

Vivekanand College, Kolhapur (Empowered Autonomous)
Department of Electronics
Assignment notice
(B.Sc-I)

Date: 15/10/2025

Course/Subject Name: 2DSC03ELE12

All the students hereby informed that, submit the assignment of Digital Electronics-I on or before 25/10/2025 as per the given question paper

Date: 25/10/2025



Dr. P. S. Jadhav
Subject Teacher



Dr. C. B. Patil
Head of the Department

Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Class: B.Sc.-I, Semester-I, Internal Examination Oct- 2025-26

Course code & Name: DSC03ELE12: Digital Electronics-I

Time 4.00 to 4.30 pm

Date: -15/10/2025

Marks: 15

Q.1 Select the Correct alternative

[2]

- 1) Radix of binary number system is _____.
a) 1 b) 2 c) 8 d) 10
- 2) ASCII code is _____ bit code.
a) 7 b) 8 c) 9 d) 10

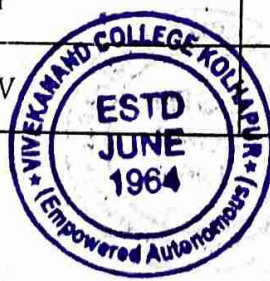
Q.2. Attempt any Two (4 marks each)

[8]

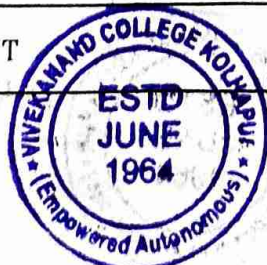
- 1) Write a note on any two number system with example
- 2) Explain 1's complement method of binary subtraction
- 3) write a note on BCD and EBCDIC code

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR
 (An Empowered Autonomous Institute)
Electronics Assignment
CLASS : B.Sc PART -I (NEP 2.0)

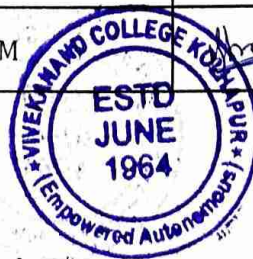
Sr. No.	Roll No	Name of Students	sign	Marks
			2DSC03ELE12	2DSC03ELE
1	7233	ANGANE DIVYA SHAMRAV	—	AB
2	7234	BAGWAN HEENA HANJALA	<u>Bagwan</u>	08
3	7235	BODAKE SANIKA SATISH	—	AB
4	7236	CHANDANSHIVE SIDDHARTH SANTOSH	—	AB
5	7237	DARAGADE SRUSHTI SURESH	<u>Daragade</u>	08
6	7238	GAIKWAD SHIVTEJ SACHIN	—	AB
7	7240	GAVADE DIPAK BIKAJI	<u>Gavade</u>	05
8	7241	GURAV ONKAR MAHESH	—	AB
9	7244	JAHDAV PARTH PRAKASH	—	AB
10	7245	JARALI ABHAY SHANKAR	—	AB
11	7246	KAMBLE HARSHAD GANPATI	<u>Kamble</u>	08
12	7247	KHARAPE ARJUN BAJARANG	—	AB
13	7249	LAGARE AKASH ANANDA	—	AB
14	7250	LOHAR SUSHANT SUBHASH	<u>Lohar</u>	10
15	7251	MALI VIJAY HANAMANT	—	AB
16	7252	MIRJE KAIVALYA ABHINANDAN	<u>Mirje</u>	10
17	7253	MULANI TAHIRHUSSAIN RAJU	—	AB
18	7254	PAGARE SARTHAK SANJAY	—	AB
19	7255	PANDIT ADITYA MAHADEV	<u>Pandit</u>	10



