

## I. READING

Nuclear fallout is the residue radioactive material moved into the upper atmosphere following a nuclear blast, so called because it "falls out" of the sky after the explosion and the shock wave have passed. It commonly refers to the radioactive dust and ash created when a nuclear weapon explodes. This radioactive dust is a highly dangerous kind of radioactive contamination.

There are two kinds of bursts called air and ground bursts which describe two possible kinds of fallout - global and local, and their consequences. An air burst (i.e. a nuclear detonation far above the surface) can eventually produce global fallout. A ground burst can produce possibly much more severe, local fallout. The radio-biological hazard of global fallout is long-term because of the potential accumulation of long-lived radioisotopes (such as strontium-90 and caesium-137) in the body as a result of ingestion of foods containing the radioactive materials. Local fallout is more concentrated and of far more immediate concern. Whenever individuals remain in a radiologically contaminated area, such contamination leads to an immediate external radiation exposure as well as a possible later internal hazard from inhalation and ingestion of radiocontaminants, such as the rather short-lived iodine-131, which is accumulated in the thyroid.

The dose that would be lethal to 50% of a population is a common parameter used to compare the effects of various fallout types or circumstances. Usually, the term is defined for a specific time, and limited to studies of acute lethality. The common time periods used are 30 days or less for most small laboratory animals and to 60 days for large animals and humans. Most people become ill after an exposure to 1 Gy (gray is the unit of the absorbed dose of ionizing radiation) or more. The fetuses of pregnant women are often more vulnerable to radiation and may miscarry, especially in the first trimester. Delayed effects may appear months to years after irradiation and include a wide variety of effects involving almost all tissues or organs. Some of the possible delayed consequences of radiation injury are life shortening, carcinogenesis, cataract formation, chronic radiodermatitis, decreased fertility, and genetic mutations.

During the Cold War, the governments of the U.S., the USSR, Great Britain, and China attempted to educate their citizens about surviving a nuclear attack by providing procedures on minimizing short-term exposure to fallout. This effort commonly became known as Civil Defense.

## 1. Based on its use in paragraph 1, what is the best definition of „shock wave“?

- ☒ A) An area of very high pressure moving through the air, earth, or water.
- ☐ B) A period of abnormal cold and darkness predicted to follow a nuclear war, caused by a layer of smoke and dust in the atmosphere blocking the sun's rays.
- ☐ C) The process or fact of irradiating or being irradiated.
- ☐ D) Radioactive waste material, for example from the use or reprocessing of nuclear fuel.

## 2. Based on its use in paragraph 1, what does the word „contamination“ refer to?

- ☒ A) pollution ☒ B) defilement
- ☐ C) contagion ☐ D) infection

## 3. As it is mentioned in the text, what does Civil Defense stand for?

- ☒ A) protecting the citizens of a state from military attacks and natural disasters
- ☐ B) obeying certain laws, demands, and commands of a government, or of an occupying international power
- ☐ C) focusing on worldwide issues such as climate change, deforestation, commercial genetic engineering, and etc.
- ☐ D) protecting human life and health, ensuring respect for all human beings

## 4. According to the information given in paragraph 4, what are the consequences of irradiation for human fetuses?

- ☐ A) decreased fertility ☐ B) radiation dermatitis
- ☐ C) radiation poisoning ☒ D) misbirth

## 5. Based on its use in paragraph 3, thyroid describes:

- ☒ A) a gland in the neck which secretes hormones regulating growth and development through the rate of metabolism
- ☐ B) an abdominal organ involved in the production and removal of blood cells in most vertebrates and forming part of the immune system
- ☐ C) a large gland behind the stomach which secretes digestive enzymes into the duodenum
- ☐ D) a tubular structure carrying blood through the tissues and organs; a vein, artery, or capillary

## II. COMMUNICATION AND VOCABULARY

## 6. A: I suggest we contact the agency again. Let's see what they can come up with this time.

B: .....

- ☐ A) How do you mean? ☒ B) Great idea! Let's do it!
- ☐ C) Really? You surprise me. ☐ D) Okay, thanks for that.

## 7. A: Have you ever taken any of these tests yourself?

B: .....

- ☐ A) Right, I see.
- ☐ B) Hmm, interesting question. I suppose there're lots of reasons.
- ☐ C) Mmm, interesting. So, how useful are the tests?
- ☒ D) Yes, I have. The results were fascinating.

