**ENGLISH TEST for MASTER STUDENTS in COMPUTER SCIENCE**

**Variant 1**

**I. Read the text. Refer to the sentences below and mark each sentence “True” or “False”**

A spacecraft and mission system’s ability to plan, act, react and generally accomplish science and other mission objectives resides partly in the minds and skills of the engineers who designed them, the operators who command them, and partly in the flight and ground software and computers that implement the vision. Ongoing challenges of deep-space missions always involve operating in a remote and poorly understood environment.

Success depends on the ability to predict the fine details of remote environments well enough to perform the mission safely and effectively. Also, a project team must be prepared to encounter unexpected issues and must implement a contingency plan that includes a generalized response that will reliably secure the spacecraft and mission until problems can be solved.

Because science investigations are delivering increasingly complex and exciting results and discoveries, engineering designs must adapt to this by improving functionality of mission software and the performance of the computers that host the software. Mission software and avionics have become more sophisticated to meet the needs of the science missions, while enhancing security in engineering and design. Mission software and computing cross over multiple missions, in that capabilities developed for one mission are typically relevant to other missions as well, especially those within the same class, e.g., orbital or surface missions.

1. Operating in a remote environment is a problem for deep-space missions.

2. A project team must be trained to face extreme situations.

3. Engineering designs must adapt to science investigations by increasing the volume of mission software.

4. Mission software has become more primitive to be operated by any person.

5. Software designed for a certain mission can be used in other missions.

**II. Fill in the empty space with the variant which you think fits the best**

6. One might claim that the inexpensive calculator has … intelligence than a well-educated human.

A. more B. most C. many D. much

7. Computer science plays an important role in … fields of life.

A. much B. more C. little D. many

8. The Russian satellite Sputnik was launched into orbit in 1957… was a great break through.

A. what B. who C. that D. which

9. Success depends … the ability to predict the fine details of remote environment.

A. on B. of C. in D. from

10. The electronic digital computer was developed independently in … England and … United States.

A.-/- B. the/the C. -/the D. the/-

11. About the time of World War II, the electronic digital computer … independently in England, Germany, and the United States.

A. developing B. was developed C. has been developed D. develop

12. Since the very start, mission system software … a central problem.

A. is always B. was always C. has always been D. had always been

13. Programming language theory ...various approaches to the description of computation.

A. consider B. considers C. considering D. considered

14. Only 14 states of the USA … significant education standards for high school computer science by the present time.

A. adopt B. adopted C. have adopted D. are adopting

15. Before B. Pascal constructed the first working mechanical calculator in 1642, W. Schickard … such type of machine.

A. has designed B. designed C. was designing D. had designed

16. In the USA 46 commercial computers … by 1960

A. produced B. were produced C. had been produced D. have produced

17. At the present time computer technology … to augment the capabilities of people’s brains.

A. be used B. was used C. is being used D. is used

18. In 1951 the first UNIVAC I machine … perform 1,905 operations per second.

A. can B. could C. should D. had to

19. Copyrights will provide some protection for software, but they will … to protect its semantic core.

A. have to B. be able C. be unable D. can

20.Computer science is the … approach to computation and its applications.

A. science B. scientist C. scientific D. scientifically

**III. Choose the correct translation**

21. To increase the weak AI of a computer, some better algorithms can be developed.

A. Слабый искусственный интеллект компьютера может быть развит.

B. Некоторые более походящие алгоритмы могут быть разработаны, чтобы увеличить слабый искусственный интеллект компьютера.

C. Можно разработать более походящие алгоритмы, для того чтобы увеличить слабый искусственный интеллект компьютера.

D. Слабость искусственного интеллекта зависит от выбранных алгоритмов.

22. A spelling checker uses an algorithmic procedure to see if a word is in its dictionary.

A.Блок орфографического контроля использует алгоритмическую процедуру, чтобы увидеть, есть ли слово в его словаре.

B. Блок орфографического контроля находит слово в словаре.

C. Блок орфографического контроля использует алгоритмическую процедуру, чтобы обнаружить слово в своем словаре.

D. Алгоритмическая процедура обнаруживает слово в своем словаре.

23. At the current time, grammar checking is based on a combination of algorithms and heuristics, with the results being very modest.

A. В настоящее время проверка грамматики основана на сочетании алгоритмов и эвристики, со скромными результатами.

B. Результаты проверки грамматики обычно очень скромные.

C. Комбинация алгоритмов и эвристики дает скромный результат при проверке грамматики.

D. В настоящее время проверка грамматики основана на сочетании алгоритмических и эвристических методов, причем результат очень скромен.

24. Двойственная природа программ – это проблема, которую предстоит обсудить.

A. One should discuss the dual nature of programs.

B. The dual nature of programs is the problem to be discussed.

C. The dual nature of programs will be discussed.

D. The dual nature of programs is the problem for discussion.

25. Устройства для вычисления существовали со времен античности.

