Q. 1 Convert the decimal number \((727.7109375)_{10}\) to the (a) binary, (b) octal, (c) hexadecimal, and (d) base 7 number systems

Q. 2 (a) Convert the following Base 10 integer numbers to binary:

97 and 23

(b) Multiply the binary representations of \((97)_{10}\) and \((23)_{10}\) together.

(c) Convert the binary representation of the product of \((97)_{10}\) and \((23)_{10}\) to Base 10.

(d) Check that this gives the same value as multiplying \((97)_{10}\) and \((23)_{10}\) in Base 10. (Any difference? Why?)

Q. 3 Repeat Problem 2 for the Base 10 fractional numbers:

\((34.8125)_{10}\) and \((24.3)_{10}\)

Q. 4 (a) Convert \((225.225)_{10}\) to the (i) binary, (ii) octal, and (iii) hexadecimal number systems.

(b) Convert \((11010111.110)_{2}\) to the (i) decimal, (ii) octal, and (iii) hexadecimal number system.

(c) Convert \((623.77)_{8}\) to the (i) decimal, (ii) binary, and (iii) hexadecimal number system.

(d) Convert \((2AC5.D)_{16}\) to the (i) decimal and (ii) octal number system.