## **FINAL ANSWER KEY**

Question 77/2025/OL

Paper Code:

Category 748/2024

Code:

Exam: Assistant Sub Inspector Trainee (Telecommunication)

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Department Kerala Police Service

Question1:-What is the objective of the SHE COHOROT 3.0 launched by the Punjab government?

A:-Provide cash incentive to pregnant and lactating mother

B:-Empower Women-Led startups

C:-Empower rural women through community participation

D:-To ensure safe motherhood by providing access to antenatal and postnatal care

Correct Answer:- Option-B

Question2:-Which one of the following was the theme of the World environment Day 2024?

A:-Ending global plastic pollution

B:-Solution to plastic pollution

C:-Land Restoration, Desertification and Drought Resilience

D:-Only one Earth

Correct Answer:- Option-C

Question3:-Who was recently appointed as the brand ambassador of FICCI FRAMES?

A:-Sachin Tendulkar

B:-Ayushmann Khurrana

C:-Virat Kohli

D:-Akshay Kumar

Correct Answer:- Option-B

Question4:-Which one of the following is a comprehensive scheme for prevention of trafficking and rescue, rehabilitation and reintegration of victims?

A:-Beti Bachao Beti Padhao

B:-Swadhar Greh

C:-Kishori Shakti Yojana

D:-Ujjwala

Correct Answer: - Option-D

Question5:-Which of the following Christian Missionary started first western

education schools in Malabar?

A:-The Basel Evangelical Mission

**B:-London Mission Society** 

C:-Church Mission Society

D:-Franciscan Missionary

Correct Answer:- Option-A

Question6:-Which of the following is not a social reform movement in Kerala?

A:-Samatva Samajam

B:-Sadhu Jana Paripalana Sangam

C:-Self Respect Movement

D:-Atmavidya Sangam

Correct Answer:- Option-C

Question7:-Prathyaksha Raksha Daiva Sabha was a religious protest movement founded in 1909 by :

A:-Ayyan Kali

B:-Chattampi Swamikal

C:-Pandit K.P. Karuppan

D:-Poikayil Yohannan

Correct Answer:- Option-D

Question8:-What is the correct order in which the following terms are enshrined in the Preamble to the Constitution of India?

- (i) Liberty
- (ii) Equality
- (iii) Fraternity
- (iv) Justice

Select the correct answer from the codes:

A:-(iv), (i), (ii) and (iii)

B:-(i), (iii), (ii) and (iv)

C:-(iv), (iii), (ii) and (i)

D:-(iv), (i), (iii) and (ii)

Correct Answer: - Option-A

Question9:-The famous Malayalam drama "Ebrayakutti" was written by :

A:-Kunhikuttan Thampuran

B:-Kochunni Thampuran

C:-Kandathil Varghese Mappila

D:-K. Damodaran

Correct Answer:- Option-C

Question 10:- Who among the following was the editor of Mitavadi?

- A:-K. Ayyappan
- B:-Dr. Palpu
- C:-K. Ramakrishna Pillai
- D:-C. Krishnan

Correct Answer: - Option-D

Question11:-Which publication is attributed to Mar Kuriakose Elias Chavara among the following options :

- A:-Akhila thiruttu
- B:-Adibhasha
- C:-Atmanutapam
- D:-Atmavidya Kahalam

Correct Answer:- Option-C

Question12:-A proclamation which was described by Gandhiji as a "Miracle of Modern Times":

- A:-Temple Entry Proclamation
- B:-Malayali Memorial
- C:-Kundara Proclamation
- D:-Queen's Proclamation

Correct Answer:- Option-A

Question13:-The movement to boycott marakkuda (cadjan umbrella) was led by :

- A:-Lalithambika Antharajanam
- B:-Parvathi Nenmenimangalam
- C:-Lalitha Prabhu
- D:-Devaki Nilayangode

Correct Answer:- Option-B

Question14:-Which country recently developed the world's first deep-sea radar that can detect high-flying aircraft?

