Assignment-5

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

1) Identify the TRUE statement with regard to the sustainability

- The one factor that combines economic, social and environmental factors together is called "Ecology."  
- Development against air pollution and preservation of natural resources are grouped under the "environmental facet" of sustainability 
- From the stand point of sustainability, one should consider primarily the current requirements and not the future requirement 
- Sustainable design focuses more on consciousness of the society

No, the answer is incorrect.
Score: 0
Accepted Answers:
Development against air pollution and preservation of natural resources are grouped under the "environmental facet" of sustainability

2) Identify the FALSE statement with regard to the sustainability

- The three environmental issues connected with the cement production are carbon dioxide emission, depletion of natural resource and waste disposal 
- During the calcination stage of cement production, approximately 50% of the carbon dioxide is produced 
- The production energy for portland cement concrete is considerably lower than the production energy of portland cement 
- The energy required for producing reinforced concrete is higher than that of plain cement concrete

No, the answer is incorrect.
Score: 0
mineral admixtures as a substitute for cement

Performance based specifications provide more flexibility for the industry to produce their own proprietary materials or product that can enhance sustainability

Industrial by-product materials which are heated at controlled temperatures during the production of other raw materials can be grouped as artificial pozzolans

The physical and chemical requirements for portland cement are given significant consideration in “performance based specification”

No, the answer is incorrect.
Score: 0
Accepted Answers:
The physical and chemical requirements for portland cement are given significant consideration in “performance based specification”

4) Identify the FALSE statement with regard to pozzolans

Supplementary cementitous material also referred as pozzolans
The naturally occurring pozzolans such as diatomized earth and volcanic glasses or tuffs are obtained from the same sources
By definition, pozzolans largely contain either calcium compound or calcium alumino material or a combination of these compounds
Fly ash and silica fume by itself are non-hydraulic binders

No, the answer is incorrect.
Score: 0
Accepted Answers:
By definition, pozzolans largely contain either calcium compound or calcium alumino material or a combination of these compounds

5) Identify the FALSE statement with regard to pozzolans

Diatomaceous earth is produced by controlled heating of pozzolanic materials in a kiln
Silica fume and slag are industry based pozzolanic materials
Reactive phase present in calcined clay or metakaolin is amorphous alumino-silicates
The principle component present in fly ash is ‘carbon’

No, the answer is incorrect.
Score: 0
Accepted Answers:
Diatomaceous earth is produced by controlled heating of pozzolanic materials in a kiln

6) Identify the TRUE statement with regard to fly ash

Secondary C-S-H gel produced during the pozzolanic reaction is of the same nature as that of C-S-H gel produced during the hydration of silicates
Fly ash is the principal component present in coal
The class or type of fly ash changes with changes in the properties of coal
Bottom ash is heavier than fly ash but have same particle size, shape and mineralogy

No, the answer is incorrect.
Score: 0
Accepted Answers:
The class or type of fly ash changes with changes in the properties of coal

7) Identify the TRUE statement with regard to the morphology of fly ash

Cement and fly ash particles are spherical in shape
Fly ash improve the flow property of mixture because of ball bearing effect of spherical particle.
Cenosphere ash particles are hollow particles having smaller particles inside.
The shape of fly ash particle is independent of the coal combustion and condensation condition.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Fly ash improve the flow property of mixture because of ball bearing effect of spherical particle

8) Identify the TRUE statement with regard to the particle size of fly ash

- The particle size of fly ash is in the range of 1 nm to 100 nm
- Samples having same specific surface area always have same particle size
- According to ASTM C618, the fineness limit for fly ash is less than 43% should be retained on 325 sieve or 45 microns sieve
- Fly ash with lower average particle size have faster rate of reaction and contribute to early age strength

No, the answer is incorrect.
Score: 0
Accepted Answers:
Fly ash with lower average particle size have faster rate of reaction and contribute to early age strength

9) Identify the FALSE statement with regard to the density of fly ash

- Amount of iron oxide present in fly ash affect the specific gravity of fly ash
- Fly ash with low bulk density have lower amount of pleurosphere
- Density of fly ash is independent of the calcium content present in fly ash
- Bulk density of fly-ash is increased by packing the material tightly

No, the answer is incorrect.
Score: 0
Accepted Answers:
Density of fly ash is independent of the calcium content present in fly ash

10) Identify the FALSE statement with regard to the color and oxide composition fly ash

- Fly ash obtained from sub-bituminous has lower amounts of CaO than SiO2
- Fly ash obtained from bituminous source contains lower amount of SiO2 as compared to sub bituminous source
- Class F fly-ash is more greyish compared to Class C fly ash
- Fly ash obtain from bituminous source have yellowish brown color

No, the answer is incorrect.
Score: 0
Accepted Answers:
Fly ash obtain from bituminous source have yellowish brown color