

DE MC

TUT - 1

Harsh Mittal

CSE 5C

G. 2

2K19C5UN01082

Ans-1 - (a)  $1001101.1011$

Decimal equivalent = 77.6878

Octal equivalent = 115.54

Hex. equivalent = 4D.B

(b)  $111000101_2$

Decimal equivalent = 453

Octal equivalent = 705

Hex. equivalent = 1C5

(c)  $1101101.0110_2$

Decimal equivalent = 109.375

Octal equivalent = 155.3

Hex. equivalent = 6D.6

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Qs-2 (a)  $24.25_{10}$

$0110000.10$  OR  $2/24$   
 $2^5 2^4 2^3 2^2 2^1 2^0 2^{-1} 2^{-2}$   

$$\begin{array}{r|l} 2 & 24 \\ \hline 2 & 12 \\ \hline 2 & 6 \\ \hline 2 & 3 \\ \hline & 1-0 \end{array}$$

Decimal equivalent =  $11000.01$   
 Octal equivalent =  $30.2$   
 Hex equivalent =  $18.4$

(b)  $160.376_{10}$

$01010000001100$   
 $2^8 2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0 2^{-1} 2^{-2} 2^{-3} 2^{-4}$

Binary equivalent =  $10100000.011$   
 Octal equivalent =  $240.3$   
 Hex equivalent =  $A0.6$

(c)  $1532.612_{10}$

$$\begin{array}{r|l} 2 & 1532 \\ \hline 2 & 766 \\ \hline 2 & 383 \\ \hline 2 & 191 \\ \hline 2 & 95 \\ \hline 2 & 47 \\ \hline & 23 \\ & 11 \\ & 5 \\ & 1-0 \end{array}$$



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Binary equivalent = 10111111001001  
Octal equivalent = 277444  
Hex equivalent = 5FC9

Ans-3 (a)  $2\frac{1}{2}$

Binary equivalent = 10100  
Hex equivalent = 14  
Decimal = 20

(b) 160.07

Binary equivalent = 1110000.000111  
Hex. equivalent = 70.1C  
Decimal equivalent = 112.109375

(c) 1502.612

Binary equivalent = 1101000010.11000101  
Hex equivalent = 342.C5  
Decimal equivalent = 834.769

Ans-4. (a) - 8A3.B4

Binary equivalent = 100010010011.101100

Octal equivalent = 4243.55

Decimal equivalent = 2211.703

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(b) 268 CF

Binary equivalent = 1001101000.1100111

Octal equivalent = 1150.636

Decimal equivalent = 616.808

(c) FD86

Binary equivalent = 111110110000110

Octal equivalent = 17606

Decimal equivalent = 64902