Sr. No.	Roll No	Name of Students	2DSC03ELE12	2DSC03ELE	Sr. No
20	7256	PATIL PRATHMESH SATISH	—	AB	41
21	7257	PATIL VIGHNESH NARAYAN	<u>Sah</u>	10	
22	7258	PATIL SAHIL DAGADU	—	AB	
23	7259	POWAR MANDAR PRATAP	<u>Mukund</u>	10	
24	7260	RAUT ANIKET SATISH	—	AB	
25	7261	SHAH NAMIT RAJENDRA	<u>A</u>	10	
26	7263	TEVARE ADITI SADASHIV	—	AB	
27	7264	PATIL ADITI SAHEBRAO	<u>Patil</u>	05	
28	7268	PATIL KSHITIJ RAVINDRA	—	AB	
29	7283	ANGAJ OM LAHU	—	AB	
30	7284	BAVADEKAR ARYAN ANANDA	<u>AB</u>	10	
31	7285	BHALEKAR JANHAVI SANDEEP	<u>Bhalekar</u>	09	
32	7286	BIRANJE SUYASH UDAY	<u>SIB</u>	08	
33	7287	DEMANNA PIYUSH SURESH	—	AB	
34	7288	GHADAGE ATHARV RAJESH	<u>Ghadage</u>	08	
35	7289	JADHAV PARAS RAMDAS	<u>Jadhav</u>	08	
36	7290	MANE SHREYASH YUVRAJ	—	AB	
37	7291	MANE TUSHAR SANTOSH	<u>Mane</u>	08	
38	7292	MOMIN MAHAMMADANAS ASHPAK	<u>Momin</u>	10	
39	7293	PATIL ANIKET NAMDEV	---	AB	
40	7294	PRABHU OM YASHWANT	<u>Prabhu</u>	10	



Sr. No.	Roll No	Name of Students	2DSC03ELE12	2DSC03ELE
41	7296	AGALE SAMRUDDHI HINDURAV	<u>S.H. Agale</u>	04
42	7297	AWATE SARVASVI SWAPNIL	<u>Awate</u>	08
43	7298	BEDAGE SAMRUDDHI SANJAY	<u>Bedage</u>	09
44	7299	DESHINGE VASUNDHARA MARUTI	<u>VM Deshinge</u>	08
45	7300	HAJGULKAR SALONI SURESH	—	AB
46	7301	HEBBALI RITISHA SANTOSH	—	AB
47	7302	JADHAV SANJANA ASHWIN	<u>Jadhav</u>	10
48	7303	KALANTRE PRANALI SARJERAO	<u>Kalantre</u>	08
49	7304	PATIL MANALI DEVAPPA	—	AB
50	7305	PATIL SANSKRUTI DHIRAJ	<u>Patil</u>	10
51	7307	SATALE PRAGATI UTTAM	<u>Satale</u>	10
52	7308	TAMBOLI MARIYA RIYAJ	<u>Tamboli</u>	07
53	7309	WADKAR NIKITA VISHWAS	<u>Nw</u>	10
54	7310	WARKARI SRUSHTI DAGADU	—	AB
55	7311	BARGE ABHILASHA BAJIRAO	<u>A.B. Barge</u>	10
56	7313	BHINGARDE AARYA SANTOSH	<u>Bhingarde</u>	09
57	7314	BHOSALE NAMRATA NANDKUMAR	<u>Bhosale</u>	09
58	7315	DAVARI SURAJ EKNATH	—	AB
59	7316	GAVALI JANHAVI TANAJI	<u>J.T. Gavalali</u>	06
60	7317	JAMDAR JYOTIRAJ INDRAJIT	<u>Jamdare</u>	10
61	7318	KORANE SHRAVANI SAKHARAM	<u>Korane</u>	06



Sr. No.	Roll No	Name of Students	2DSC03ELE12	2DSC03ELE
62	7319	MACHALE VIRAJ SANGRAM	—	AB
63	7320	PATEL RUHI HARESH	<u>R Patel</u>	07
64	7321	PATIL NAKSHATRA SAMADHAN	<u>Patil</u>	06
65	7322	PATIL PRASANNA HARISHCHANDRA	—	AB
66	7323	PATIL SHREYASH MARUTI	---	AB
67	7324	PATIL VEDIKA DEEPAK	<u>Dee.</u>	10
68	7325	PEDNEKAR ASMITA BABURAO	<u>A Pednekar</u>	06
69	7326	TAMHANEKAR ARPITA DHANAJI	----	AB
70	7327	TIKUDAVE SIDDHI NILESH	<u>Sut</u>	10
71	7497	PATIL AYUSH ASHOK	—	AB
72	7562	PATIL KETKI AMIT	<u>Ketaki P</u>	10
73	7566	JADHAV SHUBHAM RAJENDRA	—	AB
74	7569	GUJAR VEDIKA DHANAJI	—	AB
75	7571	PATIL KEDAR BABASO	—	AB
76	7573	PATIL ATHARV DATTATRAYA	—	AB
77	7579	KADAM PAWAN BAJIRAV	—	AB
78	7583	NIGADE PARTH MANOHAR	—	AB
79	7588	MUSHRIF ALFIYA KAMAAL	<u>Mushrif</u>	07
80	7593	SAVANT PIYUSH PUNDALIK	—	AB
81	7595	NIGADE HARSHVARDHAN RAVIRAJ	—	AB
82	7606	MALAI SHREYA SHANKAR	—	AB

