



**NFL
Junior
Engineering
Assistant**

**Previous Year Paper
Grade-II (18 Dec 2021)**





NFL Non Executive Examination

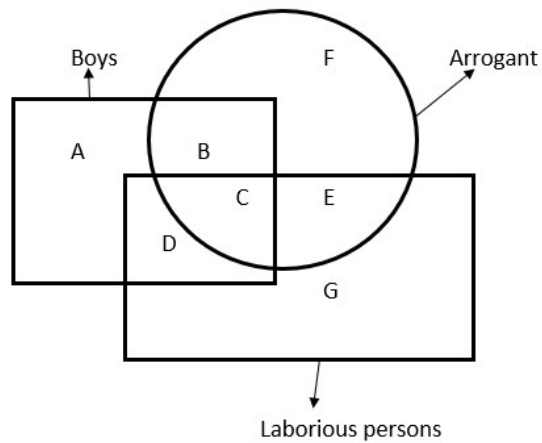
Candidate User ID :
Exam Date : 18/12/2021
Batch Id :

Candidate Exam ID :
Test Centre Name :
Exam Timing : 9:00 AM - 11:00 AM

Note: Questions answered are highlighted with selection

- 1 Which part of the sentence has an error? The Russian ambassador's whereabouts is not known to anyone.
- The Russian ambassador's
 - No error (Correct Answer)
 - Whereabouts is
 - Not known to anyone
- 2 If in a certain language A is coded as 1, B is coded as 2, C is coded as 3 and so on, then find the code for AEECD
- 15543
 - 13345
 - 15534 (Correct Answer)
 - 12245
- 3 A number exceeds by 40 when added by 20% of itself. What is the number?
- 80
 - 200 (Correct Answer)
 - 60
 - 40
- 4 The average of 11 results is 50. If the average of first six results is 49 and that of the last six is 52, find the sixth result?
- 52
 - 54
 - 58
 - 56 (Correct Answer)
- 5 Pointing to a boy, Meena said, "He is the son of my father in law's only son". How is the son related to Meena?
- Nephew
 - Son (Correct Answer)
 - Brother
 - none of these
- 6 What is the value of missing number in the sequence 4, 10, 22, 46, ?
- 76
 - 94 (Correct Answer)
 - 66
 - 56
- 7 What is the meaning of the phrase "Blue moon"?
- Moon which is blue in colour
 - A rare event or occurrence (Correct Answer)
 - A very commonly occurring event
 - A sun which looks like the moon

8 Which alphabet represents boys who are laborious but not arrogant?



- F
- B
- A
- D (Correct Answer)

9 The emission of green house gases, particularlyis leading to Global Warming.

- Carbon di oxide (Correct Answer)
- Oxygen
- Nitrogen
- Carbon Monoxide

10 The Ellora caves depict the three faiths of Hinduism, and Jainism.

- Sikhism
- Islam
- Buddhism (Correct Answer)
- Christianity

11 How many chromosomes are there in the normal human body?

- 44
- 46 (Correct Answer)
- 43
- 45

12 What can be substituted for the underlined part of the sentence for improving it? If only she had told me about her problem, I would have helped her.

- Would help
- Had helped
- No improvement (Correct Answer)
- Could help

13 If EGYPT is 75391 and ITALY is 2183, what is PITY?

- 9213 (Correct Answer)
- 7859
- 9537
- 4265

14 A number X is short of Y by 40%. By what percent is Y in excess of X?

- 56.66

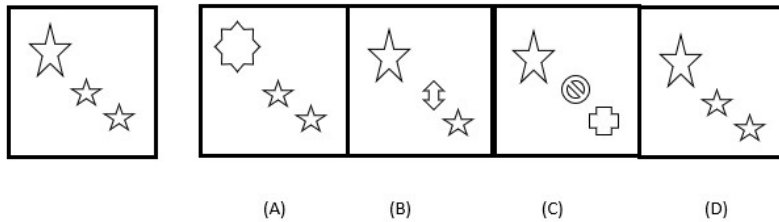
- 66.66 (Correct Answer)
 46.66
 45
- 15 Find the pair which is different from the other pairs.
- 24 : 30 (Correct Answer)
 36 : 48
 54 : 72
 60 : 80
- 16 What can be substituted for the underlined part of the sentence for improving it? It is a well-acclaimed principle that one should hold fast to one's beliefs.
- Hold fast to their beliefs
 No improvement (Correct Answer)
 Hold fast to others beliefs
 Hold fast to the beliefs
- 17 Which is the correct alternative for X? Blunt : Sharp :: Sow : X
- Water
 Farm
 Reap (Correct Answer)
 Crow
- 18 At what angle are the hands of the clock inclined when it is half past 2?
- 105 (Correct Answer)
 160
 107
 96
- 19 Who is known as the "Nightingale of India"?
- Indira Gandhi
 Jayalalitha
 Sonia Gandhi
 Sarojini Naidu (Correct Answer)
- 20 He will impart no informationanyone.
- To (Correct Answer)
 With
 For
 From
- 21 p is six times that of q. By what percentage is q less than p?
- 83.33 (Correct Answer)
 500
 5
 20
- 22 Helsinki is the capital of
- Denmark
 Finland (Correct Answer)
 Sweden
 Norway
- 23 Which is the national sport of Canada?