- A:-Japan
- B:-United States of America
- C:-Russia
- D:-China

Correct Answer:- Option-D

Question15:-Article 78 of the Constitution deals with:

- A:-President's power to get information from the Council of Ministers
- B:-Emergency powers of the President
- C:-Prime Minister's duty regarding keeping the President informed about the government's decisions and policies

D:-President power to send advisory messages to the Parliament

Correct Answer:- Option-C

Question16:-(i) Pampadi John Joseph founded the Cheramar Mahajan Saba

- (ii) He initiated the Sadhujan Dootan Magazine in 1919
- (iii) He advocated for equal rights and opportunities for Dalits
- (iv) He organised Kallumala agitation

Which of the above statements are not related to Pampadi John Joseph?

- A:-Only (i) and (ii)
- B:-Only (iv)
- C:-Only (ii) and (iii)
- D:-Only (i), (ii) and (iii)

Correct Answer:- Option-B

Question17:-India's first solar-powered village, Modhera, is situated in which state?

- A:-Gujarat
- B:-Rajasthan
- C:-Karnataka
- D:-Andhra Pradesh

Correct Answer:- Option-A

Question18:-Under which Article the Supreme Court of India exercises advisory jurisdiction?

- A:-Article 32
- B:-Article 143
- C:-Article 132
- D:-Article 131

Correct Answer:- Option-B

Question19:-Who among the following presides over a joint sitting of the two Houses of Parliament?

- A:-Chairman of Rajya Sabha
- B:-President
- C:-Prime Minister
- D:-Speaker of Lokh Sabha

Correct Answer: - Option-D

Question 20:-Who is the chairperson of the Economic Intelligence Council (EIC) of India?

- A:-Finance Minister
- **B:-Prime Minister**
- C:-RBI Governor
- D:-Finance Secretary

Correct Answer:- Option-A

Question21:-If a superheterodyne receiver is tuned to 700 kHz and the local oscillator is set to 1200 kHz, then the image frequency is

A:-455 kHz

B:-1900 kHz

C:-1700 kHz

D:-1200 kHz

Correct Answer:- Option-C

Question22:-The modulation index (B) in FM is defined as the ratio of

A:-Modulating frequency to frequency deviation

B:-Maximum frequency deviation to modulating frequency

C:-Maximum frequency deviation to carrier frequency

D:-Carrier frequency to maximum frequency deviation

Correct Answer:- Option-B

Question23:-Ground-wave (surface-wave) propagation is predominantly:

A:-Horizontally polarized

B:-Circularly polarized

C:-Unpolarized

D:-Vertically polarized

Correct Answer:- Option-D

Question24:-An AM transmitter radiates 200 W of carrier power and is modulated with a sine wave at a modulation index of 0.5. What is the total side band power?

A:-25 W

B:-50 W

C:-75 W

D:-100 W

Correct Answer:- Option-A

Question25:-Which block in an FM receiver performs frequency-to-voltage conversion?

A:-Limiter

B:-Discriminator

C:-Mixer

D:-IF amplifier

Correct Answer:- Option-B

Question26:-A communication system uses FM with a peak deviation of 5 kHz. If the modulating signal is a 3 kHz sine wave, what should be the minimum bandwidth allocated for the channel?

A:-10 kHz

B:-15 kHz

C:-20 kHz

D:-16 kHz

Correct Answer:- Option-D

Question27:-Which of the following is not used for FM demodulation?

A:-Envelope detector

B:-Foster-Seeley detector

C:-Phase discriminator

D:-Ratio detector

Correct Answer:- Option-A

Question28:-At night, AM radio stations operating in the medium frequency band (300 kHz - 3 MHz) can be received at distances far beyond their usual daytime range. Which phenomenon makes this possible?

A:-Reduced ground attenuation

B:-Enhanced space wave transmission

C:-Sky wave reflection from the ionosphere

D:-Tropospheric ducting

Correct Answer:- Option-C

Question29:-What is the standard intermediate frequency (IF) used in FM radio receivers?

A:-455 kHz

B:-10.7 MHz

C:-1.7 MHz

D:-5 MHz

Correct Answer:- Option-B

Question 30: The ability of a superheterodyne receiver to differentiate between closely spaced stations on the frequency spectrum is mainly due to :

A:-High-gain antenna

B:-Tuned RF stage

C:-Precise LO frequency

D:-Sharp IF filtering

Correct Answer:- Option-D

Question31:-In a TV system, what does the term Y in the equation, Y = 0.3R+0.59G+0.11B represent?