P. S. Jadhav
(De. P.S. Jadhav)



P. S. Jadhav
HEAD
DEPARTMENT OF ELECTRONICS
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

08/10 '13m

Name - Heena Hanjale Bagwan

Std - BSC 1st year

Roll No - 7234

subject - Electronics Part -
Digital Electronics.

Q. 1] Select the correct alternative.

1] Radix of binary number system is 2.

a] 1

b] 2 ☒

c] 8

d] 10

Q. 2] ASCII code is 7 bit code.

a] 7 ☒

b] 8

c] 9

d] 10

Q. 2] Attempt any two (4 marks each).

1] write a note on any two number system with example.

→ 1] Binary Number system.

Digital computer represents all kinds of data and information in the binary system. Binary number system consists of two digits 0 and 1 its base is 2. Each digit or bit in binary

Number system can be 0 or 1. The weight of each position is a power 2.

Example -

$$\begin{aligned}(10101)_2 &= 1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \\&= 16 + 0 + 4 + 0 + 1 \\&= (21)_{10}.\end{aligned}$$

2] Hexadecimal Number system.

oh The Hexadecimal number system consists 16 digit. From 0 to 9 and A to F. The alphabets A to F represent decimal number from 10 to 15. The base of this number system is 16. Each digit position in the hexadecimal system represents a power of 16.

Example -

$$\begin{aligned}(2B5.F)_{16} &= 2 \times 16^2 + 11 \times 16^1 + 5 \times 16^0 + 15 \times 16^{-1} \\&= (693.9375)_{10}\end{aligned}$$

2] Explain 1's complement method of binary subtraction.

→

$$\rightarrow (1000010) - (1001010).$$

$$\begin{array}{r} 1000010 \\ + 0110101 \\ \hline \end{array}$$

$$1110111$$

no carry.

Ans: (1's complement of $(1110111) = -1000$.

3] write a note on BCD and EBCDIC code.

→ The EBCDIC stands for Extended Binary coded Decimal interchange code. IBM invented this code to extend the Binary coded Decimal which existed at that time. all the IBM computers and peripherals use this code it is an 8 bit code and therefore, can accommodate 256 characters.

08/10

Rajdhani

DATE

/ /

Name - Gauri Suresh Dhangade
Std - BSC 1st year.
Roll No - 7237
Subject - Electronics Part - I
Digital electronics

Q. 11 Select the correct alternative

11 Radix of binary number system is 2

a) 1

b) 2 ☒

c) 8

d) 10

Q. 21 ASCII Code is 7 bit code

a) 7 ☒

b) 8

c) 9

d) 10

Q. 21 Attempt any two (4 marks each)

1) Write a note on any two number system with example

→ 1) Binary Number System

Digital Computer represents all kinds of data and information in the binary system. Binary number system consists of two digits 0 and 1 its base is 2. Each digit or bit in binary

Number System Can be 0 or 1. The weight of each position is a power 2.

Example -

$$\begin{aligned}(10101)_2 &= 1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \\ &= 16 + 0 + 4 + 0 + 1 \\ &= (21)_{10}\end{aligned}$$

2) Hexadecimal Number System

The Hexadecimal number System Consists 16 digit From 0 to 9 and A to F. The alphabets A to F represent decimal number from 10 to 15. The base of this number System is 16. each digit position in the hexadecimal System represents a power of 16.

Example

$$\begin{aligned}(2B5.F)_{16} &= 2 \times 16^2 + 11 \times 16^1 + 5 \times 16^0 + 15 \times 16^{-1} \\ &= (693.9375)_{10}\end{aligned}$$

2) Explain 1's Complement method of binary Substraction.

→

$$\rightarrow (1000010) - (1001010)$$

$$\begin{array}{r} 1000010 \\ + 0110101 \\ \hline \end{array}$$

$$1110111$$

No carry.

