READING COMPREHENSION – 5

Read the following passages carefully and answer the questions that follow:

Passage-1

This isn't an obvious way for people to think. Looking at the universe through our anthropocentric eyes, we can't help but view things in terms of causes, purposes and natural ways of being. In ancient Greece, Plato and Aristotle saw the world teleologically: they believed that rain falls because water wants to be lower than air, animals (and slaves) are naturally subservient to human citizens, etc.

But from the start, there were sceptics. Democritus and Lucretius were early naturalists who urged us to think in terms of matter obeying rules rather than chasing final causes and serving underlying purposes. But it wasn't until our understanding of physics was advanced by thinkers such as Avicenna, Galileo and Newton that it became reasonable to conceive of the universe evolving under its own power, free of guidance and support from anything beyond itself. Theologians sometimes invoke 'sustaining the world' as a function of God. But the world doesn't need to be sustained, it can simply be. Pierre-Simon Laplace articulated the very specific kind of rule that the world obeys: If we specify the complete state of the universe (or any isolated part of it) at some particular instant, the laws of physics tell us what its state will be at the very next moment. Applying those laws again, we can figure out what it will be a moment later. And so on, until (in principle, obviously) we can build up a complete history of the universe. This is not a universe that is advancing toward a goal; it is one that is caught in the iron grip of an unbreakable pattern. This view of the processes at the heart of the physical world has important consequences for how we come to terms with the social world. Human beings like to insist that there are reasons why things happen. The death of a child, the crash of an airplane, or a random shooting must be explained in terms of the workings of a hidden plan. Nature teaches us otherwise. Things happen because the laws of nature say they will – because they are the consequences of the state of the universe and the path of its evolution. Life on Earth doesn't arise in fulfilment of a grand scheme but as a by-product of the increase of entropy in an environment very far from equilibrium. Our impressive brains don't develop because life is guided toward greater levels of complexity and intelligence but from the mechanical interactions between genes, organisms and their surroundings. None of which is to say that life is devoid of purpose and meaning. Only that these are things we create, not things we discover out there in the fundamental architecture of the world. The world keeps happening, in accordance with its rules; it's up to us to make sense of it and give it value.

1. What is the author's purpose in writing this passage?
   A) to communicate that the teleological and theological views of the universe are wrong.
   B) to explain how the universe works and how we should see ourselves in relation to it.
   C) To prove that the universe obeys certain rules, which human beings should obey as well
   D) To tell the history of how thinkers through the ages have viewed the workings of the universe

2. Which of the following statements would the author agree with?
   A) Scepticism was nearly unknown among the ancient Greeks.
   B) Human beings should be able to feel that the universe is not indifferent to their joys and sorrows.
   C) With a certain amount of effort, the theological and scientific worldviews can be reconciled.
   D) Even if we knew the complete state of the universe and all the laws governing it, it would not be practically feasible to know its entire history.

3. Which of the following best describes the author's tone?
   A) Laudatory B) Sceptical C) Didactic D) Detached

Passage-2

We should appreciate natural language and the messy qualities that give it so much flexibility and power, and that make it so much more than a simple communication device. Its ambiguity and lack of precision allow it to serve as an instrument of thought formulation, of experimentation and discovery. We don't have to know exactly what we mean before we speak; we can figure it out as we go along. Or not. We can talk just to talk, to be social, to feel connected, to participate. At the same time natural language still works as an instrument of thought transmission, one that can be made extremely precise and reliable when we need it to be, or left loose and sloppy when we can't spare the time or effort.

When it is important that misunderstandings be avoided, we have access to something that artificial language inventors have typically disregarded or even disdained: 'mere' conventional agreement, a shared culture in which definitions have been established by habit. It is convention that allows us to approach a high level of precision in academic and scientific papers or legal documents. Of course, to benefit from the precision, you must be 'in on' the conventional agreements on which those modes of communication depend. That's why when specialists want to communicate with a general or lay audience – those who don't know the conventions – they have to rely on techniques such as slowing down, answering questions, explaining terms, illustrating with examples. Convention is a faster, more efficient instrument of meaning transmission, as long as you take the trouble to learn the conventions.

