



Department of Electronics and Communication Engineering

EC8452 – Electronic Circuits II

Unit II - MCQ Bank

1. Give the relation between output and input voltage of an oscillator?

A. $A_v = V_i/V_o$

B. $V_i = V_o A_v$

C. $V_o = A_v/V_i$

D. $A_v = V_o/V_i$

Answer: (D)

2. What are oscillators?

A. Switching circuits

B. Converts dc to ac

C. Converts ac to dc

D. Filter circuits

Answer: (B)

3. Which of the following expression depicts Barkhausen criteria?

A. $A\beta = 1$

B. $A\beta = 0$

C. $A\beta < 1 < A\beta$

D. $A\beta < 1$

Answer: (A)

4. Barkhausen criteria states phase of loop gain must be 0 for a self sustaining oscillator.

A. True

B. False

Answer: (A)

5. In a phase shift oscillator, the frequency determining elements are

- A. L and C
- B. R, L and C
- C. R and C**
- D. None of the above

Answer: (C)

6. A Wien bridge oscillator uses feedback

- A. Only positive
- B. Only negative
- C. Both positive and negative**
- D. None of the above

Answer: (C)

7. The crystal oscillator frequency is very stable due to of the crystal

- A. Rigidity
- B. Vibrations
- C. Low Q
- D. High Q**

Answer: (D)

8. The application where one would most likely find a crystal oscillator is

- A. Radio receiver
- B. Radio transmitter**
- C. AF sweep generator
- D. None of the above

Answer: (B)

9. An oscillator differs from an amplifier because it

- A. Has more gain
- B. Requires no input signal**
- C. Requires no D.C. supply
- D. Always has the same input

Answer: (B)

10. If the crystal frequency changes with temperature, we say that crystal has temperature coefficient

- A. Positive**
- B. Zero
- C. Negative
- D. None of the above

Answer: (A)

11. One condition for oscillation is

- A. A phase shift around the feedback loop of 180°
- B. A gain around the feedback loop of one-third
- C. A phase shift around the feedback loop of 0°**
- D. A gain around the feedback loop of less than 1

Answer: (C)

12. In a Wien-bridge oscillator, if the resistances in the positive feedback circuit are decreased, the frequency.....

- A. Remains the same
- B. Decreases
- C. Increases**
- D. Insufficient data

Answer : (C)

13. In Colpitt's oscillator, feedback is obtained

- A. By magnetic induction
- B. By a tickler coil
- C. From the centre of split capacitors**
- D. None of the above

Answer : (C)

14. Quartz crystal is most commonly used in crystal oscillators because

- A. It has superior electrical properties**
- B. It is easily available
- C. It is quite inexpensive
- D. None of the above

Answer : (A)

15. is a fixed frequency oscillator

- A. Phase-shift oscillator
- B. Hartely-oscillator
- C. Colpitt's oscillator
- D. Crystal oscillator**

Answer : (D)

16. An important limitation of a crystal oscillator is

- A. Its low output**
- B. Its high Q
- C. Less availability of quartz crystal
- D. Its high output

Answer : (A)

17. The signal generator generally used in the laboratories is oscillator

- A. Wien-bridge**

- B. Hartely
- C. Crystal
- D. Phase shift

Answer : (A)

18. Why is the practical value of $|A\beta|$ considered or adjusted to be slightly greater than '1'?

- A. To compensate for noise voltage
- B. To compensate for phase shifting of two relevant signals up to 180°

C. To compensate for non-linearities existing in the circuit

- D. To compensate for the change in feedback voltage

Answer : (C)

19. Which among the below mentioned oscillators does not adopt any kind of feedback mechanism?

- A. Phase-shift oscillator
- B. Wein bridge oscillator

C. UJT relaxation oscillator

- D. All of the above

Answer : (C)

20. What is an angle of phase shift for each designed RC network in the Phase Shift Oscillator circuit?

- A. 30°
- B. 60°**
- C. 90°
- D. 180°

Answer : (B)

21. Which among the following measures is/are adopted/used for improving the frequency stability in Colpitt's oscillator?

- A. Clapp oscillator
- B. Temperature stabilized chamber
- C. Voltage regulators

D. All of the above

Answer : (D)

22. Which of the following is not an example of non-sinusoidal oscillator?

- A. Sawtooth Generators
- B. Blocking oscillators
- C. Multivibrator

D. Crystal oscillators

Answer : (D)

23. Which type of oscillators is used in timing elements?

- A. RC oscillator
- B. LC oscillator

C. Crystal oscillator

D. Wein bridge oscillators

Answer : (C)

24. Which of the following oscillator cannot be used in low frequency oscillations?

- A. Wein bridge oscillators
- B. RC phase shift oscillators

C. Colpitts oscillators

D. RC oscillators

Answer : (C)

25. Which of the following oscillator is will give the most stable output oscillation frequency?

- A. Colpitts oscillator
- B. Clapp oscillator
- C. Wein bridge oscillator

D. Crystal oscillator

Answer : (D)