### Subject Code: 20EC2203 Subject Name:LIC Branch:ECE Section 1

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| --- | --- |
| Sno | 1 |
| Name | SECTION-1 |
| Time | 120 |
| Mark | 1 |
| Negative | 0 |

### Questions – S1

|  |  |
| --- | --- |
| Qno | 1 |
| Question | If both input and output is voltage then the amplifier is called |
| Sno | 1 |
| Type | Mcq |
| A | Voltage amplifier |
| B | Current amplifier |
| C | Transconductnce |
| D | None of the above |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 2 |
| Question | The output current divided by input voltage is known as |
| Sno | 1 |
| Type | Mcq |
| A | Voltage amplifier |
| B | Current amplifier |
| C | Transconductance |
| D | None of the above |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 3 |
| Question | In series-shunt connection the reverse-path gain is |
| Sno | 1 |
| Type | Mcq |
| A | Voltage gain |
| B | Current gain |
| C | Transconductance |
| D | Trans impedance |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 4 |
| Question | In shunt-shunt connection the forward-path gain is |
| Sno | 1 |
| Type | Mcq |
| A | Voltage gain |
| B | Current gain |
| C | Trans impedance |
| D | Trans conductance |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 5 |
| Question | In the positive feedback, the feedback is taken from \_\_\_terminal of the op-amp |
| Sno | 1 |
| Type | Mcq |
| A | Non-inverting |
| B | Inverting |
| C | Either a or b |
| D | None of the above |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 6 |
| Question | Both input and output resistance are less in \_\_\_\_\_\_\_\_\_\_ amplifier |
| Sno | 1 |
| Type | Mcq |
| A | Trans conductance |
| B | Trans resistance |
| C | Voltage |
| D | Current |
| Answer | B |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 7 |
| Question | **If the feedback fraction of an amplifier is 0.01, then voltage gain with negative feedback is approximately……….** |
| Sno | 1 |
| Type | Mcq |
| A | 500 |
| B | 100 |
| C | 5000 |
| D | 1000 |
| Answer | B |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 8 |
| Question | **When voltage feedback (negative) is applied to an amplifier, its input impedance** |
| Sno | 1 |
| Type | Mcq |
| A | Is Increased |
| B | Is Decreased |
| C | Remains same |
| D | None of the above |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 9 |
| Question | The circuit of the figure is an example of feedback of the following type  2 |
| Sno | 1 |
| Type | Mcq |
| A | Current series |
| B | Voltage series |
| C | Voltage shunt |
| D | Current shunt |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 10 |
| Question | **An amplifier without feedback has a voltage gain of 50, input resistance of** 1 kΩ and output resistance of 2.5 kΩ. The input resistance of the current shunt negative feedback amplifier using the above amplifier with a feedback factor of 0.2 is |
| Sno | 1 |
| Type | Mcq |
| A | 1/11 KΩ |
| B | 1/5 KΩ |
| C | 5 KΩ |
| D | 11 KΩ |
| Answer |  |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 1 |

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| Qno | 11 |
| Question | The gain of an amplifier without feedback is 100db. If negative feedback of 3 db is applied , the gain of an amplifier becomes |
| Sno | 1 |
| Type | Mcq |
| A | 5 db |
| B | 300db |
| C | 97 db |
| D | 103 db |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 12 |
| Question | What happens to the non linear distortion due to initiation of the negative feedback? |
| Sno | 1 |
| Type | Mcq |
| A | Level of non-linear distortion decreases |
| B | Level of non-linear distortion increases |
| C | Level of non-linear distortion remains stable |
| D | Level of on linear distortion changes sinusoidal |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 13 |
| Question | **For an ideal voltage amplifier circuit, what would be the value of input resistance?** |
| Sno | 1 |
| Type | Mcq |
| A | Zero |
| B | Infinity |
| C | Unity |
| D | Unpredictable |
| Answer | B |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 14 |
| Question | **Two non inverting amplifiers with gain=1 and gain=20 are made using identical operational amplifiers. As compared to the unity amplifier, the amplifier with gain=20 has** |
| Sno | 1 |
| Type | Mcq |
| A | **More input impedance** |
| B | **Less negative feedback** |
| C | **Less bandwidth** |
| D | **Less input impedance** |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 15 |
| Question | **A feedback circuit usually employs which type of circuit** |
| Sno | 1 |
| Type | Mcq |
| A | Resistive |
| B | Inductive |
| C | Capacitive |
| D | Shunt |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 16 |
| Question | Regarding the negative feedback amplifier, which of the following statement is wrong |
| Sno | 1 |
| Type | Mcq |
| A | Widens the separation between 3db frequency |
| B | Improves gain stability |
| C | Reduces distortion |
| D | Increases gain bandwidth product |
| Answer | D |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| --- | --- |
| Qno | 17 |
| Question | The gain of an amplifier is 100, when the negative feedback of 0.04 is employed to the system, the gain will be ? |
| Sno | 1 |
| Type | Mcq |
| A | 20 |
| B | 25 |
| C | 4 |
| D | 0.4 |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 18 |
| Question | what would be the value of feedback voltage in a negative feedback amplifier with A=100, feedback factor=0.03, the input signal voltage=40mv? |
| Sno | 1 |
| Type | Mcq |
| A | 0.03v |
| B | 0.06v |
| C | 0.09v |
| D | 0.12v |
| Answer | D |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 19 |
| Question | If the feedback voltage and the output voltage are given as 10v and 4v. find the gain of feedback circuit in voltage series feedback amplifier is? |
| Sno | 1 |
| Type | Mcq |
| A | 2.5v |
| B | 40v |
| C | 3v |
| D | 6.2v |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| --- | --- |
| Qno | 20 |
| Question | In a negative feedback amplifier, voltage sampling: |
| Sno | 1 |
| Type | Mcq |
| A | Tends to decrease output resistance |
| B | Tends to increase the output resistance |
| C | Does not alter the output resistance |
| D | Produces the same effect on output resistance as current sampling |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 2 |

