Comprehension Test for Bank Exams (IBPS Clerk Pre, SBI Clerk Pre, and IBPS RRB)

Passage No. 95

Direction: Study the following information carefully and answer the question given below.

Even while telecom operators in India are in the midst of rolling out 4G networks, the minister for telecom has announced that India would roll in 5G by 2020, a time frame that has been accepted by international standardization bodies, vendors, and service providers in many parts of the world. South Korea and Japan want to showcase leading 5G applications in the Winter and Summer Olympics in 2018 and 2020, respectively.

However, Indian operators face several challenges for 5G roll-outs from a business point of view. They have far less spectrum in comparison to international operators. This increases their cost of operations. Many of them are also weighed down by debt. Ever faster rounds of new technology introduction when prior technology investments have not been recouped add further complexity. This juggernaut of ever evolving generations of technology and forthcoming 5G require a supportive policy and regulatory environment. Without it, the sector's health and India's economic competitiveness would be greatly impaired. The imperatives of remaining competitive and consumer demands of faster and higher quality services leave little choice to operators but to invest in 5G.

To understand the elements of the policy and regulatory environment, we first identify the characteristics of 5G. Unlike earlier generations that provided for ever higher speeds and more bandwidth, 5G also promises ultra-reliable, very fast speeds and high bandwidth mobile connectivity and supports massive interconnected devices spread across wide areas. 5G provides peak speeds of 20 times, compared with 4G, such as that required in virtual reality applications. It is also designed to provide latency at 10 times lower than 4G. Low latency is required in applications dealing with critical emergency health care, autonomous vehicles or disaster management.

Since 5G roll-outs are likely even before 4G is extensively deployed, the adopted road map for 5G should ensure that the existing and near-future investments in 4G can be leveraged. One suggested approach has been that since operators are likely to deploy 5G in bands that they are currently using for 4G, policy should facilitate this by making spectrum usage an agnostic service. The role of wired infrastructure, especially fibre optic cables, is critical and complementary to growth of wireless. This is because very large capacities are required in the backhaul to cater to applications enabled through 5G. This would entail accelerating the BharatNet programme for deploying fibre optic cables to gram panchayats and increasing the involvement of the private sector to exploit complementarities and efficiencies of the private sector.

Questions:

1. Which of the following is/are not true as per the passage?

I. The telecom Industry needs a supportive policy environment else the sector's health would be greatly impaired.

II. 5G would provide a peak speed of 20 times vis-a-vis 4G.
III. 5G would support massive interconnected devices spread across wide areas.

A. Only I and II
B. Only II and III
C. Only I and III
D. None of the above
E. All of the above

2. "India should definitely roll in 5G by 2020." - said the minister for telecom.

Which of the following arguments is strong with respect to the statement above?

I. Yes. The time frame has been accepted in many parts of the world and India must follow suit.
II. No. Telecom operators have not yet effectively implemented 4G networks and need more time.
III. Yes. Many leading nations are keen on showing their products supporting 5G technology on International platforms and India should not be left behind.

A. Only III
B. Only II
C. Only I and II
D. Only II and III
E. All of the above

3. As per the passage, what are some of the challenges faced by Indian operators with respect to 5G?

I. The quality of their spectrum is poor when compared to international operators.
II. Lack of availability of debt.
III. The continuous need to invest in better technology.

A. Only I
B. Only III
C. Only I and III
D. Only II and III
E. All of the above

4. As per passage, which of the following feature/s make/s 5G technology ideal for use in critical areas?

I. High Speed
II. Low Latency
III. Internet of Things
IV. High Bandwidth

A. Only II
B. Only III
C. Only I, II and III
D. Only II and III
E. All of the above

5. What are some ways to ease the transition to 5G?

I. Deploy more wireless infrastructure.
II. Increase involvement of the private sector.
III. Spectrum usage should be made interchangeable.

A. Only I
B. Only I and II
C. Only II and III
D. All of the above
E. None of the above

Correct Answers:

1	2	3	4	5
D	B	B	A	C

Explanations:

1. **Refer to:**

'This juggernaut of ever evolving generations of technology and forthcoming 5G require a supportive policy and regulatory environment. Without it, the sector's health and India's economic competitiveness would be greatly impaired.'

Statement I is true.

'5G also promises ultra-reliable, very fast speeds and high bandwidth mobile connectivity and supports massive interconnected devices spread across wide areas. 5G provides peak speeds of 20 times, compared with 4G, such as that required in virtual reality applications.'

Statements II and III are true.

None of the statements are incorrect.

Hence, option D is correct.

2. Argument I is weak as India should focus on its own capabilities and needs and not blindly conform to what the other nations seem to be doing.

Argument II is strong. Paragraph 1 shows that 'telecom operators in India are in the midst of rolling out 4G networks' and hence need more time.
Argument III is weak. There is no mention of other nations' development timeline in 5G technology relative to India and hence we cannot compare our readiness to launch such products with theirs.
Hence, option B is correct.

3. **Refer to:**

'… They have far less spectrum in comparison to international operators….. Many of them are also weighed down by debt. Ever faster rounds of new technology introduction when prior technology investments have not been recouped add further complexity. This juggernaut of ever evolving generations of technology and forthcoming 5G require a supportive policy and regulatory environment. Without it, the sector's health and India's economic competitiveness would be greatly impaired...'

As per the highlighted fragments, statements I and II are incorrect. The quantity of spectrum is less while nothing about quality has been mentioned. Similarly, there is no mention of lack of debt availability.

Statement III is correct.
Hence, option B is correct.

4. '5G provides peak speeds of 20 times, compared with 4G, such as that required in virtual reality applications. It is also designed to provide latency at 10 times lower than 4G. Low latency is required in applications dealing with critical emergency health care, autonomous vehicles or disaster management. Support for widely spread networks of sensors—Internet of Things (IoT) require spectrum usage of a different type than in cellular networks. Sensors may require to transmit very small amounts of data intermittently; thus, the policy and regulation of making spectrum available for them should be different.'

High Speed and High Bandwidth are indeed present in 5G while Internet of Things is irrelevant. However, the *only* option that helps in managing critical areas is *low latency*, as can be seen in the fragment highlighted above.

Hence, option A is correct.

5. **Refer to:**

'Since 5G roll-outs are likely even before 4G is extensively deployed, the adopted road map for 5G should ensure that the existing and near-future investments in 4G can be leveraged. One suggested approach has been that since operators are likely to deploy 5G in bands that they are currently using for 4G, policy should facilitate this by making spectrum usage an agnostic service. The role of wired infrastructure, especially fibre optic cables, is critical and complementary to growth of wireless. This is because very large capacities are required in the backhaul to cater to applications enabled through 5G. This would entail accelerating the BharatNet programme for deploying fibre optic cables to gram panchayats and increasing the involvement of the private sector to exploit complementarities and efficiencies of the private sector.'
Statement I is false as the paragraph talks about deployment of *wired infrastructure*.
Statements II and III are correct as seen from the highlighted fragments above.
Note: An Agnostic service is generic in nature / its independent of context. A Service something that is generalized so that it is interoperable among various systems.
Hence, option C is correct.