IASbaba's Daily Quiz

November 10, 2016

Q.1) Consider the following statements about Liquefied Natural Gas (LNG)

1. It is colourless
2. It is odourless
3. Natural Gas can be liquefied without cooling it

Select the correct code:

a) Only 1
b) 1 and 2
c) 1 and 3
d) 2 and 3

Q.1) Solution (b)

Natural gas is a mixture of hydrocarbons which, when liquefied, form a clear colourless and odourless liquid; this LNG is usually transported and stored at a temperature very close to its boiling point at atmospheric pressure (approximately – 160 degree C).

LNG is very cold liquid form of natural gas - the fuel that's burned in gas stoves, home heaters, and electric power plants. When it warms back up, LNG becomes natural gas again. You can't liquefy natural gas without cooling it.

LNG does not burn itself .LNG needs to be in vapor form and mixed with air to burn .Is combustible in the range of 5% to 15% volume concentrations in air .Combustible mixtures in confined space will burn explosively .

LNG is a cryogenic substance and physical contact or spillage constitute a personnel and equipment hazard. Natural gas presents an asphyxiation hazard. Its main component is methane. It gasifies violently when directly introduced into a cargo tank at ambient temperature, rapidly increases the internal pressure of the cargo tank and makes the atmosphere into a flammable condition.

Q.2) Which of the following has the highest elasticity?

a) Steel
b) Copper
c) Rubber
d) Aluminium

Q.2) Solution (a)

- The definition of elastic in physics is unfortunately inverse of common sense elastic. The more difficult it is to stretch, the more elastic a material is called to be because elasticity is defined by the ratio stress to strain and not vice versa.
- Elasticity is measured as ratio of stress to strain also known as **Young's Modulus**. For a given stress (stretching force per unit area) strain is much smaller in steel than in rubber and hence the answer.
- If the same force is applied to the wire of steel and rubber thread, which are of equal length and cross-section area, we will find that the extension in the rubber thread is much greater than extension in steel wire. Therefore, for a given stress, the strain produced in steel is much smaller than that produced in the rubber. This implies that Young's modulus for steel is greater than that for rubber. Therefore, steel is more elastic than rubber.
- And also physics defines elasticity as "resistance to change". The greater the resistance to change, the greater is the elasticity of the material and the faster it comes back to its original shape or configuration when the deforming force is removed. By this definition, steel is more elastic than rubber because steel comes back to its original shape faster than rubber when the deforming forces are removed.

Q.3) Azerbaijan shares its border with which of the following countries?

1. Georgia
2. Iran
3. Armenia
4. Russia

Select the correct code:

a) 1 and 3
b) 1, 2 and 4
c) 1, 3 and 4
d) All of the above

Q.3) Solution (d)

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Q.4) Consider the following statements with respect to 'Preston Curve'

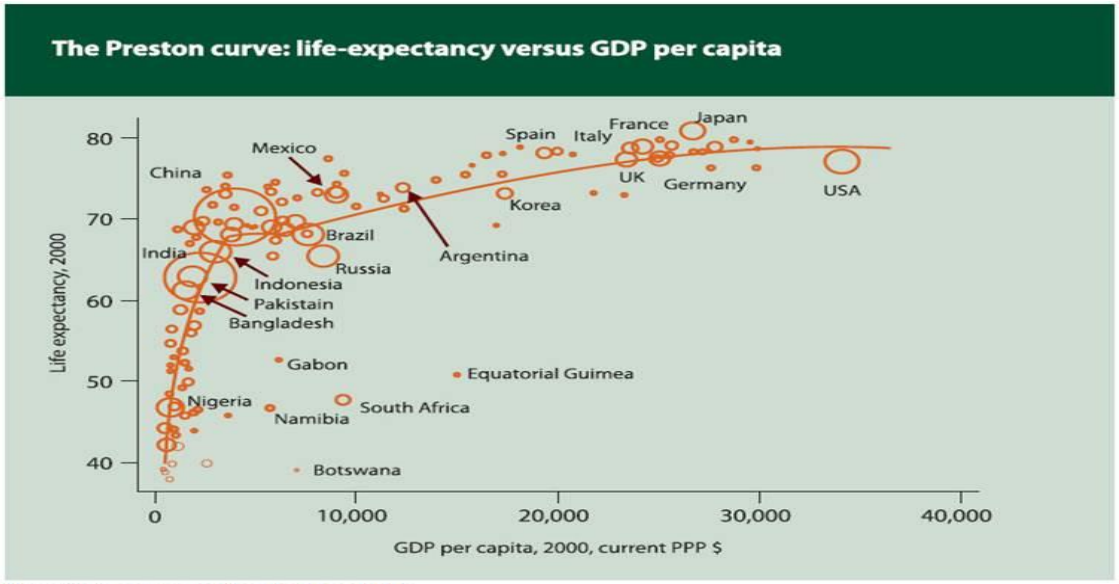
1. It is a relationship between development and health
2. Life expectancy is plotted against GDP per capita

Select the correct code

a) Only 1
b) Only 2
c) Both 1 and 2
d) Neither 1 nor 2

Q.4) Solution (c)

- It's a relationship between development and health
- Health of nations (life expectancy) plotted against wealth of nations (GDP per capita)
- It says –
    - Up to a point modest increase in GDP per capita corresponds to sharp increase in life expectancy
    - After certain point, even large increases in public health expenditure leads to modest increase in life expectancy



Note: Circles are proportional to population.

Angus Deaton says-

- India is at/near the bend on the Preston Curve
- Reasons –
  - Infant mortality & maternal mortality still prevalent
  - Number of non-communicable diseases are increasing

Q.5) Networked Readiness Index is released by

a) Internet Governance Forum (IGF)
b) World Economic Forum (WEF)
c) World Wide Web Foundation
d) Working Group on Internet Governance (WGIG)

Q.5) Solution (b)

India was placed at 91st position in the recently released 2016 Networked Readiness Index (NRI) by the Geneva-based World Economic Forum (WEF). The index was released as the part of the WEF's **Global Information Technology Report**. It measures countries' success in creating the necessary conditions for a transition to a digitized economy and society.