

001. Angle plate is made at an angle of _____
(A) 30° (B) 45°
(C) 90° (D) 60°
002. Vernier calipers are _____ instruments
(A) accurate (B) semi-precision
(C) non-precision (D) precision
003. In an open circuit _____
(A) Resistance is zero and current is infinity
(B) Resistance is infinity and current is zero
(C) Resistance and current are zero
(D) Resistance and current are infinity
004. Soft soldering is generally done _____
(A) At 1200°C (B) Above 450°C
(C) Between 800°C and 1050°C (D) Below 450°C
005. The reciprocal of resistivity is called
(A) permeability (B) conductance
(C) permittance (D) conductivity
006. Capacitance of a capacitor can be measured by using _____
(A) AC Bridge (B) Analog multimeter
(C) Kelvin Bridge (D) Wheatstone Bridge
007. The unit of luminous intensity is
(A) Lux (B) Lumex
(C) Tesla (D) Candela
008. Which of the following meters is an integrating type instrument?
(A) Watt meter (B) Ammeter
(C) Energy meter (D) Voltmeter

009. Permanent magnet moving coil instruments can be used for the measurement of

- (A) AC only (B) DC only
(C) Both AC and DC (D) None of these

010. Load cells are used for the measurement of _____

- (A) flow (B) velocity
(C) weight (D) displacement

011. The commonly used gas in Class III filled system is

- (A) Oxygen (B) Helium
(C) Nitrogen (D) Hydrogen

012. $5.5 \text{ kg/cm}^2 =$ _____ Psi

- (A) 78.27 (B) 80.85
(C) 76.02 (D) 75.45

013. The property of liquid's resistance to flow

- (A) Compressibility (B) Surface tension
(C) Velocity (D) Viscosity

014. The dimensionless quantity used to identify the type of flow

- (A) Beta ratio (B) Reynold's number
(C) Dielectric constant (D) Coefficient of discharge

015. The angle of inclination of the inclined manometer is of the order of

- (A) 15° (B) 20°
(C) 10° (D) 25°

016. Torr is the unit for the measurement of

- (A) Level (B) Speed
(C) Pressure (D) Specific gravity

017. The agreement with true value is called
- (A) Sensitivity (B) Accuracy
(C) Precision (D) Span
018. Example of derived unit
- (A) metre (B) second
(C) velocity (D) None of these
019. The speed at which an instrument responds to changes in input variable is called
- (A) Fidelity (B) Lag
(C) Speed of response (D) Sensitivity
020. Example of primary sensor of differential head flow meter
- (A) orifice plate (B) bellows
(C) manometer (D) rotameter
021. Modified form of venturi tube is
- (A) pitot tube (B) rotameter
(C) dall tube (D) weirs and notches
022. Density of a fluid decreases with increase in
- (A) Pressure (B) Temperature
(C) Flow (D) Level
023. Dead weight tester works on the principle of
- (A) Conservation of energy (B) Bernoulli's theorem
(C) Pascal's law (D) Hooke's law
024. _____ is used for the measurement of differential pressure
- (A) Pitot tube (B) Pirani gauge
(C) Manometer (D) Barometer

A

025. Non-contact method of level measurement is

- (A) sight glass (B) dall tube
(C) ultrasonic type (D) Piezoelectric type

026. Basic principle of LVDT is

- (A) magnetic effect (B) mutual induction
(C) induced emf (D) Hysteresis effect

027. The nominal voltage of a fully charged lead acid cell is

- (A) 1.1 V (B) 1.5 V
(C) 3.0 V (D) 2.2 V

028. Extension of ammeter range is obtained by connecting

- (A) Low resistance in series (B) High resistance in parallel
(C) Low resistance in parallel (D) High resistance in series

029. PMMC type instruments can be used for measuring in

- (A) AC circuits only (B) DC circuits only
(C) Both AC and DC circuits (D) Neither AC nor DC circuit

030. The form factor of half wave is

- (A) 1 (B) 1.57
(C) 1.11 (D) 2

031. For stabilizing the gain of an amplifier

- (A) Positive feedback is used (B) No feedback is used
(C) Input voltage is varied (D) Negative feedback is used

032. 8085 microprocessor has how many pins?

