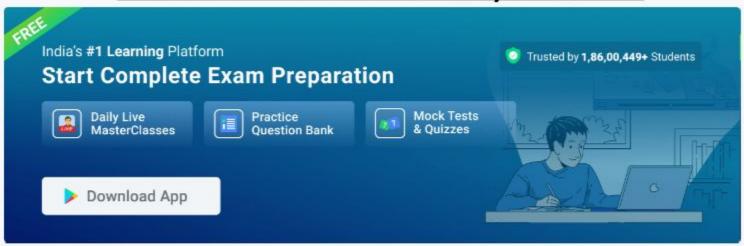
# Internet & Internet Protocols Questions

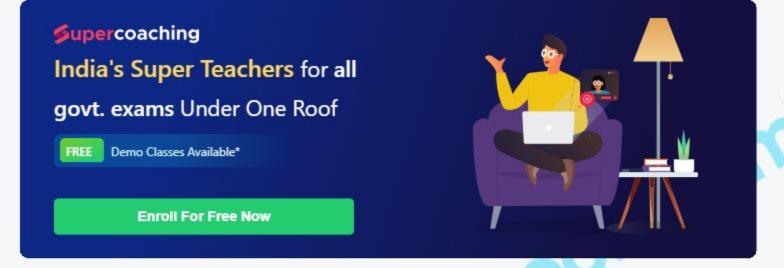
# Latest Internet & Internet Protocols MCQ Objective Questions



# Question 1: View this Question Online > Which of the following is (are) Meta search engine(s)? (i) Mamma (ii) Dogpile (iii) Netscape (iv) CNN 1. Only (ii) is correct. 2. Only (iii) is correct. 4. Only (i) and (ii) are correct.

Answer (Detailed Solution Below)

Option 3 : Only (i) and (ii) are correct.



# Internet & Internet Protocols Question 1 Detailed Solution

The correct answer is Only (i) and (ii) are correct,

# Key Points

- Meta search engines do not have their own database of web pages.
- Instead, they aggregate search results from multiple search engines, providing a comprehensive list of results.
- Mamma and Dogpile are well-known examples of meta search engines.
- Mamma was one of the earliest meta search engines, launched in 1996.
- Dogpile aggregates results from major search engines like Google, Yahoo!, and Bing.

# Additional Information

- Netscape
  - · Netscape was primarily known as an early web browser, not a search engine.
  - It was a pioneer in the 1990s but was eventually overshadowed by Internet Explorer.
- CNN
  - CNN (Cable News Network) is a major news network, not a search engine.
  - It provides news coverage and information on various topics globally.



# Question 2:

View this Question Online >

What is the primary purpose of Internet Key Eychange (IKE) protocol ?

Encrypting Web Traffic
 Secure, authenticated communications channel
 Routing packets across the internet
 Managing domain names

Answer (Detailed Solution Below)

Option 2: Secure, authenticated communications channel

# Internet & Internet Protocols Question 2 Detailed Solution

The Correct answer is Secure, authenticated communications channel.



- Internet Key Exchange (IKE) is fundamental to secure network communication, chiefly used for establishing and managing VPN connections.
- IKE uses a blend of encryption algorithms, key exchange methods, and security policies to authenticate and secure network links, thereby ensuring data confidentiality and integrity.

# History of IKE:

- 1998: ISAKMP (Internet Security Association and Key Management Protocol), the progenitor of IKE, was introduced as part of the IPSec standard.
- 1999: IKEv1 emerged, enhancing the efficiency and security of key exchanges, simplifying VPN connection setups.
- 2005: IKEv2 was introduced, addressing IKEv1's limitations, improving compatibility, and adding support for various cryptographic algorithms.
- 2010s: IKEv2 became the standard for most VPN deployments due to its robust security and flexibility.
- Ongoing: IKE continues to evolve to address the evolving demands of cybersecurity, ensuring
  confidentiality and integrity in network communications.

IKE operates mainly through two methods, Manual and Automated Key Exchange:

- Manual Key Exchange (IKEv1):
  - Operation: Security administrators manually configure and exchange cryptographic keys.
  - Advantages: Precise control over security parameters.
  - Disadvantages: Labor-intensive and prone to human error.
  - Use Cases: Suitable for small-scale deployments or systems requiring compatibility with legacy infrastructure.

