ELECTRONIC CIRCUIT ANALYSIS (15A04401)

Multiple Choice Questions

UNIT-1

1. The gain of an amplifier with Negative feedback is given by Af = _____.

a) A/(1+Aβ) b) A/(1-Aβ) c) A+1/(Aβ) d) A-1/(Aβ)

2. The disadvantage of negative feedback is that gain _____.

a) high gain b) high distortion c) less gain d) less distortion

3. With series feedback, input resistance of an amplifier will _____.

a) decrease b) increase c) remains constant d) increase or decrease

4. If negative feedback is used in amplifiers then Noise will _____.

a) decrease b) increase c) remains constant d) increase or decrease

5. If negative feedback is used in amplifiers then Bandwidth will _____.

a) decrease b) increase c) remains constant d) increase or decrease

6.If negative feedback is used in amplifiers then lower cut-off frequency will _____.

a) decrease b) increase c) remains constant d) increase or decrease

7.If negative feedback is used in amplifiers then higher cut-off frequency will _____.

a) decrease b) increase c) remains constant d) increase or decrease

8. If negative feedback is used in amplifiers then gain will _____.

a) be unity b) increase c) remains constant d) decrease

9. If negative feedback is used in amplifiers then distortion will _____.

a) remains constant b) increase c) decrease d) be zero

10. With shunt feedback, input resistance of an amplifier will _____.

a) decrease b) increase c) remains constant d) zero

11. Voltage series feedback amplifier is also called as _____ amplifier.

a) Transresistance b) Transconductance c) current d) voltage

12. Voltage shunt feedback amplifier is also called as _____.

a) Transresistance b) Transconductance c) voltage d) current

13. Current series feedback amplifier is also called as _____.

a) Transresistance b) Transconductance c) voltage d) current

14. Current shunt feedback amplifier is also called as _____.

a) Transresistance b) Transconductance c) voltage d) current

15. Oscillator is a circuit which converts _____ to _____.

a) ac, dc b) ac, ac c) dc, ac d) dc, dc

16. Sinusoidal oscillators are also called as _____ oscillators.

a) NonHarmonic b) Relaxation c) Harmonic d) negative feedback

17. Non-Sinusoidal oscillators are also called as _____.

a) Harmonic b) Relaxation c) non-relaxation d) negative feedback

18. Classification of oscillators based on type of circuit are divided into _____ and _____.

a) LC oscillators b) RC oscillators c) both a, b d) –ve resistance oscillators

19. Examples of non-sinusoidal waveforms are _____.

a) square b) sawtooth c) triangular d) all

20. An oscillator uses _____ feedback.

a) positive b) zero c) negative d) both positive, negative

21. RF oscillators are also called as _____ oscillators.

a) High Frequency b) Very High Frequency c) Low Frequency d) Microwave Frequency

22. AF oscillator has _____ range of frequencies.

a) 30MHz-300MHz b) 20KHz-30MHz c) up to 20KHz d) above 3GHz

23. RF oscillator has _____ range of frequencies.

a) up to 20KHz b) 20KHz-30MHz c) 30MHz-300MHz d) above 3GHz

24. VHF oscillator has _____ range of frequencies.

a) up to 20KHz b) 20KHz-30MHz c) 30MHz-300MHz d) above 3GHz

25. UHF oscillator has _____ range of frequencies.

a) 300MHz -3GHz b) 20KHz-30MHz c) 30MHz-300MHz d) above 3GHz

26. MWF oscillator has _____ range of frequencies.

a) 300MHz -3GHz b) 20KHz-30MHz c) 30MHz-300MHz d) above 3GHz

27. Examples of LC oscillators are _____ circuits.

a) Hartley, Colpitts b) Weinbridge, Colpitts c) Hartley, RC phase shift d) Weinbridge, RC phase shift

28. Examples of RC oscillators are _____ circuits.

a) Hartley, Colpitts b) Weinbridge, RC phase shift c) Hartley, RC phase shift d) Weinbridge, Colpitts

29. _____ Oscillator exhibits piezoelectric effect.

a) Hartley, Colpitts b) Weinbridge, Colpitts c) Hartley, RC phase shift d) Crystal

