

READING COMPREHENSION**Passage 1**

In May 2014, when India made the unprecedented gesture of inviting the heads of all SAARC member-countries (a) the oath taking ceremony of its new Prime Minister, hopes were raised that (b) new beginning for regional cooperation in South Asia was now (c) the offing. A few months later, both days of the 18th SAARC Summit were spent speculating about the possibility of a breakthrough in the cold vibes shared (d) the heads of India and Pakistan. While the Summit was rescued (e) a last-minute agreement on energy cooperation, two other agreements, on road and rail connectivity (f) left languishing.

The much-expected revival of SAARC did not happen; but there was a hint among SAARC members of moving ahead with interested partners. The first month of 2015 has seen interesting developments with the West Bengal Chief Minister accepting Bangladesh's invitation for a visit and a surprise outcome of presidential elections in Sri Lanka. What do these three developments mean for South Asia?

First, it is time to reformulate the idea of regional cooperation in South Asia as open and differentiated regionalism. Member-countries should come together in smaller sub-regional groups with a focussed agenda comprising both common challenges and aspirations that are cross-border in nature. Once they are successful in attaining the limited agenda, the aims and objectives can expand and so can the membership as non-members would begin incurring the costs of non-accession. In due course, sub-regionalism would serve as a preparatory ground for merging into larger groupings as it would be indicative of the members' willingness to act in a cooperative framework with their neighbours and a readiness to join larger groupings in the region that go beyond these members.

Within South Asia, sub-regional groups already exist. Membership in some of these sub-regional groupings extends beyond South Asia to Southeast Asian/East Asian countries. These include the BBIN with Bangladesh, Bhutan, India and Nepal as members; the BCIM with Bangladesh, China, India and Myanmar; and the BIMSTEC with Bangladesh, Bhutan, India, Nepal, Myanmar, Sri Lanka and Thailand, as member economies.

Instead of the existing overlapping and all-encompassing objectives of these sub-groupings, it would be better to **delineate** a workable agenda based on an area of comparative advantage for each and adopt a focussed approach towards its achievement. Issues of hydropower, movements of peoples, transit rights etc. could be primary areas for the BBIN: connectivity and economic corridors for the BCIM; and supply chains in textiles and clothing and gas pipelines could constitute the working agenda for the BIMSTEC.

The resource and expertise-constrained South Asian economies may then be able to contribute to and benefit from these groupings in accordance with their potential. A necessary prior requirement in this context would be the establishment of an institutional mechanism that includes a secretariat, working groups with **requisite** expertise, regular meetings, coordination and periodic exchange of information and reports. Over time, a merger or expansion of the sub-regional groupings could shape into regional formulation.

- Which of the following contains the correct sequence of missing words in the paragraph? (missing words indicated by a, b, c, d, e, f)
 - with, the, in, to, in, was
 - for, a, at, with, in, were
 - in, a, in, by, at, was
 - for, a, in, by, with, were
- Select the word that is most similar in meaning to the given word as used in the passage.
Delineate
 - Uncivilize
 - use
 - weak
 - portray
- Select the word that is most opposite in meaning to the given word as used in the passage.
Requisite
 - Conventional
 - Predictable
 - Unnecessary
 - Moral
- What was the reason behind the rise of hopes for regional cooperation in South Asia?
 - There was a last-minute agreement on energy cooperation.
 - There was a possibility of a breakthrough in the cold vibes shared by the heads of India and Pakistan.
 - There was a possibility of South Asian countries coming together in the 18th SAARC summit.
 - A new beginning for regional cooperation in South Asia was possible.

5. Which of the following is right according to the given passage?
- (a) It is time to reformulate the idea of regional cooperation in South Asia as open and differentiated regionalism.
 - (b) Member-countries should come together with a focussed agenda that are cross-border in nature.
 - (c) Once the objectives are expanded, member-countries will be successful in attaining the limited agenda.
 - (d) Sub-regionalism would serve as a preparatory ground for merging in to other groupings.
6. Consider the following statements:
- (i) BCIM denotes a sub-regional grouping
 - (ii) Issues of hydropower, movements of peoples, transit rights etc. could be primary areas for Bangladesh, Bhutan, China and India
 - (iii) The south Asian economies may be able to contribute and benefit from the groupings regardless of their potential.
- Select the best option from below:
- (a) Only (i) is true
 - (b) (ii) and (iii) are true
 - (c) Only (ii) is true
 - (d) Only (iii) is false
7. What does the author suggest instead of having objectives that overlap the sub-groupings?
- (a) Having only those objectives that do not overlap
 - (b) Make sub-groupings randomly and form an objective afterwards accordingly
 - (c) Dividing the agenda as objective for each sub-grouping based on their potential
 - (d) Making the sub-groupings follow the main-agenda wholly
8. What can be done after the member countries have accomplished the limited agenda?
- (a) They can show willingness to act in a cooperative frame work with their neighbours.
 - (b) They can come together in smaller sub-regional groups.
 - (c) They can make their challenges and aspirations cross-border in nature.
 - (d) They can expand their aims and objectives.

