READING PASSAGE 1

Question 1-4:
1. iv (first 4 lines: “An intellectual breakthrough, brilliant though it may be, does not automatically ensure that the transition is made from theory to practice. Despite the fact that rockets had been used sporadically for several hundred years, they remained a relatively minor artefact of civilisation until the twentieth century. Prodigious efforts”) )

2. I (first 7 lines: “A simple analogy can help us to understand how a rocket operates. It is much like a machine gun mounted on the rear of a boat. In reaction to the backward discharge of bullets, the gun, and hence the boat, move forwards. A rocket motor’s ‘bullets’ are minute, high-speed particles produced by burning propellants in a suitable chamber. The reaction to the ejection of these small particles causes the rocket to move forwards. There is evidence that the reaction principle was applied practically well before the rocket was invented. In his Noctes Atticae or Greek Nights, Aulus”) )

3. V (line 10-21: “explosive grenades and possibly cannons to repel their enemies. One such weapon was the ‘basket of fire’ or, as directly translated from Chinese, the ‘arrows like flying leopards’. The 0.7 metre-long arrows, each with a long tube of gunpowder attached near the point of each arrow, could be fired from a long, octagonal-shaped basket at the same time and had a range of 400 paces. Another weapon was the ‘arrow as a flying sabre’, which could be fired from crossbows. The rocket, placed in a similar position to other rocket—propelled arrows, was designed to increase the range. A small iron weight was attached to the 1.5m bamboo shaft, just below the feathers, to increase the arrow’s stability by moving the centre of gravity to a position below the rocket. At a similar time, the Arabs had developed the ‘egg which moves and burns’. This ‘egg’ was apparently full of gunpowder and stabilised by a 1.5m tail. It was fired using two rockets attached to either side of this tail.”)

4. Iii (first 3 lines: “It was not until the eighteenth century that Europe became seriously interested in the possibilities of using the rocket itself as a weapon of war and not just to propel other weapons. Prior to this, rockets were used only in pyrotechnic displays. The”)

Question 5-6:
5. B (para A, line 3-4: “it wasn't until the discovery of the reaction principle, which was the key to space travel and so represents one of the great milestones in the history of scientific”)
6. D (para E, line 9-11: “diameter with sharp points at the top and a 3m—long bamboo guiding stick’. In the early nineteenth century the British began to experiment with incendiary barrage rockets. The British rocket differed from the Indian version in that it was completely”)

Question 7-10:
7. A (para D, first 2 lines: “The invention of rockets is linked inextricably with the invention of ‘black powder’. Most historians of technology credit the Chinese with its discovery. They base their”)

8. A (para D, line 10-15: “explosive grenades and possibly cannons to repel their enemies. One such weapon was the ‘basket of fire’ or, as directly translated from Chinese, the ‘arrows like flying leopards’. The 0.7 metre-long arrows, each with a long tube of gunpowder attached near the point of each arrow, could be fired from a long, octagonal-shaped basket at the same time and had a range of 400 paces. Another weapon was the ‘arrow as a flying sabre’, which could be fired from crossbows. The rocket, placed in a similar’”)

9. E (para E, line 4-6: “incentive for the more aggressive use of rockets came not from within the European continent but from far-away India, whose leaders had built up a corps of rocketeers and used rockets successfully against the British in the late eighteenth century.”)

10. B (para E, line 14-16: “way that it could be firmly attached to the body of the rocket. The Americans developed a rocket, complete with its own launcher, to use against the Mexicans in the mid-nineteenth century. A long cylindrical tube was propped up by two sticks”)

Question 11-14:
11. B (para D, line 10-14: “explosive grenades and possibly cannons to repel their enemies. One such weapon was the ‘basket of fire’ or, as directly translated from Chinese, the ‘arrows like flying leopards’. The 0.7 metre-long arrows, each with a long tube of gunpowder attached near the point of each arrow, could be fired from a long, octagonal-shaped basket at the same time and had a range of 400 paces. Another weapon was the ‘arrow as’”)

12. E (para D, last 3 lines: “the rocket. At a similar time, the Arabs had developed the ‘egg which moves and burns’. This ‘egg’ was apparently full of gunpowder and stabilised by a 1.5m tail. It was fired using two rockets attached to either side of this tail”)

2
13. F (para E, line 6-9: “and used rockets successfully against the British in the late eighteenth century. The Indian rockets used against the British were described by a British Captain serving in India as ‘an iron envelope about 200 millimetres long and 40 millimetres in diameter with sharp points at the top and a 3m—long bamboo guiding stick’. In the”)

14. G (para E, line 10-14: “early nineteenth century the British began to experiment with incendiary barrage rockets. The British rocket differed from the Indian version in that it was completely encased in a stout, iron cylinder, terminating in a conical head, measuring one metre in diameter and having a stick almost five metres long and constructed in such a way that it could be firmly attached to the body of the rocket. The Americans”)

READING PASSAGE 2

Question 15-17:
15. B (para 2, first 5 lines: “In addition to being responsible for more than 85 per cent of lung cancels, smoking is associated with cancers of, amongst others, the mouth, stomach and kidneys, and is thought to cause about 14 per cent of leukemia and cervical cancers. In 1990, smoking caused more than 84,000 "deaths, mainly resulting from such problems as pneumonia, bronchitis and influenza. ‘Smoking, it is”)

16. A (para 7, line 3-4: “Carbon monoxide, for example, competes with oxygen in red blood cells and interferes with the blood’s ability to deliver me-giving oxygen to, the heart”)

17. C (para 7, line 5-6: “Nicotine and other toxins in cigarette smoke activate small blood cells called platelets, which increases the likelihood of blood clots, thereby affecting blood”)

Question 18-21:
18. NO (para 2, last 4 lines: “from such problems as pneumonia, bronchitis and influenza. ‘Smoking, it is believed, is responsible for 30 per cent of all deaths from cancer and clearly represents the most important preventable cause of cancer in countries like the United State today”)

19. NOT GIVEN

20. YES (para 4, last 3 lines: “years. It has been calculated that 17 per cent of cases of lung cancer can be attributed to high levels of exposure to second-hand tobacco smoke during childhood and adolescence.”)