30. Necessary conditions to be satisfied by any oscillator circuit are called as _____.

a) Halls criteria b) DeMorgans criteria c) Millers Criteria d) BarkHausen Criteria

31. Two conditions to be satisfied by any oscillator circuit are given by _____ and _____.

a) $|A\beta|=0, \theta= 1^0$ b) $|A\beta|=1, \theta= 0^0$ c) $|A\beta|=1, \theta= 90^0$ d) $|A\beta|=0, \theta= 180^0$

32. Advantage of RC oscillator is _____.

a) less cost b) high B.W c) high gain d) used for VHF range

33. RC phase shift oscillator has _____ no. of identical RC sections.

a) 1 b) 2 c) 3 d) 4

34. Each RC section in RC phase shift oscillator generates _____ degrees of phase shift.

a) 30 b) 60 c) 90 d) 180

35. Advantage of LC oscillator is _____.

a) less cost b) high B.W c) high gain d) used for VHF range

36. Disadvantage of LC oscillator is _____.

a) less cost b) high B.W c) not used for AF range d) used for VHF range

37. In Hartley Oscillator _____ are variable and _____ is constant.

a) R1, L1 & C b) R1,R2 & C c) C1, C2 & L d) L1, L2 & C

38. In Colpitts Oscillator _____ are variable and _____ is constant.

a) R1, L1 & C b) R1,R2 & C c) C1, C2 & L d) L1, L2 & C

39. In Wienbridge oscillator circuit, feedback network generates _____ degrees of phase shift.

a) 0 b) 90 c) 180 d) 270

40. Crystal frequency of vibration is inversely proportional to _____.

a) constant P b) Y c) l d) ρ

UNIT-II

1. Logarithm taken to the base 'e' is called as _____.

a) common b) natural c) decimal d) exponential

2. Log 10 = _____ and Log 1 = _____.

a) 0, 1 b) 0, 0 c) 1, 1 d) 1, 0

3. Logarithm taken to the base '10' is called as _____.

a) common b) natural c) decimal d) exponential

4. 1 bel =

a) 1dB b) 10dB c) 0.1dB d) 1dBm

5. Hybrid-pi parameters are _____.

a) $r_{bb'}$ b) $r_{b'c}$ c) $C_{b'c}$ d) all

6. Hybrid-pi model is also called as _____model.

a) Millers b) DeMorgan c) Barkhausen d) Giacoletto

7. _____ Capacitors effect is considered in low frequency response of amplifier circuit.

a) Ce b) Cc c) both Ce, Cc d) $C_{b'c}$, $C_{b'e}$

8. _____ Capacitors effect is considered in high frequency response of amplifier circuit.

a) $C_{b'e}$ b) $C_{b'c}$, c) both $C_{b'c}$, $C_{b'e}$ d), Ce, Cc

9. Range of $r_{bb'}$ is _____ Ω.

a) 80K b) 4M c) 100 d) 1000

10. Range of $r_{b'c}$ is _____.

a) 80K b) 4M c) 100 d) 1000

11. Range of $r_{b'e}$ is _____.

a) 80K b) 4M c) 100 d) 1000

12. Range of r_{ce} is _____.

a) 80K b) 4M c) 100 d) 1000

13. Range of $C_{b'c}$ is _____.

a) 1pF b) 3pF c) 100pF d) 50pF

14. Range of $C_{b'e}$ is _____.

a) 1pF b) 3pF c) 100pF d) 50pF

15. Formula of $r_{bb'}$ is _____.

a) $h_{ie} + r_{bé}$ b) $h_{ie} - r_{bé}$ c) h_{fe}/g_m d) $r_{bé}/h_{re}$

16. Formula of $r_{b'c}$ is _____.

a) $h_{ie} + r_{bé}$ b) $h_{ie} - r_{bé}$ c) h_{fe}/g_m d) $r_{bé}/h_{re}$

17. Formula of $r_{b'e}$ is _____.

a) $h_{ie} + r_{bé}$ b) $h_{ie} - r_{bé}$ c) h_{fe}/g_m d) $r_{bé}/h_{re}$

18. Formula of g_m is _____.

a) I_c/V_t b) $h_{ie} - r_{bé}$ c) h_{fe}/g_m d) $r_{bé}/h_{re}$

19. Formula of V_T in terms of T in 0C is _____.

a) T/1160 b) T/10600 c) T/1160 d) T/11600

20. Formula of h_{ie} in terms of $r_{bb'}$ is _____.

a) $r_{bb'}+r_{bé}$ b) $r_{bb'}- r_{bé}$ c) $r_{bb'}/r_{bé}$ d) $r_{bb'}.r_{bé}$

21. Formula of Bandwidth is _____.

a) f1-f2 b) f1+f2 c) f2-f1 d) (f2+f1)/2

22. f_T is called as _____.

