



**Вступительные испытания в аспирантуру  
Английский язык (технические направления)  
ВАРИАНТ № 1**

**Вопрос 1**

Пока нет ответа

Балл: 10,00

Отметить  
вопрос

Редактировать  
вопрос

**What Generative Design Is and Why It's the Future of Manufacturing**

Generative design replicates natural world's evolutionary approach with cloud computing to provide thousands of solutions to one engineering problem.

The way everyday items - from chairs to cars to power tools - are made is being reimagined through a new process called generative design.

Using artificial intelligence (AI) software and the compute power of the cloud, generative design enables engineers to create thousands of design options by simply defining their design problem - inputting basic parameters such as height, weight it must support, strength, and material options.

A few of the most forward-looking companies in the world, including Airbus, Under Armour and Stanley Black & Decker, are using generative design to solve engineering challenges and come up with design solutions that the human mind could never conceive on their own. With generative design, engineers are no longer limited by their own imaginations or past experience. Instead, they are collaborating with technology to co-create more, better, with less: more new ideas, products that better meet the needs of users, in less time and with less negative impact on the environment.

As with any new technology, however, there's often some confusion and lack of clarity around what exactly the technology is, and what it isn't.

Generative design leverages machine learning to mimic nature's evolutionary approach to design. Designers or engineers input design parameters (such as materials, size, weight, strength, manufacturing methods, and cost constraints) into generative design software and the software explores all the possible combinations of a solution, quickly generating hundreds or even thousands of design options. From there, the designers or engineers can filter and select the outcomes to best meet their needs.

Imagine if instead of starting a "drawing" or CAD design based on what you already know or ideas that are in your head, you could tell a computer what you want to accomplish or what problem you are trying to solve. For example, say you want to design a chair. Instead of drawing two or three options (maybe 10 if you're really creative), you can tell the computer you want a chair that supports X amount of weight, costs X much, and uses X material. The computer can then deliver hundreds, if not thousands, of practically and easily manufacturable design options that all meet that criteria and are likely options that you could not conceive on your own. That's the power of generative design.

With its ability to explore thousands of valid design solutions, built-in simulation, awareness of manufacturability and part consolidation, the reality is that generative design impacts far more than just the traditional notion of design. It's really about the entirety of the manufacturing process. In some ways, you could argue 'generative manufacturing' would be a more apt term.

**1. Answer the questions:**

1. What does generative design replicate to provide thousands of solutions to one engineering problem?

- ☐ ideas that are in your head
- ☐ the way everyday items are made
- ☐ natural world's evolutionary approach with cloud computing
- ☐ basic parameters such as height and weight

2. How does generative design enable engineers to create thousands of design options?

- ☐ with more negative impact on the environment
- ☐ using their own imaginations or past experience
- ☐ by starting a "drawing" two or three options
- ☐ by inputting basic parameters into generative design software

3. What do designers or engineers input into generative design software?

- ☐ thousands of solutions to one engineering problem
- ☐ manufacturable design options
- ☐ design parameters
- ☐ all the possible combinations of a solution

4. Why is generative design beneficial for engineers?

- ☐ the human mind can conceive design solutions on their own
- ☐ engineers are limited by their own imaginations
- ☐ they are collaborating with technology to co-create more and better
- ☐ there's often some confusion and lack of clarity

5. Which term would be a more apt for generative design?

- ☐ artificial intelligence
- ☐ cloud computing
- ☐ traditional notion of design
- ☐ 'generative manufacturing'

## 2. Give the correct translation.

1. Генеративный дизайн использует машинное обучение для воспроизведения эволюционного подхода в природе к проектированию.

- ☐ generative design uses machine learning to produce company`s evolutionary approach to design
- ☐ a genesis design uses computer-aided instruction in the evolutionary going of musical company near a design
- ☐ general design uses machine learning in the providing of design`s evolutionary approach
- ☐ generative design leverages machine learning to mimic nature`s evolutionary approach to design

2. Проектировщики и инженеры могут фильтровать и выбирать результаты, которые больше всего соответствуют их требованиям.