21. NOT GIVEN
Question 22-24:
22. E (para 5, first 3 lines: “A more recent study by researchers at the University of California at San Francisco (UCSF) has shown that second-hand cigarette smoke does more harm to non-smokers than to smokers. Leaving aside the philosophical question of”)

23. G (para 5, last 3 lines: “whether anyone should have to breathe someone else's cigarette smoke, the report suggests that the smoke experienced by any people in their daily lives is enough to produce substantial adverse effects on person’s heart and lungs.”)

24. H (para , first 4 lines: “The report, published’ in the Journal of the American medical Association (AMA), was based on the researchers’ own earlier research but also includes a review of studies over the past few years. The American Medical Association represents about half of all US doctors and is a strong opponent of ‘smoking’”)

Question 25-28:
25. A (para 6, line 3-7: “review of studies over the past few years. The American Medical Association represents about half of all US doctors and is a strong opponent of ‘smoking. The study suggests that people who smoke cigarettes are continually damaging their cardiovascular system, which adapts in, order to compensate for the effects of smoking. it further states that people who do not smoke do not have”)

26. B (para 5, last 4 lines: “to non-smokers than to smokers. Leaving aside the philosophical question of whether anyone should have to breathe someone else's cigarette smoke, the report suggests that the smoke experienced by any people in their daily lives is enough to produce substantial adverse effects on person’s heart and lungs”)

27. B (para 9, last 3 lines: “be similar to that being taken against illegal drugs and AIDS (SIDA). The UCSF researchers maintain that the simplest and cost-effective action is to establish smoke-free work places, schools and public states”)

28. C (para 3, line 1-6: “Passive smoking, the breathing in of the side-stream smoke from the burning of tobacco between puffs or of the smoke exhaled by a smoker, also cause a serious health risk. A reported published in 1992 by the US Environment Protection Agency (EPA) emphasized the health dangers, especially from side-stream smoke. This type of smoke contains more, smaller particles and is therefore more likely to be deposited deep in the lungs.”)
READING PASSAGE 3

Question 29-33:

29. iv (para C, line 1-9: “The myth of scientific method is that it is inductive: that the formulation of scientific theory starts with the basic, raw evidence of the senses — simple, unbiased, unprejudiced observation. Out of these sensory data — commonly referred to as ‘facts’ — generalisations will form. The”)

30. vii (para D, line 10-16: “hypothesis. Hypotheses provide the initiative and incentive for the inquiry and influence the method. It is in the light of an expectation that some observations are held to be relevant and some irrelevant, that one methodology is chosen and others discarded, that some experiments are conducted and”)

31. iii (para E, first 5 lines: “Hypotheses arise by guesswork, or by inspiration, but having been formulated they can and must be tested rigorously, using the appropriate methodology. If the”)

32. v (para F, first 8 lines: “So don't worry if you have some idea of what your results will tell you before you even begin to collect data; there are no scientists in existence who really wait until they have all the evidence in front of them before they try to work out what it might possibly mean. The”)

33. vi (para G, line 6-23: “inevitable fashion. The hypothetico-deductive method describes the logical approach to much research work, but it does not describe the psychological behaviour that brings it about. This is much more holistic — involving guesses, reworkings, corrections, blind alleys and above all inspiration, in the deductive as well as the hypothetic component — than is immediately apparent from reading the final thesis or published papers. These have been, quite properly, organised into a more serial, logical order so that the worth of the output may be evaluated independently of the behavioural processes by which it was obtained.”)

Question 34-35:

34. B (para B, first 5 lines: “It is essential that you, as an intending researcher, understand the difference between these two interpretations of the research process so that you do not become”)

35. F (para F, first 4 lines: “So don't worry if you have some idea of what your results will tell you before you even begin to collect data; there are no scientists in”)

5
Question 36-39:
36. YES (para A, line 6-9: “taken by Karl Popper in The Logic of Scientific Discovery (1972, 3rd edition) that the nature of scientific method is hypothetico-deductive”)

37. NO (para E, line 10-15: “your hypothesis. If the predictions turn out to be correct then your hypothesis has been supported and may be retained until such time as some further test shows it not to be correct. Once you have arrived at”)

38. NOT GIVEN
39. YES (para G, line 6-18: “inevitable fashion. The hypothetico-deductive method describes the logical approach to much research work, but it does not describe the psychological behaviour that brings it about. This is much more holistic — involving guesses, reworkings, corrections, blind alleys and above all inspiration, in the deductive as well as the hypothetic component — than is immediately apparent from reading the final thesis or published papers. These have been, quite”)

Question 40:
40. D