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| Qno | 21 |
| Question | A feedback amplifier has an open loop gain of -100. If 4% of the output is feedback in a degenerative loop, what is the closed loop gain of the amplifier? |
| Sno | 1 |
| Type | Mcq |
| A | -33.3 |
| B | -25 |
| C | -20 |
| D | +25 |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 22 |
| Question | Negative feedback amplifier has an open loop gain of 60,000 and a closed loop gain of 300. If the open loop upper cutoff frequency is 15khz. Estimate the closed loop upper cut off frequency |
| Sno | 1 |
| Type | Mcq |
| A | 3.015hz |
| B | 3.150Mhz |
| C | 3.015Mhz |
| D | 3.150hz |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 23 |
| Question | Calculate output voltage of a negative feedback amplifier with A=120, beta=0.05,vs=75mv |
| Sno | 1 |
| Type | Mcq |
| A | 1.285v |
| B | 1.825v |
| C | 1.582v |
| D | 1.295v |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 24 |
| Question | An amplifier has mid band voltage gain of 1000 with fl=50Hz and fh=50khz, If 5% feedback is applied then calculate fl with feedback. |
| Sno | 1 |
| Type | Mcq |
| A | 0.98Hz |
| B | 0.88hz |
| C | 0.78Hz |
| D | 0.68Hz |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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|  |  |
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| Qno | 25 |
| Question | An amplifier has mid band voltage gain of 1000 with fl=50Hz and fh=50khz, If 5% feedback is applied then calculate gain with feedback. |
| Sno | 1 |
| Type | Mcq |
| A | 20.5 |
| B | 19.6 |
| C | 18.7 |
| D | 19.7 |
| Answer | B |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 26 |
| Question | The voltage gain without negative feedback is 40db. What is the new voltage gain if 3% negative feedback is introduced? |
| Sno | 1 |
| Type | Mcq |
| A | 15.21db |
| B | 14.12db |
| C | 15.12db |
| D | 14.21db |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 27 |
| Question | Which of the following describes the correct properties of emitter follower circuit?   1. It is a voltage series feedback circuit 2. It is a current series feedback circuit 3. Its voltage gain is less than unity 4. Its output impedance is very low |
| Sno | 1 |
| Type | Mcq |
| A | 1, 3 and 4 |
| B | 2,3 and 4 |
| C | 2 and 3 only |
| D | 2 and 4 only |
| Answer | A |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 28 |
| Question | The given circuit has feedback factor of |
| Sno | 1 |
| Type | Mcq |
| A | -Rc/Rs |
| B | -Re/Rc |
| C | -Re/Rs |
| D | -Rc/Re |
| Answer | B |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 29 |
| Question | A FET source follower is shown in the figure below |
| Sno | 1 |
| Type | Mcq |
| A | Positive current |
| B | Negative current |
| C | Positive voltage |
| D | Negative voltage |
| Answer | D |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 30 |
| Question | Nature of the feedback in the opamp circuit shown is |
| Sno | 1 |
| Type | Mcq |
| A | Current-current feedback |
| B | Current-voltage feedback |
| C | Voltage-voltage feedback |
| D | Voltage –current feedback |
| Answer | C |
| Topic | Chapter-1 |
| Mark | 1 |
| Level | 3 |

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| Qno | 31 |
| Question | The ideal value of input impedance of an opamp is |
| Sno | 1 |
| Type | Mcq |
| A | Very high |
| B | Very low |
| C | Infinite |
| D | Zero |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 32 |
| Question | The gain of voltage follower circuit is |
| Sno | 1 |
| Type | Mcq |
| A | Very high |
| B | Very low |
| C | One |
| D | Zero |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 33 |
| Question | In which of the following , opamp is connected in open-loop configuration |
| Sno | 1 |
| Type | Mcq |
| A | Integrator |
| B | Comparator |
| C | Non inverting amplifier |
| D | None of these |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 34 |
| Question | Which of the following parameter of the instrumental op-amp circuit increases and allows the buffer to handle large data? |
| Sno | 1 |
| Type | Mcq |
| A | Voltage gain |
| B | Current gain |
| C | CMRR |
| D | All of the above |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 35 |
| Question | Which of the following amplifiers are built from 3 other op-amps? |
| Sno | 1 |
| Type | Mcq |
| A | Differential amplifier |
| B | Instrumentational amplifier |
| C | Isolation amplifier |
| D | Negative feedback amplifier |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 36 |
| Question | The closed loop voltage gain of an inverting amplifier equals |
| Sno | 1 |
| Type | Mcq |
| A | The ratio of the input resistance to the feedback resistance |
| B | The open loop voltage gain |
| C | The feedback resistance divided by the input resistance |
| D | The input resistance |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 37 |
| Question | For the circuit shown, find the output voltage for an input voltage of -1v |
| Sno | 1 |
| Type | Mcq |
| A | -11v |
| B | +11v |
| C | -10v |
| D | +10v |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 38 |
| Question | Output voltage v0 of the circuit shown in the figure below. |
| Sno | 1 |
| Type | Mcq |
| A | 4.0v |
| B | -4.0v |
| C | 4.5v |
| D | -4.5v |
| Answer | D |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 39 |
| Question | The output of the below op-amp circuit is: |
| Sno | 1 |
| Type | Mcq |
| A | -0.75v |
| B | -4 coswt volts |
| C | -8 coswt volts |
| D | 16 volts |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 40 |
| Question | Calculate the input voltage for the below circuit if Vo= -11v |
| Sno | 1 |
| Type | Mcq |
| A | 1.1v |
| B | -1.1v |
| C | -1v |
| D | 1v |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 1 |

