

**PSC Tradesman - Instrument  
Mechanic - Technical Education  
Examination  
Previous Year Question Paper**

***Exam Name: Tradesman - Instrument  
Mechanic - Technical Education***

***Date of Test : 19.02.2016***

***Question Paper Code: 032/2016***

***Medium of Questions: English***



032/2016

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. A ohm meter is basically :  
(A) A Ammeter  
(B) A volt meter  
(C) A Multimeter  
(D) None of the above
2. In a full wave rectifier without filter, the ripple factor is:  
(A) 1.21  
(B) 1.79  
(C) 0.482  
(D) 2.05
3. In an op-amp CMRR stands for :  
(A) Common Mode Rejection Rate  
(B) Cross Mode Rejection Ratio  
(C) Common Mode Rejection Ratio  
(D) Cross Mode Rejection Rate
4. Convert 35<sub>8</sub> octal number to decimal :  
(A) 17  
(B) 92  
(C) 29  
(D) 71
5. Potentiometer is an \_\_\_\_\_ instrument.  
(A) Indicating  
(B) Comparison  
(C) Calibrating  
(D) Recording
6. Which of the following is not the same as watt?  
(A) Joule/Sec  
(B) Amperes  $\times$  Volt  
(C) Amperes/Volt  
(D) (Amperes)<sup>2</sup>  $\times$  Ohm
7. The INPUT impedance of an ideal op-amp is :  
(A) Low  
(B) Infinite  
(C) High  
(D) None of these

8. An AND gate with schematic 'Bubbles' on its inputs performs the same function as a \_\_\_\_\_ gate.
- (A) NOT (B) OR  
(C) NOR (D) NAND
9. The 1's complement of 01010110 is :
- (A) 10111101 (B) 10101001  
(C) 11001100 (D) 11001011
10. Full form of HART is :
- (A) High Way Addressable Range Transmitter  
(B) High Way Accessable Remote Transducer  
(C) High Way Addressable Remote Transmitter  
(D) High Way Accessable Range Transducer
11. When the pressure of water increase, its volume :
- (A) Increases (B) Not Change  
(C) Decreases (D) None of these
12. An angularity error is in the :
- (A) Energy meter (B) Mano meter  
(C) BT Pressure gauge (D) Micro meter
13. \_\_\_\_\_ is the final control element in the most process control system.
- (A) Controller (B) Transmitter  
(C) Control Valve (D) Amplifier
14. For flow measurement of highly corrosive and erosive fluids \_\_\_\_\_ used.
- (A) Venturimeter (B) Magnetic flow meter  
(C) Rotameter (D) Pitot tube
15. A micro processor unit, a memory unit and an input/output unit form a :
- (A) Compiler (B) ALU  
(C) CPU (D) Micro Computer



16. Kirchoffs Second law is based on law of conservation of :  
(A) Charge (B) Momentum  
(C) Energy (D) Mass
17. The power factor of ac circuit lies between :  
(A) 0 and -1 (B) -1 and 1  
(C) 0 and 1 (D) None of these above
18. An LVDT uses a \_\_\_\_\_ core.  
(A) Variable Core (B) Soft Iron Core  
(C) Hard Iron Core (D) Moving Displacement Core
19. The range of pH of acidic solution is between :  
(A) 5 to 10 (B) 7 to 14  
(C) 10 to 15 (D) 0 to 6
20. Unit of force in FPS system is :  
(A) Newton (B) Kg  
(C) Pound (D) Gram
21. Low pressure unit is expressed in :  
(A) Gram (B) Bar  
(C) Torr (D) Pound
22. Expand WAN :  
(A) World Area Network (B) Web Area Network  
(C) Wide Area Network (D) None of these
23. Psi in terms of pressure stands for:  
(A) Pressure Square Inch (B) Per Square Inch  
(C) Pounds Per Square Inch (D) Perpendicular Square Inch
24. What type of device is a sensor?  
(A) Process (B) Input  
(C) Feed Back (D) Output

