

Code No: 54037

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

II B.Tech. II Sem., II Mid-Term Examinations, April – 2014

ANALOG AND DIGITAL IC APPLICATIONS

Objective Exam

Name: _____ Hall Ticket No.

					A				
--	--	--	--	--	---	--	--	--	--

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. A digital instrument is used to measure analog voltage and display it in 7 segment display devices. the instrument has []
A. an ADC at the input and a DAC at the output B. a DAC at the output
C. an ADC at the input D. an ADC at the output
2. Resolution of a 'N' DAC is []
A. full scale value/ 2^N B. full scale value/ $2N-1$
C. full scale value/ (2^N-1) D. none of these
3. The minimum no. of resistances are required for a 8-bit weighted – resistor type DAC is []
A. 8 B. 9 C. 15 D. 16
4. Dynamic characteristics of DAC is []
A. Dynamic nonlinearity (DNL) B. Offset error
C. Gain error D. Conversion speed
5. The speed conversion is maximum in []
A. Successive approximation ADC B. Single slop serial ADC
C. Dual slope ADC D. Flash ADC
6. An A/D convertor consists of []
A. only a DAC B. A DAC and a counter
C. DAC, comparator, logic gate and a counter D. DAC and logic gate
7. A multiplexer can be used as []
A. Counter B. Shift Register C. Combinational Circuit D. 7-segment display
8. In 16:4 priority encoder, lowest priority is given on []
A. 7 B. F C. 9 D. 0
9. Flip-flops can be used as []
A. latches B. registers C. counters D. all of these
10. A memory used for storing variable quantities is []
A. ROM B. PROM C. EPROM D. RAM

Cont....2

II Fill in the blanks:

11. _____ is the measure of worst case noise that can corrupt the actual logic level
12. The partial current flowing through P and N channels is called as _____
13. Compared to other logic families the power dissipation of CMOS is _____
14. In a N-bit single slop serial ADC, the number of clock pulses needed is _____
15. In binary to gray converter, _____ gate is used.
16. In a 4-bit ADC, the full-scale analog input voltage 16 V is divided into _____ intervals
17. For _____ the gate to source voltage is less than or equal to zero
18. A sequential circuit can be designed with the help of _____
19. _____ circuit is used in ADC
20. _____ is performed by using nine's complement representation

-oOo-

Code No: 54037

Set No. 2

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

II B.Tech. II Sem., II Mid-Term Examinations, April – 2014

ANALOG AND DIGITAL IC APPLICATIONS

Objective Exam

Name: _____ Hall Ticket No.

					A				
--	--	--	--	--	---	--	--	--	--

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. Dynamic characteristics of DAC is []
A. Dynamic nonlinearity (DNL) B. Offset error
C. Gain error D. Conversion speed
2. The speed conversion is maximum in []
A. Successive approximation ADC B. Single slop serial ADC
C. Dual slope ADC D. Flash ADC
3. An A/D convertor consists of []
A. only a DAC B. A DAC and a counter
C. DAC, comparator, logic gate and a counter D. DAC and logic gate
4. A multiplexer can be used as []
A. Counter B. Shift Register C. Combinational Circuit D. 7-segment display
5. In 16:4 priority encoder, lowest priority is given on []
A. 7 B. F C. 9 D. 0
6. Flip-flops can be used as []
A. latches B. registers C. counters D. all of these
7. A memory used for storing variable quantities is []
A. ROM B. PROM C. EPROM D. RAM
8. A digital instrument is used to measure analog voltage and display it in 7 segment display devices. the instrument has []
A. an ADC at the input and a DAC at the output B. a DAC at the output
C. an ADC at the input D. an ADC at the output
9. Resolution of a 'N' DAC is []
A. full scale value/ 2^N B. full scale value/ 2^N-1
C. full scale value/ (2^N-1) D. none of these
10. The minimum no. of resistances are required for a 8-bit weighted – resistor type DAC is []
A. 8 B. 9 C. 15 D. 16

Cont....2

II Fill in the blanks:

11. In a N-bit single slop serial ADC, the number of clock pulses needed is _____
12. In binary to gray converter, _____ gate is used.
13. In a 4-bit ADC, the full-scale analog input voltage 16 V is divided into _____ intervals
14. For _____ the gate to source voltage is less than or equal to zero
15. A sequential circuit can be designed with the help of _____
16. _____ circuit is used in ADC
17. _____ is performed by using nine's complement representation
18. _____ is the measure of worst case noise that can corrupt the actual logic level
19. The partial current flowing through P and N channels is called as _____
20. Compared to other logic families the power dissipation of CMOS is _____