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| Qno | 41 |
| Question | Calculate the output voltage for the given circuit |
| Sno | 1 |
| Type | Mcq |
| A | 3.02v |
| B | 2.03v |
| C | 1.78v |
| D | 1.50v |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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| Qno | 42 |
| Question | Calculate the output voltage if v1=v2=0.15v |
| Sno | 1 |
| Type | Mcq |
| A | 0v |
| B | 4.65v |
| C | 6.45v |
| D | -6.45v |
| Answer | D |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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| Qno | 43 |
| Question | How many op-amps are required to implement this equation? |
| Sno | 1 |
| Type | Mcq |
| A | 2 |
| B | 3 |
| C | 4 |
| D | 1 |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 44 |
| Question | Calculate Il for the circuit shown below |
| Sno | 1 |
| Type | Mcq |
| A | 3mA |
| B | 4mA |
| C | 5mA |
| D | 6mA |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 45 |
| Question | In an instrumentation amplifier, the output voltage is based on the \_\_\_\_\_ times a scale factor. |
| Sno | 1 |
| Type | Mcq |
| A | Summation of the two inputs |
| B | Product of two inputs |
| C | Difference between the two inputs |
| D | None of the above |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 46 |
| Question | **A certain inverting amplifier has a closed-loop voltage gain of 25. The Op-amp has an open-loop voltage gain of 100,000. If an Op-amp with an open-loop voltage gain of 200,000 is substituted in the arrangement, the closed-loop gain ……..** |
| Sno | 1 |
| Type | Mcq |
| A | Doubles |
| B | Drops at 12.5 |
| C | Remains at 25 |
| D | Increases slightly |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
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| Qno | 47 |
| Question | **Current cannot flow to ground through …….** |
| Sno | 1 |
| Type | Mcq |
| A | A mechanical ground |
| B | A virtual ground |
| C | An a.c ground |
| D | An ordinary ground |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 48 |
| Question | The typical input stage of an opamp has a |
| Sno | 1 |
| Type | Mcq |
| A | Single ended input and single ended output |
| B | Single ended input and differential output |
| C | Differential input and single ended output |
| D | Differential input and differential output |
| Answer | D |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 49 |
| Question | An opamp can be used to generate the waveform having shape |
| Sno | 1 |
| Type | Mcq |
| A | Square |
| B | Pulse |
| C | Triangular |
| D | All of these |
| Answer | D |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 50 |
| Question | An opamp has a voltage gain of 500,000. If the output voltage is 1v , the input voltage is |
| Sno | 1 |
| Type | Mcq |
| A | 2micro volts |
| B | 5mv |
| C | 10mv |
| D | 1v |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 51 |
| Question | Assume ideal op amp and find Io |
| Sno | 1 |
| Type | Mcqa |
| A | 0.3m |
| B | 0.4mA |
| C | 0.5mA |
| D | 0.1mA |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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| Qno | 52 |
| Question | Find the time constant of the circuit  Open loop gain of the opamp is  R=1kohm, c=5µf |
| Sno | 1 |
| Type | Mcq |
| A | 2 sec |
| B | 3 sec |
| C | 4 sec |
| D | 1 sec |
| Answer | D |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
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| Qno | 53 |
| Question | The output of an opamp whose input is 2.5MHz square wave is shown in the figure. The slew rate of the opamp is |
| Sno | 1 |
| Type | Mcq |
| A | 0.8v/µs |
| B | 8.0v/µs |
| C | 20.0v/µs |
| D | 40.0v/µs |
| Answer | D |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
| --- | --- |
| Qno | 54 |
| Question | The value Vo in the circuit shown in the figure is |
| Sno | 1 |
| Type | Mcq |
| A | -5v |
| B | -3v |
| C | +5v |
| D | +3v |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
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| Qno | 55 |
| Question | A differential amplifier is constructed using an ideal opamp as shown in the figure. The values of R1 and R2 are 47kohm and 470kohm respectively    V1 and v2 are connected to voltage sources having an open circuit output of +1v each and internal resistances of 13kohm and 3kohm respectively. The output voltage is |
| Sno | 1 |
| Type | Mcq |
| A | 0v |
| B | 0.15v |
| C | 1.5v |
| D | 10v |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
| --- | --- |
| Qno | 56 |
| Question | For the opamp circuit shown in the figure, V0 is |
| Sno | 1 |
| Type | Mcq |
| A | -2v |
| B | -1v |
| C | -0.5v |
| D | 0.5v |
| Answer | C |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
| --- | --- |
| Qno | 57 |
| Question | An opamp that is powered from a + or -5v supply is used to build a non-inverting amplifier having a gain of 15. The slew rate of the opamp is 0.5 \*106v/s. For a sinusoidal input with amplitude of 0.3v, the maximum frequency(in khz) upto which it can be operated without any distortion is |
| Sno | 1 |
| Type | Mcq |
| A | 17.68khz |
| B | 17.86khz |
| C | 15.8khz |
| D | 15.68khz |
| Answer | A |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
| --- | --- |
| Qno | 58 |
| Question | In the circuit shown below, the opamp is ideal, the transistor has vbe=0.6v and beta=150. Decide whether the feedback in the circuit is positive or negative feedback and determine the voltage at the output of an opamp? |
| Sno | 1 |
| Type | Mcq |
| A | Positive feedback, V=10v |
| B | Negative feedback, V=2v |
| C | Positive feedback, V=0v |