- Football
- Ice hockey (Correct Answer)
- Foosball
- Volleyball

24 What is the value of missing number in the sequence DL, EM, FN, GO,?

- IL
- LM
- HN
- HP (Correct Answer)

25 Which is similar to the first image?



- D (Correct Answer)
- A
- B
- C

26economy is an economy in which agricultural dominance prevails in both the Gross National Product and employment.

- All of these
- Agrarian (Correct Answer)
- Mixed
- Developing

27 In 1987, the enrolment in a school was 1500. Next year it increased by 10%. What was the enrolment in 1988?

- 1650 (Correct Answer)
- 1700
- 1750
- 1600

28 The United KingdomEngland, Wales, Scotland and Northern Ireland.

- Comprise
- Consists
- Combines
- Comprises (Correct Answer)

29 Pointing to a person, the man said to the woman, "His mother is the only daughter of your father". How is the woman related to the person?

- Mother (Correct Answer)
- Wife
- Daughter
- Aunt

30 HCF and LCM of two numbers are 16 and 240 respectively. If one of the number is 48, what is the other number?

- 70
- 60

- 90
 80 (Correct Answer)
- 31 The rainy day occurs once in every 25 days. Half of the rainy days produce rainbows. What is the percentage of days having no rainbows?
- 87.5
 98 (Correct Answer)
 2
 12.5
- 32 What should be the proper sequence of the following sentence: The students knew that (P) to control unruly students (Q) in the college administration (R) our new principal (S) took a number of strong measures
- QRPS
 RSPQ
 PQRS
 RSQP (Correct Answer)
- 33 What should be the proper sequence of the following sentence: Most of our small farmers (P) do not get a fair return (Q) on the sale of their farm-products (R) on their investments in back-breaking labour (S) and high cost of seeds and fertilizers
- PQSR
 PRQS
 PRSQ
 PQRS (Correct Answer)
- 34 Who was the chairman of the drafting committee of the constituent assembly?
- Subhash Chandra Bose
 Pundit Jawahar Lal Nehru
 Dr. B. R. Ambedkar (Correct Answer)
 None of these
- 35 What is the meaning of the phrase "At the drop of a hat"?
- Disrespecting someone
 Clumsy character
 Not willing to do something immediately
 Willing to do something immediately (Correct Answer)
- 36 What is the synonym of "Nexus"?
- Distance
 Connection (Correct Answer)
 Deficit
 Difference
- 37 What is the minimum fraction which when added to $\frac{29}{12} + \frac{15}{16}$ will give a complete number?
- $\frac{31}{38}$
 $\frac{17}{48}$
 $\frac{31}{48}$ (Correct Answer)
 $\frac{21}{38}$
- 38 One quarter of one seventh of a land is sold at Rs 30000. What is the value of eight thirty fifth of the land?
- 192000 (Correct Answer)
 36540
 212000
 27428

