**Exam questions /C group – January, 2022.**

**Примерные вопросы для собеседования на экзамене в группе C. 2022г.**

1. What department do you study in? Why did you choose it?
2. What are your plans for the future professional career?
3. What is your idea of an ideal job?
4. What does it take to be an IT professional?
5. What subjects do you study? Which are your favourite? What are you good at? What are you weak in?

**Computers:**

1. How often do you use a computer? What do you use it for?
2. How are computers used in studying, banking, travelling, sports, medicine and other areas of life?
3. What is a computer?
4. How many parts does it include and what are they?
5. What are the basic parts of hardware? Describe them briefly.
6. What types of computers and gadgets are there? Enumerate them. What is the difference between them?
7. What are the functions and peculiarities of a) PC, b) PDA, c) mainframe, d) supercomputer, e) server, f) workstation. Provide some information about their development (2-3 interesting facts from their history).
8. What types of computers do you use? How often do you use them? What do you use computers for? Can you live without computers?
9. What is software? What are the verbs used to start a software program?
10. Is it useful to learn programming? Why?
11. What is the difference between open source and closed source software? Give an example.
12. Think about advantages and disadvantages of open source / closed source. Enumerate them.
13. What would happen if all the software were open source (closed source)?
14. Have you ever written a software program yourself? If yes, what kind of program was it? What language did you use? How long did it take you?
15. Have you ever had a bug in the program run? Did you try to debug it yourself or did you ask for help? How long did it take you to fix the problem?

**Programming languages:**

1. Do computers understand human language? Why? /Why not?
2. What is the function of an assembler?
3. Why did software developers design high-level languages? What are they? Provide some facts from their history (2-3 names and facts).
4. What is the difference between a compiler and an interpreter?
5. What three broad categories do programming languages fall into?
6. What is a machine language?
7. What is an assembly language?
8. What are the differences between fourth-generation languages and fifth-generation languages? Give examples.
9. Advanced programming languages: what are they? Why are students encouraged to learn them?
10. In your opinion, what are the best programming languages for first-time learners? Be ready to say some words about each of them (characteristics, functions, some facts from the history, strengths and weaknesses).

**Internet security:**

1. What is the Internet? When and where did the Internet appear? Who contributed into its development?
2. Is it correct to use the terms Internet and Web interchangeably? Why/Why not?
3. What do you use the Internet for?
4. What is a computer virus? How does it work? In what ways can a virus enter a computer system?
5. What are the most common types of viruses and other malicious programs?
6. How can we protect a computer system from viruses? Is it possible?
7. Why is computer security so important for us?
8. What cyber crimes can you enumerate? Give their brief description.
9. Which crimes do you think are the most dangerous? Why? What measures can be taken by government to stop cybercrime?
10. Hacking: provide some facts from the history of hacking: who were the most dangerous hackers of all time and what did they do?
11. What are the types of hackers?
12. What can incentivize the good actors to stay on the right side of the law and ethics? (minimum 3 incentives).
13. What is Pwn2Own? What other hacking contests do you know?
14. Present your mind map on the topic Hacking (you may use your notes).
15. Render the article you chose for extracurricular reading on the topic (you may use your notes).

**New technologies (robotics, artificial intelligence, biometrics, smart stuff or IoT, nanotechnology, VR, AR)**

1. What are the trends in new information technologies? Enumerate them and give their brief description. What is the most interesting technology in your opinion?
2. Robotics: what jobs are meant for robots? Where can robots be used? Can robots replace humans?
3. How do you think new technologies will affect our lives in future?
4. What are advantages and disadvantages of new technologies?
5. Share the details about the technology you chose for extracurricular reading on the topic (you may use your notes).
6. Present the Glossary you made on the topic (you may use your notes).