

## FINAL ANSWER KEY

Question 48/2024/OL

Paper Code:

Category 268/2023

Code:

Exam: Assistant Sub Inspector Trainee (Telecommunications)  
(SR for ST only)

Date of Test 03-05-2024

Department Police

Question1:-Which of the following statements are correct about "Synod of Diamper" (Udayamperoor Sunhados) ?

- i. Priests conference held at Udayamperoor to make the Christian church of Kerala closer to the pope of Rome.
- ii. Udayamperoor is a town situated in Ernakulam District.
- iii. The conference was presided over by Alexis de Menezes.
- iv. It was an event in the history of Kerala during the Portuguese rule.

A:-Only (i), (ii)

B:-Only (i), (ii), (iii)

C:-Only (i), (ii), (iv)

D:-All are correct

Correct Answer:- Option-D

Question2:-Who founded the "Vaala Samudaya Parishkarani Sabha" ?

A:-Pandit K. P. Karuppan

B:-Velukkutty Arayan

C:-V. V. Govindan

D:-N. Krishnan

Correct Answer:- Option-A

Question3:-Which of the following statements are correct about Vakkom Abdul Khader Moulavi ?

- i. Father of Muslim renaissance in Kerala.
- ii. Founder of Swadeshabhimani News paper.
- iii. Started Travancore Muslim Mahajana Sabha.
- iv. Author of the book "Delhi Durbar".

A:-Only (i), (ii)

B:-Only (i), (ii), (iii)

C:-Only (i), (ii), (iv)

D:-All are correct

Correct Answer:- Option-B

Question4:-Which among the following is the first printing press in Kerala ?

A:-C. M. S. Press

B:-Travancore Press

C:-Deepika

D:-Hindusthan Press

Correct Answer:- Option-A

Question5:-Who was the founder of Samatwa Samajam ?

A:-Kumaraguru

B:-Brahmananda Sivayogi

C:-Vaikunta Swamikal

D:-M. C. Joseph

Correct Answer:- Option-C

Question6:-Who is the father of the library movement in Kerala ?

A:-P. Krishna Pillai

B:-P. N. Panicker

C:-Joseph Mundasseri

D:-Sardar K. M. Panicker

Correct Answer:- Option-B

Question7:-Which among the following is not written by Lalithambika Antharjanam ?

A:-Agnisakshi

B:-Kunjomana

C:-Thulavarshapacha

D:-Gosayi Paranja Katha

Correct Answer:- Option-C

Question8:-Who among the following is not associated with Vaikom Satyagraha ?

A:-T. K. Madhavan

B:-C. Kesavan

C:-K. Kelappan

D:-K. P. Kesavamenon

Correct Answer:- Option-B

Question9:-Who among the following made the famous Temple entry Proclamation ?

A:-Sree Moolam Thirunnaal

B:-Sethu Lekshmi Bhai

C:-Sree Chithira Thirunnaal

D:-Sree Visakhama Thirunnaal

Correct Answer:- Option-C

Question10:-The Malayalam Daily Kerala Kaumudi was founded by

A:-C. V. Kunjiraman

B:-Dr. Palpu

C:-M. Govindan

D:-V. K. Panicker

Correct Answer:- Option-A

Question11:-Who founded Sadhujana Paripalana Sangham ?

A:-Ayyankali

B:-Chattambi Swamikal

C:-Sreenarayana Guru

D:-Vagbhadanandan

Correct Answer:- Option-A

Question12:-Which of the following statements are correct about Mannathu Padmanabhan ?

- i. Ente Jeevitha Smaranakal is the auto biography of Mannathu Padmanabhan.
- ii. First general secretary of Nair Service Society.
- iii. Known as "Bharatha Kesari".
- iv. Wrote Pancha Kalyani Niroopanam.

A:-Only (i), (ii)

B:-Only (i), (ii), (iv)

C:-Only (i), (ii), (iii)

D:-All are correct

Correct Answer:- Option-D

Question13:-Who is the first editor of Bhashaposhini ?

