Unique Paper Code	62343633 / 62341101
Name of the Course	B.A. Programme CBCS
Name of the Paper	Computer Fundamentals
Semester	I
Duration	3 Hour
Maximum Marks	75
Students admitted in the year	2020

Instructions for Candidates

All questions carry equal marks.

Attempt any *FOUR* questions out of *SIX*.

Q.1

What are the different components of a computer? Describe their functionalities. Also, draw the block diagram of a computer. What is a bootstrap program?

Give an application of computers in (i) education (ii) medicine.

Q.2

For each of the following numbers, give representation in the specified base:
   a) $(71230.201)_8 \rightarrow (\ ?\ )_{16}$
   b) $(157.65)_8 \rightarrow (\ ?\ )_{10}$,
   c) $(10011.011)_2 \rightarrow (\ ?\ )_{10}$,
   d) $(8169.225)_{10} \rightarrow (\ ?\ )_8$,
   e) $(AB3.56)_{16} \rightarrow (\ ?\ )_{10}$.

Add $(111011.1011)_2$ and $(101010.1101)_2$.
Using 8-bit representation in 2's complement form, subtract $(00111010)_2$ from $(01011010)_2$.

Q.3

Distinguish between static RAM and dynamic RAM. Differentiate between magnetic and optical disk. Give the full form of SMPS and describe it purpose.

For each of the following ports, name an input/output device that can be connected to it:

   a) serial port

   b) parallel port

   c) SCSI port

   d) USB port

Q.4

Name an I/O device that can be used for input as well as output. Differentiate between OCR and OMR. Describe the working of an *optical disc*. Which output device is used for producing highly accurate large drawings and posters? How does it work? Name a device used for controlling an activity in a game. Also, describe how it may be used for controlling an activity.

Q.5

What do you mean by the term *bus* in a computer system? What is the purpose of CPU clock? State the role of different buses in a computer system.

What is the role of *registers* in a computer? How is a register different from *main memory*?

State the purpose of a *program counter* and an *accumulator*.

Q.6

Distinguish between system software and application software. Which utility program you would use to prevent a virus and other risky programs from damaging your system?

Riya wants to send an MSWord document to multiple people. Suggest an efficient way of achieving this.

Differentiate between multiprogramming and multiprocessing operating systems.
Describe the following functions of an operating system:
   a)   Security
   b)   Process management

What is cloud computing used for?