- ☐ modelers or engineers can filter and select the results to best suit their needs
- ☐ designers or engineers can filter and select results to best suit their needs
- ☐ designers or engineers can filter and choose results, by the best character to satisfy their necessities
- ☐ the designers or engineers can filter and select the outcomes to best meet their needs

3. Компьютер может предоставить сотни практически и легко изготавливаемых вариантов дизайна, которые вы не могли придумать сами

- ☐ the computer can give hundreds practically and the easily made variants of design, that you could not think of
- ☐ the computer can deliver hundreds of practical and easy design options are technological that you could not conceive yourself
- ☐ the computer can then deliver hundreds of practically and easily manufacturable design options that you could not conceive on your own
- ☐ the computer can deliver hundreds of practical and easy design options that you could not conceive yourself

4. Generative design replicates natural world's evolutionary approach with cloud computing.

- ☐ генеративное проектирование воспроизводит эволюционный подход мира к облачным вычислениям
- ☐ порождающий дизайн реплицирует эволюционный подход естественного мира к облачным вычислениям
- ☐ генеративный дизайн применяет эволюционный подход мира природы с «облачной» вычислительной средой
- ☐ порождающий дизайн копирует эволюционные облачные вычисления подхода мира природы

5. The way everyday items are made is being reimagined through a new process called generative design

- ☐ путем повседневных предметов, сделанных повторно, предполагается посредством нового процесса, названного порождающим дизайном
- ☐ способ изготовления повседневных предметов переосмысливается с помощью нового процесса, называемого генеративным дизайном
- ☐ ежедневные изделия пути делают повторно через новый процесс называемый производящий дизайн
- ☐ то, как производятся предметы быта, переосмысливается с помощью нового процесса, называемого генеративным дизайном

Вопрос 2

Пока нет ответа

Балл: 1,00

Отметить  
вопрос



Редактировать  
вопрос

I \_\_\_\_\_ out last night. I was too tired


Выберите один ответ:

- ☐ a. wasn't going
- ☐ b. didn't went
- ☐ c. didn't go
- ☐ d. haven't gone

**Вопрос 3**

Пока нет ответа

Балл: 1,00

 Отметить вопрос

Редактировать вопрос

Nick said he \_\_\_\_ do it at once as it was very urgent. He just \_\_\_\_ put it off till the next morning


Выберите один ответ:

- ☐ a. could/had to
- ☐ b. must/couldn't
- ☐ c. had to/could
- ☐ d. must/can't

**Вопрос 4**

Пока нет ответа

Балл: 1,00

 Отметить вопрос

Редактировать вопрос

When this tax (not to pay), fines may (to impose)


Выберите один ответ:

- ☐ a. is not paid, were imposed
- ☐ b. is not paid, be imposed
- ☐ c. is not paid, are imposed
- ☐ d. is not paid, have been imposed

**Вопрос 5**

Пока нет ответа

Балл: 1,00

 Отметить вопрос

Редактировать вопрос

In spite of the fact that it \_\_\_\_ all day long, the match \_\_\_\_ and the stands were full of spectators


Выберите один ответ:

- ☐ a. rained, was not cancelled
- ☐ b. had been raining, was not cancelled
- ☐ c. had rained, had not been cancelled
- ☐ d. was raining, has not cancelled

**Вопрос 6**

Пока нет ответа

Балл: 1,00

 Отметить вопрос

Редактировать вопрос

In 1936 the British Broadcasting Corporation \_\_\_\_ to provide a public radio service. Since then the BBC \_\_\_\_ by the establishment of independent and commercial radio and television, which \_\_\_\_ the BBC's broadcasting monopoly


Выберите один ответ:

- ☐ a. was established, had been influenced, removed
- ☐ b. was established, was influenced, removed
- ☐ c. was established, has been influenced, removed
- ☐ d. was established, has been influenced, had removed

**Вопрос 7**

Пока нет ответа

Балл: 1,00

 Отметить вопрос

Редактировать вопрос

Provided you \_\_\_\_ you \_\_\_\_



Выберите один ответ:

- ☐ a. worry, succeed
- ☐ b. didn't worry, succeed
- ☐ c. don't worry, will succeed
- ☐ d. don't worry, succeed

**Вопрос 8**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

Jane told everybody that she \_\_\_\_\_ a meeting \_\_\_\_\_



Выберите один ответ:

- ☐ a. was having, tomorrow
- ☐ b. will have, the next day
- ☐ c. had, tomorrow
- ☐ d. was having, the next day

