Part 4

Questions 27 to 32 *are based on an article about cities sinking.*
Six (6) sentences have been removed from the article. Choose from the sentences **A to H** *the one which fits each gap* **(27 – 32)**. *There are two (2) extra sentences which you do not need to use. Mark your answer on the answer sheet.*

Cities do not just have sea level rises to worry about. **27** [ ] This is according to new research which emphasises the importance of factoring subsidence or gradual sinking into models of climate change risk.

Geophysicist Tom Parsons, from the United States Geological Survey (USGS) agency looked at San Francisco as a case study of how large urban developments could be affecting and depressing the actual surface of the Earth. **28** [ ] Considering the Bay Area is under threat from sea level rise as well, the extra variation added by slow subsidence is significant enough to be concerning.

29 [ ] Taking into account an inventory of all the buildings in the city and their contents, the study calculated the weight of San Francisco (population: 7.75 million) as being around 1.6 trillion kg – roughly 8.7 million Boeing 747s. That could be enough to both bend the actual lithosphere or the uppermost part of the earth, on which the urban centre sits, and perhaps more significantly, to change the relative levels of fault blocks – the floating chunks of rock that make up Earth's surface.

In fact, the weight calculations didn't include things outside buildings – including transport infrastructure, vehicles, or people. **30** [ ] There are plenty of other causes of subsidence to think about too. **31** [ ] These reasons cause significant city sinking in other parts of the world.

32 [ ] The weight of cities is a significant consideration when scientists are figuring out how geography might change over time, and which areas are in danger as the sea level gets higher.

(Adapted From Source https://www.sciencealert.com/the-weight-of-cities-is-sinking-urban-areas-at-the-same-time-sea-levels-are-rising)

A By his calculations, San Francisco might have sunk as much as 80 millimetres (3.1 inches) as the city has grown over time.

B These include tectonic plate shifting and the groundwater pumping necessary to support a growing population.

C While this current study only looked at San Francisco, and made some broad assumptions in terms of modelling, the findings are important.

D The solution to this sinking of cities must be found to delay destruction of whole cities.

E As global populations move disproportionately toward the coasts, this additional subsidence in combination with expected sea level rise may worsen the risk.

F As global cities move inland, the sinking can get worse.

G The same sort of sinking is likely in other parts of the world.

H They are also slowly sinking under the weight of their own development.