Please sign this form. *(First Name, Last Name):* _____

Part 1: Teamwork scenarios (circle (A), (B) or (C) and explain)

Question 1 (on team size): Assume that some developers should do a specific IT-related task for a customer – there is a customer representative available at all times who defines the work items and answers questions. How to assign people to get the task completed efficiently and predictably?
(A) Software developer teams of 3-8 people are usually optimal.
(B) Team size is determined by the urgency of the project and resources available.
(C) Ideally a team should be 2 or 4 people to work in pairs and to do code inspections.

Question 2 (on cross-functional work). IT projects rely on different skills; what is the best way to ensure that your team has sufficient skills for the assigned tasks:
(A) Each team member should prepare to cover several roles in a project.
(B) The development team should collaborate with other development teams.
(C) Development team should have the set of skills necessary for the current development cycle.

Question 3 (on backlog). Most projects maintain a "backlog" - a prioritized TODO-list of work items that have to be planned and delivered. What is the main criterion to order the items in the backlog?
(A) The Value of the items being delivered
(B) The relative size and complexity of the items being delivered
(C) The risk associated with the items

Question 4 (on iterations). Most large software projects are done as a sequence of short (2-3 week) iterations or "sprints". Which of the following is delivered at the end of a typical project iteration?
(A) A functional design document and user manual update.
(B) An architectural design of the solution.
(C) An increment of software that was done.

Question 5 (on exit conditons). Assume that a team is currently working on an iteration. Under what circumstances the iteration can be canceled?
(A) When the project backlog sets radically different priorities.
(B) When the developers cannot continue, because the required information is missing.
(C) When a customer representative says so.

Question 6 (on iterative approach). In order to try iterative project management (submitting work in short cycles), which kind of project looks most accomodating for this:
(A) Building a residential house using the newest energy-efficient technologies.
(B) Math education experts creating series of math assesments and multiple-choice exams to include the newly approved curriculum of high-school education.
(C) Developing a solution for a government institution where the project phases, costs and decisions should be approved by a committee of officials.

Question 7 (on SMART goals). In order to try SMART guidelines (all goals should be Specific, Measurable, Attainable, Relevant, Time-bound), which type of project best matches this:
(A) Developers starting work in a totally new programming language that they still have to learn.
(B) A call center receiving customer calls about an accounting software and consulting users.
(C) A group of aides helping British PM Boris Johnson to implement Brexit until October 31.

Question 8 (on knowing statuses). Assume that a team has some introvert members and others do not always understand what they are doing for the project. Any remedies?
(A) Team members should get together and agree who is responsible for what.
(B) Team members should send out their statuses regularly and others should read that.
(C) Team should look for a coach and do some team-building exercises.

Question 9: Please list which communication channels you prefer to work in a team. Please specify the tool, if any, if you have particular experience with that.
(A) Sending emails and uploading documents to some shared file folders (such as Sharepoint, Google docs, version control such as Git, etc.).
(B) Using chat-based applications such as Messanger, WhatsApp, Skype chat.
(C) Using live desktop sharing and phone calls such as Skype desktop sharing, Adobe Connect, WebEx.

Part 2: Math appreciation (perform the tasks)

Question 10: The table shows GDP per capita (Purchasing power parity, PPP) for some large economies – it expresses all the goods and services produced in that country (in US dollars) divided by its total population.

Country	**Their per capita GDP in 2016**	**GDP growth during 2017**
China	15500	6.90%
United States	58000	2.27%
India	6600	6.62%
Japan	41000	1.71%

Order the countries by their GDP growth during 2017:

(1) _____ (fastest growing, largest increase of the GDP)

(2) _____

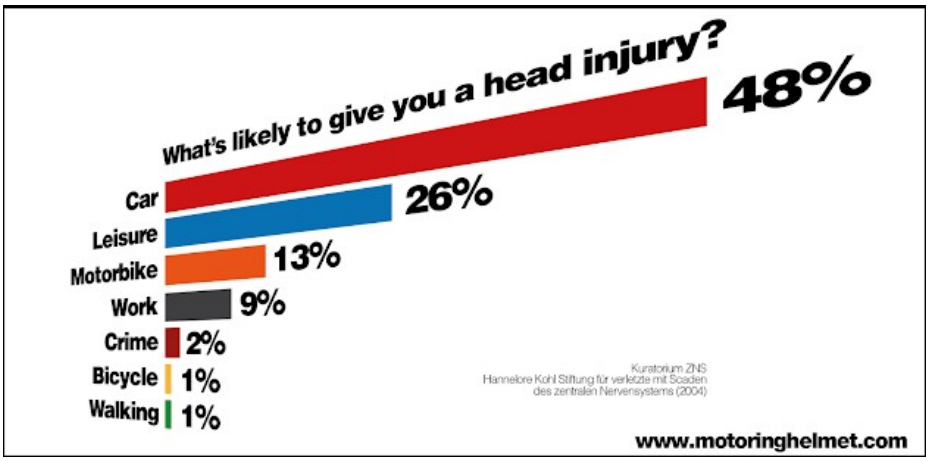
(3) _____

(4) _____ (slowest growing)