When inventors of artificial languages try to bypass convention – to make a language that is 'self-explanatory' or 'universal' – they either make a less efficient communication tool, or take away too much flexibility by over-determining meaning. When they try to take away culture, the place where linguistic conventions are made, they have to substitute

something else – like thousands of grammar rules. There are types of communication, such as the 'language' of music, that may allow us to access some kind of universal meaning or emotion, but give us no way to say, 'I left my purse in the car. ' There are unambiguous systems, such as computer programming languages, that allow us to instruct a machine to perform a certain task, but we must be so explicit about meanings we can normally trust to inference or common sense that it can take hours or days of programming work to achieve even the simplest results. Natural languages may be less universal than music and less precise than programming languages, but they are far more versatile, and useful in our everyday lives, than either.

Ambiguity, or fuzziness of meaning, is not a flaw of natural language but a feature that gives it flexibility and that, for whatever reason, suits our minds and the way we think. Likewise, the fact that languages depend on arbitrary convention or cultural habit is not a flaw but a feature that allows us to rein in the fuzziness by establishing agreed-upon meanings at different levels of precision. Language needs its 'flaws' in order to do the enormous range of things we use it for.

4. Choose a suitable title for this passage
   A) Natural vs. Artificial Language
   B) Conventions in Natural Language
   C) The Requisite Flaws of Natural Language
   D) Ambiguity and Convention: Flaws or Features

5. According to the passage, the inventors of artificial languages would agree with which of the following statements?
   A) Culture is vital as a basis for language.
   B) It is important for language not to be universally understood.
   C) Conventional agreement is useful as it allows a high degree of precision in language.
   D) None of the above

6. Choose the combinations that correctly match the type of language with one of its features.
   I. The language of music – universal
   II. Artificial language – thousands of grammar rules
   III. Computer programming languages – based on common sense

   A) [i] and [ii] B) [i] and [iii] C) [ii] and [iii] D) [i], [ii] and [iii]

Passage-3

A flash of sapphire, a flutter of wings, and the tiny bird – or was it an insect? – vanishes, the briefest mirage. Moments later it reappears, this time at a better angle. It's a bird all right, a thumb-size dervish with hyperkinetic wings that can beat 80 times a second, producing the faintest hum. Tail feathers paddle, steering gently in three dimensions. As the bird stares into the trumpet of a bright orange flower, a thread-thin tongue flickers from its needle beak. A sunbeam glances off its iridescent feathers, the reflected colour as dazzling as a gemstone hung in a sunny window. Little wonder hummingbirds inspire heartfelt affection and stuttering efforts at description. Even reserved scientists can't resist such words as 'beautiful', 'stunning' and 'exotic'. A greater wonder is that the seemingly fragile hummingbird is one of the toughest beasts in the animal kingdom. Some 330 species thrive in diverse and often brutal environments: from Alaska to Argentina; from the Arizona desert to the coast of Nova Scotia; from the lowland forests of Brazil to the 4,600-metre-plus snow line of the Andes. Mysteriously, the birds are found only in North and South America. 'They're living at the edge of what's possible for vertebrates, and they're mastering it,' says Karl Schuchmann, a German ornithologist, who knows of a captive hummer that lived 17 years. 'Imagine the durability of an organism of only five or six grams to live that long,' he says. Its cranberry-size heart, which averages 500 beats a minute (while perching!), would have thumped four and a half billion times, nearly twice the total for a 70-year-old person. Yet these little birds are durable only in life. In death their delicate, hollow bones almost never fossilize. This was one reason for the astonishment that greeted the recent discovery of a jumble of 30-million-year-old fossil bird remains that may include an ancestral hummingbird. Like modern hummers, the fossil specimens had long, slender bills and shortened upper wing bones topped by a knob that may have let them rotate in the shoulder socket for hovering flight. The other surprise was where the fossils were found: in southern Germany, far from modern hummingbird territory. To some scientists, the discovery shows that hummingbirds once existed outside the Americas, then went extinct. Or maybe the fossils weren't true hummingbirds. Sceptics, including Schuchmann, argue that other groups of birds evolved hummingbird-like characteristics many times through the eons. True hummingbirds, says Schuchmann, evolved in Brazil's eastern forests, where they competed with insects for flower nectar. 'They're a bridge between the insect and bird worlds,' says Doug Altshuler, who studies hummingbird flight. He has examined hummingbirds' flapping motion and observes that the electrical impulses that drive their wing muscles look more like those of insects than those of birds, which may explain why hummingbirds produce so much power per stroke – more, per unit mass, than any other vertebrate. Altshuler has also analysed their neural pathways, which function with the lightning speed of the most agile birds, such as their closest cousins the swifts. 'They're amazing little Frankensteins,' Altshuler says. They are certainly fearsome – gram for gram, perhaps the most confrontational players in nature. 'I think the hummingbird vocabulary is a hundred percent swear words,' says Sheri Williamson, a naturalist. Their aggression stems from fierce territorial instincts shaped by their need to sip nectar as often as every few minutes. Hummingbirds compete by challenging and bullying each other. Face-to-face in midair, they post up and pirouette, dive to the grass, and paddle backwards in dances of dominance that end as suddenly as they begin. 'You can't learn about

hummingbirds and not get sucked in,' Sheri Williamson says. 'They're seductive little creatures. I resisted them, but now I've got hummingbird blood pumping through my veins. '

