No. of Printed Pages : 4

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) $(1011.111)_2$

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(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

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(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

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(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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