A:-Kandathil Varghese Mappila

B:-S. Padmanabha Panicker

C:-Kattakkayathil Cheriyan Mappila

D:-Moorkoth Kumaran

Correct Answer:- Option-A

Question14:-Which among the following is not written by Vaikom Muhammed Basheer ?

A:-Bhargaveenilayam

B:-Jeevitha Nizhalpadukal

C:-Balyakala Sakhi

D:-Mindapennu

Correct Answer:- Option-D

Question15:-How many times has the preamble of the Constitution of India been amended ?

A:-1

B:-2

C:-3

D:-4

Correct Answer:- Option-A

Question16:-Which among the following articles of the Fundamental Rights in the Constitution of India cannot be suspended during National Emergency ?

A:-14

B:-21

C:-21A

D:-22

Correct Answer:- Option-B

Question17:-Which of the following statements are correct about "Chief Justice of the Supreme Court of India" ?

- i. Retirement age of the Chief Justice of the Supreme Court of India is 65 years.
- ii. Salary of the Chief Justice of the Supreme Court of India is given from the contingency fund of India.
- iii. The first Chief Justice of the Supreme Court of India is Harilal J. Kania.
- iv. Y. V. Chandrachud is the longest serving Chief Justice of the Supreme Court of India.

A:-Only (i), (ii)

B:-Only (i), (ii), (iii)

C:-Only (i), (iii), (iv)

D:-All are correct

Correct Answer:- Option-C

Question18:-Who was the first general secretary of Sree Narayana Dharma Paripalana Yogam ?

A:-Kumaran Asan

B:-N. Kumaran

C:-T. K. Madhavan

D:-N. Krishnan

Correct Answer:- Option-A

Question19:-The President of India who declared National Emergency in India in 1975 ?

A:-V. V. Giri

B:-Fakrudeen Ali Ahammed

C:-B. D. Jatti

D:-Neelam Sanjeeva Reddy

Correct Answer:- Option-B

Question20:-Who is known as the Jhansi Rani of Travancore ?

A:-Sethu Parvathi Bai

B:-Akkamma Cherian

C:-Annie Mascarene

D:-K. R. Gouri Amma

Correct Answer:- Option-B

Question21:-The carrier is transmitted as full power but only one of the side bands is transmitted. This system is

A:-DSBFC

B:-SSBFC

C:-SSBSC

D:-VSB

Correct Answer:- Option-B

Question22:-What is the effect of increasing its modulation depth to 100% in amplitude modulation process ?

A:-No modulation

B:-Under modulation

C:-Low level modulation

D:-Over modulation

Correct Answer:- Option-D

Question23:-In FM, frequency deviation is doubled

A:-Modulation is doubled

B:-Carrier swing is halved

C:-Modulation is halved

D:-Modulation index is decreased

Correct Answer:- Option-A

Question24:-In super heterodyne receiver, the output of mixer stage is

A:-AF

B:-RF

C:-IF

D:-VHF

Correct Answer:- Option-C

Question25:-In FM system, the modulation index is equal to 1 (100%) for a frequency deviation of

A:-100 KHz

B:-75 KHz

C:-50 KHz

D:-25 KHz

Correct Answer:- Option-B

Question26:-In FM radio receiver, the intermediate frequency is

A:-455 KHz

B:-1055 KHz

C:-10.7 MHz

D:-15.6 MHz

Correct Answer:- Option-C

Question27:-Which one is not a limitations of Amplitude modulation ?

A:-Low efficiency

B:-Needs less audio power

C:-Noisy reception

D:-Limited operating range

Correct Answer:- Option-B

Question28:-88 MHz to 108 MHz frequency range is used in

A:-FM band

B:-SW band

C:-AM band

D:-MW band

Correct Answer:- Option-A

Question29:-Short wave radio transmission is done using

A:-Ground wave propagation

B:-Space wave propagation

C:-Ground level radio wave

D:-Sky wave propagation

Correct Answer:- Option-D

Question30:-\_\_\_\_\_ is used for selecting desired station in radio receiver.