A:-Luminance

**B:-Chrominance** 

C:-Saturation D:-Phase angle Correct Answer: - Option-A Question32:-Which signal is added in a color TV transmission to help synchronize the color decoder? A:-Sync pulse B:-Burst signal C:-Pilot tone D:-Carrier pulse Correct Answer:- Option-B Question33:-In satellite communication, a transponder primarily: A:-Encodes signal B:-Tracks earth stations C:-Amplifiers and shifts frequency D:-Decrypts the signal Correct Answer:- Option-C Question34:-In an interlaced scanning video system transmitting 60 fields per second, how many complete frames are displayed each second? A:-60 Hz B:-15 Hz C:-25 Hz D:-30 Hz Correct Answer: - Option-D Question35:-In a half-wave dipole antenna, the current distribution along the length is: A:-Uniform B:-Maximum at ends, zero at center C:-Maximum at the centre, zero at ends D:-Maximum at 1/4 and 3/4 points Correct Answer:- Option-C

Question 36:- The characteristic impedance of a Coaxial cable of length 1m is  $50\Omega$ . What is the characteristic impedance of the same cable of length 100 m?

A:-50 Ω

B:-100 Ω

C:-25 Ω

D:-0.1 Ω

Correct Answer:- Option-A

Question37:-Which of the following is not true about VHF propagation?

B:-VHF waves are primarily propagated via line-of-sight

A:-VHF signals can penetrate building walls

C:-VHF signals are efficiently reflected by the ionosphere

D:-VHF signals are less affected by atmospheric noise

Correct Answer:- Option-C

Question38:-An equalizing pulse train occurs at what interval?

A:-End of each horizontal line

B:-At the start of each frame only

C:-During active video transmission

D:-During vertical blanking interval

Correct Answer:- Option-D

Question39:-Which one is a block coding technique used in digital communications?

A:-ASK

B:-PSK

C:-Hamming Code

D:-NRZ

Correct Answer:- Option-C

Question40:-How is video information modulated in a negative modulation system used in analog TV?

A:-White level lowers the carrier amplitude

B:-White level boosts the carrier amplitude

C:-Sync pulses are suppressed

D:-Color phase information is inverted

Correct Answer:- Option-A

Question41:-Space wave propagation occurs in which of the following regions?

A:-Ionosphere

B:-Troposphere

C:-Ground

D:-All of these

Correct Answer:- Option-B

Question42:-Fluctuation in the received signal strength at the receiver or a random variation in the received signal is known as

A:-Reflection

B:-Refraction

C:-Attenuation

D:-Fading

Correct Answer:- Option-D

Question43:-Which law is used to calculate the Maximum Usable Frequency (MUF) for sky wave propagation between two distant points on Earth?

A:-Friis Equation

B:-Inverse Square Law

C:-Secant Law

D:-Snell's Law

Correct Answer:- Option-C

Question44:-Assertion (A): Modulation is essential for transmitting low-frequency signals over long distances.

Reason (R): Low-frequency signals can travel longer distances without attenuation or interference.

Select the correct answer code.

A:-Both (A) and (R) are true, and (R) is the correct explanation of (A)

B:-Both (A) and (R) are true, but (R) is not the correct explanation of (A)

C:-(A) is true, but (R) is false

D:-(A) is false, but (R) is true

Correct Answer:- Option-C

Question45:-The type of modulation in which a voltage proportional to the modulating signal is added to the carrier amplitude is

A:-Amplitude Modulation

**B:-Frequency Modulation** 

C:-Phase Modulation

D:-All of these

Correct Answer:- Option-A

Question46:-A Frequency Modulated (FM) signal has a maximum frequency deviation of 75 kHz and the highest modulating signal frequency is 15 kHz. What is the approximate bandwidth of the FM signal according to Carson's rule?

A:-90 KHz

B:-180 KHz

C:-5 KHz

D:-60 KHz

Correct Answer:- Option-B

Question47:-The maximum directive gain of an antenna is called

A:-Beamwidth

B:-Efficiency

C:-Directivity

D:-Radiation Resistance

Correct Answer:- Option-C

Question48:-Which type of antenna is commonly used for television reception?

A:-Dipole Antenna

B:-Parabolic Dish Antenna

C:-Loop Antenna

D:-Yagi-Uda Antenna

Correct Answer:- Option-D

Question49:-Why can an antenna be called a transducer?

