

### Examination questions for the course in “Computer networks”

| Operational level   |     |   |   |
|---|-----|---|---|
| Computer networks   |     |   |   |
| Questions   |     |   |   |
| O/T – specifies the nature of the question (obligatory, time demanding) |     |   |   |
| No.   | O/T | Question  | Correct answer  |
| 1.  | O   | <p>The logical topology of a computer network describes:</p> <ul style="list-style-type: none"> <li>A. the structure of physical links,</li> <li>B. the way in which network devices communicate with one another,</li> <li>C. the arrangement of computers in a building,</li> <li>D. the arrangement of computers in a room.</li> </ul>   | <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; text-align: center; line-height: 40px;">B</div> |
| 2.  | O   | <p>What is the diameter of the 12 AWG wire when we know that the diameter of the 6 AWG is 4.115:</p> <ul style="list-style-type: none"> <li>A. 0.812,</li> <li>B. 2.906,</li> <li>C. 2.053,</li> <li>D. 1.291.</li> </ul>   | <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; text-align: center; line-height: 40px;">C</div> |
| 3.  | O   | <p>In which layer of the ISO/OSI model does switch function?</p> <ul style="list-style-type: none"> <li>A. first,</li> <li>B. second,</li> <li>C. third,</li> <li>D. fourth.</li> </ul>   | <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; text-align: center; line-height: 40px;">B</div> |
| 4.  | O   | <p>What is a collision domain?</p> <ul style="list-style-type: none"> <li>A. a separate company network,</li> <li>B. a reserved set of domain names,</li> <li>C. a mechanism blocking the possibility of assigning the same IP address to several stations,</li> <li>D. separation of the network traffic among designated stations to limit the occurrence of collisions.</li> </ul> | <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; text-align: center; line-height: 40px;">D</div> |
| 5.  | O   | <p>Which category of a UTP cable can be used with networks operating at 1Gb/s?</p> <ul style="list-style-type: none"> <li>A. 3,</li> <li>B. 4,</li> <li>C. 5,</li> </ul>  | <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; text-align: center; line-height: 40px;">D</div> |

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| 6.  | <input type="radio"/> | <p>What is a transmission medium?</p> <p>A. Wires designed for current transmission,<br/> B. Wires connecting devices in a computer network,<br/> C. A material substance through which data is transmitted,<br/> D. A method of establishing connection.</p>  | <div></div> <div></div> <div>C</div> <div></div> |
| 7.  | <input type="radio"/> | <p>Which port is the default port for an SMTP server?</p> <p>A. 23,<br/> B. 25,<br/> C. 21,<br/> D. 995.</p>   | <div></div> <div>B</div> <div></div> <div></div> |
| 8.  | <input type="radio"/> | <p>Which layer is IP protocol included in in the ISO/OSI model?</p> <p>A. 2,<br/> B. 3,<br/> C. 4,<br/> D. 5.</p>  | <div></div> <div>B</div> <div></div> <div></div> |
| 9.  | <input type="radio"/> | <p>A proxy server is designed to:</p> <p>A. let only authorized addresses access an internal network, and act as a means of network control,<br/> B. act as a means of network control,<br/> C. let only authorized addresses inside an internal network,<br/> D. block unauthorized web services.</p> | <div>A</div> <div></div> <div></div> <div></div> |
| 10. | <input type="radio"/> | <p>Telnet makes it possible to:</p> <p>A. establish a connection with a remote computer via a graphic display terminal,<br/> B. send files to a remote computer,<br/> C. manage a computer remotely,<br/> D. use a character terminal remotely.</p>  | <div></div> <div></div> <div></div> <div>D</div> |
| 11. | <input type="radio"/> | <p>VLAN is:</p> <p>A. a local network,<br/> B. a local network “connected” through a wide area network,<br/> C. a virtual connection to a local network,<br/> D. a virtual network access point.</p>   | <div></div> <div>B</div> <div></div> <div></div> |

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| 12. | <input type="radio"/> | <p>The maximum length of an UTP cable between active devices from the patch panel to the socket should be:</p> <p>A. 95m,<br/>B. 100m,<br/>C. 50m,<br/>D. 80m.</p>  | <div>A</div> |
| 13. | <input type="radio"/> | <p>In order to prevent modal dispersion in a multimode fibre, we can:</p> <p>A. change the source of light to laser,<br/>B. reduce the length of the optical fibre,<br/>C. replace the fibre optic connectors,<br/>D. use a gradient fibre.</p>                   | <div>D</div> |
| 14. | <input type="radio"/> | <p>An STP cable is used:</p> <p>A. where there is a risk of mechanical damage of the cable in use,<br/>B. where there occurs increased external interference,<br/>C. where there is a risk of flooding the cable in use,<br/>D. where there is a possibility.</p> | <div>B</div> |
| 15. | <input type="radio"/> | <p>What logical topology is based on application of a CSMA/CD protocol?</p> <p>A. bus type,<br/>B. ring type,<br/>C. star type,<br/>D. dual-ring type.</p>  | <div>A</div> |
| 16. | <input type="radio"/> | <p>What network technology features embedded QoS mechanisms?</p> <p>A. Ethernet,<br/>B. ATM,<br/>C. DQDB,<br/>D. CDDI.</p>  | <div>B</div> |
| 17. | <input type="radio"/> | <p>DQDB is an example of which type of topology?</p> <p>A. tree type,<br/>B. bus type,<br/>C. dual bus type,<br/>D. mesh type.</p>  | <div>C</div> |

