



SRI RAMAJAYAM GLOBAL SENIOR SECONDARY CBSE SCHOOL

Chapter - 2 (03.07.2020)

STD: XI

TIME: 01.30 Hrs

SUBJECT: COMPUTER SCIENCE

TOTAL MARKS: 50

Answer key

Section - A

I. Multiple choice questions (MCQs)

10X1=10

- Which of the following is not a positional number system?
a) Roman Number System b) Octal Number System
c) Binary Number System d) Hexadecimal Number System
- The value of radix in binary number system is _____
a) 2 b) 8 c) 10 d) 1
- Which amongst this is not an octal number?
a) 645 b) 234 c) 876 d) 123
- The cumulative addition of the four binary bits (1 + 1 + 1 + 1) gives
a) 1111 b) 111 c) 100 d) 1001
- Convert in to decimal: $(214)_8 = ?$
a) (140)₁₀ b) (141)₁₀ c) (142)₁₀ d) (130)₁₀
- $(170)_{10}$ is equivalent to _____
a) (FD)₁₆ b) (DF)₁₆ c) (AA)₁₆ d) (AF)₁₆
- The input hexadecimal representation of 1110 is _____
a) 0111 b) E c) 15 d) 14
- Convert the binary equivalent 10101 to its decimal equivalent.
a) 21 b) 12 c) 22 d) 31
- Which of the following is not a binary number?
a) 1111 b) 101 c) 11E d) 000
- Which of the following is the correct representation of a binary number?
a) $(124)_2$ b) 1110 c) $(110)^2$ d) $(000)_2$

Section - B

II. Fille in the Blanks

10X1=10

- The binary addition $1 + 1 + 1$ gives **11**
- The value of radix in octal number system is **8**
- The hexadecimal digits are 1 to 9 and A to **F**
- Convert the binary number 11001 to decimal. The answer is **25**
- Full form of MSB **Most Significant Bit**
- Complete the sequence of following binary numbers: 100, 101, 110, **111, 1000, 1001.**
- Decimal number system with **10** unique symbols.
- Complete the sequence of following octal numbers: 525, 526, 527, **530, 531, 532**
- Add the binary numbers: $101 + 110 =$ **1011**
- Complete the sequence of following hexadecimal numbers: 17, 18, 19, **1A, 1B, 1C**

Section – C

III. Answer the following questions

6x2=12

21.

Five basic cases for binary addition

case 1: $0 + 0 = 0$

case 2: $0 + 1 = 1$

case 3: $1 + 0 = 1$

case 4: $1 + 1 = 10$ (0 with carry 1)

case 5: $1 + 1 + 1 = 11$ (1 with carry 1)

22. $(266)_{10} = (412)_8$

23. $(372)_8 = (250)_{10}$

24. $(423)_{10} = (1A7)_{16}$

25. $(356)_{16} = (854)_{10}$

26. $(1010111010)_2 = (2BA)_{16}$

Section - D

IV. Answer the following questions (any 6)

6x3=18

27. Define:

Binary number system	A number system with 2 unique symbols i.e., base-2 system.
Decimal Number System	A number system with 10 unique symbols i.e., base-10 system.
Hexadecimal Number System	A number system with 16 unique symbols i.e., base-16 system.
Octal Number System	A number system with 8 unique symbols i.e., base-8 system.

28. Convert the following decimal numbers to binary:

i) $84 = (1010100)_2$

ii) $100 = (1100100)_2$

29. Convert the following binary numbers to decimal:

i) $10010 = (18)_{10}$

ii) $10010101 = (149)_{10}$

30. Convert the following binary numbers to octal:

i) $11001 = (31)_8$

ii) $10011101 = (235)_8$

31. Convert the following octal numbers to binary:

i) $7642 = (111110100010)_2$

ii) $7015 = (111000001101)_2$

32. Convert the following hexadecimal numbers to binary:

i) $A07 = (101000000111)_2$

ii) $7AB4 = (111101010110100)_2$

33. Add the following binary numbers:

i) $1011101 \text{ and } 101101 = (10001010)_2$

ii) $11110.11 \text{ and } 1011.01 = (101010.00)_2$

M.VIJAYA KUMAR CS-PGT TIRUVANNAMALAI, TAMIL NADU.

Email Id: vijay28soft@gmail.com