A:-Zener diode

B:-Gang capacitor

C:-Crystal diode

D:-Electrolytic capacitor

Correct Answer:- Option-B

Question31:-In TV transmission

A:-Both picture and sound are FM

B:-Picture and sound both the signals are AM

C:-Picture signal is AM and sound signal is FM

D:-Picture signal is FM and sound signal is AM

Correct Answer:- Option-C

Question32:-In the 625 line system, 2.5 line period ( $2.5 \times 64 = 160$  Micro seconds) has been allotted for the

- A:-Vertical sync pulses
- B:-Horizontal sync pulses
- C:-Horizontal blanking pulses
- D:-Line sync pulses

Correct Answer:- Option-A

Question33:-For TV reception, Yagi uda antenna consists of

- A:-Reflector, dipole and LNB
- B:-Dipole, transponder and directors
- C:-Reflector, director and LNB
- D:-Dipole, reflector and directors

Correct Answer:- Option-D

Question34:-The length of a transmitting antenna is kept proportional to the

- A:-Current of the signal to be radiated
- B:-Velocity of the signal to be radiated
- C:-Wavelength of the signal to be radiated
- D:-Amplitude of the signal to be radiated

Correct Answer:- Option-C

Question35:-What is the characteristic impedance of RG 6U cable used for long line cable TV transmission ?

- A:-25 Ohm
- B:-50 Ohm
- C:-75 Ohm
- D:-100 Ohm

Correct Answer:- Option-C

Question36:-What is a co-axial cable ?

A:-A center wire inside an insulating material which is covered by a metal sleeve or shield

- B:-Two wires side-by-side held apart by insulating rods
- C:-Two wires twisted around each other in a spiral
- D:-Two wires side-by-side in a plastic ribbon

Correct Answer:- Option-A

Question37:-In radio wave propagation, the Very High Frequency (VHF) range is

- A:-30 Hz – 300 Hz
- B:-300 KHz – 3000 KHz
- C:-30 MHz – 300 MHz

D:-30 MHz – 3 GHz

Correct Answer:- Option-C

Question38:-In the PAL color TV system, the color subcarrier frequency is \_\_\_\_\_ way from the picture carrier.

A:-38.9 MHz

B:-33.4 MHz

C:-5.5 MHz

D:-4.433 MHz

Correct Answer:- Option-D

Question39:-Antennas that transmit and receive radio waves in all directions equally known as

A:-Bidirectional antenna

B:-Omnidirectional antenna

C:-Directional antenna

D:-Yagi antenna

Correct Answer:- Option-B

Question40:-What are the primary and secondary colors of TV ?

A:-Red, green, blue, cyan, yellow, magenta

B:-Red, yellow, blue, cyan, yellow, magenta

C:-Red, green, blue, cyan, white, magenta

D:-Red, yellow, blue, cyan, white, magenta

Correct Answer:- Option-A

Question41:-In Radio frequency spectrum Very Low Frequency (VLF) band ranges from

A:-3 – 30 Hz

B:-3 – 30 kHz

C:-3 – 30 MHz

D:-30 MHz – 3 GHz

Correct Answer:- Option-B

Question42:-Which of the following mode of propagation is known as ionospheric propagation ?

A:-Sky wave propagation

B:-Ground wave propagation

C:-Space wave propagation

D:-Surface wave propagation

Correct Answer:- Option-A

Question43:-Line of sight propagation is



A:-Surface wave propagation

B:-Sky wave propagation

C:-Space wave propagation

D:-Ground wave propagation

Correct Answer:- Option-C

Question44:-Which characteristics changes in frequency modulation ?

A:-Carrier wave frequency

B:-Modulating wave frequency

C:-Carrier wave amplitude

D:-Carrier wave phase

Correct Answer:- Option-A

Question45:-What is the band width of AM if carrier frequency is 500 kHz and modulating frequency is 10 kHz ?

A:-5 kHz

B:-10 kHz

C:-20 kHz

D:-100 kHz

Correct Answer:- Option-C

Question46:-For 100% AM modulation calculate the power transmitted by carrier signal if total power is 3000 W ?

A:-1000 W

B:-2000 W

C:-3000 W

D:-5000 W

Correct Answer:- Option-B

Question47:-Antenna gain is measured in

A:-dB

B:-Hz

C:-Henry

D:-Farad

Correct Answer:- Option-A

Question48:-An Omnidirectional antenna is designed to provide \_\_\_\_\_ radiation pattern.