Ans. 1's Complement of $(1110111) = -1000$

3) Write a note on BCD and EBCDIC code

→ The EBCDIC stands for Extended Binary Coded Decimal interchange code. IBM invented this code to extend the Binary Coded Decimal which existed at that time. All the IBM Coded Computers and peripherals use this code it is an 8 bit code and therefore can accommodate 256 characters.

STUDENT'S NAME		TOTAL MARKS OBTAINED
CLASS	SUBJECT	
ROLL NO.	DATE	

Q.1 Select the correct alternative.

- 1] Radix of binary number system is 2.
- 2] ASCII code is 7 bit code.

Q.2 Attempt any two.

1) Write a note on any two numbers system with example

• Binary Number System - Uses two digits (0 and 1)

Ex:- 1011 in binary is 11 in decimal.

• Decimal Number System - Uses ten digits (0-9)

Ex:- 256 in decimal is

2) Explain 1's complement method of binary subtraction

To subtract B from A using 1's complement.

1) Find the 1's complement of B

2) Add this to A

3) If there is a carry add it to the result.

4) Example - $1010_2 - 0011_2$

1's complement of 0011 is 1100

Add - $1010 + 1100 = 10110$

Ignore the carry beyond the 4 bits so 0110 and add carry 1: 0111.

3) Write a note on BCD & EBCDIC code.

BCD (Binary coded decimal).

Represents each decimal digit by its binary equivalent. For ex. 9 is 1001 in BCD.

EBCDIC (Extended Binary coded Decimal interchange code) An 8-bit character encoding used mainly

on IBM mainframes for alphanumeric and special characters.

08/10



Sub: Digital Electronic

Name: Vasundhara Maruti Deshinge

Roll: 7299

1. Write a note on any two number system with example.

1. Binary Number system

Digital computer represent all kinds of data & information in the binary system. Binary number system consist of two digits 0 & 1 its base is 2. Each digit or bit in binary number system can be 0 or 1. The weight of each position is power of 2.

Example 1.

04

1	0	1	1	0	1	1	Face value.
2^6	2^5	2^4	2^3	2^2	2^1	2^0	Positional value.
64	32	16	8	4	2	1	

Example 2:

$$\begin{aligned}
 (10101)_2 &= 1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \\
 &= 16 + 0 + 4 + 0 + 1 \\
 &= (21)_{10}
 \end{aligned}$$

2. Hexadecimal Number system

The Hexadecimal Number system consists of 16 digits from 0 to 9 & A to F. The

alphabets A to F represent decimal numbers from 10 to 15. The base of this number system is 16. Each digit position in the hexadecimal system represents a power of 16.

Example 1.

A	3	5	9	
16^3	16^2	16^1	16^0	Face value.
4096	256	16	1	Positional value.
4369				Resolved Positional value.
				Decimal value.

Example 2.

$$(2B5.F)_{16} = 2 \times 16^2 + 11 \times 16^1 + 5 \times 16^0 + 15 \times 16^{-1}$$

$$= (693.9375)_{10}$$

2. Explain 1's complement method of binary subtraction.
- Subtraction using 1's complement method of binary subtraction becomes very easy with the help of 1's complement.

For subtracting a smaller number from a larger number, the 1's complement method is as follows.

1. Determine the 1's complement of the smaller number.
2. Add 1's complement to the larger number.
3. Remove the final carry & add it to result.

This is called the end-around carry.

Example.

$$(1001010) - (1000010)$$

$$\begin{array}{r} 1001010 \\ + 011101 \\ \hline 1000011 \\ \hline + \quad +1 \\ \hline 0001000 \end{array}$$

$$\text{Ans} = 1000$$

For subtracting a larger number from a smaller the 1's complement method is as follows.

1. Determine the 1's complement of the larger number
2. Add the 1's complement to the smaller number
3. There is number carry. The result has the opposite sign from the answer & is the 1's complement of the answer.
4. Change the sign & take the 1's complement of the sign & take result to get the final answer.

Example

$$(1000010) - (1001010)$$

04

$$\begin{array}{r} 1000010 \\ + 0110101 \\ \hline 1110111 \end{array} \quad \text{No carry,}$$

Ans :- 1's complement of 1110111 = -1000

$$(0100001) - (0101001)$$

$$\begin{array}{r} 0100001 \\ - 0101001 \\ \hline 1111000 \\ + 0001000 \\ \hline 0000000 \end{array}$$