-oOo-

Set No. 3

II B.Tech. II Sem., II Mid-Term Examinations, April - 2014

Objective Exam

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

1.	An A/D convertor consists of				[]
	A. only a DAC			B. A DAC and a counter		
	C. DAC, comparator, logic gate and a counter			D. DAC and logic gate		
2.	A multiplexer can be used as				[]
	A. Counter	B. Shift Register	C. Combinational Circuit	D. 7-segment display		
3.	In 16:4 priority encoder, lowest priority is given on				[]
	A. 7	B. F	C. 9	D. 0		
4.	Flip-flops can be used as				[]
	A. latches	B. registers	C. counters	D. all of these		
5.	A memory used for storing variable quantities is				[]
	A. ROM	B. PROM	C. EPROM	D. RAM		
6.	A digital instrument is used to measure analog voltage and display it in 7 segment display devices. the instrument has				[]
	A. an ADC at the input and a DAC at the output			B. a DAC at the output		
	C. an ADC at the input			D. an ADC at the output		
7.	Resolution of a 'N' DAC is				[]
	A. full scale value/ 2^N			B. full scale value/ 2^N-1		
	C. full scale value/ (2^N-1)			D. none of these		
8.	The minimum no. of resistances are required for a 8-bit weighted – resistor type DAC is				[]
	A. 8	B. 9	C. 15	D. 16		
9.	Dynamic characteristics of DAC is				[]
	A. Dynamic nonlinearity (DNL)			B. Offset error		
	C. Gain error			D. Conversion speed		
10.	The speed conversion is maximum in				[]
	A. Successive approximation ADC			B. Single slop serial ADC		
	C. Dual slope ADC			D. Flash ADC		

Cont....2

II Fill in the blanks:

11. In a 4-bit ADC, the full-scale analog input voltage 16 V is divided into _____ intervals
12. For _____ the gate to source voltage is less than or equal to zero
13. A sequential circuit can be designed with the help of _____
14. _____ circuit is used in ADC
15. _____ is performed by using nine's complement representation
16. _____ is the measure of worst case noise that can corrupt the actual logic level
17. The partial current flowing through P and N channels is called as _____
18. Compared to other logic families the power dissipation of CMOS is _____
19. In a N-bit single slop serial ADC, the number of clock pulses needed is _____
20. In binary to gray converter, _____ gate is used.

-oOo-

Code No: 54037

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

II B.Tech. II Sem., II Mid-Term Examinations, April – 2014

ANALOG AND DIGITAL IC APPLICATIONS

Objective Exam

Name: _____ Hall Ticket No.

					A				
--	--	--	--	--	---	--	--	--	--

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. In 16:4 priority encoder, lowest priority is given on []
A. 7 B. F C. 9 D. 0
2. Flip-flops can be used as []
A. latches B. registers C. counters D. all of these
3. A memory used for storing variable quantities is []
A. ROM B. PROM C. EPROM D. RAM
4. A digital instrument is used to measure analog voltage and display it in 7 segment display devices. the instrument has []
A. an ADC at the input and a DAC at the output B. a DAC at the output
C. an ADC at the input D. an ADC at the output
5. Resolution of a 'N' DAC is []
A. full scale value/ 2^N B. full scale value/ 2^N-1
C. full scale value/ (2^N-1) D. none of these
6. The minimum no. of resistances are required for a 8-bit weighted – resistor type DAC is []
A. 8 B. 9 C. 15 D. 16
7. Dynamic characteristics of DAC is []
A. Dynamic nonlinearity (DNL) B. Offset error
C. Gain error D. Conversion speed
8. The speed conversion is maximum in []
A. Successive approximation ADC B. Single slop serial ADC
C. Dual slope ADC D. Flash ADC
9. An A/D convertor consists of []
A. only a DAC B. A DAC and a counter
C. DAC, comparator, logic gate and a counter D. DAC and logic gate
10. A multiplexer can be used as []
A. Counter B. Shift Register C. Combinational Circuit D. 7-segment display

Cont....2

II Fill in the blanks:

11. A sequential circuit can be designed with the help of _____
12. _____ circuit is used in ADC
13. _____ is performed by using nine's complement representation
14. _____ is the measure of worst case noise that can corrupt the actual logic level
15. The partial current flowing through P and N channels is called as _____
16. Compared to other logic families the power dissipation of CMOS is _____
17. In a N-bit single slop serial ADC, the number of clock pulses needed is _____
18. In binary to gray converter, _____ gate is used.
19. In a 4-bit ADC, the full-scale analog input voltage 16 V is divided into _____ intervals
20. For _____ the gate to source voltage is less than or equal to zero

-oOo-