

QUESTION BANK CS PAPER II FOR UNIT TEST

Q1. Convert the given binary numbers into decimal

1. $(10110011100001011)_2$
 $(1110110)_2$
 $(110011001)_2$
2. Write in tabular form values of decimal numbers 0 to 30 and their equivalents in binary and Hexadecimal
3. Write in tabular form values of decimal numbers 0 to 7 and their equivalents in octal

Q. 2. Answer in short. (2 marks)

1. Explain 'base' of number systems with examples.
2. What is the value of base of Binary, Octal and hexadecimal number systems.
3. How is a number in binary number system converted into its equivalent decimal system?
4. Explain Decimal to binary conversion.

Q. 3 Perform the following binary addition

1. $(111010101010 + 11010000111 + 1010111011)_2$
2. $(1111+1001+1111 + 0011)_2$
3. $(10101 + 11001 + 01111)_2$
4. $(10101 + 11010 + 111)_2$
5. Add 3 digit max number in Hexa with 2 digit Max number in Octal with 4 digit max Number in Binary. Express the sum in decimal.

Q.4. Convert the following hexadecimal to binary

1. COFEE
2. 6A7
3. 2BAD
4. BED

Q5. Fill in the blanks and rewrite the sentences.

1. The base of a number system is _____.
2. In the number 4657, if the number 7 is called as least Significant digit, then the number 4 is called as _____.
3. Binary equivalent of hexadecimal number 76A is _____.
4. _____ is a valid number in Hexadecimal Number System.

5. In Octal number system, before the number _____ comes the Octal number 67.
5. The max value of a digit in Octal number system is _____
6. The max value of a digit in Hexadecimal number system is _____
7. The Min 2-digit Octal Number is _____
8. The Min 3-digit Hex Number is _____
9. 1-bit sum of binary bits 1 with 1 is _____
10. Full form of 'bit' is _____
11. Which is typically the longest and the smallest :- bit,byte,nibble,word?
12. What is a group of four bits known as ?
13. Arrange the following numbers in ascending order.
 $(1100)_2$. $(1001)_2$. $(1011)_2$

Q6. Solve the following. and Show steps for every solution/ conversion]

- 1) $(ABCA)_{16} = (?)_{10}$
- 2) $(175751)_8 = (?)_{10}$
- 3) $(1717)_{10} = (?)_8$
- 4) $(40512)_6 = (?)_{10}$
- 5) $(16119)_{10} = (?)_{16}$
- 6) $(101110)_2 = (?)_8$

Q7 Solve ANY TWO of the following and show steps for every solution/ conversion

1. Is the number 12101130 a binary number? Explain.
2. Is the number 121FAD a Hexadecimal number? Explain.
3. Which is the larger number, $(11111)_2$ or $(111)_{10}$? Why?
4. $(2FAF)_{16} = (?)_8 = (?)_2$
5. $(2ABCD)_{16} = (?)_2$
6. $(110110)_2 = (?)_{10}$
7. Convert the Decimal number 255 to its equivalent Binary, Octal, Hexadecimal number.
8. Convert the decimal number 112000 in Hexa
9. Convert the decimal number 100000 in Octal
10. Convert the decimal number 201000 in binary
11. Convert the binary number 10110011101101111 into decimal

Q8. Solve ANY TWO of the following and show steps for every solution/ conversion

- 1) $(371)_{16} = (?)_8$
- 2) $(4CAE)_{16} = (?)_8$
- 3) $(6751)_8 = (?)_2$