- 39 Which part of the sentence has an error? We have finished our work three hours ago and have been waiting for you since then.
- For you, since then
 - Three hours ago and have been waiting
 - No error
 - We have finished our work (Correct Answer)
- 40 What is the name of our galaxy?
- Virgo
 - Cygnus
 - Andromeda
 - Milky Way (Correct Answer)
- 41 What is the antonym of "Dainty"?
- Delicate
 - Clumsy (Correct Answer)
 - Refined
 - None of these
- 42 Which is the one that does not belong to the group?
- Asia
 - Australia
 - Antarctica
 - Austria (Correct Answer)
- 43 Which is the least number of 3 digits that is exactly divisible by 14?
- 112 (Correct Answer)
 - 60
 - 110
 - 98
- 44 Which are the specimens of Egyptian architectural excellence?
- Sphinx
 - Pyramids
 - Both 1 and 2 (Correct Answer)
 - None of these
- 45 What is the full form of ISRO?
- Indian Space Research Organisation (Correct Answer)
 - Indian Space Researching Organisation
 - India's Space Researching Organisation
 - India Space Research Organisation
- 46 There is an increase of 30% in the production of milk chocolates in Amul Dairy in one month. If now it is 9100 milk chocolates per month, what was it one month ago?
- 7000 (Correct Answer)
 - 13000
 - 8400
 - 10300
- 47 The famous "Nanda Devi" is located in the state of
- Himachal Pradesh
 - Tamil Nadu
 - Uttarakhand (Correct Answer)
 - Punjab

- 48 If $8700/x = 300$ and $4590/y = 170$, then $(x-y)(x+y) = ?$
- 29
 - 112 (Correct Answer)
 - 56
 - 27
- 49 Which of these are plantation crops?
- Tea
 - Rubber
 - Both 1 and 2 (Correct Answer)
 - Rice
- 50 What will be the value if you decrease 200 by 40%?
- 100
 - 140
 - 80
 - 120 (Correct Answer)
- 51 In AC circuit when the power factor is unity the reactive component of the circuit is
- Equal to resistive component
 - Equal to r.m.s component of sine wave
 - Zero (Correct Answer)
 - Maximum
- 52is the property of a coil that opposes any change in the amount of current flowing through it.
- Capacitance
 - Resistance
 - Inductance (Correct Answer)
 - All of these
- 53 Bernoulli theorem can be basically derived from
- Newtonian mechanics (Correct Answer)
 - Galilian mechanics
 - Einstein's mechanics
 - None of these
- 54 The unit of temperature in SI system is
- Fahrenheit
 - Kelvin (Correct Answer)
 - Degree Celsius
 - Degree centigrade
- 55 What is the term for the ratio of maximum value to RMS value of the given quantity?
- Amplitude factor
 - Crest factor
 - Peak factor
 - All of these (Correct Answer)
- 56 What is the reciprocal of resistance?
- Conductivity
 - Specific resistance
 - Conductance (Correct Answer)
 - None of these

- 57 To convert mechanical power into electrical power, multiply the power by
- 746 (Correct Answer)
 - 946
 - 846
 - 646
- 58 A non-sinusoidal voltage has a form factor of 1.2 and peak factor of 1.5. If the average value of the voltage is 10 V, then its maximum value is
- 36V
 - 9V
 - 12V
 - 18V (Correct Answer)
- 59 What is the slope of the line whose equation is $5x + 6y = 7$?
- 5 / 6
 - 5
 - 5
 - 5 / 6 (Correct Answer)
- 60 The number of electrons present in the outer most shell are called
- Valence electrons (Correct Answer)
 - Covalence electrons
 - Neutral electrons
 - None of these
- 61 In most of the cases the polyphase supply is generated as
- Six phase supply
 - Two phase supply
 - Single phase supply
 - Three phase supply (Correct Answer)
- 62 In parallel circuit the power factor is the ratio of
- Resistance to impedance
 - Capacitance to inductance
 - Equivalent impedance to equivalent resistance (Correct Answer)
 - Reactance to resistance
- 63 The power factor of a circuit can be improved by
- Increasing the reactive component of the circuit
 - Decreasing the reactive component (Correct Answer)
 - Increasing the real power supplied
 - Decreasing the resistive component of the circuit
- 64 The dimensions of impulse are the same as that for
- Momentum (Correct Answer)
 - Velocity
 - Force
 - None of these
- 65 The power factor of a circuit can be obtained by using
- Power factor meter (Correct Answer)
 - Phase sequence indicator
 - Voltmeter
 - Ammeter

