

Name : www.UandiStar.org

Time : 15 Min.

Branch : II /I ECE

Subject : ECA Lab H No.:

Marks :

Answer all questions each question carries one mark. Answer must be one word or one sentence

1. What is the type of capacitor used in RC coupled amplifier for a) coupling two phases b) by pass emitter
Ans. Generally electrolytic capacitors are used
2. What is signal source used for experiment of an RC coupled amplifier and how much maximum voltage it could give
Ans. A function generator with 1 MHz highest frequency 0-30 V P – P output is used in sine wave mode
3. What is the pin configuration on bread board used in the lab
Ans. In the bread boards there are two rows of horizontally shorted pin bank on top and bottom, there are vertically shorted rows of pins in two halves up and down from the center of the bread board.
4. For Class – A amplifier How do you bring operating point of amplifier at center of supply voltage
**Ans. By adjusting the value of resistor used from base to supply.
If $V_c < V_{cc}/2$ base resistor is increased and if $V_c > V_{cc}/2$ it is decreased**
5. What are the transistors used in complementary push pull experiment give type number
Ans. A matched pair of NPN (CL100 or SL100) and PNP (CK100 or SK100) used. Matching can be done by testing above in diode position of DMM for same drop and HFE sockets of NPN, PNP for β .
6. How do you determine AC power output in class A amplifier i.e., do you measure current or voltage and how?
Ans. P-P voltage is measured using CRO since AC current cannot be measured.
7. How much current do you pass through reference zener in series regulated power supply experiment
Ans. I_z min approximately equal to 5 mA is used.
8. In shunt regulator how is the value of resistor between base and emitter of shunt transistor determined
Ans. $V_{BE} = 0.7$ V, Resistor between BE = $0.7 / I_z$ min. practically 100 Ω is used
9. How do you determine Q of oil used in tuned amplifier experiment
Ans. $Q = \omega L / R_s$ where ω is Resonant frequency; R is series resistance of coil
10. What is the transistor used in shunt regulator and what is its Case style
Ans. NPN transistor SL100 is used the case style is TO2

11. Name one NPN and PNP transistors we have used in ECA lab

Ans. BC 107 NPN, CK 100 PNP

12. What ammeter do you need to measure DC power to class – C amplifier (DMM, Analog coil meter or Analog moving iron meter)

Ans. Analog coil meter

13. What is the input resistance of oscilloscope you have used

Ans. 1 M Ω , \pm 1 %

14. What is the lamp used on all instruments to show presence of mains

Ans. In all modern equipment LED(Light emitting diode) is used in various colors

15. What is the color code for 1.2 M 10 % resistor

Ans. Brown, Red, Green, Silver

16. For connection on bed board did you use single strand or multi strand wire.

Ans. single strand wire

17. How do you check a transistor in DMM

Ans. Transistor contains BE and CB diode junctions. These can be tested in DMM in diode check position. Positive lead of DMM gives positive voltage and black negative

18. Name the type of digital display on the DMM you have used in the lab

Ans. 3 ½ digit LCD display

19. What is the type of voltage stabilizer used in the lab to ensure constant AC power

Ans. Servo controlled voltage stabilizer with 5 KVA rating is used

20. What is the color code 820 Ω 5 %

Ans. Gray, Red, Brown, Gold

21. Show the polarity of zener diode by symbol along with its physical outline side by side diode



22. How do you adjust the input signal for class AB operations

Ans. Input is adjusted for initially no distortion. Gradually it increased such that there is flattening on top or bottom.

23. When you touch CRO input by hand very large signal appears on screen. What signal is it?

Ans. The signal is 50 cycles mains (HUM) picked up by body

24. What is the resistance a good fuse show?

Ans. A good fuse shows 0 or very few resistance

25. What is the color code 680 K Ω 20%

Ans. Blue, Gray, Brown