

Университет ИТМО

Факультет программной инженерии и компьютерной техники

Домашняя работа № 2 по дисциплине
"English"

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Student book

Exercise 2

2. The morning's drilling operation were proceeding without incident when, at noon, the alarm bells started ringing and hydraulic well valves closed automatically
3. Detonators were sending sound waves through rock layer as usual when, at 8.36, the underground sensors detected oil reservoirs.
4. Jaap were conducting research into small pockets of oil, when suddenly, in last year, he had eureka moment and invented snake well.
5. Drill bit was approaching the oil zone laterally when, without warning, water and gas broke into well.
6. We were preparing to close the romant well when, unexpectedly, our imaging software indicated network of small oil pockets.

Exercise 3

1. From 2001 to 2003 Armando was working in different jobs on oil rig of coast of Mexico.
2. Since 2003 Armando has been doing different kind of jobs, but always within petroleum industry.
3. From 2003 to 2006 he was studying for university degree in petroleum engineering.
4. From 2006 until the present he has been producing technical articles on oil exploration.
5. From 2006 to 2008 he was researching exploration techniques for engineering doctorate.
6. Since 2008 he has been specializing in consultancy and training for oil industry.
7. From 2008 to 2010 his consultancy business was expanding rapidly
8. Since 2010 he has been acting as consultant and trainer for the top petroleum companies.

Exercise 4

1. When Armando was working on oil rig of coast of Mexico?
2. During which period he has been doing different kind of jobs within petroleum industry?
3. When he was studying in university?
4. Since when he started producing technical articles on oil exploration?
5. How long was he researching exploration techniques for engineering doctorate?
6. When he started specializing in consultancy and training for oil industry?
7. During which period his consultancy business was expanding rapidly?
8. Since when he has been acting as consultant and trainer for the top petroleum companies?

Exercise 7

2. Laser light tube, which is coiled around ruby crystal, flashes intermittently.
3. Photons, which are emitted by flashes of light tube, excite atoms in ruby crystal.
4. Drill, which suspended from a swivel and hook, is lowered gently into the oil well.
5. Workers, who were organised into groups of four, began repairing drill pipe.
6. Drilling team, which are isolated on a rig in the middle of the desert, work in difficult conditions.

Exercise 9

1. look at
2. can be seen
3. let's look
4. like to move on
5. as you can
6. covered the main
7. hand over to
8. dealing with

Exercise 10

2. carried out
3. develop
4. noticed
5. was passing
6. commonly utilised
7. making
8. don't have
9. powered
10. weren't invented
11. were first designed
12. then manufactured
13. used

14. extracting
15. be found

Exercise 11

2. Laser beam is an optical device, which produces intense beam of coherent light with same wavelength that has many applications, for example cutting, welding and drilling.
3. Snake well drill is a flexible drill string, which is able to change direction vertically and horizontally as well as laterally to access multiple pockets of oil.
4. Tungsten is a metallic element which has very high melting point, which is useful for making heat-resistant components such as rocket engine nozzles.
5. Kevlar is a tough and flexible polymer fibre which is kilo for kilo stronger than steel, it is also lightweight and impact resistant, and it's used for manufacturing bullet-proof vests.
6. Fibre-optic cable is a group of optical fibres(threads) made of glass or polymer, which are bundled together in cable that capable to transmit large amounts of digital information at the speed of light.

Exercise 13

2. The improved laser drill for oil well should be able to not only cut into rock, but also melt it when necessary.
3. The new type of smoke detector has to be capable to detect smoke by 'seeing' it optically and by 'feeling' its heat.
4. The newly designed solar panel should be able to harvest solar power using nano-antennas to absorb the infrared radiation of the sun.
5. The updated internet search engine algorithm have got to be capable to process hundreds of thousands of pages in parallel every second.
6. The modified laser have to be able to target a signal cell in the human body without damaging the other cells around it.

Exercise 15

- Purpose of air dryer:

The machine has to be able to dry hands faster and more conveniently than other competitors.

- Description:

It should be able to use process of scraping water off hands like windscreen wiper to dry hands in 10-12 seconds by forcing cold air out at high speed.

- Performance

The airstream should be forced through apertures at 650 kph.

- Aesthetics

The machine should have long ultra-thin apertures that have to run along two blades.

- Ergonomics

Dryer has to be capable of consuming 80% less energy than conventional dryer

Dryer should be able to turn on automatically when user inserts hands

- Health

The dryer's filter should be capable of removing over 99.9% of bacteria from air.

Filtered air have to stay within the machine, not around the room.

- Safety

User's hands have to be completely dry after use.