A. Calculating machines are very old.

B. Calculating machines have existed for a long time.

C. Machines for calculating have existed since antiquity.

D. Machines for calculating existed in antiquity.

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**Variant 2**

1. **Read the text. Refer to the sentences below and mark each sentence “True” or “False”**

The Philosophy of Computer Science is concerned with philosophical issues that arise from reflection upon the nature and practice of the academic discipline of computer science. But what is the latter? It is certainly not just programming. After all, many people who write programs are not computer scientists. For example, physicists, accountants and chemists do. Indeed, computer science would be better described as being concerned with the meta-activity that is associated with programming. More generally, and more precisely, it is occupied with the design, development and investigation of the concepts and methodologies that facilitate and aid the specification, development, implementation and analysis of computational systems. Examples of this activity might include the design and analysis of programming, specification and architectural description languages; the construction and optimization of compilers, interpreters, theorem provers and type inference systems; the invention of logical frameworks and the design of embedded systems, and much more. Many of the central philosophical questions of computer science surround and underpin these activities, and many of them centre upon the logical, ontological and epistemological issues that concern it.

1. Computer science is a kind of activity much wider than just programming.

2. Only computer scientists can create computer programs.

3. The Philosophy of Computer Science helps to analyze computational product.

4. Computer science includes numerous aspects.

5. The Philosophy of Computer Science concerns only the ethical problems of programmer’s behavior.

**II. Fill in the empty space with the variant which you think fits the best**

6. Computer is … complicated thing that the mankind has ever created.

A. much B. most C. the most D. more

7. The earlier we start the … we’ll manage to do.

A. most B. much C. more D. many

8. Computer science is an interdisciplinary field, … in its origin … in its application.

A. either…or B. neither…nor C. both…and D. as…as

9. Computer technology is affecting … every academic discipline.

A. on B. - C. in D. to

10. … United States was … third country to begin the commercial production of electronic digital computers.

A. -/- B. the/the C. -/a D. the/-

11. Computer technology … a lot since the first computer produced in 1951.

A. changed B. has changed C. have changed D. had changed

12. The transistor … a few years before the first computer was produced.

A. had been invented B. has been invented C. invented D. was invented

13.Computer programming itself … various aspects of the use of programming language.

A. investigates B. investigate C. investigated D. investigating

14. Since its origin in cybernetics, artificial intelligence research … necessarily cross-disciplinary in their character.

A. have been B. was C. has been D. is being

15. After Ch. Babbage …a general-purpose Analytical Engine in Victorian times, Ada Lovelace wrote a manual for it.

A. designed B. has designed C. had designed D. was designed

16. During the time the first computer …, a vacuum tube cost about a dollar.

A. was produced B. is produced C. was being produced D. had been

produced

17. Modern cryptography algorithms … on their computational complexity.

A. are based B. is based C. based D. had been based

18. Today’s $1,000 laptop microcomputer … do two billion operations per second.

A. can to B. has to C. can D. needn’t

19.It … be that 20 years from now students will be buying microcomputers that rival today’s multimillion-dollar supercomputers.

A. can B. will C. should D. might

20. The question is how the textual object … causes the mechanical process.

A. physically B. physical C. physics D. physicist

**III. Choose the correct translation**

21. If a word is not in the dictionary, a heuristic procedure is used to suggest alternative words or spelling.

A. Эвристическая процедура используется для поиска слов в словаре.

B. Если слово отсутствует в словаре, используется эвристическая процедура.

C. Эвристическая процедура используется в работе со словарем.

D. Если слова нет в словаре, используется эвристическая процедура, чтобы предложить другие слова или орфографию.

22. Current level of AI is believed to be poorly suited to the task of grammar

checking.

A. Текущий уровень искусственного интеллекта слишком слаб, чтобы проверять грамматику.

B. Ученые верят в искусственный интеллект.

C. Полагают, что современный уровень искусственного интеллекта плохо подходит для проверки грамматики.

D. В современном искусственном интеллекте бедная грамматика.

23. Language translation is a really hard problem giving us some interesting insights into the power of a human brain.

A. Языковой перевод является сложной проблемой, позволяющий проникнуть в силу человеческого мозга.

B. Языковой перевод является интересным примером силы человеческого мозга.

C. Языковой перевод очень сложен для человеческого мозга.

D. Языковой перевод является сложной проблемой, дающий нам понимание силы человеческого мозга.

24. Известно, что Ч. Бэббидж изобрел первый механический компьютер.

A. Ch. Babbage is popular inventing the first mechanical computer.

B. Ch. Babbage is known to invent the first mechanical computer.

C. The first mechanical computer was invented by Ch. Babbage.

D. One must know that Ch. Babbage invented the first mechanical computer.

25. Г.В. Лейбниц создал первый калькулятор, выполняющий все четыре арифметических действия.

