

**B. SC. (APPLIED SCIENCE-  
ENERGY) (BSCAEY)**

**Term-End Examination**

**June, 2025**

**BEY-020 : COMPUTER BASICS AND PC  
SOFTWARE**

*Time : 3 Hours*

*Maximum Marks : 70*

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**Note :** *There are two Sections in this paper. All the questions of Section A are compulsory. Attempt any **three** questions from the four questions given in Section B.*

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**Section—A**

1. (a) Convert the following decimal numbers to binary : 4
  - (i) 49
  - (ii) 2.375

- (b) Explain the concept of seek time and latency time in the context of hard disk. 4
- (c) What is the need of operating system in a computer ? Explain the concept of time sharing and multiprogramming in the context of operating system. 5
- (d) Draw a flowchart to find the product of first  $n$  natural numbers. 4
- (e) Describe the different components of a Local Area Network (LAN). 4
- (f) What is Domain Name System (DNS) ? Explain its use with the help of an example. 4

### Section—B

2. (a) List the different components of CPU. Also, explain the function of each of these components. 5
- (b) Explain the data organisation on a hard disk with the help of a diagram. How is the data organisation of hard disk different from data organisation of CD-ROM ? 6

- (c) Explain the characteristics of the following Input/Output devices : 4
- (i) Printer
  - (ii) Keyboard
3. (a) What is an Object Oriented Language ? Define the following concepts of an object-oriented language : 6
- (i) Encapsulation
  - (ii) Inheritance
  - (iii) Polymorphism
- (b) What are Perverse Software ? Explain any *two* types of Perverse Software. 5
- (c) What is a one-dimensional array in the context of a programming language ? Explain with the help of an example. 4
4. (a) What is the meaning of Network Topology ? Explain the Bus Topology with the help of a diagram. Also list the advantages and disadvantages of Bus Topology. 7

- (b) Explain the following terms in the context of networking and internet : 8
- (i) Browser
  - (ii) Search engine
  - (iii) Social networking
  - (iv) Blog
5. Explain any *five* of the following with the help of an example or diagram if needed : 15
- (a) TCP/IP model
  - (b) Modem and its use
  - (c) Mail merge feature of MS-Word
  - (d) Features of spreadsheet software
  - (e) Process management in the context of an operating system
  - (f) Memory hierarchy
  - (g) Universal Serial Bus (USB)
  - (h) Integrated Circuits

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