



Prahladrai Dalmia Lions College Commerce & Economics
(Government Aided & Affiliated to University of Mumbai & AICTE, New Delhi)
NAAC Re-accredited with 'A' Grade (III Cycle) ISO 21001:2018 Certified
University of Mumbai Recognised Research Centre in Accountancy, Commerce & Business Economics
A Government Approved Hindi Linguistic Minority Institute

ATKT SEMESTE II

Internal Examination Oct., 2026.

BSc.(Information Technology), NEP BATCH

DATE - 6/10/2026

INSTRUCTIONS FOR THE STUDENTS HAVING ATKT IN INTERNALS:

1. **Date of Submission of the Projects- 9th October, 2026 (Timings 11:30 am sharp)**
2. **Reporting time for students: at least 10 minutes before the mentioned time. Venue: 3rd floor staff room). Please meet Dr. Rupali Mishra.**
3. Students have to be present in person for the submission.
4. Submission of projects to be done on proper A4 size paper, handwritten by the candidate himself only. The Front page should contain details of Roll no, Name of the student, Semester, Subject.
5. **Print out of the questions uploaded should be attached along with the project. Students should also enclose a photocopy of the ATKT fee paid receipt along with each of his projects.**
6. On the date of submission there will be a viva voce on the given questions/topics.
7. If the student fails to present himself on the given date and time he will be marked ABSENT for the said subject.
8. **Any Submissions after the above mentioned date and time will not be accepted and entertained under any circumstances.**
9. **Note: If students have any discrepancies in the below mentioned questions or any queries related to same need to meet Dr. Rupali Mishra on or before 08 October, 2026.**

Dr. Rupali Mishra

(Coordinator - BSc.IT)

CA. Durgesh Kenkre

Exam Convener

Ms. Subhashini Naikar

Vice- Principal, SFC

Prof. (Dr.) D. N. Ganjewar

(Principal)

DI/N-STD/GEN/00

FYBSc.(I.T.) SEMESTER II ATKT INTERNAL PROJECT QUESTIONS

NOTE: Students shall attempt any five questions out of the same as per their subjects allocated and in which they have ATKT only in internals

Subject - Environmental Management & Sustainable Development -II

1. Discuss the constitutional provisions related to environmental protection in India, with special reference to Article 48A and Article 51A(g).
2. Discuss one national and one international case study related to environmental protection and sustainable development
3. Define pollution. Explain the concept of assimilative capacity of the environment and discuss point and non-point sources of pollution with examples
4. Explain Pollution control and management; Waste Management- Concept of 3R (Reduce, Recycle and Reuse) and sustainability
5. Short note on The Wild Life (Protection) Act, 1972; The Water (Prevention and Control of Pollution) Act, 1974; The Forest (Conservation) Act
6. Production processes and generation of wastes
7. Discuss in detail the Volatile Organic compounds (VOCs), Peroxyacetyl Nitrate (PAN)
8. Short Note on Polycyclic aromatic hydrocarbons (PAHs) and Persistent organic pollutants (POPs);

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Subject - Introduction to Marketing

1. What is marketing? Explain the scope of marketing?
2. Explain the concept of market segmentation and features
3. What is promotion? Explain the objectives and elements of promotion
4. Explain the internal factors of pricing
5. Explain the functions and responsibilities of a marketing manager
6. Discuss buying motives and types of buyers in detail.
7. What is selling and explain its features
8. Explain the consumer buying decision process with a suitable example
9. Explain the different concepts of marketing in detail
10. What is Pricing? Explain the factors affecting the pricing

Subject - Foundation of Behavioural skills

1. Discuss the importance of self-awareness and empathy in building healthy interpersonal relationships and emotional well-being.
2. Explain the classification of Value Education, highlighting personal values, social values, moral values, and spiritual values.
3. Describe the process of choice making—Choosing, Cherishing, and Acting—with suitable examples.
4. Discuss the various life skills required for professional life.
5. Discuss the stress management and 4 A's of stress management.
6. Discuss the creative thinking and critical thinking with one example.
7. Write difference between creative thinking and critical thinking
8. Discuss the concepts of IQ, EQ, and SQ. Explain their importance in overall personality

development.