| D | Negative feedback, V=5v |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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|  |  |
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| Qno | 59 |
| Question | The inverting opamp shown in the figure has an open loop gain of 100. The closed loop gain v0/vs is |
| Sno | 1 |
| Type | Mcq |
| A | -8 |
| B | -9 |
| C | -10 |
| D | -11 |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 60 |
| Question | In the circuit shown below, all opamps are ideal. The current I=0A when the resistance R |
| Sno | 1 |
| Type | Mcq |
| A | 10kohms |
| B | 9k ohms |
| C | 8k ohms |
| D | 7k ohms |
| Answer | B |
| Topic | Chapter-2 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 61 |
| Question | RC Phase shift oscillator contains minimum no of network |
| Sno | 1 |
| Type | Mcq |
| A | 2 |
| B | 1 |
| C | 3 |
| D | 5 |
| Answer | 3 |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 62 |
| Question | One phase shift network of RC Phase shift contain minimum no of inductor |
| Sno | 1 |
| Type | Mcq |
| A | 1 |
| B | 4 |
| C | 0 |
| D | 2 |
| Answer | c |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 63 |
| Question | Phase shift provided by the one phase shift network of RC phase shift oscillator is |
| Sno | 1 |
| Type | Mcq |
| A | 1800 |
| B | 900 |
| C | 600 |
| D | 1200 |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 64 |
| Question | A Wein bridge oscillator is a |
| Sno | 1 |
| Type | Mcq |
| A | Microwave |
| B | RF oscillator |
| C | Audio frequency oscillator |
| D | VHF oscillator |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 65 |
| Question | The Wein bridge oscillators uses |
| Sno | 1 |
| Type | Mcq |
| A | Negative feedback only |
| B | Both the negative and positive feedbacks |
| C | Positive feedback only |
| D | None of the above |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 66 |
| Question | In a Wein bridge oscillator the RC elements of the bridge provide a |
| Sno | 1 |
| Type | Mcq |
| A | No feedback |
| B | Positive feedback |
| C | Negative feedback |
| D | Negative feedback at low frequency |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 67 |
| Question | **In an LC transistor oscillator, the active device is** |
| Sno | 1 |
| Type | Mcq |
| A | LC tank circuit |
| B | Transistor |
| C | Biasing circuit |
| D | None of the above |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 68 |
| Question | An oscillator produces……………. oscillations |
| Sno | 1 |
| Type | Mcq |
| A | Damped |
| B | Undamped |
| C | Modulated |
| D | None of the above |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 69 |
| Question | Multivibrators are also referred to as \_\_\_\_\_\_. |
| Sno | 1 |
| Type | Mcq |
| A | Linear oscillators |
| B | Function generators |
| C | Non-linear oscillators |
| D | b and c |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 70 |
| Question | What are the types of Multivibrators? |
| Sno | 1 |
| Type | Mcq |
| A | Astable Multivibrator |
| B | Monostable Multivibrator |
| C | Bistable Multivibrator |
| D | All the above |
| Answer | D |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 71 |
| Question | Astable Multivibrators has \_\_\_\_\_\_\_\_ Stable states**.** |
| Sno | 1 |
| Type | Mcq |
| A | 0 |
| B | 2 |
| C | 3 |
| D | 4 |
| Answer | A |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 72 |
| Question | The Wein bridge oscillator requires the external phase shift of |
| Sno | 1 |
| Type | Mcq |
| A | 00 |
| B | 600 |
| C | 900 |
| D | 1800 |
| Answer | D |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 73 |
| Question | **In an LC oscillator, the frequency of oscillator is ……………. L or C.** |
| Sno | 1 |
| Type | Mcq |
| A | Proportional to square of |
| B | Directly proportional to |
| C | Independent of the values of |
| D | Inversely proportional to square root of |
| Answer | D |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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| --- | --- |
| Qno | 74 |
| Question | The frequency for a Weinbridge oscillator is given by |
| Sno | 1 |
| Type | Mcq |
| A | 1/2π RC |
| B | 2π/RC |
| C | 1/2πRC |
| D | 1/(2πRC) |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 75 |
| Question | Which Multivibrator is known as Flip-flop Multivibrator? |
| Sno | 1 |
| Type | Mcq |
| A | Astable Multivibrator |
| B | Bistable Multivibrator |
| C | Monostable Multivibrator |
| D | Pulse Generator |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 76 |
| Question | **Hartley oscillator is commonly used in ………………** |
| Sno | 1 |
| Type | Mcq |
| A | TV receivers |
| B | Radio transmitters |
| C | Radio receivers |
| D | None of the above |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 77 |
| Question | **The piezoelectric effect in a crystal is ……………** |
| Sno | 1 |
| Type | Mcq |
| A | A change in resistance because of temperature |
| B | A change in frequency because of temperature |
| C | A voltage developed because of mechanical stress |
| D | None of the above |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 78 |
| Question | How do Multivibrators differ from Oscillators? |
| Sno | 1 |
| Type | Mcq |
| A | Produces one waveform as outcome |
| B | Generates rectangular, square, and pulse waves as outcomes |
| C | Produces sine wave as output |
| D | Same |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 79 |
| Question | What kind of multi vibrators have equal time for a capacitor to charge and discharge? |
| Sno | 1 |
| Type | Mcq |
| A | Astable Multivibrator |
| B | Monostable Multivibrator |
| C | Triggered Oscillator |
| D | Bistable Multivibrator |
| Answer | A |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

