Interest, Time and Work, Pipes and Cisterns

Reasoning:
Blood Relations, Calendar, Clocks, Cubes and Dice, Coded Inequalities

Verbal:
Grammar in use, Group discussion, Reading Comprehension, Past Tense, Future Tense

Text Books

1. Quantitative Aptitude –Dr. R. S. Aggarwal, S CHAND, ISBN: 9789355012326
2. A Modern Approach to Verbal and Non-Verbal Reasoning – Dr. R. S. Aggarwal, ISBN-13: 978-9352832163
3. Quick Learning Objective General English – Dr. R. S. Aggarwal, S CHAND, ISBN-13: 978-8121922111

Reference Books:

1. Quantitative Aptitude – Abhijit Guha Mc Graw Hill Publications, ISBN-13: 9789389957426
2. How To Crack Test of Reasoning Verbal , Non-Verbal & Analytical – Jaikishan and Premkishan,Arihant Publications, NEW EDITION 2024, **ASIN : B0CRQ9BVBC**.
3. A New Approach to Objective English – R. S. Dhillon DGP Publications, ISBN-13: 978-8186651032

Web Links:

1. www.indiabix.com
2. www.bankersadda.com

Employability Skills- IV

(Common to CE, EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT, Min.E & Agri.E)

	L	T	P	C
Course Code: 241UC015	**0**	**0**	**3**	**0**

Aptitude:
Time, Speed and Distance, Problems on Trains, Boats and Streams, Mensuration - I, Mensuration – II

Reasoning:
Venn Diagrams, Syllogisms, Non - Verbal Reasoning, Seating Arrangement

Verbal:
Grammatical use, Self-introduction, Letters, E-Mail & Report writing, Error correction, Effective Communication

Text Books

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Employability Skills- V

(Common to CE, EEE, ME, ECE, CSE, IT, AIML, CSE(DS), PT & Min.E)

	L	T	P	C
Course Code: 241UC016	**0**	**0**	**3**	**1**

Aptitude:
Permutations and Combinations, Probability, Data Interpretation, Logarithms, Statistics

Reasoning:
Puzzle Tests, Eligibility Test, Data Sufficiency, Statements – Arguments, Statements – Assumptions, Statements - Course of Action, Statements – Conclusions

Verbal:
Interview skills, Grammar in use, Interpersonal Skills, Negotiation Skills, Social Skills, Problem-Solving Skills, Time Management Skills

Text Books

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