

PSC Tradesman - Electronics - Technical Education Examination Previous Year Question Paper

***Exam Name: Tradesman - Electronics -
Technical Education***

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144/2016

1. The ripple factor of a halfwave rectifier is _____.
(A) 0.482 (B) 0.812 (C) 40.6 (D) 1.21
2. Which of the following is the fastest switching component ?
(A) MOSFET (B) JFET (C) BJT (D) pentode
3. The final power amplifier in a radio transmitter station is usually _____.
(A) Class A (B) Class B (C) Class C (D) Class AB
4. In AM radio receiver, the oscillator frequency is _____.
(A) incoming signal - 455 kHz (B) incoming signal + 455 kHz
(C) equal to signal frequency (D) equal to 455 kHz
5. The voltage gain of an emitter follower configuration can **not** be more than _____.
(A) 1 (B) 0.5 (C) 10 (D) 100
6. The doping concentration in zener diode is _____.
(A) very low (B) very high (C) zero (D) infinity
7. Binary number system uses _____ symbols.
(A) 16 (B) 10 (C) 8 (D) 2
8. Trimmer is a variable _____.
(A) resistor (B) inductor (C) capacitor (D) none of these
9. The number of turns in secondary of a _____ transformer is more than the primary.
(A) step - down (B) step - up (C) 230 V to 6 V (D) 11 kV to 230 V

10. In a PN junction diode the barrier potential offers opposition to _____.
(A) Minority charge carriers in both regions
(B) Majority charge carriers in both regions
(C) Holes in N region
(D) Electrons in P region
11. Negative feedback in amplifier _____ the stability of its voltage gain.
(A) increases (B) decreases (C) does not affect (D) none of these
12. The time-base of a CRO is _____ waveform.
(A) sawtooth (B) sine (C) square (D) rectangular
13. Moving iron meter is usually used for measurement of _____.
(A) AC and DC (B) DC only (C) AC only (D) None of these
14. Integrator is a _____ filter.
(A) high pass (B) low pass (C) band pass (D) band stop
15. OP-AMP may be used as :
(A) summing amplifier (B) voltage comparator
(C) differentiator (D) all the above
16. The timer IC 555 is available in _____ package.
(A) 3 pin (B) 14 pin DIP (C) 8 pin DIP (D) 16 pin DIP
17. IGBT stands for _____.
(A) Insulated Gate-Based Thyristor (B) Insulated Gate Bipolar Thyristor
(C) Intrinsic Gate Bipolar Transistor (D) Insulated Gate Bipolar Transistor
18. IC 7912 is _____.
(A) Two input Quad XNOR gate
(B) Two input Quad XOR gate
(C) Negative voltage regulator for 12 V
(D) Positive voltage regulator for 12 V

19. In On-line UPS, the battery is connected _____.
(A) All the time to the inverter (B) During mains failure
(C) During charging time only (D) All the above
20. The program counter in 8085 microprocessor is of _____ bit.
(A) 8 (B) 16 (C) 4 (D) 32
21. Which of the following is a bidirectional device ?
(A) Zener diode (B) SCR (C) LED (D) Triac
22. Henry is the unit of _____.
(A) Capacitance (B) Power (C) Inductance (D) Resistance
23. A half adder circuit can add _____ bits at a time.
(A) 2 (B) 3 (C) 4 (D) 1
24. Which of the following is a single input flip-flop ?
(A) R-S (B) D (C) JK (D) Clocked RS
25. Time constant of RC circuit is the time during which capacitor voltage rises to _____% of its final steady value.
(A) 50 (B) 100 (C) 63 (D) 70.7
26. Which of the following is an insulator ?
(A) Ferrite (B) Germanium (C) Silicon (D) Zinc
27. Antimony is a _____ type doping material.
(A) Trivalent (B) Semiconductor (C) Acceptor (D) Pentavalent
28. A dynamic microphone is a _____ type transducer.
(A) Acoustical (B) Thermal
(C) Optical (D) Variable resistance

29. The function of NOT gate is to _____.
(A) Invert an input signal (B) Add two input signals
(C) Multiply two input signals (D) Perform as a universal gate
30. The channel width in PAL system is _____.
(A) 5.5 MHz (B) 4.433 MHz (C) 38.9 MHz (D) 7 MHz
31. Clamping circuits make use of adding a _____ level into an ac signal.
(A) Zero (B) DC (C) AC (D) Negative
32. Which of the following statements is **not** related to Ohm's law ?
(A) Current is directly proportional to P_d
(B) Current is inversely proportional to resistance
(C) Law is applicable to dc circuits
(D) Law is independent of temperature
33. Which of the following is **not** used for making LED ?
(A) Germanium (B) Gallium arsenide
(C) Gallium phosphide (D) Gallium arsenide phosphide
34. In SCR if the conduction angle is less, the output, is _____.
(A) More (B) Less (C) Not affected (D) Infinity
35. The ripple output frequency of bridge rectifier in 50 Hz supply is _____ Hz.
(A) 50 (B) 25 (C) 100 (D) 60
36. At saturation point of transistor, $V_{CE} =$ _____ volt.
(A) Zero (B) V_{CC} (C) One (D) Infinite