#### Automated Key Exchange (IKEv2):

- · Operation: Uses predefined protocols and algorithms to establish secure connections.
- Mechanism: Involves a series of negotiations and cryptographic processes to create and maintain VPN tunnels.
- Advantages: Seamless establishment of secure connections, reducing manual effort and errors.



#### Question 3:

View this Question Online >

In the context of URI, the 'Identifier' is a / an

- 1. Protocol
- Address
- 3. Resources
- 4. Object

# Answer (Detailed Solution Below)

Option 3: Resources

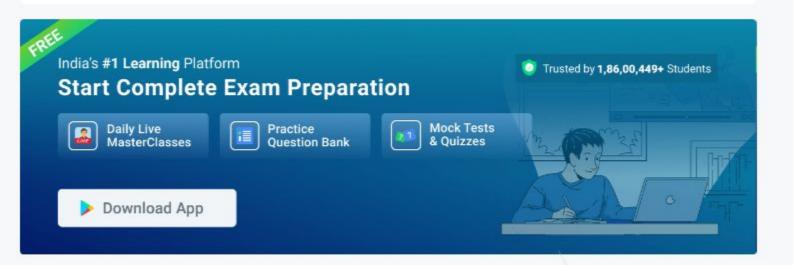
## Internet & Internet Protocols Question 3 Detailed Solution

The correct answer is **Resources**.



- A URI (Uniform Resource Identifier) is a string of characters that unambiguously identifies a
  particular resource.
- It is used in web technologies to identify and interact with resources on the internet.
- In the context of URI (Uniform Resource Identifier), the 'Identifier' refers to a resource.

- Uniform Resource Locators were defined in RFC 1738 in 1994 by Tim Berners-Lee, and IETF.
- Every HTTP URL conforms to the syntax of a generic URI.
- An Internationalized Resource Identifier (IRI) is a form of URL that includes Unicode characters
- Protocol-relative links (PRL), also known as protocol-relative URLs (PRURL), are URLs that
  have no protocol specified.
- A persistent uniform resource locator (PURL) is a uniform resource locator (URL) that is used to redirect to the location of the requested web resource



# Question 4:

# View this Ouestion Online >

In a Personal Computer, the Network Interface Card (NIC) is connected with the internet switch through \_\_\_\_\_ connector.

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- RJ11
- RJ25
- 3. RJ14
- 4. RJ45

# Answer (Detailed Solution Below)

Option 4: RJ45

#### Internet & Internet Protocols Question 4 Detailed Solution

The Correct answer is RJ45.



- In a Personal Computer, the Network Interface Card (NIC) is connected to the internet switch through an RJ45 connector.
- RJ45 stands for Registered Jack 45 and is the most common connector for wired networks, primarily used to connect devices in a Local Area Network (LAN).
- Originally designed for telephone use, it has become standard in Ethernet networking. The "45" refers to its specific listing number.
- RJ45 connectors are wider than traditional telephone jacks and offer higher bandwidth, typically up to 10 Gbps.
- Due to their speed and security, they are widely used to connect personal computers, servers, and routers, particularly in Star Topology networks.

# Additional Information

- RJ11: Commonly used for telephone connections.
- RJ25: Less common, also used for telephone lines, with additional wires compared to RJ11.
- RJ14: Another variant for telephone connections, typically supporting two lines.



#### Question 5:

View this Question Online >

Among the following what is the default port number of SMTP Secure (SMTPS) protocol presently?

1. 521

2. 587

3. 259

4. 463

# Answer (Detailed Solution Below)

Option 2:587

# Internet & Internet Protocols Question 5 Detailed Solution

The Correct answer is 587.



4. Internet Society

- SMTP (Simple Mail Transfer Protocol):
  - SMTP is a communication protocol used for the transmission of email messages between servers.
  - It is part of the application layer protocols in the TCP/IP stack.
  - SMTP is responsible for sending emails from a client to a server or between servers.
  - · It is a fundamental protocol for email communication.
  - Originally, the Simple Mail Transfer Protocol (SMTP) used port 25.
  - Today, SMTP should use port 587 for encrypted email transmissions (SMTPS).
  - Though port 465 can be used for SMTPS, it is outdated, and port 587 is preferred.
  - Additionally, some email service providers support SMTP on port 2525 as a backup if other ports are blocked by a network provider or firewall.