**Вопрос 9**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

The contract \_\_\_\_\_ be signed on each page



Выберите один ответ:

- ☐ a. needs
- ☐ b. is to
- ☐ c. can
- ☐ d. has to

**Вопрос 10**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

Lisa was driving into town when she \_\_\_\_\_ out of petrol



Выберите один ответ:

- ☐ a. was running
- ☐ b. run
- ☐ c. ran
- ☐ d. had run

**Вопрос 11**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

To take advantage of the interest-free use of the creditor's money you \_\_\_\_\_ pay your bill in full by the due date each month



Выберите один ответ:

- ☐ a. have to
- ☐ b. may
- ☐ c. should
- ☐ d. must

**Вопрос 12**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

I'm afraid you \_\_\_\_\_ design another project



Выберите один ответ:

- ☐ a. will have to
- ☐ b. are to
- ☐ c. must
- ☐ d. will be able

**Вопрос 13**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

"I didn't eat meat for a month."  
Justin said \_\_\_\_\_



Выберите один ответ:

- ☐ a. he hadn't eat meat for a month
- ☐ b. he didn't eat meat for a month
- ☐ c. he hadn't eaten meat for a month
- ☐ d. I didn't eaten meat for a month

**Вопрос 14**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

«Don't imagine it's an easy task to perform».  
He told me \_\_\_\_ an easy task to perform



Выберите один ответ:

- ☐ a. not to imagine it was
- ☐ b. don't imagine it's
- ☐ c. not imagine it is
- ☐ d. to imagine it was

**Вопрос 15**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

If Tom had enough money, he \_\_\_\_ to the USA long ago



Выберите один ответ:

- ☐ a. have gone
- ☐ b. went
- ☐ c. would go
- ☐ d. would have gone

**Вопрос 16**

Пока нет ответа

Балл: 1,00

 Отметить  
вопрос Редактировать  
вопрос

You say you require a minimum of six trainees, but would it be OK if there \_\_\_\_ five?



Выберите один ответ:

- ☐ a. were
- ☐ b. would be
- ☐ c. are
- ☐ d. will be

**Вопрос 17**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

Laurel said that she had been playing tennis for two hours only and she\_\_\_\_\_yet



Выберите один ответ:

- ☐ a. has not been tired
- ☐ b. is not tired
- ☐ c. had not been tired
- ☐ d. was not tired

**Вопрос 18**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

I'm unemployed at the moment. I \_\_\_\_\_ a job, but it's difficult



Выберите один ответ:

- ☐ a. have looked for
- ☐ b. am looking for
- ☐ c. look for
- ☐ d. will look for

**Вопрос 19**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

The equipment \_\_\_\_\_ by the engineer when it suddenly \_\_\_\_\_



Выберите один ответ:

- ☐ a. was being checked; had broken down
- ☐ b. was checked; broke down
- ☐ c. was being checked; broke down
- ☐ d. is being checked; broke down

**Вопрос 20**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

Mary said: "I can `t translate this article".

Mary said that she \_\_\_\_\_ article



Выберите один ответ:

- ☐ a. could translate the
- ☐ b. can translate that
- ☐ c. couldn `t translate that
- ☐ d. can `t translate this

**Вопрос 21**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

Someone \_\_\_\_\_ the photocopier again



Выберите один ответ:

- ☐ a. have broken
- ☐ b. broke
- ☐ c. has broken
- ☐ d. had broken

**Вопрос 22**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос**Give the synonym: to expand**



Выберите один ответ:

- ☐ a. to extend
- ☐ b. to investigate
- ☐ c. to oversee
- ☐ d. to develop

**Вопрос 23**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос**Give the synonym: uneducated**



Выберите один ответ:

- ☐ a. educated
- ☐ b. dangerous
- ☐ c. inconvenient
- ☐ d. ignorant

**Вопрос 24**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос**Give the synonym: rigid**



Выберите один ответ:

- ☐ a. rear
- ☐ b. specific
- ☐ c. stale
- ☐ d. inflexible

**Вопрос 25**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос**Give the antonym: to reduce**



Выберите один ответ:

- ☐ a. to ensure
- ☐ b. to cut
- ☐ c. to shorten
- ☐ d. to increase

**Вопрос 26**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос**Give the antonym: to provide**

Выберите один ответ:

- ☐ a. to establish
- ☐ b. to build
- ☐ c. to receive
- ☐ d. to ensure

Вопрос 27

Пока нет ответа

Балл: 1,00

Отметить  
вопрос



Редактировать  
вопрос

Give the antonym: gloomy

Выберите один ответ:

- ☐ a. warm
- ☐ b. bold
- ☐ c. cheerful
- ☐ d. destructive

Вопрос 28

Пока нет ответа

Балл: 1,00

Отметить  
вопрос



Редактировать  
вопрос

Our main task now is \_\_\_\_ our considerable strategic assets

Выберите один ответ:

- ☐ a. conceived
- ☐ b. to leverage
- ☐ c. approach
- ☐ d. solution

Вопрос 29

Пока нет ответа

Балл: 1,00

Отметить  
вопрос



Редактировать  
вопрос

Welding is one of methods of \_\_\_\_ metals and other material

Выберите один ответ:

- ☐ a. connecting
- ☐ b. fusion
- ☐ c. creating
- ☐ d. join

Вопрос 30

Пока нет ответа

Балл: 1,00

Отметить  
вопрос



Редактировать  
вопрос

In ancient times the world was \_\_\_\_ of as flat

Выберите один ответ:

- ☐ a. approach
- ☐ b. to leverage
- ☐ c. conceived
- ☐ d. solution

Вопрос 31

Пока нет ответа

Балл: 1,00

Отметить  
вопрос



Редактировать  
вопрос

The deep of the crater indicates the amount of \_\_\_\_ or the depth of fusion



Выберите один ответ:

- ☐ a. fusion
- ☐ b. increasing
- ☐ c. penetration
- ☐ d. melting

**Вопрос 32**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

The new library \_\_\_\_\_ by the Mayor next Saturday



Выберите один ответ:

- ☐ a. will have been opened
- ☐ b. will be opened
- ☐ c. is opened
- ☐ d. will open

**Вопрос 33**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

This writer is said \_\_\_\_ a new novel



Выберите один ответ:

- ☐ a. write
- ☐ b. written
- ☐ c. writing
- ☐ d. to have written

**Вопрос 34**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

I'm very busy today. There is a lot of work \_\_\_\_ for me to do



Выберите один ответ:

- ☐ a. waiting
- ☐ b. wait
- ☐ c. to wait
- ☐ d. waits

**Вопрос 35**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

The teacher said to the children: "Don't run in the corridors. The teacher told the children \_\_\_\_\_ in the corridors



Выберите один ответ:

- ☐ a. not to run
- ☐ b. not run
- ☐ c. will not run
- ☐ d. do not run

**Вопрос 36**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопросHe said: "I can speak English very well".  
He said that he \_\_\_\_ English very well



Выберите один ответ:

- ☐ a. could speak
- ☐ b. can speak
- ☐ c. will speak
- ☐ d. may speak

**Вопрос 37**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

If the world (not to know) Adam Smith, his work (not to give) generations of economists



Выберите один ответ:

- ☐ a. did not know, had not given
- ☐ b. would have not known, had not given
- ☐ c. would have not known, have not give
- ☐ d. had not known, would not have given

**Вопрос 38**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

"Listen to me, Mary! The officer says I cannot go abroad now! I wish I \_\_\_\_ the parking fine! I'm so sorry!"



Выберите один ответ:

- ☐ a. had paid
- ☐ b. paid
- ☐ c. pay
- ☐ d. would pay

**Вопрос 39**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

As you \_\_\_\_ already \_\_\_\_, we have a new designer in the department



Выберите один ответ:

- ☐ a. have heard
- ☐ b. has heard
- ☐ c. heard
- ☐ d. had heard

**Вопрос 40**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

Liz is from Edinburgh. She \_\_\_\_\_ there all her life



Выберите один ответ:

- ☐ a. lived
- ☐ b. lives
- ☐ c. is living
- ☐ d. has lived

**Вопрос 41**

Пока нет ответа

Балл: 1,00

 Отметить вопрос Редактировать вопрос

If you listen carefully, you \_\_\_\_\_ an owl in the trees over there

Выберите один ответ:

- ☐ a. will hear
- ☐ b. will have heard
- ☐ c. hear
- ☐ d. would hear