37. In a multistage amplifier, the overall voltage gain is equal to _____ of the gains of individual stages.
(A) Sum (B) Half (C) Product (D) Gain of one stage
38. AM wave has _____ side bands.
(A) no (B) one (C) a number of (D) two
39. IF in AM radio receivers is obtained by _____.
(A) Detection (B) Heterodyning (C) Rectification (D) Amplification
40. Barkhausen criterion is important in _____.
(A) Oscillation (B) Rectification (C) Doping (D) Demodulation
41. _____ oscillator is not a sinusoidal oscillator.
(A) RC phase shift (B) Wien bridge (C) Crystal (D) UJT relaxation
42. The statement not related to a diac is _____.
(A) It is a two terminal device (B) It is an SCR without its gate terminal
(C) It can be used to trigger a triac (D) It is a bidirectional switching device
43. The image continuity in motion pictures is obtained by the property of _____.
(A) Doppler effect (B) Skin effect
(C) Photoelectric effect (D) Persistence of vision
44. dB is used to measure _____.
(A) power level (B) power (C) voltage (D) magnetic flux
45. Cross over distortion occurs in _____ type of amplifiers.
(A) Class A (B) Class B (C) Class C (D) Push-pull
46. The leakage current in a transistor is _____ dependent on.
(A) Temperature (B) Voltage
(C) Majority charge carriers (D) Input signal

47. BJT is _____.
(A) A type of FET (B) A type of UJT
(C) NPN or PNP transistor (D) Bidirectional Junction Transistor
48. Atomic number of Silicon is _____.
(A) 10 (B) 32 (C) 14 (D) 16
49. Yellow, Violet, Red indicates _____ Ohms.
(A) 4.7 (B) 470 (C) 4.7 k (D) 47 k
50. _____ loss is **not** a transformer loss.
(A) Core (B) Copper (C) Hysteresis (D) Dielectric
51. SCR has _____ layers.
(A) PNNP (B) PNPN (C) PPNN (D) NPPN
52. A logic circuit that has a high output only when all its inputs are low is _____ gate.
(A) AND (B) NAND (C) NOR (D) OR
53. 88-108 MHz band of frequencies is used for _____ broadcasting.
(A) TV (B) FM (C) AM (D) Defence
54. In FM receivers, limiter is used _____.
(A) For automatic gain control (B) To eliminate amplitude variations
(C) To maintain minimum S/N ratio (D) To detect the audio signal from carrier
55. The frequency range used for RADAR is _____.
(A) UHF (B) VHF
(C) UHF and Microwave (D) Microwave

56. Approximate distance of geostationary satellite from earth is _____.
(A) 15,625 kms (B) 30,000 kms (C) 36,000 kms (D) 80,000 kms
57. Recording in compact disc is done with the help of _____.
(A) Laser (B) UV light (C) IR light (D) None of these
58. _____ is not a semiconductor memory.
(A) RAM (B) ROM (C) CD (D) Cache
59. A two diode rectifier requires _____.
(A) Direct ac mains (B) Centre tapped transformer
(C) Low PIV rated diodes (D) No filters for smoothing
60. The processor chip 8085A has _____ pins.
(A) 14 (B) 16 (C) 40 (D) 80
61. The heart of a CRO is _____.
(A) Cathode ray tube (B) Power supply
(C) Vertical amplifier (D) Horizontal amplifier
62. The function of the emitter bypass capacitor in a CE amplifier is to _____.
(A) Act as a high resistance path for dc signals
(B) Act as a low resistance path for dc signals
(C) Provide a low resistance path for ac signals
(D) Provide a high resistance path for ac signals
63. The minimum forward bias voltage for a Germanium PN junction to set into conduction is _____ Volt.
(A) 0.7 (B) 0.6 (C) 0.1 (D) 0.3

64. The width of the collector layer in a transistor is _____.
(A) Equal to that of the base region
(B) Less than that of the base region
(C) Much greater than that of the base region
(D) Much less than the emitter region
65. In NPN transistors, the majority charge carriers are _____.
(A) Holes (B) Electrons (C) Positive charges (D) None of these
66. _____ diode is used in reverse biased condition for its normal working.
(A) Zener (B) Light emitting (C) Rectifier (D) Signal
67. An etchant used in PCB making is _____.
(A) Ferric Chloride (B) Ammonium Chloride
(C) Carbon Tetrachloride (D) Copper Sulphate
68. The most common component used in ripple filter circuits is _____.
(A) Inductor (B) Resistor (C) Capacitor (D) Diode
69. _____ voltage is the maximum reverse voltage that a diode can withstand.
(A) Peak inverse (B) Peak (C) Cut - in (D) Barrier
70. When two capacitors are connected in series, the effective capacitance is _____.
(A) Increases (B) Decreases (C) Doubles (D) Becomes unity
71. When ten resistors each of $47\ \Omega$ are connected in parallel, the net resistance of the combination is _____ Ohms.
(A) 47 (B) 10 (C) 470 (D) 4.7
72. The quality factor 'Q' of an ideal inductor is _____.
(A) Unity (B) Zero (C) 0.63 (D) Infinity