- 66 What are the factors affecting the capacitance of a capacitor?
- Area of the plates
 - Distance between the plates
 - Absolute permittivity of the medium
 - All of these (Correct Answer)
- 67 The power factor is defined as theof the angle between voltage and current.
- Cosine (Correct Answer)
 - Tangent
 - Sine
 - Secant
- 68 The number of cycles per second of an alternating quantity is termed as
- Wavelength
 - Amplitude
 - Cycle
 - Frequency (Correct Answer)
- 69 The orbit of a planet around a star is generally
- A straight line
 - An ellipse (Correct Answer)
 - A circle
 - A parabola
- 70 The power factor improvement may be achieved by using
- Synchronous motor (Correct Answer)
 - Induction motor
 - Short transmission line
 - Long transmission line
- 71 The specific resistance of a metallic conductorwith rise in temperature.
- Increases (Correct Answer)
 - Cannot predict
 - Decreases
 - No change
- 72 Which is a semiconductor device whose resistance varies with the amount of light falling on it?
- LCR
 - LDR (Correct Answer)
 - LAR
 - None of these
- 73 A ball pen functions on the principle of
- Capillary action
 - Viscosity
 - Gravitational force (Correct Answer)
 - Surface tension
- 74 What is the slope of a line whose equation is $y = 5x + c$?
- Two
 - One
 - Five (Correct Answer)
 - Ten

- 75 The property of electric circuit which opposes the flow of current is termed as
- Inductance
 - Capacitance
 - Electrical conductance
 - Electrical resistance (Correct Answer)
- 76 Which of the following is a scalar?
- Work (Correct Answer)
 - Couple
 - Displacement
 - Force
- 77 Which is the commercial unit of electrical energy?
- Kw
 - Kwh (Correct Answer)
 - Kwatts/hour
 - None of these
- 78 Two lamps of 40 watts and 60 watts are connected in parallel. Their resultant power is
- 240watts
 - 100watts (Correct Answer)
 - 20watts
 - 50watts
- 79 The glowing of a bulb comes under the category of
- Short circuit
 - Earth circuit
 - Open circuit
 - Closed circuit (Correct Answer)
- 80 The frequency of A.C in India is
- 40 cycles/sec
 - 60 cycles/sec
 - 25 cycles/sec
 - 50 cycles/sec (Correct Answer)
- 81 Which of the following pairs of physical quantities have identical dimensions?
- Momentum and Impulse (Correct Answer)
 - Work and Power
 - Moment of a force and Angular momentum
 - Torque and Energy
- 82 For Germanium, the forward voltage drop is
- 0.3V (Correct Answer)
 - 0.9V
 - 0.5V
 - 0.7V
- 83 A transmission line is an example of a
- Unilateral circuit
 - Bilateral circuit (Correct Answer)
 - Electric network
 - Linear circuit

- 84 If a d.c 240V is connected across 240 ohm resistance the power of the load is
- 240 watts (Correct Answer)
 - 480 watts
 - 1 watt
 - 10 watts
- 85 A Diode rectifier is an example of a
- Non-linear circuit
 - Unilateral circuit (Correct Answer)
 - Linear circuit
 - Bilateral circuit
- 86 The total amount of work done in an electric circuit is termed as
- Electrical energy (Correct Answer)
 - Electrical power
 - Electrical coefficient
 - All of these
- 87 What is the slope of a line having an inclination of 45 degrees from the horizontal?
- Positive
 - One (Correct Answer)
 - Negative
 - None of these
- 88 A man aims horizontally at a mango on a mango tree and fires with a gun. At the same time the mango falls. The bullet will
- Pass over it
 - Hit the mango (Correct Answer)
 - Hit the mango if it is small
 - Pass below it
- 89 Silicon atom hasnumber of valence electrons.
- 3
 - 2
 - 1
 - 4 (Correct Answer)
- 90 If the acceleration and velocity are acting perpendicular to each other, the path of motion is
- Linear
 - Circular (Correct Answer)
 - Parabolic
 - Elliptical
- 91 Vitreous enamel and ceramic resistors are examples of
- Moulded carbon composition resistor
 - Carbon film resistor
 - Wire wound resistor (Correct Answer)
 - None of these
- 92 The practical unit of inductance is
- Watts
 - Farad
 - Ampere
 - Henry (Correct Answer)