- (A) 30 (B) 41
(C) 39 (D) 40

033. SCR is a _____ switch

- (A) Unidirectional (B) Bidirectional
(C) Three directional (D) None of these

034. Which semiconductor power device out of the following is not a current triggered device?

- (A) Thyristor (B) Triac
(C) GTO (D) MOSFET

035. Modem is used for

- (A) Printing (B) Video editing
(C) Data display (D) Dial-up connection

036. A microprocessor performs the functions of CPU of a _____

- (A) Control bus (B) Digital computer
(C) Memory (D) Data bus

037. Zener diode is used as

- (A) Amplifier (B) Switch
(C) Regulator (D) None of these

038. Which of the following is not an advantage of negative feedback?

- (A) Reduced noise (B) Increased gain
(C) Reduced distortion (D) Increased sound quality

039. The oscillator which generates sine wave oscillations is called

- (A) Feedback oscillator (B) Harmonic oscillator
(C) Damped wave oscillator (D) Relaxation oscillator

040. The input resistance of an Op–Amp is about

- (A) 2 k Ω (B) 20 m Ω
(C) 2 m Ω (D) 200 k Ω

A

041. The most heavily doped region in a transistor is
- (A) Collector (B) Emitter
(C) Base (D) Both (A) and (C)
042. Which of these is a volatile memory?
- (A) RAM (B) ROM
(C) PROM (D) EPROM
043. The decimal equivalent of the hexadecimal number A0H is
- (A) 100 (B) 256
(C) 80 (D) 160
044. The gates required to build a half adder are
- (A) EX-OR and NAND gate (B) EX-OR and AND gate
(C) EX-OR and NOR gate (D) Four NAND gates
045. _____ and _____ gates are called universal gates
- (A) AND, OR (B) NOT, OR
(C) NAND, NOR (D) NAND, AND
046. The length of program counter (PC) of 8085 microprocessor is _____
- (A) 6 Bits (B) 12 Bits
(C) 8 Bits (D) 16 Bits
047. When the source voltage increases in a zener regulator, the _____ current remains constant approximately
- (A) Series (B) Load
(C) Zener (D) Total
048. The instrument which is not suitable for the application in automatic control scheme
- (A) Pitot static tube (B) Rotameter
(C) Orifice plate (D) Rotary piston meter

049. Absolute zero on Kelvin scale is equal to

- (A) 273 K (B) 373 K
(C) 0 K (D) None of these

050. Temperature of core of earth is equal to 3727°C . This temperature in Kelvins is equal to

- (A) 4000 K (B) 3727 K
(C) 3454 K (D) None of these

051. Dip sticks are used for the

- (A) Flow measurement (B) Pressure measurement
(C) Displacement measurement (D) Level measurement

052. IPTS stands for

- (A) Indian Primary Temperature Scale
(B) International Primary Temperature Scale
(C) International Practical Temperature Scale
(D) International Practical Temperature Standard

053. Output of a Bimetallic element will be

- (A) Voltage (B) Displacement
(C) Strain (D) Pressure

054. Which device is similar to an RTD but has a negative temperature coefficient?

- (A) Thermistor (B) Negative-type RTD
(C) Thermocouple (D) Strain gauge

055. The ionization gauge is an instrument used for the measurement of

- (A) Very high pressure (B) Medium pressure
(C) Very low pressure (D) High pressure

A

056. A capacitive pressure sensor has a typical measurement uncertainty of

- (A) $\pm 0.4\%$ (B) $\pm 0.2\%$
(C) $\pm 0.1\%$ (D) $\pm 0.8\%$

057. The RS Flip-flop has _____ input/s

- (A) One (B) Three
(C) Four (D) Two

058. The current gain is highest in _____ amplifiers.

- (A) Common collectors (B) Common emitters
(C) Common base (D) All of these

059. In Boolean algebra, $A + (A.B) =$ _____

- (A) A.B (B) B
(C) A (D) 1

060. The DIAC is used as a triggering device for

- (A) FET (B) TRIAC
(C) SCR (D) UJT

061. To avoid the creeping error in the energy meters, the discs must

- (A) Be Laminated (B) Be thin
(C) Have bar magnet (D) Have holes

062. Output of an I to P converter is _____ kg/cm^2

- (A) 0 to 1 (B) 1.5 to 7
(C) 3 to 15 (D) 0.2 to 1

063. Potentiometer is a/an _____ instrument

- (A) Recording (B) Indicating
(C) Comparison (D) Calibrating

064. A transistor is _____ operated device
- (A) Voltage (B) Current
(C) Both voltage and current (D) None of the above
065. Reynolds number for turbulent flow is
- (A) Less than 1000 (B) More than 4000
(C) Less than 2000 (D) Between 1000 and 2000
066. Well-type manometer is _____ accurate than u-tube manometer
- (A) More (B) Less
(C) Equal (D) None of these
067. For flow measurement of highly corrosive and erosive fluid _____ is used
- (A) Ventury meter (B) Rotameter
(C) Elbow tap (D) Magnetic flow meter
068. _____ is the final control element in most process control systems
- (A) Transmitter (B) Amplifier
(C) Controller (D) Control valve
069. The 2's complement of the number 1101101 is
- (A) 0101110 (B) 0110010
(C) 0010011 (D) 0111110
070. If proportional band is more, controller response will be
- (A) More (B) Less
(C) Medium (D) None of the above
071. PLC is used for _____ application
- (A) control (B) flow
(C) level (D) counting