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|  |  |
| --- | --- |
| Qno | 80 |
| Question | Total time period of the Square wave is \_\_\_\_\_\_\_\_. |
| Sno | 1 |
| Type | Mcq |
| A | 0.69 RC |
| B | 1.48 RC |
| C | 1.38 RC |
| D | 1.28 RC |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 81 |
| Question | If the crystal frequency changes with temperature, we say that crystal has ………….. temperature coefficient |
| Sno | 1 |
| Type | Mcq |
| A | Positive |
| B | Zero |
| C | Negative |
| D | None of the above |
| Answer | A |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 82 |
| Question | One condition for oscillation is …………. |
| Sno | 1 |
| Type | Mcq |
| A | A phase shift around the feedback loop of 180o |
| B | A gain around the feedback loop of one-third |
| C | A phase shift around the feedback loop of 0o |
| D | A gain around the feedback loop of less than 1 |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 83 |
| Question | In Colpitt’s oscillator, feedback is obtained ……………. |
| Sno | 1 |
| Type | Mcq |
| A | By magnetic induction |
| B | By a tickler coil |
| C | From the centre of split capacitors |
| D | None of the above |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 84 |
| Question | In an LC oscillator, if the value of L is increased four times, the frequency of oscillations is ………… |
| Sno | 1 |
| Type | Mcq |
| A | Decreased 2 times |
| B | Increased 2 times |
| C | Decreased 4 times |
| D | Increased 4 times |
| Answer | A |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 85 |
| Question | What is the duty cycle of the Astable multi vibrator |
| Sno | 1 |
| Type | Mcq |
| A | 60% |
| B | 50% |
| C | 30% |
| D | 100% |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 86 |
| Question | **Hysteresis prevents false triggering associated with** |
| Sno | 1 |
| Type | Mcq |
| A | A sinusoidal input |
| B | Noise voltages |
| C | Stray capacitances |
| D | Trip points |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 87 |
| Question | The output voltage of an op amp Schmitt trigger is |
| Sno | 1 |
| Type | Mcq |
| A | A low voltage |
| B | A high voltage |
| C | A sine wave |
| D | Either a low or a high voltage |
| Answer | D |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 88 |
| Question | Quartz crystal is most commonly used in crystal oscillators because …………. |
| Sno | 1 |
| Type | Mcq |
| A | It has superior electrical properties |
| B | It is quite inexpensive |
| C | It is easily available |
| D | None of the above |
| Answer | A |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 89 |
| Question | When a large sine wave drives a Schmitt trigger, the output is a |
| Sno | 1 |
| Type | Mcq |
| A | Triangular wave |
| B | Rectangular wave |
| C | Series of ramps |
| D | Rectified sine wave |
| Answer | B |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 90 |
| Question | The application where one would most likely find a crystal oscillator is …………….. |
| Sno | 1 |
| Type | Mcq |
| A | Radio receiver |
| B | AF sweep generator |
| C | Radio transmitter |
| D | None of the above |
| Answer | C |
| Topic | Chapter-3 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 91 |
| Question | The output voltage is lower than the input voltage that type of converter is\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Boost converter |
| B | Buck converter |
| C | step-down converter |
| D | both options b,c true |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 92 |
| Question | The output voltage is higher than the input voltage that type of converter is\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Boost converter |
| B | Buck converter |
| C | step-down converter |
| D | both options b,c true |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 93 |
| Question | DC-DC converters under the category of : |
| Sno | 1 |
| Type | Mcq |
| A | LMPS |
| B | AC-DC |
| C | SMPS |
| D | Non |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 94 |
| Question | In DC-DC converters switching operation is done with:   1. Electronic switch III. MOSFET 2. BJT IV.Diode |
| Sno | 1 |
| Type | Mcq |
| A | BJT and Diode |
| B | Electronic switch, BJT and MOSFET |
| C | All are correct |
| D | Electronic switch and diode |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 95 |
| Question | How much Efficiency of DC-DC converters ex-hibits ? |
| Sno | 1 |
| Type | Mcq |
| A | 90% |
| B | 80% |
| C | 70% |
| D | 60% |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 96 |
| Question | The Regulation of DC-DC converters is\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | (VNL˟ VFL) / VNL |
| B | (VNL+VFL) / VNL |
| C | (VFL-VNL) / VNL |
| D | (VNL-VFL) / VFL |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 97 |
| Question | In DC-DC converter filtering operation is done, using element is\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Diode |
| B | Capacitor |
| C | Inductor |
| D | Resistor |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 98 |
| Question | The output voltage is either higher or lower than the input voltage that type of converter is\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Buck-Boost converter |
| B | Boost converter |
| C | step-down converter |
| D | both options b,c true |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 99 |
| Question | Which type of converter is formed with the cascading connection of step-down, step-up converters ? |
| Sno | 1 |
| Type | Mcq |
| A | Buck converter |
| B | Boost converter |
| C | Buck-Boost converter |
| D | Cuk converter |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 100 |
| Question | Boost, Buck, Buck-Boost, Cuk converters are under the category of\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | AC-DC converters |
| B | DC-DC converters |
| C | AC-AC converters |
| D | DC-AC converters |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 101 |
| Question | What is formula for the output voltage for Buck-converter ? |
| Sno | 1 |
| Type | Mcq |
| A | Vin (1+D) |
| B | D2Vin |
| C | D3Vin |
| D | D4Vin |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 102 |
| Question | What is formula for the output voltage for Buck-Boost converter ? |
| Sno | 1 |
| Type | Mcq |
| A | DVin |
| B | Vin (1-D) |
| C | DVin (1-D) |
| D | DVin  (1+D) |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 103 |
| Question | Inductor and capacitor in Buck converter are used to \_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Filter out the harmonics |
| B | Increase the harmonics |
| C | Increase the cost |
| D | Decrease the cost |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 104 |
| Question | Calculate the output voltage of the Buck converter if the supply voltage is 120V and duty cycle value is 0.9 |
| Sno | 1 |
| Type | Mcq |
| A | 58.12V |
| B | 63.15V |
| C | 81.23V |
| D | 48.12V |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 105 |
| Question | Bandwidth of the positive feedback amplifier is\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Bf = |
| B | Bf = B(1+A |
| C | Bf=B(1-A |
| D | Bf = |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 106 |
| Question | Noise factor of the Negative feedback amplifier is\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Nf = N(1+A |
| B | Nf=N(1-A |
| C | Nf = |
| D | Nf = |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 107 |
| Question | OP-AMP output stage designed with \_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Complementary symmetry push-pull amplifier |
| B | Class-A power amplifier |
| C | Class-B push-pull power amplifier |
| D | Class-AB power amplifier |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 108 |
| Question | Practical OP-AMP input bias current value is \_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 20mA |
| B | 40mA |
| C | 60nA |
| D | 80nA |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 109 |
| Question | OP-AMP have the input offset voltage 25V and supply voltage 5V then find the PSRR ? |
| Sno | 1 |
| Type | Mcq |
| A | 15 |
| B | 5 |
| C | 20 |
| D | 25 |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 110 |
| Question | In the given below which type of circuit is acts as low-pass filter ? |
| Sno | 1 |
| Type | Mcq |
| A | Inverting amplifier |
| B | Summer |
| C | Integrator |
| D | Differentiator |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 111 |
| Question | The output of a practical OP-AMP has 8V in12s.The slew rate in V/ is\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 0.25 |
| B | 0.67 |
| C | 0.52 |
| D | 0.76 |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 112 |
| Question | The OP-AMP can amplify \_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | a.c. signal only |
| B | d.c. signal only |
| C | both a.c. and d.c. signals |
| D | neither a.c. nor d.c. signal |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 113 |
| Question | wien bridge Oscillator have the feedback resistance is 8KΩ then find the resistance R1=? |
| Sno | 1 |
| Type | Mcq |
| A | 4KΩ |
| B | 6KΩ |
| C | 8KΩ |
| D | 10KΩ |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 114 |
| Question | In the application of temperature sensors which type of Oscillator is used ? |
| Sno | 1 |
| Type | Mcq |
| A | RC-phase shift Oscillator |
| B | Wien bridge Oscillator |
| C | Hartley Oscillator |
| D | Colpitts Oscillator |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 115 |
| Question | For a RC-Phase shift Oscillator R1=2KΩ then find the feedback resistance in (KΩ)? |