a) gain bandwidth product b) transmission frequency c) β cut off frequency d) α cutoff frequency

23. f_β is called as _____.

a) gain bandwidth product b) transmission frequency c) β cut off frequency d) α cutoff frequency

24. f_α is called as _____.

a) gain bandwidth product b) transmission frequency c) β cut off frequency d) α cutoff frequency

25. f_β is also indicated as _____.

a) f_{hfb} b) f_{hfe} c) f_{hfc} d) f_T

26. f_α is also indicated as _____.

a) f_{hfb} b) f_{hfe} c) f_{hfc} d) f_T

27. f_T in terms of f_α is given by _____.

a) $f_T = h_{fe}\, f_\alpha$ b) $f_\alpha - f_\beta$ c) $f_T = h_{fe}\, f_\beta$ d) $f_T = h_{fb}\, f_\alpha$

28. f_T in terms of f_β is given by _____.

a) $f_T = h_{fe}\, f_\alpha$ b) $f_\alpha - f_\beta$ c) $f_T = h_{fe}\, f_\beta$ d) $f_T = h_{fb}\, f_\alpha$

29. Formula for gain in dB in terms of power levels P_1, P_2 is _____.

a) 10 log (P2/P1) b) 20 log (P2/P1) c) log (P2/P1) d) ½ log (P2/P1)

30. Formula for gain in dB in terms of voltage levels V_1, V_2 is _____.

a) 10 log (V2/V1) b) 20 log (V2/V1) c) log (V2/V1) d) ½ log (V2/V1)

31. Formula for gain in dB in terms of current levels I_1, I_2 is _____.

a) 10 log (I2/I1) b) 20 log (I2/I1) c) log (I2/I1) d) ½ log (I2/I1)

32. At f=fT, |Ai| =

a) 0 b) ½ c) 1 d) 1/√2

33. Formula for gain in bel in terms of power levels P_1, P_2 is _____.

a) 10 log (P2/P1) b) 20 log (P2/P1) c) log (P2/P1) d) ½ log (P2/P1)

34. At very high frequencies, reactance of capacitor is almost _____

a) 0 b) 1 c) ∞ d) independent of 'f'

35. At very low frequencies, reactance of capacitor is almost _____

a) 0 b) 1 c) ∞ d) independent of 'f'

36. The cut off frequency at which CB short circuit forward current transfer ratio drops to 3dB from its value at low frequencies is called ___

a) fT b) fγ c) fβ d) fα

37. The cut off frequency at which CE short circuit forward current transfer ratio drops to 3dB from its value at low frequencies is called ___

a) fT b) fγ c) fβ d) fα

38. ___ represents maximum attainable bandwidth of CE amplifier.

a) fT b) fβ c) fγ d) fα

39. Which of the following relation is correct?

a) fβ< fα b) fT<fβ c) fT>fα d) fα< fβ

40. Relation between fα, fβ and fT is _____

a) fT<fβ< fα b) fβ< fT<fα c) fT>fα> fβ d) fα< fβ<fT

UNIT-III

1. The disadvantage single stage amplifier is _____.
   a) high gain b) low gain c) low bandwidth d) high bandwidth
2. In multistage amplifier, _____ of one stage is connected to _____ of next stage.
   a) output, input b) output, output c) input, input d) input, output
3. Advantage of cascading is _____.
   a) high gain b) correct i/p impedance c) correct o/p impedance d) all
4. Cascaded amplifier means _____ amplifier followed by _____amplifier.
   a) CE, CE b) CE, CB c) CE, CC d) CB, CE
5. Cascode amplifier means _____ amplifier followed by _____amplifier.
   a) CC, CE b) CE, CB c) CC, CC d) CB, CB
6. _____ Types of coupling schemes are used in amplifiers.
   a) RC b) TC c) Direct d) all
7. Different coupling schemes used in amplifiers are _____.
   a) RC b) TC c) Direct d) all
8. Advantages of coupling networks are _____ and _____.
   a) less gain b) transfers dc, isolates ac c) transfers ac, isolates dc d) less BW
9. Coupling network isolates _____ of one stage to the next stage.

