This question paper contains 3 printed pages]

Roll No. | | | | | | | | | | | |

S. No. of Question Paper : **1955**

Unique Paper Code : **62341101**   **GC-3**

Name of the Paper : **Computer Fundamentals**

Name of the Course : **B.A. (Prog.) Computer Science–CBCS**

Semester : **I**

Duration : **3 Hours**   Maximum Marks : **75**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Question No. **1** is compulsory.

Attempt any **5** questions from Question No. **2** to Question No. **8**.

Parts of a question must be answered together.

1. (*a*) What is the purpose of ROM in the computer system ?   2

   (*b*) Convert the binary number 1111011 into the following representations :   2

   (*i*) 1's complement

   (*ii*) 2's complement

   (*c*) Write applications of Touch Screen.   2

   (*d*) Define seek time and latency time.   4

   (*e*) What do you mean by pixels ? Briefly explain the three factors on which the clarity of image on computer screen depends.   5

(f) What is the purpose of a device driver ?　　2

(g) How many types of software are there ? Explain each *one* with examples.　　4

(h) What do you understand by Address Bus ? How much memory (in GB) can be addressed by a 36 bit address bus ?　　4

2. (a) Define the relationship between hardware and software of a computer system with examples.　　6

(b) Explain any *four* application areas of the computer with examples.　　4

3. (a) Briefly explain impact printers and non-impact printers with *two* examples of each.　　4

(b) Define secondary memory. Explain access types of storage devices.　　6

4. (a) Give differences between the following with examples :　　6

  (i) SRAM and DRAM

  (ii) EPROM and EEPROM

  (iii) OCR and OMR

(b) What do you understand by Utility Programs ? Briefly explain any *three* utility programs.　　4

5. Convert the following :　　10

  (i) $(2049.625)_{10}$ to $(?)_2$

  (ii) $(ABC.0C)_{16}$ to $(?)_8$

  (iii) $(777.002)_8$ to $(?)_{10}$

  (iv) $(23668.35)_{10}$ to $(?)_{16}$

  (v) $(11001.101)_2$ to $(?)_8$

6. (a) What is an Operating System ? How does operating system provide security to a system ?   6

   (b) Differentiate between Turnaround time and Response time.   4

7. Perform the following binary operation :   10

   (i) $(11110011.011)_2 - (1010.111)_2$

   (ii) $(110011.11)_2 + (100011.001)_2$

8. Write short notes on the following terms (any *four*) :   10

   (i) e-library

   (ii) Search engine

   (iii) SMPS

   (iv) Cloud computing

   (v) Anti-virus