| Sno | 1 |
| Type | Mcq |
| A | 45 |
| B | 58 |
| C | 64 |
| D | 74 |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 116 |
| Question | In the given below which type of Oscillator circuit having the high stability and selectivity? |
| Sno | 1 |
| Type | Mcq |
| A | Colpitts Oscillator |
| B | Hartley Oscillator |
| C | Crystal oscillator |
| D | RC-phase shift Oscillator |
| Answer | C |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 117 |
| Question | For an Astable multi-vibrator having reference voltage 12V and =6 then the generated square wave vary in between \_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A |  |
| B |  |
| C |  |
| D |  |
| Answer | A |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 118 |
| Question | For a Bi-stable multi-vibrator having R=2KΩ,C=4mf then find the frequency of oscillations? |
| Sno | 1 |
| Type | Mcq |
| A | 0.8HZ |
| B | 1.8HZ |
| C | 0.28HZ |
| D | 0.18HZ |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 119 |
| Question | In R-2R Ladder type DAC the range of ‘R’ is in (KΩ) ? |
| Sno | 1 |
| Type | Mcq |
| A | 2-4.2 |
| B | 2.5-10 |
| C | 3.5-11.5 |
| D | 4.5-12.2 |
| Answer | B |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 120 |
| Question | For 4-bit R-2R Ladder type DAC having the reference voltage 12V and the resistance value 3KΩ.Find the current resolution ? |
| Sno | 1 |
| Type | Mcq |
| A | 1Ma |
| B | 0.75mA |
| C | 0.50mA |
| D | 0.25mA |
| Answer | D |
| Topic | Chapter-4 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 121 |
| Question | In a PLL, VCO designed with which type oscillator used ? |
| Sno | 1 |
| Type | Mcq |
| A | Astable multivibrator |
| B | Hartly oscillator |
| C | Collipits oscillator |
| D | Crystal oscillator |
| Answer | A |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 122 |
| Question | IC VCO NE/SE566 the 4th pin represents : |
| Sno | 1 |
| Type | Mcq |
| A | Ground |
| B | Square wave output |
| C | VCC |
| D | Triangular wave output |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 123 |
| Question | IC VCO NE/SE566 the 3rd pin represents : |
| Sno | 1 |
| Type | Mcq |
| A | Ground |
| B | Square wave output |
| C | VCC |
| D | Triangular wave output |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 124 |
| Question | The most commonly used IC VCO is\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | IC 741 |
| B | IC 555 |
| C | IC 566 |
| D | IC 568 |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 125 |
| Question | In PLL analog phase detection done with\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | D-flip flop |
| B | Electronic Switch |
| C | EX-OR gate |
| D | RS-Flip flop |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 126 |
| Question | In PLL digital phase detection done with\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | D-flip flop |
| B | Electronic Switch |
| C | EX-OR gate |
| D | RS-Flip flop |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 127 |
| Question | To arrange the correct order for the blocks presented in the PLL is\_\_\_\_\_  a) phase detector b) amplifier c) VCO d) Filter |
| Sno | 1 |
| Type | Mcq |
| A | a,b,d,c |
| B | a,b,c,d |
| C | b,c,a,d |
| D | a,d,c,b |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 128 |
| Question | other name of VCO is\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | pulse stretcher |
| B | bi-stable multi-vibrator |
| C | Free running multi-vibrator |
| D | Mono-stable multi-vibrator |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 129 |
| Question | Applications of PLL is\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | signal synchronizer |
| B | Tone decoder |
| C | computer modems |
| D | all options are true |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 130 |
| Question | The PLL using AM detector improves\_\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | high fidelity |
| B | high selectivity |
| C | both options b,d |
| D | higher noise immunity |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 131 |
| Question | In VCO the Inverter block designed with\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | power amplifier |
| B | voltage amplifier |
| C | Buffer |
| D | Schmitt trigger |
| Answer | A |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 132 |
| Question | In VCO the schmitt trigger circuit generated signal is\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Square wave signal |
| B | Sinusoidal signal |
| C | Triangular wave |
| D | Noise signal |
| Answer | A |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 133 |
| Question | In a VCO the amount of charge and discharge voltage swing is done with\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | current sink |
| B | Buffer |
| C | Schmitt trigger |
| D | Inverter |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 134 |
| Question | The conversation ratio of the PLL is \_\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 1 / |
| B | 1.2 / |
| C | 1.3 / |
| D | 1.4 / |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 135 |
| Question | The lock-in range of a PLL is \_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | ± 7f0 / V |
| B | ± 7.8f0 / V |
| C | ± 7.6f0 / V |
| D | ± 7.2f0 / V |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 136 |
| Question | In a analog phase detector the perfect lock is achieved in which case, φ=\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 900 |
| B | 1800 |
| C | 450 |
| D | 00 |
| Answer | A |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 137 |
| Question | In a analog phase detector under the perfect lock condition the error voltage, Ve is \_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 1 |
| B | Vi Vo |
| C | (KVi Vo)/ 2 |
| D | 0 |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 138 |
| Question | In a analog phase detector the error voltage depends on : |
| Sno | 1 |
| Type | Mcq |
| A | input signal amplitude |
| B | input signal phase angle |
| C | both options a,b true |
| D | output phase angle |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 139 |
| Question | The frequency of oscillations of VCO is given by \_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 1/R1C1 |
| B | 1/2R1C1 |
| C | 1/3R1C1 |
| D | 1/4R1C1 |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 140 |
| Question | In a digital phase detector,the phase error φ is \_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A |  |
| B |  |
| C |  |
| D |  |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 141 |
| Question | If the PLL is used as Frequency divider. It is designed with a divide-by-10 network then the generated frequency, fo \_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | fi / 5 |
| B | 5fi |
| C | fi / 10 |
| D | 10fi |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 142 |
| Question | If the PLL is used as Frequency multiplier. It is designed with a multiplier 5 network then the generated frequency, fo \_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | fi / 5 |
| B | 5fi |
| C | fi / 10 |
| D | 10fi |
| Answer | A |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 143 |
| Question | The voltage to frequency conversation factor is determined in VCO is \_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | fo / Vcc |
| B | 2fo / Vcc |
| C | 4fo / Vcc |
| D | 8fo / Vcc |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 144 |
| Question | Determine the change in dc control voltage Vc during lock, if input signal frequency fs=20KHZ,the free running frequency is 21KHZ and the voltage to frequency transfer co-efficient of VCO is 4KHZ/V. |
| Sno | 1 |
| Type | Mcq |
| A | 0.55V |
| B | 0.25V |
| C | 0.75V |
| D | 0.35V |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 145 |
| Question | Choose the best characteristics of VCO is \_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | Linearity in voltage to frequency conversation |
| B | High operating frequency |
| C | Option ‘a’ True ‘b’ False |
| D | Options a, b are True |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 146 |
| Question | At which state the phase-locked loop tracks any change in input frequency ? |
| Sno | 1 |
| Type | Mcq |
| A | free running state |
| B | capture state |
| C | phase locked state |
| D | None |
| Answer | C |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 147 |
| Question | The output frequency of the VCO can be changed by changing parameters are\_\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | External tuning resistor |
| B | External tuning capacitor |
| C | Modulating input voltage |
| D | options a,b,c are true |
| Answer | D |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 148 |
| Question | Calculate the value of external timing capacitor, if no modulating input signal is applied to VCO. Consider f0=20K and RT=10KΩ. |
| Sno | 1 |
| Type | Mcq |
| A | 1.25nf |
| B | 6nf |
| C | 10nf |
| D | 100nf |
| Answer | A |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 149 |
| Question | Determine the value of current flow in VCO, when the NE 566 VCO external timing resistor RT=300Ω and the modulating input voltage VC=2V,Vcc=+5V. |
| Sno | 1 |
| Type | Mcq |
| A | 0.03A |
| B | 0.01A |
| C | 0.02A |
| D | 0A |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 150 |
| Question | The free running or center frequency of VCO is\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 1/R1C1 |
| B | 1.2/4R1C1 |
| C | 1/3R1C1 |
| D | 1/2R1C1 |
| Answer | B |
| Topic | Chapter-5 |
| Mark | 1 |
| Level | 3 |