a) ac b) dc c) dc, ac d) ac output

10. _____coupling is most commonly used coupling scheme in multistage amplifiers.
    a) RC b) TC c) Direct d) RLC
11. _____ coupling scheme is least expensive.
    a) RC b) TC c) Direct d) RLC
12. _____ coupling scheme has satisfactory frequency response.
    a) RC b) TC c) Direct d) RLC
13. In _____coupling, signal developed across R_C is coupled through C' into base of next stage.'
    a) RC b) TC c) Direct d) RLC
14. Amplifier which uses Resistance capacitance coupling scheme are called as _____ amplifiers.
    a) RC b) TC c) Direct d) RLC
15. In _____ coupling, primary winding of transformer acts as a collector load and secondary winding transfers the ac output signal directly to the base of next stage.
    a) RC b) TC c) Direct d) RLC
16. _____ coupling scheme has very high voltage gain.
    a) RC b) TC c) Direct d) RLC
17. _____ coupling scheme has high level of impedance matching.
    a) RC b) TC c) Direct d) RLC
18. _____ coupling scheme was very expensive.
    a) RC b) TC c) Direct d) RLC
19. Amplifiers which uses transformer coupling scheme are called as _____ amplifiers.
    a) RC b) TC c) Direct d) RLC
20. In _____ coupling, ac output signal is fed directly to the next stage.
    a) RC b) TC c) Direct d) RLC
21. In _____ coupling, no reactive elements are used.
    a) RC b) TC c) Direct d) RLC
22. In _____ coupling, special dc voltage level circuits are used.
    a) RC b) TC c) Direct d) RLC
23. Amplifiers which uses direct coupling scheme are called as _____ amplifiers.
    a) RC b) Direct c) TC d) RLC
24. Entire frequency range is divided into _____ ranges.
    a) 1 b) 2 c) 3 d) 4
25. One advantage of RC coupling is _____.
    a) cheap b) good response c) impedance matching d) none
26. _____ Coupling gives uniform voltage amplification.
    a) RC b) TC c) Direct d) RLC

27. _____ Coupling has minimum possible distortion.

a) RC b) TC c) Direct d) RLC

28. Cascode amplifier has voltage gain as that of _____ amplifier.

a) CE b) CB c) CC d) CE or CB

29. Cascode amplifier has current gain as that of _____ amplifier.

a) CE b) CB c) CC d) CE or CB

30. Cascode amplifier has input impedance as that of _____ amplifier.

a) CE or CB b) CB c) CC d) CE

31. Darlington pair transistor is also called as _____transistor,

a) power b) triple c) megabeta d) superbeta

32. Main feature of Darlington pair is high _____.

a) voltage gain b) current gain c) power gain d) BW

33. If β_1, β_2 are current gains of two different transistors, then current gain of Darlington pair is given by formula _____.

a) $\beta_1 . \beta_2$ b) $\beta_1 + \beta_2$ c) $2.\beta_1.\beta_2$ d) $\beta_1 + 2\beta_2$