# Top Internet & Internet Protocols MCQ Objective Questions



# Internet Protocol version 6 (IPv6) was developed by the \_\_\_\_\_. 1. Internet Engineering Task Force 2. Internet Technical Society 3. Internet Development Task Force

# Answer (Detailed Solution Below)

Option 1: Internet Engineering Task Force

# Internet & Internet Protocols Question 6 Detailed Solution

The correct answer is the Internet Engineering Task Force.

# Key Points

- IPv6 was developed by the Internet Engineering Task Force (IETF) to deal with the longanticipated problem of IPv4 address exhaustion.
- An IPv6 address has a size of 128 bits.
- Internet Protocol version 6 (IPv6) is the most recent version of the Internet Protocol (IP), the
  communications protocol that provides an identification and location system for computers
  on networks and routes traffic across the Internet.
- Pv6 is intended to replace IPv4.
- 1 Bytes is equal to 8 bit.

# Additional Information

- IPv4 (Internet Protocol version 4) uses a 32-bit addressing scheme.
- This means that IPv4 addresses are composed of 32 binary bits, which are typically represented
  as four sets of decimal numbers separated by periods (e.g., 192.168.0.1).
- Each decimal number in the address represents an 8-bit segment, also known as an octet, resulting in a total of four octets in an IPv4 address.



#### Question 7

View this Question Online >

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Theodor Holm Nelson founded Project Xanadu in the year

- 1. 1958
- 2. 1960
- 3. 1972

# Answer (Detailed Solution Below)

Option 2: 1960

# Internet & Internet Protocols Question 7 Detailed Solution

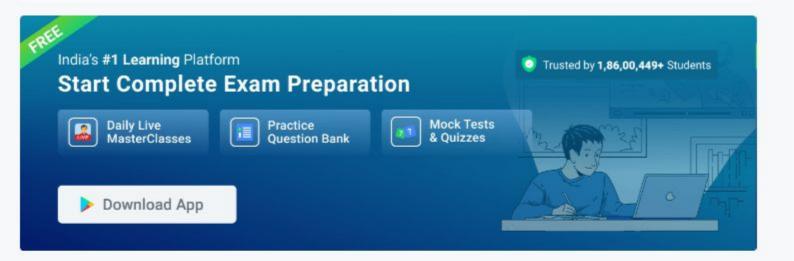
The Correct answer is 1960.

# Key Points

- Ted Nelson founded Project Xanadu in 1960 with the vision of creating a user-friendly computer network.
- Project Xanadu was the first Hypertext Project.
- In an article titled "The Curse of Xanadu" Wired magazine referred to Project Xanadu as one
  of the longest-running stories of unrealized software in the computer industry's history.

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- , in 2014, a version known as OpenXanadu, described as a functional deliverable, became available.
- In the year 2007, Project Xanadu introduced XanaduSpace 1.0.



# Question 8 View this Question Online >

Lycos is a search engine which was originally started as a research project at-

- Stanford University
- 2. Carnegie Mellon University
- 3. Harvard University

4. Virginia Tech

# Answer (Detailed Solution Below)

Option 2 : Carnegie Mellon University

# Internet & Internet Protocols Question 8 Detailed Solution

The correct answer is Carnegie Mellon University.



- Lycos, originally a research project by Michael Loren Mauldin at Carnegie Mellon University, transitioned into Lycos Inc. in 1994 with \$2 million in venture capital from CMGI.
- In April 1996, Lycos achieved the fastest NASDAQ IPO in history, reaching a \$300 million market value on its first day.
- Lycos introduced email services in October 1997 and turned profitable that same year. In 1998, it acquired Tripod.com for \$58 million to enter the portal market.
- Due to the dot-com bubble burst, Lycos made a strategic shift in late 2001 by discontinuing its own search crawler and instead began utilizing FAST for its search functionality.
- In May 2018, Lycos Internet underwent a name change and was rebranded as Brightcom Group.