A. G.W. Leibnitz created the first calculator performing all four arithmetic operations.

B. G.W. Leibnitz created the first calculator that performed all four arithmetic operations.

C. G.W. Leibnitz created the first calculator with all four arithmetic operations.

D. G.W. Leibnitz created four arithmetic operations.

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**Variant 3**

1. **Read the text. Refer to the sentences below and mark each sentence “True” or “False”**

Mapping out the philosophical landscape of computer science is no easy task. Fortunately, traditional branches of philosophy can provide intellectual and structural guidance. For example, in the philosophies of mathematics and physics, there are central questions concerning the nature of the objects dealt with, what constitutes knowledge and the means of obtaining that knowledge. The philosophy of language raises questions about the content and form of a semantic theory for natural language. It brings to the fore the underlying ontological and epistemological assumptions of the semantic enterprise. Ontology indicates the kinds of things there are, how to individuate them and their role in framing our conceptual schemes. The philosophy of logic provides an account and analysis of different kinds of logical systems and their role in everyday and specialized discourse. Analogies and similarities from these and other branches of philosophy should prove helpful in identifying and clarifying some of the central philosophical concerns of computer science. In particular, the second, third and fourth sections will reflect the impact of ontology and the philosophies of language and mathematics.

1. Philosophies of different sciences can help to define the philosophy of computer science.

2. The philosophy of language raises questions about the ethic problems. 3. Ontology concerns the essence of different things. 4. Analogies and similarities from other branches of philosophy can’t be applied in computer science. 5. The philosophies of language and mathematics are of great value for the philosophy of computer science.

**II. Fill in the empty space with the variant which you think fits the best**

6. Learning computer science can help you get a good job or go on to … education.

A. far B. farther C. further D. farthest

7. The … future will see the revolution in computer technologies.

A. nearest B. near C. nearer D. most near

8. … its nature, mission system software has the potential to advance rapidly.

A. instead of B. although C. because of D. while

9. Computer science deals … the theoretical foundations of information and computation.

A. - B. with C. on D. in

10. In the early 1950s … vacuum tube cost about … dollar.

A. the/the B. a/a C. -/- D. the/-

11. By nowadays satellite-based Global Positioning System … routine consumer product.

A. became B. has become C. have become D. had become

12. The first commercial installation of fiber-optic cables … in 1977.

A. is made B. has been made C. had been made D. was made

13. Human-computer interaction … the challenges in making computers accessible to   humans.

A. consider B. considering C. considered D. considers

14. Algorithmic trading … the efficiency of financial markets since the very start of implementation.

A. has increased B. increased C. is increasing D. have increased

15. After practical computers … available, many applications of computing became distinct areas of study in their own right.

A. had become B. has become C. became D. becomes

16. At the present time computational science … in various fields.

A. are applied B. has been applied C. applied D. is being applied

17. About 40 years ago the price for computers … by progress in transistor technology.

A. had been decreased B. decreased C. was decreased D. were decreased

18. One fiber-optic cable … carry hundreds of thousands of phone conversations.

A. may B. can C. can to D. has to

19. The large-scale decryption of Enigma traffic … contributed to the victory in World War II.

A. might have B. could C. should have D. had to

20. The algorithm-program distinction is also in need of further conceptual … .

A. clarify B. clarification C. clarifier D. clarified

**III. Choose the correct translation**

21. Material to be translated comes into one’s brain through reading or listening.

A. Переведенный материал проходит через мозг после чтения или слушания.

B. Материал, который перевели, реализуется в чтении и слушании.

C. Материал, который предстоит перевести, поступает в мозг через чтение или слушание.

D. Материал следует перевести в письменном или виде.

22. Current computerized language translation systems do not have an understanding of what they are translating.

A. Современные компьютеры не имеют блока языкового перевода.

B. Современные компьютеризированные системы не могут переводить.

C. Современные системы языкового перевода не имеют хороших переводчиков.

D. Современные компьютерные системы языкового перевода не имеют понимания того, что они переводят.

23. The analyses carried out by chess masters are used to develop a better chess-playing program.

A. Анализ выполняется мастерами-шахматистами, чтобы лучше играть.

B. Мастера-шахматисты разрабатывают шахматные программы.

C. Анализ, выполненный мастерами-шахматистами, используется для разработки более совершенных шахматных программ.

D. Более совершенные шахматные программы разрабатываются, чтобы лучше играть.

24. В 50-х годах стало ясно, что информатика – это наука, которую предстояло учредить как определенную учебную дисциплину.

A. In the 1950s it became clear that computer science is to be established as a certain academic discipline.

B. In the 1950s it became clear that computing is a science to be established as a certain academic discipline.

C. In the 1950s computer science became a school discipline.

D. In the 1950s computer science was a school discipline.

25. Компьютеры, выпущенные фирмой IBM, внесли вклад в информационную революцию.

A. The computers released by IBM contributed to the computer science revolution.

B. The IBM brought about the computer science revolution.

C. The computers were produced by IBM.

D. The computers released by IBM were a part of the computer science revolution.