

## QUIZ – ANSWER KEY

QUIZ NO: 131

TOPIC: ELECTRICAL ENGINEERING

DATE: 03/12/2022

1. The use of amplifier in a circuit is to \_\_\_\_\_ for input signal ?

- [A] Provide a phase shift
- [B] Provide strength
- [C] Provide frequency enhancement
- [D] Make circuit compatible

**Answer: B**

**Explanation:** The only use of amplifier in a circuit is to provide strength to signal. This may refer to an increase in current, voltage or power of the output w.r.t the input being applied.

2. The unwanted characteristics of amplifier output apart from the desired output is collectively termed as \_\_\_\_?

- [A] Inefficiency
- [B] Damage
- [C] Fault
- [D] Distortion

**Answer: D**

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**Explanation:** The unwanted characteristics of amplifier output apart from desired output are collectively termed as distortion. This should be avoided.

3. Which device was used for the amplification of audio signals before the invention of power amplifiers ?

- [A] Diode
- [B] Op-amp
- [C] Vacuum tubes
- [D] SCR

**Answer: C**

**Explanation:** Before the invention of power amplifier vacuum tubes are used for audio signal amplification which consumes large space and costly.

4. Power amplifier directly amplifies \_\_\_\_\_?

- [A] Voltage of signal
- [B] Current of the signal
- [C] Power of the signal
- [D] All of the mentioned

**Answer: D**

**Explanation:** Power amplifier increases voltage as well as current. Increase in voltage or current is small compared to normal amplifiers. But power amplification has occurred ie. Voltage x current is more.

5. Input stage of power amplifier is also called \_\_\_?

- [A] First op
- [B] Beginning stage
- [C] Front end

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[D] Normal stage

**Answer: C**

**Explanation:** Input stage of the power amplifier is also called the front end.

6. Transistor in power amplifier is \_\_\_\_?

[A] An active device

[B] A passive device

[C] A op-amp

[D] A voltage generating device

**Answer: A**

**Explanation:** Transistor is an active device since transistor contains voltage sources which are necessary for amplification.

7. For a perfect power amplifier output power rating will be \_\_\_\_\_ if the output impedance is halved ?

[A] Halved

[B] Squared

[C] Doubled

[D] Square rooted

**Answer: C**

**Explanation:** In the equation of power output for the power amplifier, the power is proportional to the square of the current and inversely proportional to the resistance. If the impedance is halved then power is doubled.

8. The power rating of the amplifier is 100watts then the transistor can only operate at \_\_\_\_?

[A] Power higher than 100w

[B] Power lower than 100w

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- [C] Power near to 100w
- [D] Power lower than 200W

**Answer: B**

**Explanation :** The power rating is 100 W, and that is the maximum allowable power usage of a transistor, beyond which it may damage. If the power is less than 100W, the circuit operates. Near to 100W, the power may also be higher than 100W, hence that option is incorrect.

9. Which of the following amplifier class have the highest linearity and lowest distortion ?
- [A] Class A
  - [B] Class B
  - [C] Class C
  - [D] Class B push-pull

**Answer: A**

**Explanation:** Class A amplifier has the highest linearity and the lowest distortion. The amplifying element is always conducting and close to the linear portion of its transconductance curve. The point where the device is almost off is not at a zero signal point and hence its distortions compared to other classes are less.

10. Which of the following class has the poorest linearity ?
- [A] Class A
  - [B] Class B
  - [C] Class C
  - [D] Class AB

**Answer: C**

**Explanation:** Class C amplifiers have high efficiency but have the poorest linearity since they only take less than 180° oscillations. They are suitable for amplifying constant envelope signals.

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