[24-HKUD1SN-24J (M2)]

BCA 1st Semester (NEP) Exam. 2024 (S2)

BCA

(*Computer Fundamentals*), (Minor)

[UG, CAE, S1-01]

Full Marks : 70

Time : 3 hours

The figures in the right-hand margin indicate marks.

1. Answer any *five* from the following questions : $2 \times 5 = 10$

   (*a*) Mention any two characteristics of fifth generation computers.

   (*b*) Write two differences between analog and digital computers.

   (*c*) Fill in the blanks :

   (*i*) 1 TB = ——— GB

   (*ii*) 1 MB = ——— KB

   (*d*) What are the different types of interface in operating systems ?

   (*e*) What is cyber bullying ?

   (*f*) What is a data bus and control bus ?

2. Answer any *six* from the following questions : $4 \times 6 = 24$

   (*a*) Explain the Von Neumann architecture.

   (*b*) List the differences between procedural programming and object-oriented programming.

(*c*) What is a flow-chart ? Draw a flowchart to find the product of two numbers. 1+3 = 4

(*d*) What is a shell in UNIX ? What are the different types of shell ? 1+3 = 4

(*e*) Discuss computer memory hierarchy.

(*f*) Explain the different instruction formats.

(*g*) What is a database ? What are the characteristics of a database ? 1+3 = 4

3. Answer any *six* from the following questions : 6 × 6 = 36

(*a*) Based on size and power, describe the different categories of a computer ?

(*b*) What is an algorithm ? Write an algorithm to find the smallest of three numbers. 2+4 = 6

(*c*) What is a compiler ? Discuss the different phases of a compiler. 2+4 = 6

(*d*) Differentiate between : 3+3 = 6

(*i*) Laser printer and dot matrix printer

(*ii*) CRT and LCD Monitors

(*e*) What is computer security ? Discuss any four methods used by anti-virus software to detect viruses. 2+4 = 6

(*f*) Explain different social engineering attacks. What is the differences between vishing and smishing ? 4+2 = 6

(*g*) What is software piracy ? Explain how it can cause a loss of revenue for the makers.