73. _____ is not a variable resistor.
(A) Preset (B) Varactor (C) Rheostat (D) Potentiometer
74. Insulation resistance can be measured using _____.
(A) Multimeter (B) Megger (C) Galvanometer (D) Clampmeter
75. Bistable multivibrator is also called as _____.
(A) Monoshot (B) Sinusoidal oscillator
(C) Free running multivibrator (D) Flip-flop
76. Colpitts oscillator uses _____ feedback.
(A) no (B) positive (C) negative (D) none of these
77. The binary number 1111 corresponds to _____ hexadecimal number.
(A) A (B) B (C) D (D) F
78. The voltage regulation of an ideal regulated power supply is _____.
(A) 50 (B) 100 (C) 1 (D) 0
79. The input impedance of a JFET is high because _____.
(A) its gate is insulated from the channel
(B) its input is reverse biased
(C) of the presence of the substrate
(D) all the above
80. _____ has no gate terminal.
(A) MOSFET (B) Triac (C) SCR (D) Diac
81. Mazagoan is famous for :
(A) Iron ore export (B) Locomotive engineering works
(C) Co-operative dairy farming (D) Ship building

82. Which of the following rivers flows west ward ?
(A) Krishna (B) Kavery (C) Narmada (D) Mahanadi
83. Which is **not** an ancient town ?
(A) Varanasi (B) Mumbai (C) Pataliputra (D) Prayag
84. The least populated Union Territory in India is :
(A) Pondicherry (B) Andaman Nicobar Island
(C) Lakshadweep (D) Chandigarh
85. Pradhan Mantri Fasal Bima Yojana (PMFBY) aimed to :
(A) Crop Insurance Scheme
(B) Eradication of Poverty in Urban Areas
(C) National Rural Development
(D) Upliftment of The Poor People
86. The Dandi March was organised by Gandhiji to :
(A) Protest against atrocities on Harijans
(B) Break the Salt Laws
(C) Ask for poorna swaraj
(D) Oppose Simon Commission
87. New India and Commonweal two news papers during the Home Rule were edited by :
(A) Mrs. Annie Besant (B) Balgangadhara Tilak
(C) Gopala Krishna Gokhale (D) Lala Lajpat Rai
88. Who is the first women president of Indian National Congress ?
(A) Sucheta Kripalini (B) Sarojini Naidu
(C) Rajkumari Amrith Kour (D) Mrs. Annie Besant

89. Which is the Naval Port in Kerala ?
(A) Bepur (B) Kochi (C) Neendakara (D) Alappuzha
90. Parambikulam Wildlife Sanctuary is in :
(A) Palakkad (B) Thiruvananthapuram
(C) Pathanamthitta (D) Idukki
91. In which year Mahatma Gandhi visited Sree Narayan Guru ?
(A) 1921 (B) 1920 (C) 1925 (D) 1922
92. Which movement was started by Kumara Guru at Iraviperur ?
(A) Ananda Mahasabha (B) Atma Vidya Sangam
(C) Sahodara Sangam (D) Prathyaksha Raksha Daiva Sabha
93. Who is the founder of Sadhujana Paripalana Yogam ?
(A) Vaikunda Swamikal (B) Ayyankali
(C) Swami Vagbhatananda (D) Brahmananda Shivayogi
94. Who popularised Arabic Malayalam by publishing, monthly called Al Islam ?
(A) Vaikkom Muhammed Basheer (B) Vakkom Abdul Khader Maulavi
(C) Moidu Maulavi (D) Kalathingal Muhammed
95. Who led the Vimochana Samaram which resulted in the dismissal of the EMS Namboodiripad Ministry ?
(A) E.V. Ramaswami Naicker (B) V.T. Bhattathiripad
(C) Mannath Padmanabhan (D) K. Kelappan
96. Who won the women's single tennis title in Wimbledon, 2016 ?
(A) Angelique Kerber (B) Venus Williams
(C) Elena Vesnina (D) Serena Williams

97. Who is the present Chief Minister of Arunachal Pradesh ?
(A) Pema Khandu (B) Nabam Tuki
(C) Khaliko Pul (D) Tathagath Roy
98. Who is the Chief Executive Officer (CEO) in NITI Aayog ?
(A) Raghuram Rajan (B) Vishal Sikha
(C) Amitab Kant (D) Amitabachan
99. Who is the famous Bollywood filmstar selected as Good Will ambassador to Rio-Olympic Indian Team ?
(A) Amir Khan (B) Sharuk Khan (C) Akshay Kumar (D) Salman Khan
100. In which date India launched IRNSS - 1G from Satheesh Dhawan Space Centre Sri Hari Kotta ?
(A) 28th April, 2016 (B) 22nd June, 2016
(C) 22nd June, 2014 (D) 22nd October, 2008

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