7. All of the following statements about hummingbirds are true according to this passage, EXCEPT:
   A) Hummingbirds are found only in the Americas.
   B) Hummingbirds' hearts weigh only five to six grams.
   C) Hummingbirds need to feed almost constantly.
   D) Hummingbirds can survive in a vast variety of environments.

8. Why does Doug Altshuler call hummingbirds 'a bridge between the insect and bird worlds'?
   A) The way hummingbirds' wing muscles are powered resembles those of insects, rather than those of birds.
   B) Hummingbirds' wingstrokes are much more powerful than those of other birds, and much more like those of insects.
   C) The neural pathways of hummingbirds function as fast as those of only the fastest birds, and more like those of insects.
   D) Hummingbirds share many characteristics with insects: their tiny size, the humming sound produced by their wings, and their diet of flower nectar.

9. "They're amazing little Frankensteins" – Which of the following most likely prompted Altshuler to describe hummingbirds as 'little Frankensteins"?
   A) Enigmatic nature of their evolution which left hardly any fossil remains behind.
   B) Their seductive nature which draws one in as soon as one starts studying about them.
   C) Their monstrous energy levels in spite of their insignificant size
   D) Their fierce territorial instincts which makes them aggressive.

Passage-4

Most people have heard about the left-brain/right-brain idea. Maybe they have been told they're too 'left-brained' or want to be more 'right-brained'. The idea has made it into everyday parlance, has infiltrated schools everywhere, sells a lot of self-help books, and has even been used as the basis of scientific theories, for example with regards to gender differences in the brain. Yet it is an idea that makes no physiological sense.

Scientific lingo about how the two sides of the brain - the hemispheres - function has permeated mainstream culture, but the research is often wildly over-interpreted. The notion that the two hemispheres of the brain are involved in different 'modes of thinking' and that one hemisphere dominates over the other has become widespread, in particular in schools and the workplace. There are numerous websites where you can find out whether you are left-brained or right-brained and which offer to teach you how to change this.

This is pseudo-science and is not based on knowledge of how the brain works. While it is true that the brain is made up of two hemispheres and one hemisphere is often initially active before the other during actions, speech and perception, both sides of the brain work together in almost all situations, tasks and processes. The hemispheres are in constant communication with each other and it simply is not possible for one hemisphere to function without the other hemisphere 'joining in', except in certain rare patient populations. In other words, you are not right- or left-brained. You use both sides of the brain.

Some people have proposed that education currently favours left-brain modes of thinking, which are supposed to be logical, analytical and accurate, while not putting enough emphasis on right-brain modes of thinking, which are supposed to be creative, intuitive, emotional and subjective. Certainly education should involve a wide variety of tasks, skills, learning and modes of thinking. However, it is just a metaphor to refer to these as right-brain or left-brain modes. Patients who have had a lesion in their right hemisphere are not devoid of creativity. Patients with a damaged left hemisphere might be unable to produce language (which relies on the left hemisphere in over 90% of the population) but can still be analytical.

Whether left-brain/right-brain notions should influence the way people are educated is highly questionable. There is no validity in categorizing people in terms of their abilities as either a left-brain or a right-brain person. In terms of education, such categorization might even act as an impediment to learning, not least because it might be interpreted as being innate or fixed to a large degree. Yes, there are large individual differences in cognitive strengths. But the idea that people are left-brained or right-brained needs to be retired.

10. Choose a suitable title for this passage.
    A) The Left-brain/Right-brain Dilemma
    B) The Myth of the Left-brain/Right-brain Distinction
    C) The Left-brain/Right-brain Divide: True or False?
    D) Are you Left-brained or Right-brained?

11. What is the style of this passage?
    A) Descriptive B) Narrative C) Argumentative D) Analytical

12. There is no difference between the functions of the right and left hemispheres of the human brain. Based on this passage, we can say that this statement is:
    A) Probably true. B) Definitely true. C) Probably false. D) Definitely false.