A:-Because it increases signal frequency

B:-Because it converts electrical energy into mechanical energy

C:-Because it converts electrical signals into electromagnetic waves and vice versa

D:-Because it stores electromagnetic energy

Correct Answer:- Option-C

Question50:-Quantization error in an Analog-to-Digital Converter (ADC) is :

A:-The difference between the actual analog input and the quantized digital output

B:-Caused by thermal noise in the circuit

C:-The result of signal attenuation during conversion

D:-Completely eliminated by using a high sampling rate

Correct Answer:- Option-A

Question51:-What is the main purpose of multiplexing in communication systems?

A:-To increase the power of transmitted signals

B:-To reduce the size of the transmitter

C:-To allow multiple signals to share a single communication channel

D:-To convert analog signals into digital form

Correct Answer:- Option-C

Question52:-In Pulse Width Modulation (PWM), the information is encoded in:

A:-The amplitude of the pulse

B:-The duration of the pulse

C:-The frequency of the pulse

D:-The number of pulses per second

Correct Answer:- Option-B

Question53:-Given below are the two statements:

Statement 1 : A cell corresponds to the covering area of one transmitter or a small collection of transmitters.

Statement 2 : In a cellular system, the covering area of an operator is divided into cells

In the light of the above statements choose the correct answer from the option given below

A:-Both statement 1 and statement 2 are True

B:-Both statement 1 and statement 2 are False

C:-Statement 1 is True but statement 2 is False

D:-Statement 1 is False but statement 2 is True

Correct Answer: - Option-A

Question54:-In a GSM system Radio Link management is performed by

A:-Base Station Controller

B:-Mobile Switching Centre

C:-Base Transceiver Station

D:-Mobile Station

Correct Answer:- Option-C

Question55:-FM radio broadcasting typically operates in which frequency range?

A:-88 MHz - 108 MHz

B:-300 kHz - 3 MHz

C:-3 MHz - 30 MHz

D:-540 kHz-1600 kHz

Correct Answer:- Option-A

Question56:-Identify the optical test equipment that sends laser pulses through a fiber and analyses the reflected signals to determine the location and nature of faults such as bends, breaks, and splicing losses

A:-Optional Power Meter

**B:-Visual Fault Locator** 

C:-Optical Time Domain Reflectometer

D:-Fusion Splicer

Correct Answer:- Option-C

Ouestion57:-SMPS stands for:

