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1704CP108- COMMUNICATION SKILL LAB – **I**   **L T P C**
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OBJECTIVES:
- To prepare students for taking BEC Vantage level examination which is an International Benchmark for English language proficiency of Cambridge English Language Assessment (CELA).
- To communicate for essential business needs.
- To acquire skills for using English in workplace effectively.

UNIT I GRAMMAR AND VOCABULARY   **10**

Comparison of adjectives – forming questions – asking complex questions – expressing purpose and function – tenses – conditionals – time statements – modal verbs – active and passive voice – articles – direct and indirect speech – cause and effect – relative pronouns – expressions followed by – ing forms – countable / uncountable – acronyms – marketing terms / vocabulary – financial terms – collocations – discourse markers.

UNIT II LISTENING   **7**

Purposes of listening – features of listening texts – potential barriers to listening – specific listening skills – strategies to use when listening– distinguishing relevant from irrelevant information – gap filling exercise – multiple-choice options – note completion – matching and multiple choice questions – listening for specific information, gist, topic, context and function.

UNIT III SPEAKING   **10**

Word and sentence stress – clear individual sounds – turn taking – initiating and responding - intonation patterns – pronunciation – mother tongue intrusion– conversation practice – turn-taking and sustaining the interaction by initiating and responding appropriately.

UNIT IV READING   **9**

Purposes of reading – potential barriers to reading – paraphrasing – identifying facts and ideas – skimming and scanning for information – matching statements with texts– spotting reference words – understanding text structure – understanding the ideas in a text – distinguishing between the correct answer and the distractor – understanding cohesion in a text – deciphering contextual meaning of words and phrases – cloze – proof reading – transcoding.

UNIT V WRITING   **10**

Paragraphing a text – using appropriate connectives – editing practice –Longer Documents: writing a proposal.

                                                          Total: 45 PEROIDS

OUTCOMES:
The students will be able to

CO1   Enable students to get International recognition for work and study.

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CO2   Use English confidently in the International business environments.
CO3   To take part in business discussion.
CO4   To read company literature, listen and understand business conversations
CO5   To write formal and informal business correspondences

REFERENCES:

1. Guy Brook-Hart, BEC VANTAGE: BUSINESS BENCHMARK Upper-Intermediate – Student's Book, 1st Edition, Cambridge University Press, New Delhi, 2006.

2. Cambridge Examinations Publishing, Cambridge BEC VANTAGE – Self-study Edition, Cambridge University Press, UK, 2005.

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1704CP206-**ADVANCED DATABASE LABORATORY**   **L T P C**
                                                     0 0 4 2

OBJECTIVES :

To study and implement the basic SQL commands.
To implement the database design in PL/SQL.
To store different types of data in a database and retrieve it from a front end.

DISTRIBUTED DATABASE

1. Consider a distributed database for a bookstore with 4 sites called S1, S2, S3 and S4.

   Consider the following relations:

   Books (ISBN, primary Author, topic, total Stock, price)

   Book Store (store No, city, state, zip, inventoryValue) Stock

   (store No, ISBN, Qty)

   Total Stock is the total number of books in stock and inventory Value is the total inventory value for the store in dollars.

   Consider that Books are fragmented by price amounts into: F1:

   Books: price up to $20

   F2: Books: price from $20.01 to $50 F3:

   Books: price from $50.01 to $100 F4:

   Books: price $100.01 and above

   Similarly, Book Stores are divided by ZIP codes into:
   S1: Bookstore: Zip up to 25000 S2: Bookstore: Zip 25001 to 50000

   S3: Bookstore: Zip 50001 to 75000

   S4: Bookstore: Zip 75001 to 99999

   Task: Write SQL query for the following

   1. Insert and Display details in each table.

   2. Find the total number of books in stock where price is between $15 and $55.

   3. Update the book price of book No=1234 from $45 to $55 at site S3.

   4. Find total number of book at site S2.

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2. Implement deadlock detection algorithm for distributed database using wait-for graph and test with the following information.

Consider five transactions T1, T2, T3, T4 and T5 with T1 initiated at site S1 and spawning an agent at site S2 T2 initiated at site S3 and spawning an agent at site S1 T3 initiated at site S1 and spawning an agent at site S3 T4 initiated at site S2 and spawning an agent at site S3 T5 initiated at site S3

The locking information for these transactions is shown in the following table

Transactions	Data items locked by transactions	Data items transaction is waiting for	Site involved in operations
T1	X1	X8	S1
T1	X6	X2	S2
T2	X4	X1	S1
T2	X5	-	S3
T3	X2	X7	S1
T3	-	X3	S3
T4	X7	-	S2
T4	X8	X5	S3
T5	X3	X7	S3

Produce local wait for graph for each of the sites and construct global wait for graph and check for dead lock.

OBJECT ORIENTED DATABASE:

3. A University wants to track persons associated with them. A person can be an Employee or Student. Employees are Faculty, Technicians and Project associates. Students are Full time students, Part time students and Teaching Assistants.
   a) Design an Enhanced Entity Relationship (EER) Model for university database.

Write OQL for the following
   i.   Insert details in each object.
   ii.   Display the Employee details.
   iii. Display Student Details.
   iv.   Modify person details.
   v.   Delete person details.
   b)   Extend the design by incorporating the following information.
   Students are registering for courses which are handled by instructor researchers (graduate students). Faculty are advisors to graduate students. Instructor researchers' class
is a category with super class of faculty and graduate students. Faculty are having sponsored research projects with a grant supporting instruction researchers. Grants are sanctioned by

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different agencies. Faculty belongs to different departments. Department is chaired by a faculty. Implement for the Insertion and Display of details in each class.

