53 (IT 301) COAR

2016

COMPUTER ORGANIZATION AND ARCHITECTURE

Paper : IT 301

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer **any five** questions.

1. *(a)* Convert decimal 41·6875 into binary.

10

   (b) Convert octal 736·4 into decimal.

10

2. *(a)* What is floating-point representation ? Explain in terms of mantissa and exponent. 10

   (b) Where is the need for a parity bit ?

10

3. (a) Define a digital system. 10

(b) What are micro operations ? 10

4. (a) What are MAR, PC, IR, R1, R2, Rn ? 10

(b) What is a three-state-gate ? 10

5. Write the block diagram for the transfer from R1 to R2. 20

6. (a) Give an example of an instruction format. 10

(b) What is an Indirect address and Immediate operand ? 10

7. (a) What is an instruction cycle ? 10

(b) What is a pipe-line ? 10

_____