**LESSON 17**

**Reading activity 7**.

1. Into what units are data subdivided by the transport layer?

The transport subdivides the data into segments, creates checksum tests.

1. What is the purpose of a transmission checksum test?

Checksum tests – mathematical sums based on the contents of data – that can be used later to determine if the data was scrambled.

1. How long does the data-link layer keep a copy of each packet?

The data-link layer keeps a copy of each packet until it receives confirmation from the next point along the route that the packet has arrived undamaged.

1. What processes can be carried out at intermediate nodes?

An intermediate node calculates and verifies the checksum for each packet. It may also reroute the message to avoid congestion on the network.

1. Which network communications layer is described by each of the following statements?
2. The presentation layer ensures that the message is transmitted in a language that the receiving computer can interpret.
3. The transport layer protects the data being sent.
4. The physical layer encodes the packets into the medium that will carry them – such as an analogue signal, if the message is going across a telephone line – and sends the packets along that medium.
5. The data-link layer supervises the transmission.
6. The application layer is the only part of a communications process that a user can see.
7. The session layer opens communications and has the job of keeping the communications among all nodes on the network.
8. The network layer selects a route for the message.
9. The transport layer make backup copies of the data.
10. The data-link layer confirms the checksum, then addresses and duplicates the packets.

**Reading activity 12.**

1. What is network communication?

2. What are the sizes of data packets?

3. Into what units are data subdivided by the transport layer?

4. What is the purpose of a transmission checksum test?

5. How long does the data-link layer keep a copy of each packet?

6. What processes can be carried out at intermediate nodes?

7. What is a network protocol?

8. Which network communications layer supervises the transmission? 9. Which network communications layer protects the data being sent? 10. Which network communications layer encodes and sends the packets.

**Reading activity 13.**

1. Data transmission network - a set of three or more terminal devices (terminals) of communication, united by data transmission channels and switching devices (network nodes), ensuring the exchange of messages between all terminal devices.

2. Network protocols prescribe the rules for computers that are connected to the network.

3. The OSI Model is a 7-layer logical model of how a network operates.

4. At the physical level, the physical (mechanical, electrical, optical) characteristics of communication lines are determined.

5. At the data link layer, the rules for the use of the physical layer by network nodes are determined.

**LESSON 18**

**Writing Activity 20**.

Before we start talking about how we can change the World Wide Web for the better, we first need to understand what it is.

The World Wide Web (WWW), commonly known as the Web, is an information system where documents and other web resources are identified by URL(Uniform Resource Locators), which may be interlinked by hyperlinks, and are accessible over the Internet.

Now knowing this information, we have an idea of ​​what it is and where we encounter it. And we are faced with this everywhere. The first thing that catches our eye when we go to a little-known site is a huge amount of advertising. And this ad does not always turn out to be decent. I believe that before publishing your ad on the Internet, it must undergo a certain verification, which will check the compatible ad for illegal actions. I also know that there are forums on the Internet where people with a common opinion discuss some illegal things, or form something like a sect. An equally well-known problem is the trade in drugs or some other illegal things through the darknet.

So in order to resist all this, something like the police must appear on the Internet, which will comb out such atrocities. Nowadays, technology allows us to calculate the location of a person in a matter of seconds. I believe that such means need to be developed more rapidly for the benefit of the safety of people.