25. Pyro metre is used to measure :  
(A) High pressure (B) High voltage  
(C) High temp. (D) None of these
26. Rota meter is used for measurement of :  
(A) Level (B) Pressure  
(C) Volume (D) Flow
27. Standard current process para meter sensor range is :  
(A) 01 ma to 10 ma (B) 10 ma to 20 ma  
(C) 01 ma to 100 ma (D) 04 ma to 20 ma
28. Physical or logical arrangement of network is :  
(A) Topology (B) Networking  
(C) Routing (D) None of these
29. What device is similar to an rtd but has a negative temperature coefficient?  
(A) Strain Gauge (B) Thermo Couple  
(C) Thermistor (D) Pyro Meter
30. PID Stands For :  
(A) Proportionally Integrated Diode (B) Power Indication Display  
(C) Proportional Integral Derivative (D) Phase Inverting Driver
31. In process control P to I convertor means:  
(A) Pulse to interia convertor  
(B) Pressure to intensity convertor  
(C) Pressure to current convertor  
(D) Pressure to indicator valve convertor
32. In A \_\_\_\_\_ controller, a flapper nozzle is used.  
(A) Electronic (B) Hydrostatic  
(C) Pneumatic (D) All of above



33. ——— Steel has maximum Co-efficient of linear expansion.  
(A) Spring (B) Invar  
(C) Stainless (D) High Carbon
34. Clino Meter is an instrument concerned with :  
(A) Temp Measurement (B) Linear Measurement  
(C) Flatness Measurement (D) Angular Measurement
35. ——— is a quantity meter.  
(A) Orifice Plate (B) Anemometer  
(C) Nutating Disk Meter (D) Rota Meter
36. ——— is the most accurate instrument.  
(A) Height Gauge (B) Screw Gauge  
(C) Optical Projector (D) Mechanical Comparator
37. ——— is not provided on combination set.  
(A) Spirit level (B) Protractor head  
(C) Vernier scale (D) Centre head
38. A sin bar is used to measure :  
(A) Surface Roughness (B) Gear Profiles  
(C) Internal Tapers (D) External Tapers
39. Dall Tube is another variation of :  
(A) Pitot Tube (B) Flow Nozzle  
(C) Venturi Tube (D) Annubar Tube
40. For strain gauge, the gauge factor is generally in the range of :  
(A) 0.2 to 0.8 (B) 1.5 to 2.0  
(C) 0.8 to 1.5 (D) 2.0 to 4.0
41. Unit of deflection sensitivity of CRO is :  
(A) V/Mm (B) Metre Per Volt  
(C) Mm Per Mv (D) Mm/V

42. LVDT is a ——— Transducer.  
(A) Eddy Current (B) Resistance  
(C) Inductive (D) Magnetostriction
43. In process control HMI means :  
(A) Human Motion Indicator (B) Human Machine Interface  
(C) Hail Machine Interface (D) Hot Machine Indicator
44. DCS Process Control System means :  
(A) Data Control System (B) Distributed Control System  
(C) Data Core System (D) Damaged Control System
45. Reynolds number for Turbulent flow is :  
(A) Between 1000 and 2000 (B) Less than 500  
(C) More than 4000 (D) Between 500 and 1000
46. RTU Means :  
(A) Range Transmitter Unit (B) Remote Terminal Unit  
(C) Rota Meter Trans Unit (D) Range Transfer Unit
47. A transducer converts ——— from one form to another.  
(A) Sound (B) Heat  
(C) Energy (D) Electricity
48. Which transmission media has highest transmission speed in a network?  
(A) Electrical Cable (B) Twisted Cable  
(C) Optical Fibre (D) None of these
49. In this topology there is a central controller or hub :  
(A) Star (B) Mesh  
(C) Ring (D) Bus
50. One Micron is equal to :  
(A) 1 mm (B) 0.1 mm  
(C) 0.01 mm (D) 0.001 mm