PARALLEL DATABASE:

4. Consider the application for University Counselling for Engineering Colleges. The college, department and vacancy details are maintained in 3 sites. Students are allocated colleges in these 3 sites simultaneously. Implement this application using parallel database [State any assumptions you have made].
5. There are 5 processors working in a parallel environment and producing output. The output record contains college details and students mark information. Implement parallel join and parallel sort algorithms to get the marks from different colleges of the university and publish 10 ranks for each discipline.

ACTIVE DATABASE:

6. Create triggers and assertions for Bank database handling deposits and loan and admission database handling seat allocation and vacancy position. Design the above relational database schema and implement the following triggers and assertions.
   a. When a deposit is made by a customer, create a trigger for updating customers account and bank account
   b. When a loan is issued to the customer, create a trigger for updating customer's loan account and bank account.
   c. Create assertion for bank database so that the total loan amount does not exceed the total balance in the bank.
   d. When an admission is made, create a trigger for updating the seat allocation details and vacancy position.

DEDUCTIVE DATABASE:

7. Construct a knowledge database for kinship domain (family relations) with facts. Extract the following relations using rules.
Parent, Sibling, Brother, Sister, Child, Daughter, Son, Spouse, Wife, husband, Grandparent, Grandchild, Cousin, Aunt and Uncle.

WEKA TOOL:

8. Work with Weka tool classification and clustering algorithms using the given training data and test with the unknown sample. Also experiment with different scenarios and large data set

RID	Age	Income	Student	Credit_rating	Class: buys_computer
1	youth	high	no	fair	no
2	youth	high	no	excellent	no

3	middle_aged	high	no	fair	yes
4	senior	medium	no	fair	yes
5	senior	low	yes	fair	yes
6	senior	low	yes	excellent	no
7	middle_aged	low	yes	excellent	yes
8	youth	medium	no	fair	no
9	youth	low	yes	fair	yes
10	senior	medium	yes	fair	yes
11	Youth	medium	yes	excellent	yes
12	middle_aged	medium	no	excellent	yes
13	middle_aged	high	yes	fair	yes
14	senior	medium	no	excellent	no

QUERY PROCESSING

9. Implement Query Optimizer with Relational Algebraic expression construction and execution plan generation for choosing an efficient execution strategy for processing the given query.

Also design employee database and test the algorithm with following sample queries.
   a) Select empid, empname from employee where experience > 5
   b) Find all managers working at London Branch

XML

10. Design XML Schema for the given company database

> Department (deptName, deptNo, deptManagerSSN, deptManagerStartDate, deptLocation)
> Employee (empName, empSSN, empSex, empSalary, empBirthDate, empDeptNo, empSupervisorSSN, empAddress, empWorksOn) Project (projName, projNo, projLocation, projDeptNo, projWorker)

a. Implement the following queries using XQuery and XPath

   i. Retrieve the department name, manager name, and manager salary for every department'
   ii. Retrieve the employee name, supervisor name and employee salary for each employee who works in the ResearchDepartment.
   iii. Retrieve the project name, controlling department name, number of employees and total hours worked per week on the project for each project.
   iv. Retrieve the project name, controlling department name, number of employees and total hours worked per week on the project for each project with more than one employee working on it
b. Implement a storage structure for storing XML database and test with the above schema.

Total: 60 PERIODS

OUTCOMES :

CO1   Work on distributed databases
CO2   Create and work on object oriented databases and Parallel Database

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CO3	Experiment on active database
CO4	Explore the features of deductive database
CO5	To work on weka tool for clustering and classification

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<table>
<tr><td>1704CP207-TECHNICAL SEMINAR</td><td>L T P C
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OBJECTIVES:
- To expose students to the real working environment and get acquainted with the organization
- To set the stage for future recruitment by potential employers.Structure, business operations and administrative functions.

The students are expected to make a presentation on the state of research on a particular topic based on current journal publications in that topic. A faculty guide is to be allotted and he / she will guide and monitor the progress of the student and maintain attendance also. Students are encouraged to use various teaching aids such as over head projectors, power point presentation and demonstrative models.

OUTCOMES:
1. Apply effective strategies in literature searches using libraries resources, other e-databases.
2. Critical thinking within Seminar is grounded on the processes of analysis, synthesis and evaluation necessary to read with understanding.

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1704CP208- Communication Skills Lab II

L T P C
1 0 2 2

OBJECTIVES :
- To prepare students for taking BEC Vantage level examination conducted by the Cambridge English Language Assessment (CELA).
- To communicate appropriately in business contexts.
- To acquire skills for using English in business environment.

UNIT I SPEAKING   **6**

Non-verbal communication – agreeing / disagreeing, reaching decisions, giving and supporting opinions – making mini presentations – extending on conservations – collaborative task – tongue twisters.

UNIT II WRITING   **9**

Business letters – fax – Shorter Documents: e-mail - memo – message - note – report writing – formal / informal styles.

Total: 15 Periods

OUTCOMES :
The students will be able to
- Enable students to acquire business terms for communication.
- Use English confidently in the business contexts.
- Take part in business discussion and write formal and informal business   correspondences.

REFERENCES
1. Guy Brook-Hart, BEC VANTAGE: BUSINESS BENCHMARK Upper-Intermediate – Student's Book, 1st Edition, Cambridge University Press, New Delhi, 2006.
2. Cambridge Examinations Publishing, Cambridge BEC VANTAGE – Self-study Edition, Cambridge University Press, UK, 2005.