8. A: We've fallen out with George.

B: .....

- ☒ A) Oh, what a pity! What happened?  
☒ B) I'm really sorry to hear that. What are you going to do?  
☐ B) For pity's sake!  
☒ Г) Oh, come on! He's never been your type.

9. A: Did you know that women, actually, are better drivers than men?

B: .....

- ☒ A) I can't believe that. You must be kidding!  
☐ B) Check this out.  
☐ B) Let's make impossible possible.  
☒ Г) How do you know?

10. .... are used for tennis, volleyball, football, basketball, hockey and badminton.

- ☐ A) Goals ☐ B) Bats  
☐ B) Wickets ☒ Г) Nets

11. .... occurs when people find themselves in conflict due to a fundamental incompatibility in their personalities.

- ☒ A) Personality clash ☐ B) Mental disorder  
☐ B) Peer pressure ☐ Г) Bullying

12. Many cultures have a ..... during the hottest part of the day.

- ☐ A) brunch ☐ B) fiesta  
☐ B) hors d'oeuvre ☒ Г) siesta

13. As ..... such as coal, gas, oil are being used up, governments are keen to find alternative sources of energy.

- ☐ A) nuclear fuels ☒ B) fossil fuels  
☐ B) synthetic fuels ☐ Г) liquid fuels

14. Typically, ..... works give the viewer the impression of movement, hidden images and vibrating patterns.

- ☐ A) pop art ☐ B) urban art  
☐ B) fine art ☒ Г) optical art

### III. Grammar

15. I ..... up early yesterday. It ..... a beautiful morning. The sun ..... and birds .....

- ☒ A) woke / was / was shining / were singing  
☐ B) was waking / had been / is shining / are singing  
☐ B) wake / was / shone / sang  
☐ Г) woke / was / shone / sang

16. Susan is an interesting person. She ..... many different jobs and ..... in many places.

- ☐ A) had done / had lived  
☐ B) has been having / has been living  
☒ B) has had / has lived  
☐ Г) is doing / is living

17. My train ..... at 11.30, so I need to be at the station by 11.15

- ☐ A) shall leave ☒ B) leaves  
☐ B) is leaving ☐ Г) is going to leave

18. .... Flight AB123 to .... Rome is now boarding at .... Gate 21.

- ☒ A) - / - / - ☐ B) the / - / the  
☐ B) A / - / a ☐ Г) The / - / a

19. „I couldn't find a job.” - Kate told me that she ..... find a job.

- ☐ A) couldn't ☐ B) wasn't able to  
☒ B) hadn't been able to ☐ Г) can't

20. Have you found the keys ..... you lost?

- ☐ A) who ☒ B) that  
☒ B) which ☒ Г) -

21. I don't know ..... they live near here.

- ☒ A) if ☐ B) do  
☒ B) whether ☐ Г) weather

22. We regret ..... you that your application has been unsuccessful.

- ☐ A) informing ☒ B) to inform  
☐ B) to have informed ☐ Г) having been informed

23. The hotel was ..... expensive than I expected.

- ☒ A) a lot more ☒ B) less  
☒ B) a bit more / a little more ☒ Г) much more

24. I don't go out ..... you.

- ☐ A) as more as ☐ B) as many as  
☒ B) as often as ☒ Г) as much as

25. I haven't got ..... friends.

- ☒ A) a lot of ☐ B) much  
☒ B) many ☒ Г) lots of

26. Helen wants to go to ..... university when she leaves ..... school.

- ☐ A) the / the ☒ B) - / -  
☐ B) a / the ☐ Г) an / a

27. .... Corsica is ..... island in ..... Mediterranean.

- ☒ A) - / an / the ☐ B) The / the / the  
☐ B) A / the / the ☐ Г) - / an / a

28. She asked ..... in my present job.

- ☐ A) whether had I been working  
☐ B) how long had I been working  
☒ B) how long I had been working  
☐ Г) if I had been working

29. course / the / September / in / very / is / which / begins / difficult.

- ☒ A) The course, which is very difficult, begins in September.  
☐ B) The course is very difficult, which begins in September.  
☒ B) The course, which begins in September, is very difficult.  
☐ Г) Very difficult the course, which in September begins, is.

30. I pretended ..... the paper.

- ☐ A) to read ☒ B) to be reading  
☐ B) reading ☐ Г) read