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| --- | --- |
| Qno | 151 |
| Question | The resolution of DAC will be |
| Sno | 1 |
| Type | Mcq |
| A | 1/8 |
| B | 1/255 |
| C | 1/28 |
| D | 1/64 |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 152 |
| Question | Which of the following is the fastest A/D converter |
| Sno | 1 |
| Type | Mcq |
| A | Counter type ADC |
| B | Sucessive approximation type ADC |
| C | Flash type ADC |
| D | Dual slope ADC |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 153 |
| Question | What is the main role of an ADC? |
| Sno | 1 |
| Type | Mcq |
| A | Amplify |
| B | Reduce noise |
| C | Convert analog to digital |
| D | Increase range |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 154 |
| Question | Pulse width modulator is type of |
| Sno | 1 |
| Type | Mcq |
| A | DAC |
| B | ADC |
| C | AAC |
| D | DDC |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 155 |
| Question | How many control lines are present A to D converter in addition of reference voltage |
| Sno | 1 |
| Type | Mcq |
| A | 3 |
| B | 2 |
| C | 1 |
| D | None of the above |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 156 |
| Question | ADC input sampled by |
| Sno | 1 |
| Type | Mcq |
| A | Ohm Rate |
| B | Nyquist Rate |
| C | Newton Rate |
| D | Lens Rate |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 157 |
| Question | The Advantage of Dual slope using in digital voltmeter is that of |
| Sno | 1 |
| Type | Mcq |
| A | Its conversion time is less |
| B | Its accuracy is high |
| C | It gives output in BCD format |
| D | It doesn’t require any comparator |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 158 |
| Question | The number of comparators in 4 bit Flash type ADC |
| Sno | 1 |
| Type | Mcq |
| A | 4 |
| B | 5 |
| C | 15 |
| D | 16 |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