- 93 Which device is a voltage operated device that virtually has no requirement of any input current?
- FET (Correct Answer)
 - BJT
 - MET
 - None of these
- 94 A rocket works on the principle of conservation of
- Linear momentum (Correct Answer)
 - Energy
 - Angular momentum
 - Mass
- 95is defined as the change in collector current to the change in base current at constant emitter voltage in a common emitter configuration.
- Current amplification factor (Correct Answer)
 - Voltage amplification factor
 - Power amplification factor
 - None of these
- 96 Which material is used for making LDR?
- Cadmium sulphide
 - Cadmium Selenide
 - Both a and b (Correct Answer)
 - None of these
- 97 The n th term of the arithmetic progression: 5, 2, -1, -4, -7 etc is
- $4 - 3n$
 - $8 - 2n$
 - $4 + 3n$
 - $8 - 3n$ (Correct Answer)
- 98 A non-sinusoidal voltage is having a form factor of 1.2 and peak factor of 1.5. If the average value of the voltage is 10V, then its RMS value is
- 12V (Correct Answer)
 - 10V
 - 6V
 - 5V
- 99 The power factor in any circuit is defined as the ratio of
- True power to apparent power (Correct Answer)
 - Apparent power to inductive power
 - Single phase to three phase power
 - True power to inductive power
- 100 Which of the following component works as a voltage regulator?
- Junction diode
 - Thyatron
 - Tunnel diode
 - Zener diode (Correct Answer)
- 101 The property of material which hinders the flow of electric current is known as
- Reluctance
 - Electrical conductance
 - Inductance
 - Electrical resistance (Correct Answer)

- 102 For all non-metallic conductors, the linear relationship
- Exist
 - Cannot able to say
 - Sometimes exist
 - Does not exist (Correct Answer)
- 103 What is the forward voltage drop for silicon diode?
- 0.2V
 - 0.9V
 - 0.7V (Correct Answer)
 - 0.3V
- 104 A capacitor offers high impedance to
- To an oscillator circuit
 - D.C voltage (Correct Answer)
 - Both A.C and D.C voltage
 - A.C voltage
- 105 What is a semiconductor without any impurity called?
- Intrinsic semiconductor (Correct Answer)
 - Extrinsic semiconductor
 - N-type semiconductor
 - P-type semiconductor
- 106 If any wire of the supply mains touches the body of an appliance, it is known as
- Closed circuit
 - Leakage circuit (Correct Answer)
 - Short circuit
 - All of these
- 107 is defined as the ratio of the RMS value to the average value of the given quantity.
- Form factor (Correct Answer)
 - Peak factor
 - Amplitude factor
 - None of these
- 108 An optocoupler is a combination of two light activated devices such as
- Phototransistor and LCD
 - Phototransistor and LED (Correct Answer)
 - Photons and LED
 - None of these
- 109 A pure resistive circuit in a.c follows the
- Lenz's law
 - Faraday's laws of electrolysis
 - Kirchhoff's law
 - Ohm's law (Correct Answer)
- 110 The property which tells us about the pattern of change in resistance with change in temperature for a given material is called its
- Susceptance
 - Resistivity
 - Conductivity

- Temperature coefficient (Correct Answer)
- 111 Most common three phase inter connections are
- Series and star
 - Delta and open delta
 - Star and delta (Correct Answer)
 - Series and parallel
- 112 Which is an example of a semi-conductor?
- Silicon
 - Germanium
 - Carbon
 - All of these (Correct Answer)
- 113 The property of a material to keep the magnetic domain alignment for a long time is called
- Electromagnetism
 - Magnetic retentivity (Correct Answer)
 - Magnetic permeability
 - Magnetic Induction
- 114 The two wattmeter method is used to measure three phase
- Unbalanced load
 - Only resistive load
 - Balanced and unbalanced loads (Correct Answer)
 - Balanced load
- 115 A p-type semiconductor has plenty of
- Holes (Correct Answer)
 - Cannot able to say
 - Electrons
 - Both electrons and holes
- 116 If an ice cube with a piece of lead in it floating in a tumbler melts, the water level will
- Rise (Correct Answer)
 - Fall or rise depending on the size of the ice cube
 - Fall
 - Remain same
- 117 The sum of all the natural numbers with two digits is
- 4095
 - 4905 (Correct Answer)
 - 450
 - 57.5
- 118 We know that the gravitational forces are
- Non-conservative
 - Cyclic
 - Conservative (Correct Answer)
 - Non-cyclic
- 119 The equivalent resistance of a series circuit is equal toof the individual resistance in the circuit.
- The product of the reciprocals
 - The product
 - The sum of the reciprocals