A:-0°

B:-90°

C:-180°

D:-360°

Correct Answer:- Option-D

Question49:-Which of the following antenna is used for radar antenna ?

A:-Yagi uda antenna

B:-Isotropic antenna

C:-Patch antenna

D:-Parabolic antenna

Correct Answer:- Option-D

Question50:-According to Nyquist criteria of sampling theorem the sampling frequency is

A:-Same as signal frequency

B:-Twice the signal frequency

C:-3 times of signal frequency

D:-4 times of signal frequency

Correct Answer:- Option-B

Question51:-Which of the following is not a digital modulation technique ?

A:-ASK

B:-FSK

C:-PSK

D:-FM

Correct Answer:- Option-D

Question52:-DC component is present in \_\_\_\_\_ type of encoding.

A:-Polar encoding

B:-Unipolar encoding

C:-Bipolar encoding

D:-Manchester encoding

Correct Answer:- Option-B

Question53:-The geographical area under one base station with a single transmitter and a receiver is known as

A:-Cell

B:-Cluster

C:-Cell site

D:-Module

Correct Answer:- Option-A

Question54:-Which wireless technology link is used for mobile phone data transfer ?

A:-SIM

B:-Barcode

C:-Bluetooth

D:-Multiplexer

Correct Answer:- Option-C

Question55:-The band width used for TV transmission in India is

A:-2 MHz

B:-5 MHz

C:-7 MHz

D:-10 MHz

Correct Answer:- Option-C

Question56:-What are the 3 primary colours used in colour television system ?

A:-Red, Blue, Green

B:-Red, Blue, Yellow

C:-Red, Blue, Magenta

D:-Red, Green, Yellow

Correct Answer:- Option-A

Question57:-Which of the following type of UPS is known as double conversion UPS ?

A:-OFF line UPS

B:-ON line UPS

C:-Line interactive UPS

D:-Stand by UPS

Correct Answer:- Option-B

Question58:-Which circuit is used in control section of SMPS to drive the switching transistor ?

A:-Rectifier

B:-Pulse width modulator

C:-Filter

D:-Multiplexer

Correct Answer:- Option-B

Question59:-Which of the following is an example of e-governance project ?

A:-Online tax filing and payment

B:-Hospital bill payment

C:-Construction of public park

D:-Building a new highway

Correct Answer:- Option-A

Question60:-According to which section, No person shall possess wireless telegraphy apparatus without license issued under Indian telegraph act ?

A:-Section 3

B:-Section 4

C:-Section 5

D:-Section 7

Correct Answer:- Option-B

Question61:-What is the formula for dynamically induced emf ?

A:-BLV volts

B:-BL sin $\theta$  volts

C:-BLV sin $\theta$  volts

D:-BLV cos $\theta$  volts

Correct Answer:- Option-C

Question62:-What is the purpose of ELCB ?

A:-Detects the fault in circuit

B:-Monitors the residual current

C:-Protects the equipment from over load

D:-Protects from short circuit fault

Correct Answer:- Option-B

Question63:-What is the power factor in a 3 phase power measurement of two wattmeters showing equal reading ?

A:-0

B:-1

C:-0.5

D:-0.8

Correct Answer:- Option-B

Question64:-Calculate the percentage slip in a 3 phase induction motor having 6 poles with a frequency of 50 Hertz rotating with actual speed of 960 rpm.

A:-2%

B:-3%

C:-4%

D:-5%

Correct Answer:- Option-C

Question65:-In a 3 phase system, if the active power is 4 kW and the apparent power is 5 KVA, calculate the reactive power.

A:-1 KVAR

B:-2 KVAR

C:-3 KVAR

D:-4 KVAR

Correct Answer:- Option-C

Question66:-Which type of DC Generator works in absence of residual magnetism ?

A:-Shunt generator

B:-Series generator

C:-Compound generator

D:-Separately excited generator

Correct Answer:- Option-D

Question67:-Calculate the line current of the 3 phase 415 V 50 Hz supply for the balanced load of 3000 Watt at 0.8 power factor is connected in star.