34. Darlington pair is commonly used in _____amplifier circuits.

a) CE & CB b) CE c) CC d) CB

35. Darlington pair amplifier has____ impedance.

a) low input b) high input c) high output d) medium input

36. DC input voltage required to bring back output to its original value is _____ voltage

a) offset b) difference c) bias d) cutoff

37. For two stage amplifiers, upper cutoff frequency is almost ____ % of value obtained in single stage.

a) 51 b) 64 c) 43 d) 39

38. For two stage amplifiers, lower cutoff frequency is almost ____ % of value obtained in single stage.

a) 1.96 b) 1.76 c) 1.36 d) 1.56

39. For three stage amplifiers, upper cutoff frequency is almost ____ % of value obtained in single stage.

a) 39 b) 64 c) 43 d) 51

40. For three stage amplifiers, lower cutoff frequency is almost ____ % of value obtained in single stage.

a) 1.76 b) 1.36 c) 1.96 d) 1.56

UNIT-IV

1. Other name of large signal amplifier is _____.

a) voltage b) current c) power d) super voltage

2. Based on BJT operation, power amplifiers are classified as _____.

a) class-A, AB b) class-B c) class-C d) all

3. In a Class-A amplifier, output transistor conducts for _____.

a) $\theta = 180^0$ b) $\theta = 90^0$ c) $\theta = 270^0$ d) $\theta = 0^0$

4. Theoretical max. Efficiency in a Class-A amplifier is _____.

a) 25 b) 50 c) 78.5 d) 100

5. Theoretical max. Efficiency for a series fed Class-A amplifier is _____.

a) 50 b) 25 c) 78.5 d) 100

6. Theoretical max. Efficiency in a Class-A amplifier by using inductors or transformers is _____.

a) 25 b) 78.5 c) 50 d) 100

7. In Class-B amplifier, transistors conduct for _____.

a) $\theta = 180^0$ b) $\theta = 90^0$ c) $\theta = 270^0$ d) $\theta = 360^0$

8. Theoretical max. Efficiency in Class-B amplifier is _____.

a) 25 b) 50 c) 78.5 d) 100

9. Class-A amplifier means BJT conduction takes place for _____.

a) half cycle b) full cycle c) ¼ full cycle d) ¾ full cycle

10. Class-B amplifier means BJT conduction takes place for _____.

a) half cycle b) full cycle c) ¼ full cycle d) ¾ full cycle

11. Class-AB amplifier means BJT conduction takes place for _____.

a) half cycle b) full cycle c) ¼ full cycle d) ¾ full cycle

12. Class-C amplifier means BJT conduction takes place for _____.

a) half cycle b) full cycle c) ¼ full cycle d) ¾ full cycle

13. Formula for efficiency is given by _____.

a) P_{ac} / P_{dc} b) $1 + P_{ac} / P_{dc}$ c) $P_{ac} + P_{dc}$ d) $1- P_{ac} / P_{dc}$

14. Amplitude distortion is also called as _____distortion.

a) Non-Linear b) phase c) frequency d) all

15. The second harmonic distortion in percentage is given by _____* 100.

a) B3/B1 b) B2/B1 c) B1/B2 d) B1/B4

16. Total Harmonic Distortion is denoted by _____.

a) P b) w c) t d) D

17. Effective resistance formula for transformer coupled amplifier is given by _____.

a) RL/n^2 b) $RL. n^2$ c) n^2 / RL d) none

18. Voltage transformation ratio 'n' is given by _____.

a) N1/N2 b) N1+N2 c) N1-N2 d) N2/N1

19. Class-B amplifiers have _____output power than Class-A amplifier.

a) less b) high c) zero d) unity

20. Class-B amplifiers have _____ efficiency than Class-A amplifier.

a) high b) less c) zero d) unity

21. Thermal resistance is denoted by _____.

a) TR b) Θ c) θ d) R'

22. Thermal resistance is measured in _____.

a) Ω b) θ c) ^{0}C/W d) W/C

23. Thermal resistance formula is given by _____.

a) ΔT/P b) ΔP/T c) T.P d) R.T

24. Junction Temperatures of transistor can be reduced by using _____.

a) neutralization b) heat sink c) biasing d) both a,b

25. Different types of heat sinks are _____.

a) fin b) metal sheet c) washer d) all

26. Heat sinks are used to _____.

a) reduce heat b) increase R value c) avoid oscillations d) decrease C value

27. Different types of low power transistor heat sinks are _____.

a) fin b) metal sheet c) washer d) both fin, washer

28. Change in shape of output wave w.r.t input wave is called as _____.

a) biasing b) neutralization c) distortion d) stabilization

29. Cross over distortion is observed in _____ amplifiers.

a) class-A b) class-C c) class-D d) class-B

30. _____ is ratio of rms value of all harmonics to rms value of fundamental.

a) B2 b) THD c) B1 d) P

31. _____ is the range of β for power transistor.