51. A feeler gauge is used to check :  
(A) Screw Pitch (B) Surface Roughness  
(C) Thickness Of Clearance (D) Unsymmetrical Shape
52. The joints of a phosphor bronze bourdon tubes are :  
(A) Jointed by adhesives (B) Soldered  
(C) Screwed (D) Brazed
53. V- Block is used to check :  
(A) Roundness of a cylindrical work (B) Surface roughness  
(C) Taper on a job (D) Dimension as oval job
54. \_\_\_\_\_ is used to measure flow as air around an aeroplane.  
(A) Anemometer (B) Rota Meter  
(C) Venturi Meter (D) Orifice Meter
55. Systematic errors are :  
(A) Instrumental errors (B) Environmental errors  
(C) Observational errors (D) All of the above
56. The working of \_\_\_\_\_ is not affected by the fluid density.  
(A) Orifice plate (B) Rota meter  
(C) Magnetic flow meter (D) Pitot table
57. In a metal resistance thermometer the sensing element is usually made by :  
(A) Brass (B) Cast iron  
(C) Mild steel (D) Platinum
58. Bevelled edge of the orifice plate is on \_\_\_\_\_ side of the orifice plate assembly.  
(A) Bevelled (B) Inside  
(C) Outside (D) Rear Side
59. Viscosity of air \_\_\_\_\_ with increase of temperature.  
(A) Increases (B) Decreases  
(C) Not Change (D) Same



60. Well type manometer is \_\_\_\_\_ accurate than U-tube manometer.  
(A) Less (B) More  
(C) Not (D) None of these
61. Unit of pressure is :  
(A) Pascal (B) N-M  
(C)  $\text{Kg/m}^3$  (D) Pound
62. LED produces light when \_\_\_\_\_ biased.  
(A) Reverse (B) Positively  
(C) Forward (D) Negatively
63. In calibrating a pressure instrument we first adjust its :  
(A) Span (B) Zero  
(C) Linearity (D) Output
64. Which type of signal is represented by discrete values?  
(A) Noisy Signal (B) Analog  
(C) Digital (D) Non-Linear
65. A series of gradually decreasing sine wave oscillations is called :  
(A) Ringing (B) Under Shooting  
(C) Slew (D) Over Shooting
66. Liquid flow is measured in :  
(A) Litres (B) Gallons  
(C) Litres Per Hour (D) None of these
67. Standard pneumatic output of an I to P convertor is \_\_\_\_\_ to \_\_\_\_\_  $\text{Kg/Cm}^2$ .  
(A) 0 to 2 (B) 0.2 to 1  
(C) 1.5 to 3 (D) 3 to 15
68. An ideal operational amplifier has :  
(A) Infinite output impedance (B) Infinite bandwidth  
(C) Zero input impedance (D) All of these above

69. The base of a transistor is very ———— doped.  
(A) Highly (B) Lightly  
(C) Largely (D) None of these
70. If proportional band is more, controller response will be :  
(A) High (B) Less  
(C) More (D) Same
71. Unit of conductance is :  
(A) Ohm (B) Mho  
(C) Henry (D) Ampere
72. Ct S are used for measurement of :  
(A) Voltage (B) Resistance  
(C) Current (D) Inductance
73. Standard cell voltage is :  
(A) 2.5 V (B) 1.5 V  
(C) 10 V (D) 5 V
74. Solder is an alloy of :  
(A) Copper and Tin (B) Brass and Zinc  
(C) Tin and Lead (D) Copper and Zinc
75. The Logic Gate that will have high or '1' at its output when any its input is high is A (N) :  
(A) AND Gate (B) NOR Gate  
(C) OR Gate (D) NOT Gate
76. A Port can be :  
(A) Strictly for input (B) Bi directional  
(C) Strictly for output (D) All of the above
77. The Full range form atmospheric pressure to a perfect vaccum is :  
(A) 7.14 Psi (B) 0.40 Torr  
(C) 14.7 Psi (D) 0.40 Psi