A:-8.5 A

B:-5.2 A

C:-4.5 A

D:-3.4 A

Correct Answer:- Option-B

Question68:-What is the rotor frequency of a 3 phase squirrel cage induction motor at the time of starting ?

A:-Equal to supply frequency

B:-3 times less than supply frequency

C:-3 times more than supply frequency

D:- $\sqrt{3}$  times less than supply frequency

Correct Answer:- Option-A

Question69:-Which electrical quantity affects the heat generated in a conductor ?

A:-Voltage

B:-Square of the current

C:-Square of the resistance

D:-Current passed through it

Correct Answer:- Option-B

Question70:-Calculate the voltage regulation in percentage of the transformer if the no load voltage is 240 volt and full load voltage is 220 volt.

A:-7.2%

B:-8.3%

C:-8.71%

D:-9.09%

Correct Answer:- Option-D

Question71:-What is the maximum value of voltage for 240 volt RMS ?

A:-240 V

B:-415 V

C:-339.5 V

D:-376.8 V

Correct Answer:- Option-C

Question72:-Which is the application of DC series MCB ?

A:-AC motor

B:-DC motor

C:-Locomotives

D:-Air conditioners

Correct Answer:- Option-C

Question73:-What is the effect on surrounding metal placed in a magnetic field ?

A:-Hysteresis

B:-Skin effect

C:-Eddy current

D:-Dielectric stress

Correct Answer:- Option-C

Question74:-What is the unit of luminous efficiency ?

A:-Lux

B:-Lumen

C:-Lumen/ $m^2$

D:-Lumen/watt

Correct Answer:- Option-D

Question75:-What is the effect of the parallel circuit with one branch opened ?

A:-Current will remain same

B:-Whole circuit will not function

C:-No current will flow in that branch

D:-Voltage drop increase in the opened branch

Correct Answer:- Option-C

Question76:-Which resistor the lowest current flows in a parallel circuit having the values of 50  $\Omega$ , 220  $\Omega$ , 450  $\Omega$  and 560  $\Omega$  connected with supply ?

A:-50  $\Omega$

B:-220  $\Omega$

C:-450  $\Omega$

D:-560  $\Omega$

Correct Answer:- Option-D

Question77:-Which position MB type high pressure mercury vapour lamps are operated ?

A:-Vertical

B:-Inclined

C:-Horizontal

D:-Any position

Correct Answer:- Option-D

Question78:-Which factor affects the polarity of the electromagnet ?

A:-Length of the coil

B:-Direction of current

C:-Strength of current

D:-Strength of the magnetic field

Correct Answer:- Option-B

Question79:-Which power loss is assessed by open-circuit test on transformer ?

A:-Hysteresis loss only

B:-Eddy current loss only

C:-Copper loss

D:-Core loss

Correct Answer:- Option-D

Question80:-Which type of resistor is used for Arc quenching protection in circuit breakers ?

A:-Varistors

B:-Sensistors

C:-Thermistors

D:-Light Dependent Resistor (LDR)

Correct Answer:- Option-A

Question81:-Which of the following statements are true ?

- i. First Generation computers used Valves.
- ii. Second Generation computers used vacuum tubes.
- iii. Third Generation computers used ICs.
- iv. Fourth generation computers use microprocessors.

A:-i only

B:-i and ii only

C:- i, ii and iii only

D:-i, iii and iv only

Correct Answer:- Option-D

Question82:-An Operating System do

- i. Process Management
- ii. Process Synchronization
- iii. Memory Management
- iv. CPU Scheduling

A:-i, ii, iii and iv

B:-ii and iv only

C:-i, ii and iii only

D:-i, ii and iv only

Correct Answer:- Option-A

Question83:-Which is the technology of electronically extracting data from marked fields such as checkboxes or bubbles from pre-printed forms ?