# Additional Information

# Other search engines

- Yahoo! Inc.
  - Yahoo was founded by Jerry Yang and David Filo in January 1994, and incorporated on March 2, 1995.
  - Yahoo provides cartographic and geographic services through GeoPlanet.
  - Yahoo Next is an incubator for testing future Yahoo technologies, where Yahoo users can provide feedback to aid in their development.
- HotBot:
  - HotBot, a Canadian web search engine, is now owned by HotBot Limited, led by Kristen Richardson.
  - Initially launched in 1996 by Wired magazine in North America, it was a popular search engine in the 1990s.
- Google:
  - Google was founded on September 4, 1998, by computer scientists Larry Page and Sergey Brin during their PhD studies at Stanford University in California.
  - In 2007, Google launched "AdSense for Mobile" to tap into the growing mobile advertising market.

#### Scirus:

- Scirus, launched in 2001, was a science-specific search engine, similar to CiteSeerX and Google Scholar.
- Owned by Elsevier, Scirus announced its retirement in 2013, which took effect in early 2014. The service was no longer operational by February 2014.
- Microsoft Bing:

Nicon Big.

- by Microsoft.
- Bing was introduced by Microsoft CEO Steve Ballmer on May 28, 2009, and officially launched on June 3, 2009.





# Answer (Detailed Solution Below)

Option 3: 128

## Internet & Internet Protocols Question 9 Detailed Solution

The correct answer is 128:



- IPv6 (Internet Protocol Version 6):
  - IPv6 (Internet Protocol version 6) is a set of specifications from the Internet Engineering Task Force (IETF) that is essentially an upgrade of IP version 4 (IPv4), a category of IP addresses in IPv4-based routing.

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- IPv6 addresses are 128 bits long (16 bytes), including 64 bits for the network number and 64 bits for the host number.
- The specification (REC8200) for IDv6 was published in 2017.

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# Additional Information

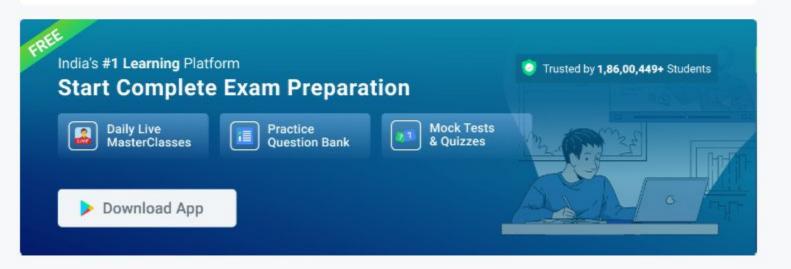
- Internet Protocol (IP):
  - The Internet Protocol (IP) is a protocol, or set of rules, for routing and addressing packets
    of data so that they can travel across networks and arrive at the correct destination.
  - IPv4: The fourth version of IP (IPv4 for short) was introduced in 1983.
    - IPv4 uses a 32-bit address space

Internet & Internet Protocols Question 10 Detailed Solution

The correct answer is "HTTP".

Way Dainta

- IP address:
  - An IP address is a unique identifier assigned to a device or domain that connects to the Internet.





#### Mey Pollits

· HTTP-

- It stands for Hyper Text Transfer Protocol.
- The protocol is used for communication between the web browser client and the server.
- For secure applications, Secure Hyper Text Transfer Protocol (HTTPS) is used.
- HTTP is used universally to access web services all over the Internet.

#### · FTP-

- It stands for File Transfer Protocol.
- It is a standard communication protocol used for transferring computer files from a server to a client on a computer network.
- It is based on client-server model architecture.
- The first FTP client applications were command-line programs.

#### IP-

- · It stands for Internet Protocol.
- It is the network layer communication protocol in the Internet protocol suite for relaying datagram across boundaries.
- It delivers packets from the source host to the destination host based on the IP address in the packet headers.
- It was introduced by Vint Cerf and Bob Kahn in 1974.
- It was the connectionless datagram service in the original Transmission Control Program.

#### HTML-

- It stands for Hyper Text Markup Language.
- It is the standard Markup language for documents designed to be displayed in a web browser.
- HTML defines how documents are to be formatted.