13. According to the author, how should the concept of left-brain/right-brain thinking be used in education?
    A) Educational policies should not differentiate between left-brain and right-brain thinking, because people have trouble switching from one kind to the other.
    B) Educational policies should focus on left-brain/right-brain modes of thinking only in metaphorical terms, not as literal descriptions of the working of the brain.
    C) Educators should not categorize people as being left-brained or right-brained, as it wrongly suggests that such differences are innate and unchangeable.
    D) Educators should use the left-brain/right-brain categorization with caution, as it could be an impediment to learning because some people can think only in one mode.

Passage- 5

If you think that humans are destroying the planet in a way that's historically unprecedented, you're suffering from a species-level delusion of grandeur. We're not even the first creatures to pollute the Earth so much that other creatures go extinct. Weirdly, it turns out that that's a good thing. If it hadn't been for a number of upstart microbes causing an environmental apocalypse over 2 billion years ago, human beings and our ancestors never would have evolved. Indeed, Earth's history is full of apocalyptic scenarios where mass death leads to new kinds of life. To appreciate how these strange catastrophes work, we'll have to travel back in time to our planet's beginnings.

Earth is roughly 4. 5 billion years old, and for most of its life the atmosphere would have been noxious for humans and all the creatures that live here now. Vast acidic oceans roiled in what today's environmental scientists would call an extreme greenhouse climate: the air was superheated and filled with methane and carbon. Our planet's surface, now covered in cool water and crusty soil, was bubbling with magma. The solar system had formed relatively recently, and chunks of rock hurtled between the young planets - often landing on them with fiery explosions. It was on this poisonous, inhospitable world that life began.

About 2. 5 billion years ago, early in an eon that geologists call the Proterozoic, a few hardy microbes who could breathe in this environment drifted to the surface of the oceans. These microbes, called cyanobacteria (or blue-green algae), knit themselves into wrinkled mats of vegetation. They looked like black, frothy coats of slime on the water, trailing long, feathery tendrils beneath the waves. All that remains of this primordial ooze are enigmatic fossils that hide inside a distinctive type of ancient, spherical rock called a stromatolite. If you slice a stromatolite down the middle, you'll see thin, dark lines curving across its inner surface like the whorls in a fingerprint - these are all that remain of those algal mats.

Knowing when the oldest stromatolites were created helps us date an event which changed Earth forever. The mats of algae that became stromatolites weren't just methane-loving scum. They were also filling the atmosphere with a gas that was deadly to them: oxygen. This is how the first environmental disaster on Earth began.

Just like plants today, ancient blue-green algae nourished themselves using photosynthesis, a molecular process that converts light and water into chemical energy. Cyanobacteria were the first organisms to evolve photosynthesis, and they did it by absorbing photons from sunlight and water molecules from the ocean. Water molecules are made up of three atoms: two hydrogen atoms and one oxygen atom (hence the chemical formula H2O). To nourish themselves, the algae used photons to smash water molecules apart, taking the hydrogen to use as an energy source and releasing the oxygen molecules. This proved to be such a winning adaptation to Earth's primordial environment that cyanobacteria spread across the face of the planet, eventually exhaling enough oxygen to set off a cascade of chemical processes that leached methane and other greenhouse gases from the atmosphere. The dominant form of life on Earth ultimately released so much oxygen that it changed the climate dramatically, soon extinguishing most of the life-forms that thrived in a carbon-rich atmosphere.

14. In the first sentence of the passage, the author criticizes human beings':
    A) Hubris. B) Neurosis. C) Genesis. D) Catharsis

15. How did the cyanobacteria of the Proterozoic eon cause an environmental apocalypse?
    A) By releasing so much methane and carbon that an extreme greenhouse climate resulted
    B) By releasing so much methane and carbon and using up so much water that the oceans turned acidic
    C) By releasing so much oxygen that they poisoned themselves and all other life forms on Earth
    D) By releasing so much oxygen that it reduced the greenhouse gases in the atmosphere, causing drastic climate change

16. What are stromatolites?
    A) Mats of cyanobacteria that used to float on the surface of the primordial oceans
    B) Fossils of blue-green algae that used to be found in the primordial oceans
    C) Ancient rocks that contains fossils of the cyanobacteria that used to float in primordial oceans
    D) The thin, dark lines found on the inside of ancient rocks that are the remains of ancient blue-green algae from the primordial oceans

17. Which of the following can be definitely inferred from this passage?
    A) Life began on Earth sometime between 2. 5 and 4. 5 billion years ago.
    B) Life could not have begun on Earth if it had initially had an oxygen-rich atmosphere as it does now.
    C) Cyanobacteria, who first evolved photosynthesis, were the ancestors of plants, who use the same mechanism today.

