Tribhuwan University
Institute of Science and Technology
2019-Objective

Bachelor Level / First Semester / Science — Full marks: 60
Computer Science and Information Technology(CACS105) — Pass marks: 24
((TU BCA) Digital Logic) — Time: 3 hours
Candidates are required to give their answers in their own words as far as practicable.
The figures in the margin indicate full marks.

Group A

Attempt all the questions. [10x1 = 10]

1.

i) Which one of the following is hexadecimal equivalent of (5073.052)8?

a) A3C.150 b) B2B.140 c) A3B.150 d) B3A.150

1.

ii) Which one of the following is 9's complement of (3578.501)10?

a) 4926.947 b) 3926.947 c) 4926.937 d) None of the Above

1.

iii) Which one of the following is the equivalent reflected code of 1101?

a) 1001 b) 1011 c) 1000 d) 1010

1.

iv) When output will go high in NOR Gate?

a) if all inputs are high b) if any input is high c) if any input is low d) if all inputs are low

1.

v) According to Boolean algebra: What is the value of

a) X■ b)1 c)0 d) X

1.

vi) The logic circuits whose outputs at any instant of time depends only on the present input but also on the past outputs are called

a) Combinational circuits b) Sequential circuits c) Latches d) Flip-flops

1.

vii) If Q = 1, the output is said to be

a) Reset b) Set c) Previous state d) current state

1.

viii) Which one of the following are also called ripple counters?

a) SSI counters b) Synchronous counters c) Asynchronous counters d) VLSI counters

1.

ix) How many flip-flops are required to construct MOD-30 counter?

a) 5 b) 6 c) 4 d) 8

1.

x) How much storage capacity does each stage in a shift register represent?

a) One bit b) Two bits c) Four bits d) Eight bits