a) low b) medium c) high d) very high

32. h-parameter model is not applicable to _____ amplifier.

a) voltage b) current c) power d) CE

33. _____ is one of the switching amplifiers.

a) class-A b) class-C c) class-D d) class-B

34. _____ is one of the most efficient power amplifiers.

a) class-A b) class-AB c) class-B d) class-D

35. Low power heat dissipation is observed in _____ power amplifiers.

a) class-A b) class-AB c) class-B d) class-D

36. _____power amplifier is having same type of BJTs.

a) class-A b) class-AB c) class-B push pull d) class-B complimentary symmetry push pull

37. _____power amplifier is having opposite type of BJTs.

a) class-A b) class-AB c) class-B push pull d) class-B complimentary symmetry push pull

38. The third harmonic distortion is given by _____.

a) B3/B1 b) B2/B1 c) B1/B2 d) B1/B4

39. The fourth harmonic distortion is given by _____.

a) B3/B1 b) B2/B1 c) B4/B1 d) B1/B4

40. THD is also called as ____ factor

a) Quality b) Distortion c) Quiescent d) Difference

UNIT-V

1. Tuned circuit means parallel arrangement of _____.
   a) R,C b) L,C c) R,L d) L, C, R
2. Advantage of tuned amplifier is _____.
   a) narrow BW b) wider BW c) low gain d) high gain
3. Formula for resonant frequency f_0 is given by_____.
   a) $1/(2\pi\sqrt{(LC)}$ b) $\pi\sqrt{(LC)}$ c) $1/(2\pi\sqrt{(RC)}$ d) $1/(\pi\sqrt{(LC)}$
4. Response of tuned amplifier is _____ at resonant frequency and for frequencies below f_0 and above f_0, response will _____.
   a) zero, decrease b) min, increase c) max, decrease d) unity, increase
5. At resonance, tuned circuit act as _____.
   a) capacitive b) inductive c) resistive d) neutral
6. At resonance, both Voltage and Current are _____.
   a) in phase b) out of phase c) V lags I d) V leads I
7. For frequencies above f_0, tuned circuit act as _____.
   a) resistive b) inductive c) neutral d) capacitive
8. For frequencies above f_0, Current _____ applied Voltage.
   a) in phase b) has no relation c) lags d) leads
9. For frequencies below f_0, tuned circuit act as _____.
   a) resistive b) inductive c) capacitive d) neutral
10. For frequencies below f_0, Current _____ applied Voltage.
    a) in phase b) has no relation c) lags d) leads
11. Gain of transistor amplifier is _____ proportional to its load impedance.
    a) directly b) inversely c) no effect d) neglible
12. A parallel tuned circuit has _____ impedance at its resonant frequency.
    a) zero b) low c) high d) unity
13. Tuned amplifiers are used for amplification of _____ of frequencies.
    a) narrow band b) wider band c) KHz d) MHz
14. Tuned amplifiers are classified into _____ no. of types.
    a) 1 b) 2 c) 3 d) 4
15. Small signal Tuned amplifiers are operated under Class_____ mode as power involved is ____.
    a) C, less b) B, min c) AB, max d) A, less
16. Small signal Tuned amplifiers has _____ distortion.
    a) zero b) min. c) max. d) medium
17. Large signal Tuned amplifiers are operated under Class ____ mode as power involved is_____.
    a) C, less b) B, min c) AB, max d) A, less
18. Large signal Tuned amplifiers has _____ efficiency.
    a) little b) min. c) max. d) medium