# HyperLink-

- A Hyperlink is a digital reference to data that points to a whole document or to a specific element within a document.
- A hyperlink can be in the form of a Text hyperlink, Image hyperlink, Bookmark hyperlink, and E-mail hyperlink.



#### Question 11

View this Question Online >

When the sender and the receiver of an e-mail are on different systems, in order to send message over internet we need \_\_\_\_\_.

- (A) Two UAS
- (B) Pair of MTAS
- (C) MAA

(D) NIME

Choose the correct answer from the options given below:

- 1. (A) and (C) Only
- 2. (A) and (B) Only
- 3. (B) and (D) Only
- 4. (C) and (D) Only

# Answer (Detailed Solution Below)

Option 2: (A) and (B) Only

# Internet & Internet Protocols Question 11 Detailed Solution

The Correct answer is (A) and (B) Only.

# Key Points

- When the sender and the receiver of an email are on different systems, we need two User Agents (UAs) and two Mail Transfer Agents (MTAs) to send the message over the internet.
- The email needs to pass through multiple components before it reaches the recipient's system, including UAs and MTAs.

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- The sender's UA is used to compose and send the email, and the recipient's UA is used to receive and read the email.
- The first pair of MTAs is used to transmit the email from the sender's system to the recipient's system, and the second pair of MTAs is used to transmit the email from the recipient's system back to the sender's system.
- The sender's MTA sends the email to the recipient's MTA, which then delivers the email to the recipient's UA



#### Question 12

View this Question Online >

FaaS stands for .

- 1. Fix as a Service
- 2. Fault repair as a Service
- Function as a Service
- 4. FRBR as a Service

# Answer (Detailed Solution Below)

Option 3: Function - as - a - Service

# Internet & Internet Protocols Question 12 Detailed Solution

The correct answer is Function - as - a - Service

# Key Points

· FaaS, or Function-as-a-Service, is a cloud computing service that enables customers to execute code in response to events, eliminating the need for them to handle the intricate infrastructure traditionally linked with creating and deploying microservices applications.

Com

- FaaS is an event-driven model that operates within stateless containers. These functions 30K.com handle server-side logic and state-using services provided by a FaaS provider.
- Notable FaaS examples include:
  - IBM Cloud Functions
  - AWS Lambda by Amazon
  - Google Cloud Functions
  - Microsoft Azure Functions (open-source)
  - · OpenFaaS (open-source)

# Additional Information

- Software as a Service (SaaS)-
  - It is a software licensing and delivery model in which software is licensed on a subscription basis and is hosted centrally.
  - It is also known as "on-demand software" and Web-based/Web-hosted software.
  - It includes services such as Google Doc, GoogleApps, OpenID, Adobe
- Platform as a Service (PaaS)-
  - It is a category of cloud computing services that allow customers to instantiate, run, and manage a modular bundle comprising a computing platform and one or more applications.
  - It removes the complexity of building and maintaining the infrastructure typically associated with developing and launching the application(s)

- · It allows developers to create, develop, and package such software bundles.
- It includes Cloud Services such as LibLime, OSSLab, N-LARN project in India, Polaris, and Exlibris.
- Infrastructure as a Service (laaS)-
  - It is a cloud computing service model by means of which computing resources are supplied by a cloud services provider.
  - This service enables users to free themselves from maintaining an on-premise data center.
  - IaaS involves the use of a cloud orchestration technology like OpenStack, Apache CloudStack, or OpenNebula.
  - It includes services such as Amason Elastic Compute Cloud (EC2), Amazon Simple Storage Solution (S3), and Dropbox Cloud storage.



Question 13

View this Question Online >

Given below are two statements

**Statement I:** Yahoo can explore more count of websites while searching a query than Metacrawler.

Statement II: Meatcrawler is a Metasearch engine.