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| 18. | <input type="radio"/> | <p>DNS is:</p> <ul style="list-style-type: none"> <li>A. a server of catalogue services,</li> <li>B. a dynamic name server,</li> <li>C. an incoming mail server,</li> <li>D. a domain name system.</li> </ul>   | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; bottom: 5px; right: 5px;">D</div> </div> |
| 19. | <input type="radio"/> | <p>DHCP is:</p> <ul style="list-style-type: none"> <li>A. a server enabling system clock synchronisation,</li> <li>B. a service of remote station control,</li> <li>C. a server enabling dynamic station configuration,</li> <li>D. a service of copying documents in the background.</li> </ul>  | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; bottom: 5px; right: 5px;">C</div> </div> |
| 20. | <input type="radio"/> | <p>A MAC sublayer of the second layer of the ISO/OSI model in a IEEE 802.3 standard contains:</p> <ul style="list-style-type: none"> <li>A. a collision detection protocol,</li> <li>B. a network access protocol,</li> <li>C. a packet routing setting protocol,</li> <li>D. a mechanism of abnormality correction.</li> </ul>                   | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; bottom: 5px; right: 5px;">B</div> </div> |
| 21. | <input type="radio"/> | <p>Setting a Profibus DP master includes:</p> <ul style="list-style-type: none"> <li>A. entering the network, assigning a network name and a DP address, selecting the communication speed,</li> <li>B. assigning a network name, I/O addresses, a DPV profile,</li> <li>C. entering the ID address of the DP master, slave addresses.</li> </ul> | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; top: 5px; left: 5px;">A</div> </div>     |
| 22. | <input type="radio"/> | <p>Setting a Slave in a Profibus DP network includes:</p> <ul style="list-style-type: none"> <li>A. entering a DP address, selecting the communication speed, entering the I/O addresses in the slave in the Master memory,</li> <li>B. entering the Master address, the Slave address, the communication speed.</li> </ul>                       | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; top: 5px; left: 5px;">A</div> </div>     |
| 23. | <input type="radio"/> | <p>What is the topology type of a Profibus DP network?</p> <ul style="list-style-type: none"> <li>A. ring type,</li> <li>B. bus type,</li> <li>C. tree type.</li> </ul>   | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; bottom: 5px; right: 5px;">B</div> </div> |
| 24. | <input type="radio"/> | <p>The bus of a Profibus network features terminators. Which of the terminators of the bus of Profibus DP have to be enabled:</p> <ul style="list-style-type: none"> <li>A. on each DP-Slave module,</li> <li>B. on extreme stations of the bus,</li> <li>C. on the Profibus DP master.</li> </ul>  | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; top: 5px; left: 5px;">A</div> </div>     |
| 25. | <input type="radio"/> | <p>Replacing a damaged Profibus DP-Slave requires:</p> <ul style="list-style-type: none"> <li>A. setting the address of a new slave, connecting it to the network, connecting the I/O,</li> <li>B. setting the address, connecting the slave and setting the network anew,</li> </ul>   | <div style="border: 1px solid black; height: 40px; width: 40px; position: relative;"> <div style="position: absolute; bottom: 5px; left: 5px;">A</div> </div>  |

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|     |                       | C. connecting it following the plug-and-play principle.   |  |   |
| 26. | <input type="radio"/> | Enabling communication of a PLC in an Industrial Ethernet network using a TCP/IP protocol requires:<br>A. setting the communication module and the software if PLC is a network client,<br>B. setting the communication module and indicating the address of the partner station,<br>C. setting the CP module, setting the "Connection" and the data exchange software.   |  | A |
| 27. | <input type="radio"/> | Communication of a PLC – Client in an Industrial Ethernet network using an S7_Connection protocol requires:<br>A. setting the CP communication module and the data exchange software,<br>B. setting the communication module and indicating the address and the memory area of the partner station,<br>C. setting the CP module, setting the "Connection" and the data exchange software.   |  | C |
| 28. | <input type="radio"/> | A "Connection" set for a PLC functioning in an Industrial Ethernet network includes:<br>A. IP addresses of both nodes exchanging data, a subnet mask, numbers of CP modules of nodes and connections,<br>B. addresses of both network nodes, standards for GET and PUT exchange,<br>C. IP addresses of nodes, addresses of sent and received memory areas,<br>D. IP addresses of communication partners, addresses of sent and received memory areas. |  | A |
| 29. | <input type="radio"/> | Communication of a PLC through a Modbus RTU network requires equipping the PLC with which of the following modules:<br>A. RS 485 and a special RTU power supply unit,<br>B. RS 232,<br>C. RS 485,<br>D. Modbus TCP.   |  | C |
| 30. | <input type="radio"/> | Connecting a new slave to a Modbus RTU network requires:<br>A. setting the PLC hardware and software of data exchange through the new slave anew,<br>B. program setting of the network and introducing a new data exchange standard,<br>C. introducing a new standard for data exchange with the connected slave,<br>D. indicating the memory range intended for data exchange, extended by an additional area connected to the Modbus slave.         |  | C |
| 31. | <input type="radio"/> | What method of network access is applied in an Industrial Ethernet network?<br>A. Cyclical polling,<br>B. Token Ring,<br>C. CSMA/CD,<br>D. TCP/IP.  |  | C |

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| 32 | <input type="radio"/> | <p>What method of network access is applied in a single master Profibus DP network?</p> <p>A. Cyclical polling,<br/> B. Token passing,<br/> C. CSMA/CD,<br/> D. CSMA/CA,<br/> E. Token passing.</p> | <div> <div>A</div> <div></div> <div></div> <div></div> <div></div> </div> |
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