Unit 12 - Week 11

Assignment 11

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. **Due on 2018-10-17, 23:59 IST.**

1) In an incrementally raised ash pond, the starter dyke of the first new ash pond is usually constructed of _____.

- Loosely deposited ash
- Mine tailings
- Local soil
- Concrete
- None of the above

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**
- Local soil

2) The amount of earthwork involved in a slurry pond is maximum in _______ method of raising.

- Upstream
- Downstream
- Centerline

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**
- Downstream

3) It is essential to have at least two compartments of a slurry pond or two slurry ponds for upstream method of raising because:

- Yes, the answer is correct.
4) It is essential to secure enough space outside the periphery of starter dyke in an incrementally raised slurry pond. Choose the correct option:

- Above statement is true only for upstream method of raising
- Above statement is true for downstream and centreline method of raising
- Above statement is false.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Above statement is true for downstream and centreline method of raising

5) The most critical factor governing stability of slopes in a slurry pond is:

- Density of slurry deposited ash
- Provision of internal drains
- Proximity to bedrock
- Provision of vegetative cover over dyke slope

No, the answer is incorrect.
Score: 0
Accepted Answers:
Provision of internal drains

6) Disadvantage(s) of locating decantation well close to starter dyke in an ash pond raised incrementally by upstream method of construction is/are:

- It will get buried with time and hence needs to be relocated
- It will result in high phreatic line leading to stability issues of downstream slope
- It will result in high phreatic line leading to stability issues of downstream slope
- Fines will get deposited close to upstream side which will lead to stability issues of further raisings
- All of above
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of above

7) Indicate the correct statement in context of slurry pond raised incrementally:

- Peripheral dykes are temporary embankments and have factor of safety lower than partition dykes
- Peripheral dykes are permanent embankments and have factor of safety lower than partition dykes
- Partition dykes are permanent embankments and have factor of safety lower than peripheral dykes
- Partition dykes are temporary embankments and have factor of safety lower than peripheral dykes

No, the answer is incorrect.
Score: 0
Accepted Answers:
Partition dykes are temporary embankments and have factor of safety lower than peripheral dykes
No, the answer is incorrect.
Score: 0
Accepted Answers:
Partition dykes are temporary embankments and have factor of safety lower than peripheral dykes.

8) Compute the factor of safety for downstream slope (3H:1V) of the dyke of mine tailings pond when the pond is full. The dykes are made of compacted local soil. The properties of the compacted local soil are: \( \gamma_{\text{dry}} = 17 \text{ kN/m}^3 \), \( \gamma_{\text{sat}} = 19 \text{ kN/m}^3 \), \( c' = 0 \), \( \varphi' = 30^\circ \) and for mine tailings are \( \gamma_{\text{dry}} = 20 \text{ kN/m}^3 \), \( \gamma_{\text{sat}} = 24 \text{ kN/m}^3 \), \( c' = 0 \), \( \varphi' = 35^\circ \). Internal drains are absent. Use formulae for factor of safety as applicable for failure surface parallel to outer slope.

No, the answer is incorrect.
Score: 0
Accepted Answers:

9) Compute the factor of safety of the downstream slope (3H:1V) of an ash pond raised by downstream method of construction. The pond is full with loosely deposited ash (\( \gamma_{\text{sat}} = 15 \text{ kN/m}^3 \), \( c' = 0 \), \( \varphi' = 26^\circ \)) and the dykes of pond are made of compacted ash (\( \gamma_{\text{dry}} = 14 \text{ kN/m}^3 \), \( \gamma_{\text{sat}} = 17 \text{ kN/m}^3 \), \( c' = 0 \), \( \varphi' = 35^\circ \)). Chimney drains are provided at all stages. Use formulae for factor of safety as applicable for failure surface parallel to outer slope.

No, the answer is incorrect.
Score: 0
Accepted Answers:

10) Barges with pumps do not find favour in India for decanting water from tailings pond because they need regular maintenance?

No, the answer is incorrect.
Score: 0
Accepted Answers:

11) Chimney drains of each stage of raising are interconnected vertically in an upstream method of construction of a slurry pond?

No, the answer is incorrect.
Score: 0
Accepted Answers:
For an embankment witnessing distress due to wetness of downstream slope, a stabilizing berm can be placed on the downstream face with an inclined chimney drain in between.

No, the answer is incorrect.
Score: 0
Accepted Answers:
True

Filter criteria ensures that no seepage occurs through an incrementally raised embankment.

No, the answer is incorrect.
Score: 0
Accepted Answers:
False