In light of the above statements, choose the most appropriate answer from the options given below

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Answer (Detailed Solution Below)

Option 4: Statement I is incorrect but Statement II is correct

# Internet & Internet Protocols Question 13 Detailed Solution

The correct answer is Statement I is incorrect but Statement II is correct

# Explanation;

- Statement I: Yahoo can explore more count of websites while searching a query than Metacrawler.
  - Statement I, which claims that Yahoo can explore more websites than Metacrawler when searching, is not necessarily correct.
  - The number of websites explored by a search engine like Yahoo or Metacrawler can vary and depends on various factors such as the search engine's index, algorithms, and other considerations.
  - Therefore, it's not accurate to make a definitive statement about one searching more websites than the other.
- Statement II: Metacrawler is a Metasearch engine.
  - Statement II is indeed correct. Metacrawler is a Metasearch engine. Metasearch engines gather results from multiple other search engines and present them to the user, providing a consolidated set of results.

# 🍃 Additional Information

- Yahoo! Inc.
  - Yahoo was founded by Jerry Yang and David Filo in January 1994, and incorporated on March 2, 1995.
  - Yahoo provides cartographic and geographic services through GeoPlanet.
  - Yahoo Next is an incubator for testing future Yahoo technologies, where Yahoo users can provide feedback to aid in their development.
  - Yahoo Search BOSS enables developers to create search applications using Yahoo's technology. Early program partners include Hakia, Me.dium, Delver, Daylife, and Yebol.
- Metacrawler.
  - MetaCrawler is a registered trademark of InfoSpace and was created by Erik Selberg.
  - Originally developed in 1994 at the University of Washington by graduate student Erik Selberg and Professor Oren Etzioni.
  - · It combines search results from various search engines.
  - Originally developed for research purposes, it became a useful service on its own.



K.COM

The term 'Internet of Things was first used by:

- 1. D. W. Lewis
- 2. Bob Thomas
- 3. Kevin Ashton
- 4. Jian Qin

Answer (Detailed Solution Below)

Option 3: Kevin Ashton

# Internet & Internet Protocols Question 14 Detailed Solution

The Correct answer is Kevin Ashton.



# Internet of Things-

- The term IoT, or Internet of Things, refers to the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between the devices themselves.
- The term "Internet of Things" was coined independently by Kevin Ashton of Procter & Gamble, later of MIT's Auto-ID Center, in 1999.
- Kevin Ashton, the originator of the term "Internet of Things," saw Radio Frequency Identification (RFID) as a crucial component of the IoT, particularly for inventory tracking.
- He believed that by tagging all devices, computers could effectively manage, track, and inventory them.
- In the early 2000s, Walmart and the US Department of Defense were pioneers in adopting Ashton's approach by using RFID and IoT for inventory tracking.



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# Library Thing-

- LibraryThing is a social cataloging web application for storing and sharing book catalogs and various types of book metadata used by authors, individuals, libraries, and publishers.
- The catalog would be available online and can be accessed over the Web and even on mobile phones.

# · Features of Library Thing-

- It provides the facility to import catalogs from other sources if the document is already cataloged online e.g. by the Library of Congress or Amazon.
- It enables you to create your own library with a number of collections.





# Internet & Internet Protocols Question 15 Detailed Solution

The correct answer is ICMP.



- The ping command operates within an Internet Control Message Protocol (ICMP).
  - Ping (Packet InterNet Groper) is a utility that sends a signal to another computer over a
    network and then receives a reply from the computer that was pinged and sends it back
    to the first computer.
  - With the ping command, one can quickly determine whether a machine has internet access and can communicate with other computers or network devices.
- · ICMP is a fundamental component of any IP network.
  - · It is used for error handling in the network layer.
  - · It is primarily used on network devices such as routers.

# User Datagram Protocol (UDP)

- It is a communications protocol that facilitates the exchange of messages between computing devices in a network.
- In a network that uses the Internet Protocol (IP), it is sometimes referred to as UDP/IP.
- UDP enables process-to-process communication.

# Transmission Control Protocol (TCP)

- The Transmission Control Protocol (TCP) is one of the main protocols of the Internet protocol.
- It lies between the Application and Network Layers which are used in providing reliable delivery services.
- It is a connection-oriented protocol for communications that helps in the exchange of messages between different devices over a network.
- TCP supports host-to-host communication.

# Address Resolution Protocol (ARP)

- The Address Resolution Protocol (ARP) is a communication protocol used for discovering the link layer address.
- It dynamically translates Internet addresses into the unique hardware addresses on local area networks.