Assignment Booklet

BSCAEY Programme
B.Sc (Applied Sciences - Energy)

Second Semester	
BEY-002	Energy Resources
BEY-003	Fluid Mechanics
BEY-005	Energy Efficiency and Management
BEY-018	Linear Algebra and Calculus
BEY-020	Computer Basics and PC Software (4)

SCHOOL OF ENGINEERING & TECHNOLOGY
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
Maidan Garhi, New Delhi – 110 068

JANUARY 2026

Dear Student,

Please read the information on assignments in the Programme Guide that we have sent you after your enrolment. A weightage of 30%, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this Programme. The assignment for BSCAEY (first semester) has been given in this booklet.

Instructions for Formatting Your Assignments

Before attempting the assignment, please read the following instructions carefully:

1) On top of the first page of your answer sheet, please write the details exactly in the following format:

ENROLLMENT NO :……………………………………………

NAME :……………………………………………

ADDRESS :……………………………………………

……………………………………………

……………………………………………

PROGRAMME CODE: ………………………..

COURSE CODE: …………………………………

COURSE TITLE: …………………………………

STUDY CENTRE: …………………………..…… DATE: …………………………………...

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.

3) Leave 4 cm margin on the left, top and bottom of your answer sheet.

4) Your answers should be precise.

5) **These assignments submitted should be hand written in your own hand writing.**

We strongly suggest that you should retain a copy of your answer sheets.

6) **You cannot fill the Exam Form without** submission of the assignments. So solve it and **submit it at the earliest.** If you wish to appear in the **TEE, June 2026,** you should submit your TMAs by **April 30, 2026.** Similarly, if you wish to appear in the **TEE, December 2026,** you should submit your TMAs by **September 30, 2026.**

7) Assignments will be submitted at **your respective regional centre.**

We wish you good luck!

1.   **All questions are compulsory.**

Q.1   What is the role of memory in a computer? What are the different types of   10
        memories used in a Computer? Explain the uses of each type of memory. Find
        size range of these memories.

Q.2   Convert the following numbers as stated   (5 × 4)   20
        i.   Decimal 372.125 to binary
        ii.   Decimal 6400 to hexadecimal
        iii.   Octal 754 to hexadecimal
        iv.   Octal 345 to decimal

Q.3   What is an instruction in the context of a Computer? Explain with the help of an   10
        example. How is an instruction executed by a computer?

Q.4   Differentiate between the following: 5
        i.   Random Access vs. Serial Access
        ii.   Parallel port vs. Serial port

Q.5   List the features of the following: 10
        i.   Scanner
        ii.   LCD Monitors
        iii.   MICR
        iv.   Net book

Q.6   Describe in detail client-server architecture with examples.   5

Q.7   Explain the features of Object Oriented programming languages. How object is   5
        oriented programming different than that of procedural programming?

Q.8   What is the model of development of Open source software? Explain the Open   5
        Source licensing policy.

Q.9   With reference to Operating System, explain the following: (2.5 marks each)   10
        a.   Serial processing
        b.   Command Processor
        c.   Multiprogramming
        d.   Process management

Q.10   Explain the use of MODEM, Router, Switch and Gateway in the context of   5
        Computer Networks.

Q.11   For the design a network for an office (with no branches) that is located in a
        building which of the networks (LAN, MAN, WAN) will you suggest? Justify
        your selection. List the basic characteristics of the proposed network.

Q.12   Explain   (2.5 marks each)   10
        a. TCP/IP protocol
        b. IP address

c. URL

d. DN.

Q.13 What is the reason behind popularity of social networking? What are the   5
precautions one must take while using social networking? Give examples a few
social networking sites and how they function.