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BEY-020

B. SC. (APPLIED SCIENCE-ENERGY)

(BSCAEY)

Term-End Examination

December, 2024

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

Time : 3 Hours

Maximum Marks : 70

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

Section—A

1. (a) Convert the following binary numbers to equivalent decimal numbers : 4

(i) $(1011001)_2$

(ii) $(1011.111)_2$

- (b) Calculate the storage capacity of a 2.5 inch diameter disk pack, having 8 plates with each recording surface having 100 tracks, and each track has 200 sectors. A sector can store 512 bytes. 4
- (c) Describe the role of an Operating System in a computer. Explain the tasks/functions of file management and memory management in the context of an Operating System. 5
- (d) Draw a flowchart to check if a given number is divisible by 2 or not. 4
- (e) What is an IP address in the context of Internet ? What are the components of an IP address ? Explain with the help of an example. 4
- (f) What is a browser software ? Explain how a browser works. 4

Section—B

Note : Attempt any *three* questions from the Question No. 2 to Question No. 5.

2. (a) Explain the von Neumann Architecture of a computer with the help of a diagram. 5

- (b) What is primary memory of a computer ?
Explain the concept of memory hierarchy
with the help of a diagram. 4
- (c) Explain the features of the following
Input/Output devices : 6
- (i) Mouse
- (ii) Scanner
- (iii) Magnetic Ink Character Recognition
(MICR)
3. (a) Discuss the functions of the following
softwares : 6
- (i) Compiler
- (ii) Linker
- (iii) Antivirus software
- (b) What is “data type” in the context of
programming ? Describe any *four* data
types that are used in a programming
language. 6
- (c) What are open source software ? Explain
with the help an example. 3
4. (a) What is the need of computer networks ?
Explain the features of Local Area
Networks (LAN). 5

- (b) Discuss the role of the following networking devices : 6
- (i) Modem
 - (ii) Bridge
 - (iii) Router
- (c) What is a search engine ? Briefly explain the actions performed by search engines. 4
5. Explain any *five* of the following terms with the help of an example or diagram, if needed : 15
- (a) Security threats on Internet
 - (b) Domain Name System (DNS)
 - (c) Features of spreadsheet software
 - (d) Features of project management software
 - (e) One-dimensional array in the context of programming
 - (f) Serial and parallel ports
 - (g) Disk defragmenter
 - (h) CD-ROM disk layout

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