19. Q-factor means _____.

a) operating b) Quiescent c) power d) Quality

20. Relation between Q-factor and BW is _____.

a) Q=f0/BW b) f0=Q.BW c) f0=Q/BW d) f0/BW=Q

21. For high values of Q, BW is _____.

a) zero b) min. c) max. d) medium

22. For low values of Q, BW is _____.

a) zero b) min. c) max. d) medium

23. No. of tuned amplifier stages are cascaded to _____.

a) decrease V_0 b) increase V_0 c) decrease V_i d) decrease V_i

24. Single tuned amplifier uses _____ parallel resonant circuit per each stage.

a) 0 b) 2 c) 1 d) 3

25. Double tuned amplifier uses _____ parallel resonant circuits per each stage.

a) 0 b) 2 c) 1 d) 3

26. Single tuned amplifier uses _____ coupling.

a) L b) C c) TC d) all

27. Double tuned amplifier uses _____ coupling.

a) R b) C c) TC d) all

28. Stagger tuned amplifier uses no. of _____tuned amplifiers in cascade.

a) single b) double c) both a,b d) none

29. In Single tuned amplifiers cascading, all tuned circuits are tuned to _____ frequency.

a) different b) same c) twice d) thrice

30. For tuned amplifiers, δ means _____variation.

a) fractional frequency b) fractional BW c) frequency d) BW

31. For tuned amplifiers, formula for δ is given by ___.

a) (f-f0)/f b) (f0-f)/f c) (f+f0)/f d) (f1-f0)/f

32. For double tuned amplifiers, factor ‘b’ means _____.

a) constant of BJT b) error c) distortion d) coeff. of coupling

33. Range of factor ‘b’ is from _____ and _____.

a) 0, 1 b) 1, 1.7 c) 0, 1.7 d) 1, 2.7

34. For double tuned amplifiers, factor ‘b’ is always _____.

a) more than 1 b) less than 1 c) 0 d) 1

35. Neutralization is to _____ in tuned amplifiers.

a) avoid distortion b) increase gain c) avoid oscillations d) reduce heat

36. Q-factor of inductor is _____.

a) ωL/R b) ωR/L c) L/ωR d) ω/LR

37. Q-factor of capacitor is _____.

a) ωR/C b) ωC/R c) 1/ωCR d) ω/RC

38. Q-factor of lossy capacitor is _____.

a) $\omega R_p/C$ b) $\omega C/R_p$ c) $1/\omega CR_p$ d) ωcR_p

39. In Hazeltine Neutralization technique C_N is connected from bottom of coil to____ of transistor.

a) emitter b) base c) collector d) both base and collector

40. In modified Hazeltine Neutralization technique C_N is connected from base of transistor and ___.

a) collector b) emitter c) ground d) lower end of next stage

KEY:

UNIT-1:

1. A	2.C	3.B	4.A	5.B	6.A	7.B	8.D	9.C	10.A
11.D	12.A	13.B	14.D	15.C	16.C	17.B	18.C	19.D	20.A
21.A	22.C	23.B	24.C	25.A	26.D	27.A	28.B	29.D	30.D
31.B	32.A	33.C	34.B	35.D	36.C	37.D	38.C	39.A	40.C

UNIT-2:

1.B	2.D	3.A	4.B	5.D	6.D	7.C	8.C	9.C	10.B
11.D	12.A	13.B	14.C	15.B	16.D	17.C	18.A	19.D	20.A
21.C	22.A	23.C	24.D	25.B	26.A	27.D	28.C	29.A	30.B
31.B	32.C	33.C	34.A	35.C	36.D	37.C	38.B	39.A	40.B

UNIT-3:

1.B	2.A	3.D	4.A	5.B	6.D	7.D	8.C	9.B	10.A
11.C	12.A	13.A	14.A	15.B	16.B	17.B	18.B	19.B	20.C
21.C	22.C	23.B	24.C	25.A	26.A	27.A	28.B	29.A	30.D
31.D	32.B	33.A	34.C	35.B	36.A	37.B	38.D	39.D	40.C

UNIT-4:

1.C	2.D	3.D	4.A	5.B	6.C	7.A	8.C	9.B	10.A
11.D	12.C	13.A	14.A	15.B	16.D	17.A	18.D	19.B	20.A
21.B	22.C	23.A	24.B	25.D	26.A	27.D	28.C	29.D	30.B
31.A	32.C	33.C	34.D	35.D	36.C	37.D	38.A	39.C	40.B

UNIT-5:

1.B	2.A	3.A	4.C	5.C	6.A	7.D	8.D	9.B	10.C
11.A	12.C	13.A	14.B	15.D	16.B	17.C	18.C	19.D	20.A
21.B	22.C	23.B	24.C	25.B	26.D	27.C	28.A	29.B	30.A

31.A	32.D	33.B	34.A	35.C	36.A	37.C	38.D	39.B	40.D