A:-Standard Mode Power Supply

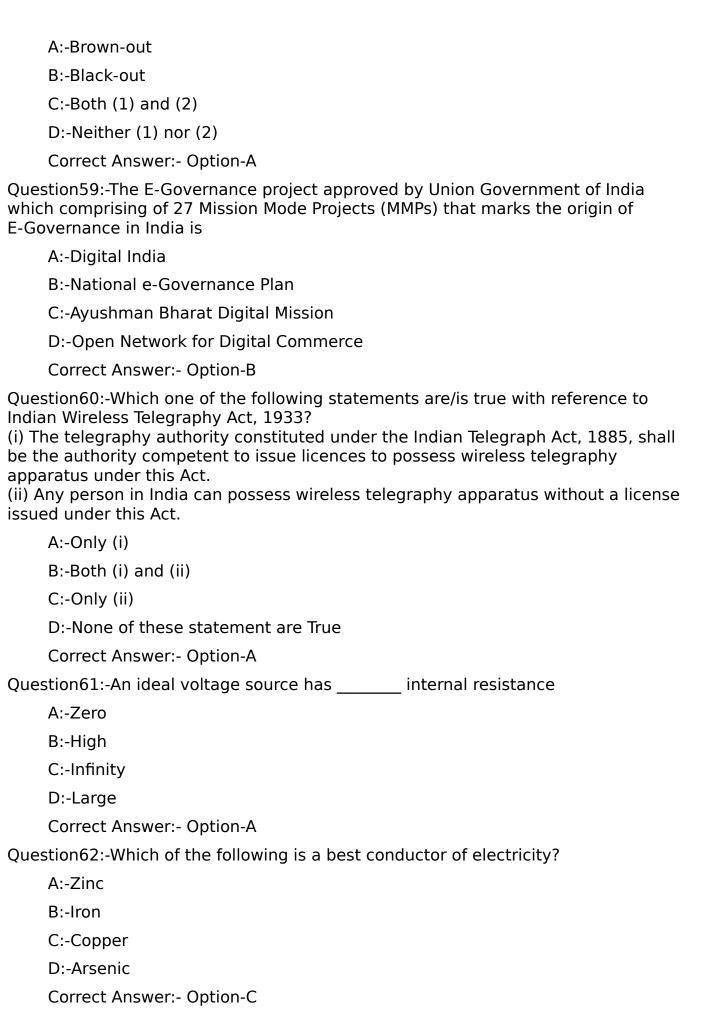
B:-Switched Mode Power Supply

C:-Synchronous Mode Power Supply

D:-Static Mode Power System

Correct Answer:- Option-B

Question58:-The power supply failure due to voltage drop that is beyond the regulating capacity of UPS is known as



Question63:-The voltage drop per ampere-meter of an aluminum conductor is higher as compared to a copper conductor of the same size due to its higher

A:-Insulation resistance
B:-Resistivity
C:-Current density
D:-Conductivity
Correct Answer:- Option-B
Question64:-Which of the following materials possess least resistivity?
A:-Manganin
B:-Eurekha
C:-Tungston
D:-Silver
Correct Answer:- Option-D
Question65:-Air gap in the iron core of an inductor prevents
A:-Core sturation
B:-Hysteresis loss
C:-Flux leakage
D:-Transformer action
Correct Answer:- Option-B
Question66:-Sparking occurs when a load is switched off because the circuit has
A:-Resistance
B:-Capacitance
C:-Inductance
D:-Conductance
Correct Answer:- Option-C
Question67:-The voltage induced in a loop of wire rotating in a strong and steady magnetic field is
A:-DC
B:-Rectified DC
C:-Rectified AC
D:-AC
Correct Answer:- Option-D
Question68:-The power factor of a purely resistive circuit is
A:-Unity
B:-Zero
C:-Infinity
D:-Lagging
Correct Answer:- Option-A

Question69:-The input of an ac circuit having p.f. of 0.8 lagging is 30 KVA. The power drawn by the circuit is KW.	
A:-24 KW	
B:-30 KW	
C:-20 KW	
D:-15 KW	
Correct Answer:- Option-A	
Question70:-Slipring induction motor is preferred over sq. cage induction motowhere	r
A:-High speed is required	
B:-High starting torque is required	
C:-High power factor is required	
D:-Medium torque is required	
Correct Answer:- Option-B	
Question71:-The ratio of active power to apparent power is known as	
A:-Form factor	
B:-Crest factor	
C:-Peak factor	
D:-Power factor	
Correct Answer:- Option-D	
Question72:-Metallic casing of electrical apparatus always earthed	
A:-To ensure installation safety	
B:-To ensure safety of earth pit	
C:-To ensure operators safety	
D:-To ensure the safety of RCCB	
Correct Answer:- Option-C	
Question73:-Supply point to a consumer is taken at	
A:-The output side of energy meter	
B:-The output side of distribution box	
C:-The input side of energy meter	
D:-The output side of supplier fuse	
Correct Answer:- Option-D	
Question74:-For an ideal transformer, input VA=output VA, hence current are	
A:-Equal ratio of transformation ratio	
B:-Negative ratio of transformation ratio	
C:-Inverse ratio of voltage transformation ratio	

Correct Answer:- Option-C Question 75:- Which type of core is used for high frequency transformer? A:-Vacuum core B:-Oil core C:-Air core D:-Solid core Correct Answer:- Option-C Question76:-Which of the lamp has more resistance? A:-1000 W, 250 V lamp B:-25 W, 250 V lamp C:-40 W, 250 V lamp D:-60 W, 250 V lamp Correct Answer:- Option-B Question77:-Two lamps each rated 60 W 230 V when connected in parallel across 230 V supply will consume A:-30 W B:-90 W C:-120 W D:-60 W Correct Answer:- Option-C Question 78:-What is the voltage regulation of an ideal d.c. generator? A:-Positive **B:-Negative** C:-High D:-Zero Correct Answer:- Option-D Question79:-Ward-Leonard system of speed control is most suited for A:-Low speed range operation B:-Constant speed operation C:-Medium speed range operation D:-High range speed operation Correct Answer:- Option-B Question80:-Reverse current braking commonly used in A:-Elevators **B:-Rectifiers** 

D:-Positive ratio of current ratio

C:-Fan

D:-Rice Mill

Correct Answer:- Option-A

Question81:-Which of the following computer is used for bulk data processing?

