Dedicated Freight Corridor Corporation of India (DFCCIL)
1. What does LED stand for?
Light Emitting Display
Low Energy Display
Light Emitting Diode-Answer
Light Emitting Detector

2. Name the three leads of a common transistor
Collector Bias Omitter
Base Collector Case
Emitter Collector Bias
Collector Base Emitter-Answer

3. Connecting a lead from the negative to the positive of a battery will produce:
A high resistance circuit
A short circuit-Answer
A low current path
An open circuit

4. What is the approximate characteristic voltage that develops across a red LED?

1.7v-Answer
3.4v
0.6v
5v

5. If two resistors are placed in series, is the final resistance:
Higher-Answer
Lower
he same
Cannot be determined

6. Which is not a "common" value of resistance:
2k7
1M8
330R
4k4-Answer

7. If a small value of capacitance is connected in parallel with a large value, the combined capacitance will be:
The same
Higher-Answer
Lower

8. If the voltage on the base of a transistor increases, does it:
Turn on

Turn off
Not enough information-Answer
Remain the same

9. The resistor identified in brown is called the:

Base Bias Resistor
Load Resistor
Emitter Feedback Resistor
Bypass Resistor-Answer

10. A 100n capacitor in parallel with 10n produces:
90n
100n
110n-Answer
Cannot be determined

11. A resistor with colour bands: red-red-red-gold, has the value:
22k 5%
2k2 5%-Answer
220R 5%
22R 5%

12. The lead marked with the arrow is:

The Collector
The Base
The Emitter-Answer
The case

13. A 10k resistor in parallel with 10k produces:
10k
5k-Answer
20k
Cannot be determined

14. The symbol is:

NPN Transistor
PNP Transistor-Answer
Photo Transistor
Field Effect Transistor

15. Two 3v batteries are connected as shown.
The output voltage is:

3v
0v-Answer
6v

16. 4 resistors in ascending order are:
22R 270k 2k2 1M
4k7 10k 47R 330k
3R3 4R7 22R 5k6-Answer
100R 10k 1M 3k3

17. The closest value for this combination is:

4k7
2k3-Answer
9k4

18. This stage is called:

Common Base
Common Collector
Common Emitter-Answer
Emitter Follower

19. The four symbols are:
Capacitor, Microphone, Potentiometer, Electrolytic-Answer
Electrolytic, Microphone, Resistor, Capacitor
Capacitor, Piezo, Resistor, Electrolytic
Electrolytic, Coil, Resistor, Capacitor

20. The value of the combination is:

100n
200n-Answer
50n

21. The resistor marked in red is:

Base Bias Resistor-Answer
Load Resistor
Emitter Feedback Resistor
Bypass Resistor

22. A resistor and capacitor in series is called a:

Pulse Circuit
Timing Circuit/Delay Circuit-Answer
Oscillator Circuit/Frequency Circuit
Schmitt Circuit

23. A red-red-red-gold resistor in series with an orange-orange-orange-gold resistor produces:

5k5
35,200 ohms-Answer
55k
None of the above

24. Name the 4 components:

Photo transistor, switch, capacitor, coil
Transistor, mercury switch, piezo, coil
Photo transistor, reed switch, piezo, coil
Photo darlington transistor, reed switch, piezo, coil-Answer

25. To obtain a higher value of resistance, resistors are connected in:

Reverse
Forward
Parallel
Series-Answer

26. A capacitor and coil in parallel is called:

A Tuned Circuit-Answer
A Timing Circuit
A Delay Circuit
A Schmitt Circuit

27. When the base is raised, the emitter will:

Rise-Answer
Fall
Remain Fixed
Oscillate

28. What is 1,000p?

0.01n-Answer
0.0001u
0.1n
1n

29. The current in a circuit is 45mA. This is:
0.045Amp-Answer
0.00045A
0.0045A
0.45A

30. A 100n capacitor can be expressed as:
0.1u u = microfarad-Answer
0.01u
0.001u
none of the above

31. 1mA is equal to:
0.001A-Answer
0.00001A
0.01A
0.1A

32. 1,200mV is equal to:
12v
1.2v-Answer
0.12v
0.0012v

33. If a 10k resistor is placed across a 10v supply, the current will be:
10mA
1mA-Answer
0.01mA
0.1mA

34. This arrangement is called:

Common Emitter
Common Collector/Emitter Follower-Answer
Common Base

35. Identify the correctly connected LED:

A
B-Answer
C
D

36. Identify the correct statement:

The cathode lead is longer. It goes to the negative rail
The cathode lead is shorter. It goes to the negative rail-Answer
The cathode lead is shorter. It goes to the positive rail
The cathode lead is longer. It goes to the positive rail

37. The current requirement of a LED is:
1.7mA
25mA
Between 3 and 35mA-Answer
65mA

38. The signal at the collector will be . .

.
Answer inverted

39. The purpose of the capacitor:

To pass AC on the input to the base
To allow the transistor to self-bias
Block DC from the input line-Answer
To allow the stage to operate

40. The direction of conduction for a diode is:

answer-A

41. A DC voltage . . .
rises and falls
is a sinewave

remains constant-Answer
is an audio waveform

42. A CRO is a
Cathode Ray Oscillator
Cathode Ray Oscilloscope-Answer
Capacitor-Resistor Oscillator
Capacitor-Resistor Output

43. These jargon terms mean: (Jargon = language peculiar to a 'mickey' 'electro' 'cap' 'puff'; trade)

mighty, electronic, capper, picofarad
microfarad, electronic, capacitor, picofarad
microfarad, electrolytic, capacitor, picofarad-Answer
microfarad, electrolyte, capping, blow

44. The tolerance bands: gold; silver; brown, represent:
10%, 5%, 1%
5%, 10%, 2%
5%, 10%, 1%-Answer
10%, 5%, 2%

45. 223 on a capacitor represents:
0.022u u = microfarad-Answer
22n n = nanofarad
22,000p p = picofarad
All of the above

46. Arrange these in ascending order: n, p, u
p, u, n,
n, u, p
p, n, u-Answer

47. Name this symbol:

A buffer
A NOR gate
A NAND gate
A Schmitt Trigger-Answer

48. The number "104" on a capacitor indicates:
0.1u
100n-Answer
1n

10n

49. What is the multimeter detecting:

The output voltage of the Schmitt Trigger
The delay across the capacitor
The voltage across the capacitor-Answer
The current through the capacitor

50. For the XOR gate, what is the output when both inputs are HIGH:

HIGH
LOW-Answer
Can be HIGH or LOW
Cannot be determined