Subject - CC - Co-curricular activities

1. How does scene study aid in understanding a character?
2. Explain the steps involved in developing a character for a role.
3. Discuss the scope of career opportunities in performing arts.
4. Explain the challenges in developing improvisational skills.
5. Explain Career Opportunities in Fine Arts.
6. Elaborate on Evolution of Abstract Art in India.
7. Discuss the Role of Tradition in Shaping Contemporary Art.
8. Elaborate on Themes and Philosophy of S.H. Raza's "Bindu" Series.
9. Explain Materials and Techniques in Ancient Tribal Art.
10. What is Role of Mythology and Nature in Tribal and Folk Art?

Subject - हिन्दी भाषा : कौशल के आधार

1. लेखन कौशल का अथाएववितवरूप
2. लेखन कौशल की उपयोगिता एवविमित्व
3. लेखन कौशल की विहियाँ
4. लेखन कौशल केभदे एवविविशेषताएँ
5. भाषण कौशल का मित्व एवविउपयोगिता
6. भाषण कौशल की विशेषताएँ
7. भाषण कौशल की विहियाँ
8. श्रवण कौशल का अथाएववितवरूप

PL/SQL Practical

1. Write an anonymous PL/SQL block that accepts an employee number, fetches the name and salary using `SELECT . . . INTO`, and displays them. Create a sequence and use it to insert two records into a table.
2. Write PL/SQL programs to print the multiplication table of a number using a `WHILE` loop and a number series in reverse using a `FOR` loop. Show the use of a `GOTO` statement.
3. Write a PL/SQL block using an `IF-ELSIF` ladder to assign grades from marks. Rewrite the same logic using a `CASE` expression.
4. Demonstrate an implicit cursor, using `SQL%FOUND` and `SQL%ROWCOUNT` after an `UPDATE`. Write an explicit cursor that lists employees earning more than a given salary.
5. Write a parameterized cursor that displays the employees of a department passed as a parameter.
6. Declare a record using `%ROWTYPE` and a PL/SQL collection (`VARRAY` or nested table). Populate them and display the contents.
7. Create a stored procedure with `IN` and `OUT` parameters that returns the bonus for a given employee. Show how to call it.
8. Create a function that returns the factorial of a number, and call it from an anonymous block and from a `SELECT` statement.

9. Create a row-level trigger that logs changes to the salary column into an audit table. Explain how a statement-level trigger differs.
10. Write a program that handles a system-defined exception (`NO_DATA_FOUND`) and a user-defined exception (balance below minimum). Create a package with one procedure and one function.

Assembly Language Programming (8085)

1. Write an 8085 program to store 32H in location 4000H and exchange the contents of locations 2000H and 4000H.
2. Write a program to add two 16-bit numbers stored at 4000H–4001H and 4002H–4003H, and store the result at 4004H–4005H.
3. Write a program to find the 1's complement and the 2's complement of a number in memory.
4. Write a program to pack two unpacked BCD digits into one byte, and another to unpack a BCD byte into two digits.
5. Write a program to shift an 8-bit number in register C four bits right. Write another to shift a 16-bit number in HL one bit left.
6. Write a program to count the number of 1's in register D and store the count in register B.
7. Write a program to find the sum of a series of numbers (8-bit and 16-bit sums). The length is at 4200H.
8. Write a program to multiply two 8-bit numbers by repetitive addition. Write another to divide a 16-bit number by an 8-bit number.
9. Write a program to find the largest number in a block of data, and another to count the negative numbers in a block.
10. Write a program to sort 10 numbers in ascending order starting at 2200H, and another to generate a Fibonacci series.