A:-Super computer

B:-Mainframe computer

C:-Mini computer

D:-Micro computer

Correct Answer:- Option-B

Question82:-Which among the following was used in the first generation of computers?

A:-Integrated circuit

B:-Transistor

C:-Vacuum tube

D:-Microprocessor

Correct Answer:- Option-C

Question83:-Which of the following CPU register contains the address of next instruction to be processed?

A:-Accumulator

B:-Program counter

C:-Memory Address Register

D:-Instruction register

Correct Answer:- Option-B

Question84:-Which of the following technology is used in a Drum Scanner?

A:-Photo Multiplier Tube

B:-Charge Coupled Device

C:-Contact Image Sensor

D:-Flat Bed Method

Correct Answer: - Option-A

Question85:-Which of the following peripheral device can be connected to computer using ps/2 port?

A:-Printer

B:-Motherboard

C:-Modem

D:-Mouse

Correct Answer:- Option-D

Question86:-Which of the following Monitor uses an electron gun to form images?

A:-LCD B:-LED C:-Plasma D:-CRT Correct Answer:- Option-D Question87:-Which of the following is an impact printer? A:-Laser Printer B:-Dot Matrix Printer C:-Ink Jet printer D:-Thermal Printer Correct Answer:- Option-B Question88:-What is the function of SATA port in motherboard? A:-To connect Ram and Motherboard B:-To connect Processor and Motherboard C:-To connect Hard disk and Motherboard D:-To connect Network cable to Motherboard Correct Answer:- Option-C Question89:-Arrange the following computer memory in increasing order of data access time (from fastest to slowest) (i) Cache memory (ii) RAM (iii) Registers (iv) Hard Disk A:-(iii), (i), (ii), (iv) B:-(i), (iii), (ii), (iv) C:-(iv), (ii), (i), (iii) D:-(iv), (i), (ii), (iii) Correct Answer:- Option-A Question 90:-Which of the following processor is designed for servers and workstations? A:-Celeron B:-Pentium C:-Xeon D:-Core 2 Duo Correct Answer:- Option-C Question 91:- What is the shortcut key to open Task Manager in Windows?

A:-Ctrl+Shift+Esc

B:-Ctrl+Shift+Tab

C:-Ctrl+Alt+Esc D:-Ctrl+Alt+Tab Correct Answer: - Option-A Question92:-What is the use of "Safe Mode" in Windows? A:-To reorganize fragmented files on data drives B:-To delete files in windows Registry C:-To start Windows with bare essential services and drivers D:-None of the above Correct Answer:- Option-C Question93:-What is the use of Mail merge feature in MS Word? A:-Compare two documents to see the differences between them B:-To create personalized letters to multiple recipients C:-Combine two documents D:-To keep track of changes made to a document Correct Answer:- Option-B Question 94:- What is the shortcut key to Align text/image to Center in MS Word? A:-Ctrl+C B:-Ctrl+D C:-Ctrl+E D:-Ctrl+F Correct Answer:- Option-C Question95:-Which Tab of MS word has "Protect Document" option? A:-File B:-Review C:-References D:-Layout Correct Answer: - Option-A

Question 96:-Which of the following is not true about subnetting in computer network?

A:-It is applied for a single network

B:-It is used to improve security

C:-Bits are borrowed from network portion

D:-Bits are borrowed from Host portion

Correct Answer:- Option-C

Question 97:- What is the purpose of DHCP server?

A:-To provide storage for email

B:-To translate URLs to IP addresses

C:-To translate IPV4 address to MAC address

D:-To provide IP configuration

Correct Answer:- Option-D

Question98:-Which device is used to connect multiple computers in a Local Area Network and forward data packets based on MAC address?

A:-Modem

B:-Hub

C:-Switch

D:-Firewall

Correct Answer:- Option-C

Question99:-What is the full form of DNS?

A:-Dual name system

B:-Domain name system

C:-Duplicate name system

D:-Distributor name system

Correct Answer:- Option-B

Question100:-Which of the following is the first step in the operation of a search engine?

A:-Web crawling

B:-Indexing

C:-Ranking

D:-Searching

Correct Answer:- Option-A