

Q: Consider the following statement regarding fluorescence microscopy:

1. It views an object by studying how it re-emits light that it has absorbed.
2. The object is illuminated with light of a specific wavelength.
3. Particles in the object does not absorb this light and re-emit it at a lower wavelength.

Choose the correct option from the codes given below:

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) 1, 2 and 3

Ans: a

Explanation:

- An optical microscope views an object by studying how it absorbs, reflects or scatters visible light. A fluorescence microscope views an object by studying how it re-emits light that it has absorbed, i.e. how it fluoresces. This is its basic principle.
- The object is illuminated with light of a specific wavelength. Particles in the object absorb this light and re-emit it at a higher wavelength (i.e. different colour). These particles are called fluorophores; the object is infused with them before being placed under the microscope.
- There are versions of fluorescent microscopes with more sophisticated abilities, such as epifluorescence and confocal laser-scanning microscopes.

Q: Recently, the collapse of Silicon Valley Bank is causing global contagion. Consider the following statement:

1. Silicon Valley Bank was hit hard by the COVID 19 Pandemic.
2. It became the largest bank to fail since the 2008 financial crisis.
3. One reason is that the value of bond fails because of lower interest rate.

Choose the correct option from the codes given below:

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) 1, 2 and 3

Ans: b

Explanation:

- The Silicon Valley Bank became the largest bank to fail since the 2008 financial crisis. The move put nearly \$175 billion in customer deposits under the control of the Federal Deposit Insurance Corp.
- Silicon Valley Bank was hit hard by the downturn in technology stocks over the past year as well as the Federal Reserve's aggressive plan to increase interest rates to combat inflation.
- The bank bought billions of dollars, worth of bonds over the past couple of years, using customers' deposits as a typical bank would normally operate. These investments are typically safe, but the value of those investments fell because they paid lower interest rates than what a comparable bond would pay if issued in today's higher interest rate environment.
- Typically, that's not an issue, because banks hold onto those for a long time, unless they have to sell them in an emergency.

Q: Consider the following statement regarding I2U2:

1. It is a grouping of four nation.
2. It was given the name International Forum for Economic Cooperation.

Choose the correct option from the codes given below:

- a) 1 Only
- b) 2 Only
- c) 1 and 2
- d) None of the above

Ans: c

Explanation:

- I2U2 is the new grouping formed by four nations- India, Israel, UAE, and the US. It was given the name International Forum for Economic Cooperation.
- It is focused on expanding economic and political cooperation in the Middle East and Asia, including through trade, combating climate change, energy cooperation, and coordination on other vital shared interests.

- The four-nation framework would foster support and cooperation in various domains like infrastructure, technology and maritime security.

Q: Consider the following:

1. Article 21
2. Article 38
3. Article 47

Which among the following article talks about “Right To Health”?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) 1, 2 and 3

Ans: d

Explanation:

- The Indian Constitution does not explicitly talk about a right to health. A “right to health”, in theory, is derived from the right to life and liberty as guaranteed under Article 21 of the Constitution.
- Previously, courts have highlighted the State’s obligation to protect and promote the health of citizens, pointing to Constitutional provisions such as Article 38 (promoting the welfare of people) and Article 47 (which directs the government to meet the nutrition and health requirements of the population).

Q: Consider the following statement:

1. 12th WTO Ministerial Conference was held in Geneva.
2. 13th WTO Ministerial Conference is to be held in India in 2024.

Choose the correct option from the codes given below:

- a) 1 Only
- b) 2 Only
- c) 1 and 2
- d) None of the above

Ans: a

Explanation:

- India and Australia reaffirmed the importance of the multilateral trading system, with the WTO at its core. They agreed to build on the success of the 12th WTO Ministerial Conference in Geneva and reaffirmed their commitment towards improving WTO functions and having a fully functioning dispute settlement system by 2024.
- They agreed to work towards a productive engagement in the run up to the 13th WTO Ministerial Conference to be held in Abu Dhabi in 2024.