D) It is acceptable for human beings to pollute the Earth so much that other creatures go extinct, because such events in the past are what led to us evolving.

Passage-6

Why are science fiction and fantasy so often grouped together? Obviously, because they share readership and so are well placed together in book stores. And, of course, some of us write both! Still, there are very real differences.

Fantasy is the mother genre - e. g. Gilgamesh, the Iliad, Odyssey and most religions. Science fiction is the brash offshoot. All literature has deep roots in fantasy, which in turn emerges from the font of our dreams.

Having said that, what is my definition of the separation? I think it is very basic, revolving around the notion of human improvability: Do you believe it is possible for children to learn from the mistakes of their parents?

For all the courage and heroism shown by fantasy characters across 4000 years of great, compelling dramas - nothing ever changes! In The Lord of the Rings, Aragorn may be a better king than Sauron would have been - but he's still a king. And the palantir on his desk that lets him see faraway places and converse with viceroys across the realm is still reserved for the super elite. No way are we going to see mass-produced palantirs appearing on every peasant's tabletop from Rohan to the Shire. (The way our civilization plopped such a miracle on your tabletop.)

Fantasy has its attractions. Something about feudalism resonates, deep inside us. We fantasize about being the king or wizard. The core thing about fantasy tales is that, after the adventure is done and the bad guys are defeated . . . the social order stays the same. Science fiction, in sharp contrast, considers the possibility of learning and change.

Not that children always choose to learn from their parent's mistakes! When they don't, when they are obstinately stupid and miss opportunities, you can get a sci-fi tragedy - which is far more horrible than anything 'tragic' in Aristotle's Poetics. Aristotle says tragedy is Oedipus writhing futilely against fate. A sci-fi tragedy portrays people suffering, same as in older tragedies . . . but with this crucial difference: things did not have to be this way. It wasn't 'fate'. We - or the characters - could have done better. There was, at some point, a chance to change our own destiny.

Even if we make kids who are better than us (which is our goal, after all), their Startrekkian heirs will still have some problems. Why insist that our descendants have to fret over the same ones? Can't they assume the solutions we find, take them for granted, and move on to new, interesting issues of their own? Isn't that what we did?

The implicit assumption in most fantasy is that the form of governance that ruled most human societies since the discovery of grain must always govern us. Oh, kingly rulers may topple and shift, but the abiding assumptions and social castes generally do not. And when an author resists that assumption, he/she is writing science fiction, whether or not there are wizards or demons in it.

Anne McCaffrey says 'Never call me a fantasy author! I write science fiction!' Indeed. Despite the dragons and lords and medieval craft and renaissance fair stuff in her books, her characters have heard of flush toilets and universities and democracy . . . and they want those things back! They want starships. And Anne is going to let them earn those things - she is a science fiction author.

18. What, according to the author, is the primary difference between fantasy and science fiction?
    A) Fantasy is an old genre rooted in mythology and ancient literature, while science fiction is its new, brash offshoot.
    B) Fantasy remains mired in the past, while science fiction looks to the future for its inspiration.
    C) Fantasy depicts an unchanging social order while science fiction suggests a possibility of progress and change.
    D) In fantasy, children face the same problems as their parents, while in science fiction, children are unable to learn from their parent's mistakes.

19. The example from The Lord of the Rings is meant to show that in fantasy:
    A) The elite control the means of communication.
    B) Power of any kind remains firmly in the hands of the elite.
    C) Only kings and the elite are allowed to own magical items.
    D) The peasants have no chance of sharing the riches of the elite.

20. According to the author, Anne McCaffrey:
    A) Should allow her characters to improve their lives.
    B) Dislikes being pigeonholed as a fantasy or science fiction author.
    C) Is a science fiction author, despite the apparent fantasy aspects of her books.
    D) Intends to change her writing style so that it can be categorized as science fiction and not fantasy.

21. The author of this passage is most likely to be:
    A) A writer of fantasy.
    B) A writer of science fiction.
    C) A writer of both fantasy and science fiction.
    D) Not a writer at all.

Answer Key:

1. B	2. D	3. C	4. C	5. D	6. A	7. B	8. A	9. C	10. B	11. C
12. D	13. C	14. A	15. D	16. C	17. A	18. C	19. B	20. C	21. C	