**VIVA**

**GPTE & SEMICONDUCTOR**

1. **How to measure the freq by the help of Digital storage oscilloscope?**
2. Set the Oscilloscope to default set up
3. Signal applied at the CH1 which to be measured
4. Press the Auto Switch Hard button
5. **How to measure the Amplitude by the help of Digital storage oscilloscope?**

1. Set the Oscilloscope to default set up
2. Signal applied at the CH1 which to be measured
3. Press the Auto Switch Hard button

**3. How to check the RF output by the help of RF watt meter?**

1. At first connect the dummy load to the watt meter.
2. RF signal which to be measured applied to the RF watt meter ( If digital watt meter no need the plug in elements .Otherwise required a Plug in elements , which have a different freq & power range.
3. Switch on the XMTR or PTT switch
4. Now display shows the power in watt meter

**4. How to measure a range of Freq by the help of spectrum analyzers**

1. At first preset the Spectrum Analyzer
2. RF signal which to be measured applied to the SA(Spectrum

Analyzer)

1. Set the start freq & Stop Freq of the SA
2. Set the span of the SA to read the freq
3. Set the center freq of the band width

5.  **How to measure the current by the help of Multimeter?**

1. Set the multimeter to the ampere meter or milli ampere meter.
2. Connect the ammeter in series with load & source of supply
3. This time eqpt is run & measured value of current is display

**6. How to measure the DC volt by the Multimeter?**

1. Set the multimeter to the volt meter or milli volt meter .
2. Connect the volt in parallel with load & source of supply

**7. What is the role of Signal generator in Fd army?**

1. Signal generator is used to check the serviceability of the receiver of Tran receiver or repair of the sub module / cards
2. In training purpose it is used in Lab to check the function of Test eqpt .

**8. How to check the logic input & output of ICs and chips?**

By using Logic probe 10:1, 100:1 & 1000:1

1. By using Multimeter of TTL & CMOS ICs

**9. How to find out a short circuit in eqpt or probable faults?**

1. In SMPS Bridge faulty or diodes are faulty
2. MOV ( metal oxide varriastor )short circuit
3. Load is short circuited

**10. Basically Classification of power amplifiers are**

1. Class A power amplifier
2. Class B power amp
3. Class C power amp

**11. Application of OP Amplifier**

1. Inverting Amplifier
2. Non Inverting Amplifier
3. Integrator
4. Differentiator
5. Comparator
6. Summing Amplifier
7. Voltage Follower
8. Differential Amplifier

**12 Different types of capacitors**

1. Electrolytic capacitor
2. Mica capacitor
3. Ceramic capacitor
4. Paper capacitor
5. Metal / polyesterised capacitor

**13. Limitation of FET over Transistor**

1. FET is noise less
2. Consume less current at the input
3. Output impedance is low
4. Input impedance is High
5. Conducts High Current

**14. Checking the serviceability of diode with help of digital multimeter (Fluke)**

1. Set the knob position of multimeter in diode Consume less current at the input
2. Connect red and black probes of multimeter with anode and cathode of the diode respectively
3. Display shows some digital value
4. When probes are connected in opposite polarities with diode then display shows no any value

**15. Verify the type of transistor (NPN/PNP) with help of digital multimeter (Fluke)**

1. Set the knob position of multimeter in diode.
2. Identify the base ,emitter and collector terminals of the transistor Output impedance is low
3. Connect black probe of MM with the base of transistor and red probe to remaining other two terminal one by one then display shows some value ie PNP
4. Connect red probe of MM with the base of transistor and black probe to remaining other two terminal one by one then display shows some value ie NPN

**16. Measuring the frequency with help of digital multimeter (Fluke)**

1. Set the knob position of multimeter in AC voltage.
2. Select the ‘’Hz’’ function in the MM with the help of menu button.
3. Apply the signal in the MM through its probes.
4. Display shows the measuring frequency

**17. How can observe the wave form of addition of two input signals in DSO.**

1. Two signals are applied into the DSO at CH1 and CH2 simultaneously.
2. Press the ‘’math’’ button on DSO.
3. Select add function in DSO.
4. Resultant Wave form will display on the screen

**18. How can observe the AM wave form in DSO.**

1. Select the AM modulation on function generator.
2. Sets the RF frequency, RF level, AM frequency and modulation depth Select add function in DSO.
3. in the function generator.
4. Above generated signal applied to the DSO on CH1 through coaxial cable.
5. Press auto set button on DSO then display shows AM wave form

**19. How can observe the FM wave form in DSO.**

1. Select the FM modulation on function generator.
2. Sets thr RF frequency, RF level, FM frequency and deviation in the function generator.
3. Above generated signal applied to the DSO on CH1 through coaxial cable.
4. Press auto set button on DSO then display shows FM wave form

**20. What are the uses of Capacitor?**

1. Ac ripple filtration in Rectifiers
2. Provides the low reactance for the particular freq
3. Oscillation of freq
4. Store of energy in electric field
5. In wave shaping network

**21 What are the uses of Inductor?**

1. Pass the Dc components where block thye AC Components / filtration in Rectifiers
2. Provides the low reactance for the particular DC volt
3. Oscillation of freq used in tank circuit
4. Store of energy in magnetic field
5. Change the phase when used in transformer

**22. What are the uses of resistance?**

1. Oppose the flow of current according to the value find out by colour coding
2. Tolerates the current according to the wattages
3. Used as a load
4. Developed the voltage according to the ohm’s law
5. ‘Divide the voltage when used is series configuration

**23. What is the photo transistor? & its uses**

1. When transistor exposed on light , the resistivity is reduced
2. Intensity of light is directly proportional to the current
3. Used as a sensor in barrier or gate .
4. No physical terminal as base of the transistor

**24. What is opto- isolator? Its uses**

1. It separates the high volt in SMPS
2. Four terminal IC activated o light constructed internally
3. Used as a volt separator.

**25. What is the procedure of Pin counting of IC**

1. Keep the IC pins towards the ground or in mount in PCBs
2. Cut position or DOT of IC towards the top
3. Count anti clockwise from 1 to ……n.