Passage 2

As part of efforts to find alternative sources of fuel to power its trains, and to reduce reliance on fossil fuel-based energy sources like diesel and electricity, Indian Railways has set in motion efforts to build a hydrogen-powered rail engine that can propel a passenger train on a suburban route by the end of 2021.

The Railways' efforts to develop a hydrogen-powered engine found mention at the 107th Indian Science Congress in Bengaluru this week, with former space scientist D Narayana Rao stating that a group from SRM University is working with Railways to develop the engine.

In November 2019, the Indian Railways Organisation for Alternate Fuels (IROAF) issued a call for interest in development of a hydrogen-powered rail engine — a technology that has been demonstrated successfully only in Germany so far.

"SRM University and IROAF have come up with the technical specifications to design a hydrogen-powered fuel cell-based train. So far only Germany has demonstrated and no other country in the world has done this," Prof Rao, who is the pro-vice chancellor of SRM University, Amaravati, said on the sidelines of the Science Congress.

"The proposed train will have four passenger coaches operating at 75 km/hr speed. One coach will carry the hydrogen gas cylinders, fuel cells, super capacitors and DC converters. Hydrogen will be the input to the fuel cell and the power output of the fuel cell will drive the train," he said.

"Fuel cell-based rail propulsion technologies powered by PEM (proton exchange membrane) using hydrogen fuel-cells and a standard battery system are being tried out globally for railroad applications. Elimination of fossil fuel and very low emissions are inherent advantages of such a rolling stock," the IROAF has stated in its proposal for developing hydrogen-powered trains.

"On January 10 we will present our technical specifications to Indian Railways. Perhaps by end of 2021, we are hoping to have a functional train," Rao said. A group of faculty at the university with expertise in hydrogen-powered fuel cell technology had initially proposed the hydrogen-powered engine to the Integral Coach Factory, but the project was subsequently taken up by the Indian Railways itself, he said.

"The hydrogen-powered train will be operated in suburban areas to start with," Rao said. It is expected to later evolve into a train powered by engines that produce hydrogen on board using water splitting technologies, which are being experimented with around the world with the use of nano materials.

"The next phase is to generate hydrogen on board the train from water. This means that we want to convert water into hydrogen and use that hydrogen as the input for fuel cells. Here the role of nano catalysts will come into play to split water into hydrogen," the professor said.

Until water splitting technologies are firmly established and are capable of producing pure hydrogen, the source of supply of the gas would have to be hydrogen that is available as a byproduct of some industries, he said.

9. Which of the following is true according to the given passage?
- (a) A group of faculty at the university has taken up the project of hydrogen powered engine.
 - (b) A hydrogen powered rail engine can encourage a passenger train on a suburban route.
 - (c) The IROAF has developed hydrogen powered trains.
 - (d) Both (b) and (c)
10. Consider the following statements:
- (i) PEM has states in its proposal for developing hydrogen powered trains.
 - (ii) Professor Rao is the chancellor of SRM university and IROAF both.
 - (iii) Germany is the only country in the world that has successfully demonstrated.
- Select the best option from below:
- (a) Only (iii) is true
 - (b) (ii) and (iii) are true
 - (c) Only (ii) is true
 - (d) (i), (ii) and (iii) are true
11. The tone of the passage is
- (a) Critical
 - (b) Witty
 - (c) Mocking
 - (d) Informative
12. How can generate hydrogen train from water in the offing?
- (a) To establish water splitting technology
 - (b) To find alternative sources of fuel to power
 - (c) Both (a) and (b)
 - (d) With the use of Nano catalysts which split water into sydorgen.
13. What is the reason behind setting efforts to build a hydrogen powered rail engine by Indian railways?
- (a) To carry the hydrogen gas cylinder, fuel cells and DC converters.
 - (b) To come up with the technical specifications to design a hydrogen-powered fuel.
 - (c) To make less dependency on fossil fuel-based energy.
 - (d) All of the above