78. A thermo couple gauge is one type of :  
(A) Mcleod gauge (B) Slack diaphragm gauge  
(C) Thermal conductivity gauge (D) Pirani gauge
79. The difference between gauge and absolute pressure is :  
(A) Vaccum (B) Atmospheric Pressure  
(C) Zero (D) 0.433 Psi
80. The difference between set point and process variable is called as :  
(A) Offset (B) Over Shoot  
(C) Error (D) None of these
81. From which country did India borrow the 'Idea of Single Citizenship'?  
(A) USA (B) Britain  
(C) Ireland (D) USSR
82. Who prepared the preamble of Indian Constitution?  
(A) B.R. Ambedkar (B) Moulana Abdul Kalam Azad  
(C) Dr. Rajendra Prasad (D) Jawaharlal Nehru
83. Which right was removed from the fundamental right of Indian Constitution?  
(A) Right to property (B) Right to equality  
(C) Right to freedom of religion (D) Right to freedom against exploitation
84. The article which was considered as the 'Soul of Indian Constitution' by Dr. B.R. Ambedkar :  
(A) Article 19 (B) Article 20  
(C) Article 32 (D) Article 22
85. Who compiled the first dictionary in Malayalam?  
(A) Dr. Herman Gundart (B) William Logan  
(C) Arnos Pathiri (D) Ravarent Meed

86. Who was known as 'Kerala Lincoln'?
- (A) Sahodaran Ayyappan (B) Pambadi Jhon Joseph  
(C) Moorkoth Kumaran (D) Pandit Karuppan
87. Who established Sidhashramam at Alathur?
- (A) Brahmanandha Sivayogi (B) Vagbhadanandhan  
(C) Swami Anandha Theertham (D) Vaikunda Swamikal
88. Who consecrated the famous Kundroli Gokarna natheswaram temple in Mangaluru?
- (A) Basavanna (B) Kumara Guru  
(C) T.R. Krishna Swami Ayyar (D) Sree Narayana Guru
89. Who is considered as the pioneer of muslim renaissance in Kerala?
- (A) Vakkam Abdul Khadar Moulavi (B) Muhammed Abdul Rahiman Sahib  
(C) Sayyid Sanahulla Makti Thangal (D) Seethi Koya Thangal
90. Who is known as Kerala Vyasam?
- (A) Vallathol  
(B) Kerala Varma Valliyakoyi Thampuram  
(C) Ulloor S. Parameswara Ayyar  
(D) Kodungalloor Kunhikuttan Thampuran
91. In which year did 'Valmiki Ambedkar Awas Yojana' come in to being?
- (A) 1991 (B) 2001  
(C) 2002 (D) 2004
92. What does DPAP stand for?
- (A) Drought Prone Area Programme  
(B) Drought Poverty Allivation Programme  
(C) Development Programme for the Adult Persons  
(D) Development Prone Area Programme



93. In which year was Congress Lahore Session held?
- (A) 1920 (B) 1930  
(C) 1929 (D) 1942
94. Who won US open 2015 for the Woman Singles?
- (A) Flavia Penatta (B) Venus Williams  
(C) Mariya Sharappova (D) Sareena Williams
95. Which organisation won Nobel Prize for peace in 2015?
- (A) Green peace (B) Amnesti International  
(C) Tunisian National Dialogue Courtat (D) Green Belt
96. When was National Science day observed?
- (A) February 19 (B) February 28  
(C) March 4 (D) January 12
97. Where is National Institute of Oceanography situated?
- (A) Mumbai (B) Chennai  
(C) Kolkatha (D) Panaji
98. Who wrote 'Poverty in UnBritish Rule in India'?
- (A) R.P. Dutt (B) Dadabai Naoroji  
(C) M.N. Roy (D) R.C. Dutt
99. Study of Inscription is known as :
- (A) Numismatics (B) Paliography  
(C) Palaentology (D) Epigraphy
100. Channar rebellion is connected with :
- (A) Right to wear upper cloth (B) The right to use the road  
(C) The right to go to school (D) To increase the wages