072. SCADA stands for

- (A) Statutory control for acquisition of Data Analog
- (B) Supervisory control and Data acquisition**
- (C) Standard counting of Analog to digital application
- (D) Supervisory control on Analog to digital analysis

073. Thermo couples are arranged in _____ to form a thermopile.

- (A) Parallel
- (B) Series**
- (C) Inclined
- (D) None of the above

074. Overshoot oscillation will be reduced by _____ action

- (A) Integral
- (B) Derivative**
- (C) Proportional
- (D) None of the above

075. The range of PH of acidic solution is

- (A) 14
- (B) between 0 and 7**
- (C) 16
- (D) between 7 and 14

076. Viscosity of air _____ with increase of temperature

- (A) Increases**
- (B) Decreases
- (C) No change
- (D) None of the above

077. In closed loop control system, the input has control over

- (A) Output**
- (B) Feedback
- (C) Set point
- (D) Open Loop

078. The most popular medium for the data highway is

- (A) Modem
- (B) Internet
- (C) Web
- (D) Ethernet**

079. A Hydraulic controller has _____ power gain
- (A) Low (B) Medium
(C) High (D) None of the above
080. 2-wire smart DP transmitter output follows _____ protocol
- (A) ASCII (B) RS485
(C) HART (D) RS232
081. Relay is a/an
- (A) ordinary switch (B) passive switch
(C) electro magnetic switch (D) All of these
082. With increase in the intensity of light, the resistance of a photo voltaic cell
- (A) remains same (B) decreases
(C) increases (D) none of these
083. The unit of measurement of pressure is
- (A) Kg m^{-3} (B) m^2
(C) ms^{-2} (D) Nm^{-2}
084. Temperature range of Thermistor is
- (A) 60°C to -15°C (B) -60°C to 15°C
(C) 60°C to 15°C (D) -60°C to 20°C
085. The BJT is a _____ controlled device
- (A) Voltage (B) Current
(C) Temperature (D) None of these
086. The accuracy of a pneumatic controller is about
- (A) $\pm 2\%$ (B) $\pm 1\%$
(C) $\pm 4\%$ (D) $\pm 5\%$

A

087. Any externally introduced signal affecting the controlled output is called
- (A) Feedback (B) Stimulus
(C) Signal (D) Gain control
088. As a result of introduction of negative feedback which of the following will not decrease?
- (A) Overall gain (B) Distortion
(C) Bandwidth (D) Instability
089. The bulbs of filled system thermometers are usually made of
- (A) Copper (B) Glass
(C) Plastic (D) Stainless steel
090. Strip chart recorder is a
- (A) Oscillographic recorder (B) Graphic recorder
(C) Magnetic type tape recorder (D) None of these
091. Venturi tubes are generally made of
- (A) Phosphor bronze (B) Cast Iron
(C) Nickel (D) All of these
092. Set point of a system is also called
- (A) Disturbance (B) Desired value
(C) Controlled variable (D) Manipulated variable
093. Ratio control system is a special type of
- (A) Open-Loop system (B) Feedback system
(C) ON-OFF system (D) Feed forward system
094. A thermo couple gauge is one type of
- (A) McLeod gauge (B) Ionization gauge
(C) Thermal conductivity gauge (D) None of these

095. Which of the following cannot be used for negative pressure?
- (A) Piezo meter (B) Pirani gauge
(C) Bourdon tube gauge (D) U-tube manometer
096. A vibrating level sensor consists of
- (A) One piezo electric oscillator (B) Two piezo electric oscillators
(C) Three piezo electric oscillators (D) Four piezo electric oscillators
097. The Gates required to build a half-adder are
- (A) EX-OR and NAND gate (B) Four NOR gates
(C) EX-OR and AND gate (D) Four NAND gates
098. Which of the following instruments is a rate meter?
- (A) Current meter (B) Venturi meter
(C) Hot wire anemometer (D) None of the above
099. A flow meter that measures flow rates which are independent of density is
- (A) Orifice meter (B) Rotameter
(C) Magnetic flow meter (D) Venturi meter
100. A SCADA system will only monitor and never make changes to the operations
- (A) True (B) False
(C) Cannot say (D) None of these

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