

Key answerI. Text bookA-

- 1- We form the pre cast type by setting steel bars in concrete. Then we drive these piles into the ground. We cast piles at the site by first drilling a hole into the soil and then filling it with concrete
- 2- Almost all innovations are produced from previous innovations rather than from an injection of any scientific knowledge, technology has its connections with contemporary as well as past technology.
- 3- If we keep the newly placed concrete damp while the cement sets, the concrete wont shrink very much, that's how we keep the tensile stresses to a minimum.
- 4- No, but they're very similar. In both we use metal rods, however, in reinforced concrete the rods are not stressed
- 5- Technological innovations affect society and help to change the environment. The means of communication break the isolation of communities and usher in new vistas, while innovations like the cinema, radio and television give a new dimension to culture and bring about deep social changes.

**B-The definitions for terminologies:**

- 1- **Caisson**: a box used during underwater construction, into which water cannot flow.
- 2- **Mold**: a structure or frame for holding concrete until it hardens.
- 3- **Excavation**: the removal of earth or place of removal.
- 4- **Anchor**: a mechanical device that holds wire in place.
- 5- **Corrosion**: a wearing away by chemical action.
- 6- **Air –entrained concrete**: concrete injected with small air bubbles to offsets the effects of frost.

**C- Complete:**

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|----------------|---------------|
| 1- Mat or raft | 2- Substratum |
|----------------|---------------|

II. Grammar & structure

- |             |                |
|-------------|----------------|
| 1- They are | 5- There       |
| 2-Trip      | 6- Has changed |
| 3-Was       | 7-Whose        |
| 4-job       | 8- must        |

**B-**

- 1- What have you done to your hand?
- 2- Has anyone called an ambulance yet?

C-

- 1- The library provides us with books.
  - 2- My father always warns me not to smoke.
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### III. Reading comprehension

A-

- 1- This happened as a result of the combined effects of global warming, population growth, deforestation, flooding and the fact that deserts are advancing in some regions.
- 2- They will regenerate them and grow new plants from them.
- 3- They will be under threat of extinction by 2050.

B-

- 4- ( C ) Regenerate
  - 5- ( b ) No longer existing
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### IV. Writing

Ignite a candle and carefully place an inverted gas –jar over it until the flames extinguish. Then remove the gas – jar and add some lime-water in it. Place a cover over the jar and shake it about. The lime water will turn milky. This shows that there is some carbon dioxide inside. Then let the flame of the candle ignite against a cool surface. You will see some drops of a liquid. Add some copper sulphate powder into this liquid and you will see that it turns blue. This shows that the liquid is water.