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| --- | --- |
| Qno | 159 |
| Question | What is the major advantage of R-2R ladder D/A converter as compared to binary weighted resistors |
| Sno | 1 |
| Type | Mcq |
| A | Only use two values of resistors |
| B | Its operation much easier to analyze |
| C | It has the few parts of the same number of inputs |
| D | All of the above |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 160 |
| Question | Which ADC is fixed conversion time |
| Sno | 1 |
| Type | Mcq |
| A | Counter type |
| B | Flash type |
| C | Successive approximation type |
| D | Dual slope |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 1 |

|  |  |
| --- | --- |
| Qno | 161 |
| Question | C:\Users\indian\Desktop\Capture1.PNG |
| Sno | 1 |
| Type | Mcq |
| A | 3.516 |
| B | 1.758 |
| C | 0.878 |
| D | 4.125 |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 162 |
| Question | ---------- In DAC is defines as the variation analog step sizes between successive bits |
| Sno | 1 |
| Type | Mcq |
| A | DNL |
| B | INL |
| C | Resolution error |
| D | Full scale error |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

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| --- | --- |
| Qno | 163 |
| Question | The give fig below 3-bit flash type ADC What would be the binary output when vin =3.45v,vref=8v |
| Sno | 1 |
| Type | Mcq |
| A | 011 |
| B | 100 |
| C | 101 |
| D | 110 |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 164 |
| Question |  |
| Sno | 1 |
| Type | Mcq |
| A | 10100 |
| B | 01100 |
| C | 11000 |
| D | 10110 |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 165 |
| Question | Express the output voltage of digital to analog converter? |
| Sno | 1 |
| Type | Mcq |
| A | Vo =VFS/k(d12-1+d22-2+….dn2-n) |
| B | Vo =KVFS(d12-1+d22-2+….dn2-n) |
| C | Vo =VFS(d12-1+d22-2+….dn2-n) |
| D | Vo =K(d12-1+d22-2+….dn2-n) |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 166 |
| Question | The Inverted R-2R Ladder operated in |
| Sno | 1 |
| Type | Mcq |
| A | Inverted mode |
| B | Current mode |
| C | Voltage mode |
| D | None of the above |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 167 |
| Question | Which of the following circuit is said to be linear |
| Sno | 1 |
| Type | Mcq |
| A | Weighted resistor type DAC |
| B | R-2R ladder type DAC |
| C | Inverted type DAC |
| D | All of the above |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

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| --- | --- |
| Qno | 168 |
| Question | Calculate the value of LSB &MSB of DAC for 10v |
| Sno | 1 |
| Type | Mcq |
| A | 7.8mv ,5v |
| B | 9.3mv, 5v |
| C | 14.2mv,5v |
| D | 2.4mv,5v |
| Answer | D |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 169 |
| Question | If the input is 101101111 |
| Sno | 1 |
| Type | Mcq |
| A | 1.36v |
| B | 2.27v |
| C | 5.45v |
| D | None of the above |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 170 |
| Question | Multiplying DAC uses |
| Sno | 1 |
| Type | Mcq |
| A | Constant reference voltage |
| B | Varying reference voltage |
| C | Constant input voltage |
| D | Varying input voltage |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 2 |

|  |  |
| --- | --- |
| Qno | 171 |
| Question | If the flash ADC has 8 bit resolution,which one of the following alternatives closest to the maximum sampling rate |
| Sno | 1 |
| Type | Mcq |
| A | 1Mega samples per sec |
| B | 6Mega samples per sec |
| C | 64Mega samples per sec |
| D | 256Mega samples per sec |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 172 |
| Question | In a certain five-step R/2R ladder network, the smallest resistor value is 1 kΩ. The largest value is\_\_\_\_\_\_\_\_\_\_\_? |
| Sno | 1 |
| Type | Mcq |
| A | 1. Indeterminable |
| B | 1. 2 kΩ |
| C | 1. 10 kΩ |
| D | 1. 20 kΩ |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 173 |
| Question | The successive approximation converters have a resolution of\_\_\_\_\_\_\_\_\_\_ |
| Sno | 1 |
| Type | Mcq |
| A | 8-10 bits |
| B | 10-12 bits |
| C | 12-16 bits |
| D | 16-32 bits |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 174 |
| Question | The problems of the binary-weighted resistor digital-to-analog converter (DAC) can be overcome by using \_\_\_\_\_\_\_\_\_\_\_. |
| Sno | 1 |
| Type | Mcq |
| A | An R/2R ladder DAC |
| B | an 8-bit binary-weighted resistor DAC |
| C | a staircase DAC |
| D | a flash DAC |
| Answer | A |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 175 |
| Question | The number of binary bits at the input of a digital-to-analog converter (DAC) is known as \_\_\_\_\_\_\_\_. |
| Sno | 1 |
| Type | Mcq |
| A | Accuracy |
| B | Resolution |
| C | Monotonicity |
| D | Linearity |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 176 |
| Question | Inaccurate analog-to-digital conversion may be due to \_\_\_\_\_\_\_\_\_\_\_\_. |
| Sno | 1 |
| Type | Mcq |
| A | constant analog input voltage |
| B | linear ramp usage |
| C | faulty sample-and-hold circuitry |
| D | intermittent counter inputs |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 177 |
| Question | The characteristic that a change of one binary step on the input of a digital-to-analog converter (DAC) should cause exactly one step change on the output is called \_\_\_\_\_\_\_\_. |
| Sno | 1 |
| Type | Mcq |
| A | Resolution |
| B | monotonicity |
| C | linearity |
| D | accuracy |
| Answer | B |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 178 |
| Question | \_\_\_\_\_\_\_ analog-to-digital converters (ADCs) use no clock signal, because there is no timing or sequencing required. |
| Sno | 1 |
| Type | Mcq |
| A | * Actuator |
| B | * Dual |
| C | * Flash |
| D | * Bipolar |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 179 |
| Question | |  | | --- | | Which of the following is a type of error associated with digital-to-analog converters (DACs)? | |  | |
| Sno | 1 |
| Type | Mcq |
| A | Non monotonic error |
| B | incorrect output codes |
| C | offset error |
| D | Non monotonic and offset error |
| Answer | D |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |

|  |  |
| --- | --- |
| Qno | 180 |
| Question | |  | | --- | | A binary-weighted digital-to-analog converter has an input resistor of 100 k. If the resistor is connected to a 5 V source, the current through the resistor is: | |  | |
| Sno | 1 |
| Type | Mcq |
| A | 5 mA |
| B | 500 mu.gifA |
| C | 50 mu.gifA |
| D | 50 mA |
| Answer | C |
| Topic | Chapter-6 |
| Mark | 1 |
| Level | 3 |