A:-OCR

B:-MICR

C:-OMR

D:-BCR

Correct Answer:- Option-C

Question84:-Linux was first released in

A:-1993

B:-1990

C:-1992

D:-1991

Correct Answer:- Option-D

Question85:-In the following VDUs, which are considered as emissive display ?

i. LED

ii. LCD

iii. Flat CRT

iv. Plasma panel

A:-ii only

B:-i, ii and iii only

C:-i, ii and iv only

D:-i, iii and iv only

Correct Answer:- Option-D

Question86:-With the number of cores increased, then

i. Price increases

ii. The multitasking capability of the CPU increases

iii. The speed increases

iv. Processing time increases

A:-iv only

B:-i, ii and iii only

C:-i, ii and iv only

D:-i, iii and iv only

Correct Answer:- Option-B

Question87:-DHCP stands for



- A:-Dynamic Host Control Protocol
- B:-Dynamic Host Connection Protocol
- C:-Dynamic Host Configuration Protocol
- D:-Dynamic Hub Control Protocol

Correct Answer:- Option-C

Question88:-In MS Word which of the following are types of SmartArt graphic ?

- i. Cycle
- ii. Hierarchy
- iii. Process
- iv. Stock

- A:-All of them
- B:-Except iv
- C:-Except iii
- D:-Except ii

Correct Answer:- Option-B

Question89:-Which twisted pair cable contains only two pairs (4 wires) ?

- A:-Cat 1
- B:-Cat 2
- C:-Cat 3
- D:-Cat 4

Correct Answer:- Option-A

Question90:-Which protocol specifies the way the web browser and the web server communicates ?

- A:-FTP
- B:-HTTP
- C:-SMTP
- D:-TCP

Correct Answer:- Option-B

Question91:-According to ROM, which of the following statements are true ?

- i. ROM is a Programmable Logic Device
- ii. ROM stands for Read Only Memory
- iii. ROM is the primary memory unit of a computer
- iv. We can only read the programs and data stored on it

- A:-ii, iii, iv only
- B:-ii and iv only
- C:-i, ii and iii only
- D:-i, ii, iii and iv

Correct Answer:- Option-D

Question92:-In MS Word, under Auto fit behaviour you can't choose

A:-AutoFit Rows

B:-AutoFit Contents

C:-AutoFit Window

D:-Fixed Column Width

Correct Answer:- Option-A

Question93:-Bluetooth follows the principle of transmitting and receiving data using

A:-Radio Waves

B:-Micro Waves

C:-Infrared Waves

D:-Ultra Violet Waves

Correct Answer:- Option-A

Question94:-Which of the following are intermediary devices ?

- i. Wireless Access Points
- ii. Web Servers
- iii. Workstations
- iv. Security Firewalls

A:-iii only

B:-ii and iii only

C:-i, ii and iv only

D:-ii, iii and iv only

Correct Answer:- Option-C

Question95:-According to a DVD, which of the following are true ?

- i. The recording or metal layer is situated on the top of the disk.
- ii. There are double layers of pits in DVD.
- iii. The data transfer rate is 11 MB/sec.
- iv. The thickness of DVD is 0.6 mm.

A:-i, ii and iii only

B:-ii and iii only

C:-i, ii and iv only

D:-ii, iii and iv only

Correct Answer:- Option-D

Question96:-Windows 10 introduced a feature, which is able to accept voice commands

A:-File Explorer

B:-Cortana

C:-Disk Clean Up

D:-Control panel

Correct Answer:- Option-B

Question97:-Who created World Wide Web ?

A:-Charles Babbage

B:-Timothy John Berners Lee

C:-Dennis Ritchie

D:-Brenden Eich

Correct Answer:- Option-B

Question98:-Which of the motherboard component controls the data connection to the BIOS ?

A:-RAM

B:-CPU

C:-Northbridge

D:-Southbridge

Correct Answer:- Option-D

Question99:-In the following input devices, which are considered as pointing devices ?

- i. Scanner
- ii. Mouse
- iii. Joystick
- iv. Keyboard

A:-ii only

B:-ii and iii only

C:-i and iv only

D:-ii, iii and iv only

Correct Answer:- Option-B

Question100:-On the basis of principle of operation computers are classified as

- i. Micro Computers
- ii. Analog Computers
- iii. Digital Computers
- iv. Hybrid Computers

A:-i only

B:-i and ii only

C:-ii, iii and iv only

D:-i, iii and iv only

Correct Answer:- Option-C