Question 11: At the beginning of the school year 70% from all the students could pass a certification exam in Chinese. After one month of studying 77% from all the students could pass that same exam. By what percent did the number of Chinese-certified students grow?

Question 12: Originally, in a forest 99% of the trees were pines and 1% of all the trees were birches. After that some pines were cut down, and now 98% of all the trees are pines and 2% are birches. What percentage from all the trees in the forest were cut down?

Question 13: Would this chart convince you to wear a helmet when driving a car? Explain your reasoning. (Data about the head injury causes from a German foundation *"Hannelore Kohl Stiftung für Verletzte mit Schäden des Zentralen Nervensystems"*).



Question 14: In Google search bar you can write Boolean expressions (`word1 OR word2`), quotations – possibly with some words omitted (`"we hold these truths"` or even `"we hold * self evident"`), avoid some terms (`real estate -sale`) search particular Web domains (e.g. `site:bbc.co.uk`) or filetypes (`some topic filetype:docx`)

(1) Write Google search that would find phrase "mellow fruitfulness" (but would avoid the poem "Autumn" by John Keats).

_____

(2) Write Google search that finds some PowerPoint presentations on Agile or Scrum project management.

_____

(3) Write Google search that finds Latvian Websites that mention *Betula Pendula* (ordinary birch tree):

_____

Question 15: In statistics there are two ways to summarize a set of *n* numbers – *arithmetic mean* (you sum all numbers and divide by *n*) and *median* (a middle number that has half of the numbers above it and another half below it). Circle, which would be the most informative summarization regarding the students (grades 10-12) in Bauska (circle "mean" or "median" in each row):

(1) **Height in centimeters:** mean / median

(2) **Household income in EUR:** mean / median

(3) **Average score in history exam:** mean / median

Part 3: General ideas about the course (please answer the questions)

Question 16: Some people claim that large student teams (more than 3 people per team) meay lead to very uneven involvement – only some people do all the relevant work. Do you agree? Is there a way to remedy this?

Question 17: What is your level of interest in learning and prcticing the following skills (relative to other goals in this study year)? Circle one answer in each row of the table:

(A) Software project process and tracking the progress, taking remedial steps.	Low	Below average	Medium	High	Very high
(B) Developing content (websites, multimedia, user guides and training)	Low	Below average	Medium	High	Very high
(C) Developing software (databases, user interfaces and the business logic)	Low	Below average	Medium	High	Very high
(D) Interacting with customers and users, refining the requirements.	Low	Below average	Medium	High	Very high
(E) Testing the solution, reviewing documents, creating errata lists (things to fix).	Low	Below average	Medium	High	Very high

Question 18: Have you previous experience with any of the following tasks? Circle one answer in each row of the table.

(A) Writing small software programs	No prior exposure	Can do with assistance	Can do this task	Can help others
(B) Writing HTML and other web documents	No prior exposure	Can do with assistance	Can do this task	Can help others
(C) Collective editing of the same document at the same time, tracking versions of your files.	No prior exposure	Can do with assistance	Can do this task	Can help others
(D) Working remotely (e.g. from home) for any kind of team project.	No prior exposure	Can do with assistance	Can do this task	Can help others
(E) Assisting over the phone (e.g. consulting a relative on how to use some office software).	No prior exposure	Can do with assistance	Can do this task	Can help others

Question 19: Decision making in a large team may sometimes be tricky. There are different "business cultures" how to ensure that all people are in sync and are working for the same goal. Which method best reflects your preferences? Please explain your answer.
(A) A team needs a manager who is responsible for most external communication and ensures that everyone is involved and nobody is stuck.
(B) A team needs a to meet and to discuss things so that decisions can be reached by consensus.
(C) A team should create several specific assignments and each assignment should have somebody responsible who can delegate to others.

Question 20: If you need to learn a new technical skill (such as fancy editing your photos etc.), which way of receiving that information works best for you. Please comment your answer.
(A) You prefer having a live training, where somebody shows and explains this to you.
(B) You prefer a video-based training, where the relevant steps are recorded and can be replayed, in case you missed something.
(C) You prefer a written document that explains all the options you have.