DS_R Programming

1. Explain R objects: atomic vectors, matrices, arrays, lists and data frames, with an example of each.
2. What are the R user interface and the help system? Explain how to install, load and get help on a package.
3. Explain how to write your own function in R, covering arguments, default values and return values, with an example.
4. Explain R notation for selecting values (positive, negative, zero, blank, logical and name indexing) with examples.
5. Explain the dollar sign `$` and double brackets `[ [ ] ]` for lists and data frames. How are cards dealt and a deck shuffled in R?
6. Explain modifying values in R: changing values in place, logical subsetting and handling missing information (NA).
7. What are environments in R? Explain scoping rules, assignment, evaluation and closures.
8. Explain if and else statements in R and the use of lookup tables, with examples. Why are code comments important?
9. Explain the S3 system in R: attributes, generic functions, methods and classes. How does it differ from S4 and R5?
10. Explain for, while and repeat loops with examples, and the use of `expand.grid`. What is vectorized code, and why is it faster than loops?

Object-Oriented Programming using C++ (Theory)

1. Compare procedure-oriented and object-oriented programming. List the advantages and applications of OOP.
2. Explain the principles of OOP: objects, classes, abstraction, encapsulation, inheritance, polymorphism, dynamic binding and message passing.

3. What is a friend function? Explain with an example how it accesses private members of two classes.
4. Explain passing objects as arguments and returning objects from functions, with a program.
5. What are constructors and destructors? Explain the default and parameterized constructors with examples.
6. Explain the access specifiers (public, private, protected) and how they affect inheritance. Describe derived class constructors.
7. Explain multiple, multilevel and hybrid inheritance with diagrams and code snippets.
8. Explain function overloading and operator overloading. Write a program to overload the unary minus (-) operator.
9. What are virtual functions and pure virtual functions? Explain abstract classes, the `this` pointer and virtual destructors.
10. Explain the exception-handling mechanism (try, throw, catch) with an example. Describe the file modes and file pointer functions in C++.

Web Designing (Theory)

1. What is HTML5? Explain the basic structure of an HTML document with the DOCTYPE, `<html>`, `<head>`, `<title>` and `<body>` tags.
2. Explain the text formatting tags (headings, bold, italic, superscript, subscript, monospace, preformatted text) with examples.
3. Explain bulleted, numbered and definition lists. How are special characters and horizontal lines inserted?
4. Explain hyperlinks and anchors: linking to a web page, an e-mail address and other content within the same page.
5. What are style sheets? Explain style rules, styles for nested tags, styles for hyperlinks and linking an external style sheet.
6. Explain CSS text and paragraph formatting: font family, size, colour, spacing, indenting, borders and alignment.
7. Explain how to insert and control graphics: image formats, size, padding, hyperlinked images, thumbnails, alternate text and figure captions.
8. Explain how to create tables (size, column width, merging cells, borders, padding) and an image map.
9. Explain HTML5 forms: text box, text area, check boxes, option buttons, submit/reset buttons and the new input types. Explain the `<video>` and `<audio>` tags.
10. Explain JavaScript operators, control structures, native objects and the common event handlers. Briefly explain jQuery selection and effects, and JSON syntax and parsing.

Major Practical II (C++ and Web Designing)

1. Write a C++ program for a simple calculator using a switch statement, and another to convert seconds into hours, minutes and seconds.
2. Write a C++ class `Demo` with a private `readNo()` and the methods `factorial()`, `reverseNo()`, `isPalindrome()` and `isArmstrong()`.
3. Write a C++ program that adds two complex numbers using a friend function. Write another to add distances from two different classes.
4. Write a C++ program to overload the `+` operator for adding the timings of two clocks, and for concatenating two strings.
5. Write C++ programs to demonstrate virtual functions and an abstract class. Also demonstrate multilevel inheritance.
6. Write a C++ program that opens a file and counts the total number of words and lines. Also show exception handling with `try`, `throw` and `catch`.
7. Design a web page that uses text formatting tags, ordered, unordered and nested lists, and background and foreground colours. Also write HTML to display your CV.

8. Design a web page with an external style sheet, styled hyperlinks and an e-mail link. Also create a web page with a thumbnail image that works as a hyperlink.
9. Write HTML to display the marks table (Name, Subject, Marks) using merged cells (rowspan and colspan), and create the "Sign In" form with e-mail and password fields.
10. Write JavaScript to accept a number and print its factorial, to display prime numbers from 1 to 100, and to validate a form with text, drop-down and radio fields. Add a jQuery effect and a program that reads JSON data and displays it on the page.