- The sum (Correct Answer)
- 120 How many terminals does a transistor have?
- 4
 1
 2
 3 (Correct Answer)
- 121 What is the unit of resistivity?
- Mho meter
 Ohm meter (Correct Answer)
 Ohm/meter
 None of these
- 122 Which is a variable capacitor?
- Electrolytic capacitor
 Mica capacitor
 Ceramic Capacitor
 Air gang capacitor (Correct Answer)
- 123 What is the value of x in the sequence $1 + 6 + 11 + 16 + \dots + x = 148$?
- 56
 36 (Correct Answer)
 66
 46
- 124 are positive charged carriers.
- Holes (Correct Answer)
 Electrons
 Ions
 All of these
- 125 What is the reciprocal of specific resistance?
- Specific conductivity (Correct Answer)
 Conductance
 Specific conductance
 None of these
- 126 A P-N junction is said to bewhen a negative terminal of the battery is connected to the P-side and positive to the N-side.
- Reverse biased (Correct Answer)
 Forward biased
 Biased
 None of these
- 127 Which is the practical unit of resistance?
- Ohm (Correct Answer)
 Henry
 Mho
 Ohm sec
- 128 atom has 3 valence electrons.
- Carbon
 Silicon

- Iron
 Boron (Correct Answer)
- 129 A body is thrown upwards with a velocity 49m/sec. It will return to the point of projection after
- 10sec (Correct Answer)
 0.5sec
 5sec
 49sec
- 130 Power diodes arediodes.
- Low power
 Low current
 High current (Correct Answer)
 High power
- 131 The part of a network which lies between two junctions is termed as
- Node
 Branch (Correct Answer)
 Active network
 Linear circuit
- 132 What is the unit of magnetising intensity H?
- Ampere-turns per meter
 Weber per ampere-turns
 Ampere turns per meter (Correct Answer)
 Weber per ampere turns meter
- 133 A capacitor is basically meant to
- Store electrons and release them whenever desired (Correct Answer)
 Store dielectric
 Increase the capacity of the resistive circuit
 Store electrons and release them only when there is a fault in the associated circuit
- 134 Out of the following materials, the highest elastic material is
- Rubber
 Iron (Correct Answer)
 Wood
 Copper
- 135 Which term is used to compare the phases of two alternating quantities?
- Amplitude
 Phase difference (Correct Answer)
 Wave length
 None of these
- 136 The end of a glass tube becomes round on heating due to
- Gravity
 Friction
 Surface tension (Correct Answer)
 Viscosity
- 137 The process of adding impurities is called
- Doping (Correct Answer)
 Dropping

- Impurity addition
 None of these
- 138 Which law states that when a voltage is applied across a conductor in a closed circuit, then the current flowing through it is directly proportional to voltage?
- Faraday's law
 Coulomb's law
 Ohm's law (Correct Answer)
 None of these
- 139 If six resistance of 60 ohm each are connected in parallel the total resistance will be
- 360 ohm
 10 ohm (Correct Answer)
 90 ohm
 30 ohm
- 140 The uni-junction transistor is a
- Gas tube device
 Vacuum tube device
 Device with memory tubes
 Semiconductor device (Correct Answer)
- 141 What is the value of form factor of a sinusoidal waveform?
- 0.707
 1.414
 1.11 (Correct Answer)
 0.637
- 142 The value of a.c is useful for all practical purposes.
- Instantaneous
 Effective (Correct Answer)
 Average
 Maximum
- 143 A consuming unit has a load of 1000kW and the reactive power 1000 kV, it has the power factor
- 0.9
 0.7 (Correct Answer)
 unity
 0.8
- 144 The unit of flux density is
- Henry/meter
 Weber
 Tesla (Correct Answer)
 Ampere turns
- 145 The resistance of a conductor depends upon
- Its cross-section
 Its length
 The material of the conductor
 All of these (Correct Answer)
- 146is the property to store an electric charge when its plates are at different potentials.
- Conductance

- Capacitance (Correct Answer)
- Inductance
- Resistance

147 Which of these are charge carriers?

- Electrons
- Holes
- Both holes and electrons (Correct Answer)
- None of these

148 If 'f' is the frequency of a voltage in cycles per second, the angular frequency is

- $2\pi/f$
- $2\pi f$ (Correct Answer)
- $2\pi ft$
- $1/f$

149 Which is an example for non-linear element?

- Diodes
- Thermistors
- Varistors
- All of these (Correct Answer)

150 One complete set of positive and negative values of an alternating quantity is termed as

- Wave length
- Amplitude
- Cycle (Correct Answer)
- Frequency

