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Class: XI Comp. Sci.	Department: Computer Science	Date of submission: 13/05/2020
Worksheet No: 1	Topic: Number System & Boolean Logic	Note:

Section A

1) $(1\ 1\ 0\ 1\ 0\ 1\ 1)_2 = (?)_{10}$

a) 105 b) 110 c) 107 d) 109

2) $(1\ 0\ 0\ 1\ 0\ 1\ 1\ 0\ 0)_2 = (?)_{10}$

a) 290 b) 298 c) 310 d) 300

3) $(436)_8 = (?)_{10}$

a) 284 b) 286 c) 302 d) 290

4) $(2752)_8 = (?)_{10}$

a) 1514 b) 1614 c) 1518 d) 1618

5) $(AB3)_{16} = (?)_{10}$

a) 2735 b) 2752 c) 2742 d) 2739

6) $(4D08)_{16} = (?)_{10}$

a) 19720 b) 18700 c) 19700 d) 18720

7) $(1\ 1\ 0\ 1\ 0\ 1\ 0\ 1)_2 = (?)_8$

a) 335 b) 330 c) 325 d) 320

8) $(1\ 0\ 1\ 1\ 1\ 1\ 0\ 0\ 1\ 0\ 1\ 0\ 1\ 1\ 0)_2 = (?)_{16}$

a) 5F56 b) 5E56 c) 5D56 d) 5F56

9) $(6325)_8 = (?)_2$

a) 110 011 010 101 b) 011 011 010 110 c) 101 110 100 011 d) 110 101 010 110

10) $(FACE)_{16} = (?)_2$

a) 1101 1010 1110 1011 b) 1111 1011 1100 1110 c) 1111 1010 1100 1110 d) 1111 1010 1100 1011

11) $(0.750)_{10} = (?)_2$

a) 0.01 b) 0.11 c) 0.10 d) 0.001

12) $(725.26)_8 = (?)_{10}$

a) 1325.25 b) 1325.025 c) 1325. 0205 d) 1325.205

13) $(11010)_2 = (?)_{10}$

a) 24 b) 32 c) 36 d) 26

14) $(10110.11)_2 = (?)_8$

a) 46.6 b) 26.6 c) 26.3 d) 46.3

15) $(1110010.11011)_2 = (?)_{16}$

a) E2.D8 b) 72.1B c) 72.D8 d) E2.1B

Section B

16) Construct Truth Table for the Boolean expression:

a) $X' \cdot Y \cdot Z' + X \cdot Y'$

b) $A \cdot ((B' + C) + C')$

17) Prove the Boolean Laws using Truth Table:

a) $X+XY=X$

b) $X \cdot (X+Y)=X$

18) Draw the logic circuits for the following Boolean expressions:

a) $y = A.C + B.C' + A'.B.C$

b) $F = A.B'+C'.D$

c) $F = (U.V')+(U'.W')$

d) $F = (X+Y).(X'+Z).(Y+Z)$