Sample Evaluator Paper

- The Evaluator paper attempts to evaluate the ability of the professional to use their knowledge and experience while evaluating and scrutinizing the documents submitted to ADaRSH for evaluation.

- There are five different disciplines for Evaluators:
    - Architects with expertise in passive design
    - Energy Analyst
    - Plumbing Expert
    - Public Health Engineer
    - Landscape Architect.

- The questions are designed to evaluate the ability of the professional to pay attention to details and provide comments based upon their knowledge of the discipline and GRIHA requirements.

- The questions given in this paper are representative of the structure and type of questions asked in GRIHA Evaluator exam. These samples are mixed from all 5 disciplines together. However, during the exam, the participant shall be able to attempt only one of the five available papers and the questions shall correspond to the same discipline.

- The answers mentioned in the sample paper are only representative in nature. These could have multiple variations.

Question 1: (From the Discipline: Architects with expertise in passive design)

GRIHA criterion 15, appraisal 15.3.1 states- *Minimum 15% replacement of Portland cement with fly ash by weight of cement used in structural concrete, as per clause 15.2.1 – points 1 (additional 1 point if more than 30%).*

A project has used PPC in their structural concrete. The PPC has 22.5% replacement of OPC by fly ash (by weight). This entitles them to 1 point.
Additionally the design team has given the following comment:

"*More than 30% replacement of cement with flyash by weight of cement is not possible technically in higher grades of structural concrete .Since in this project we are largely going for higher grades of structural concrete, it is not possible to comply with the requirements of the above criteria owing to the technical constraints.*

Based on the technical constraints, we claim for additional 1 point."

Should the project be given the point? Reply "yes" or "no" along with reason in not more than 50 words.

Response structure

The question asks to give a reply in "Yes" or "No" on whether the point will be given to the project and asks for a reason. Thus, the answer to the above question has two parts:

1. *Answer "Yes" or "No" – In this case, the project shall not be given the point. So the correct answer is "NO".*

2. *Reason: The question also demands an explanation for the same. Thus the explanation can be as follows:*

ANSWER

No, the project shall not be awarded the additional point.
GRIHA criterion15 is developed based on IS codes (IS-456, IS-1489 etc.). Technically, there are different grades of concrete that the IS codes specify. The higher grades of concrete do not allow more than 30% mix of fly ash in cement. However, there are grades of concrete mentioned in the IS codes which allow for a higher mix of fly ash. Thus the project should have opted for those grades of concrete.

Question 2: (From the Discipline: Landscape Architects)

Describe the role of "Growing temporary grass on soil erosion channels" in preserving soil.

Response Structure

In this case, as briefly as possible, highlight the following for each of the above:

- Key characteristics of the measure;
- Reason for its adoption;
- Its benefits in terms of environmental impact reduction on landscape;
- Any other aspects of it.
- Draw a diagram in case necessary else avoid.

ANSWER

In order to curb soil erosion through run off water, soil erosion control channels should be built around the site which can channel the run-off water into sedimentation basins. These channels can be either artificial (made of concrete etc.) or natural (growing grass on soil erosion channels). Thus, growing grass on temporary soil erosion channels helps in reducing the rate of run-off, thereby slowing down the discharge. Grass offers resistance to loose earth being carried by water and retains it, thereby aiding in reducing the volume of soil that enters the sedimentation tank. Additionally, the grass ensures that the drains do not get distorted and retain their shape, slope etc. Since the rate of flow of water gets reduced, it also helps in providing time for heavier soil particles to settle down in the channel instead of reaching the sedimentation tank.

Question 3 (From the discipline: Public Health Engineer)

For a project registered for GRIHA certification, following are the site photographs taken during construction. Review the photographs and comment (Maximum 25 words per photo) on how each of the given photographs demonstrates compliance/non compliance with GRIHA Criterion 8: Provide minimum level of sanitation/safety facilities for construction workers.

Response Structure

The intent of the question is to observe the facilities available and whether these facilities meet the GRIHA requirement. A sample answer is given below.

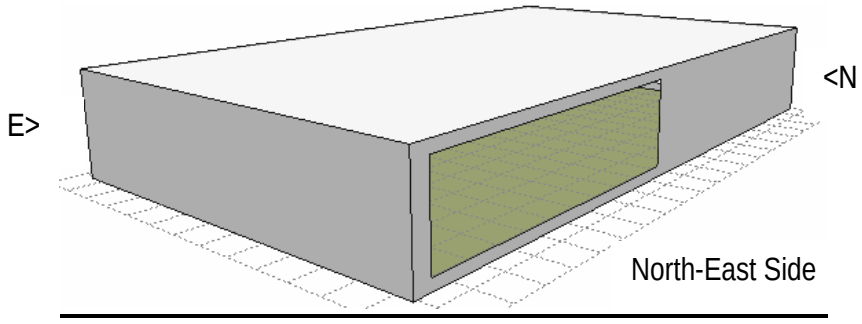
ANSWER

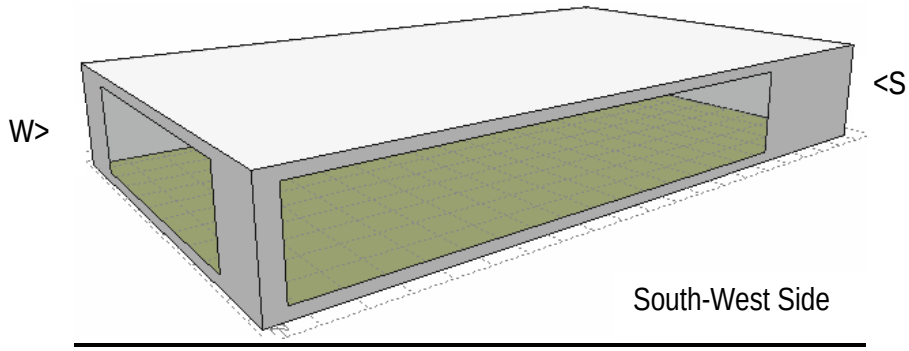
- The laborer has been provided with a hard hat which is good.
- There has been no high-visibility safety jacket provided.
- The photograph does not provide any inputs on provision of safety shoes.
- The safety harness/rope has been provided.
- The scaffolding seems rigid and strong which is a good practice.

The photograph broadly demonstrates compliance with safety norms as mentioned. The aspects like provision of safety boots can be confirmed through additional snaps.

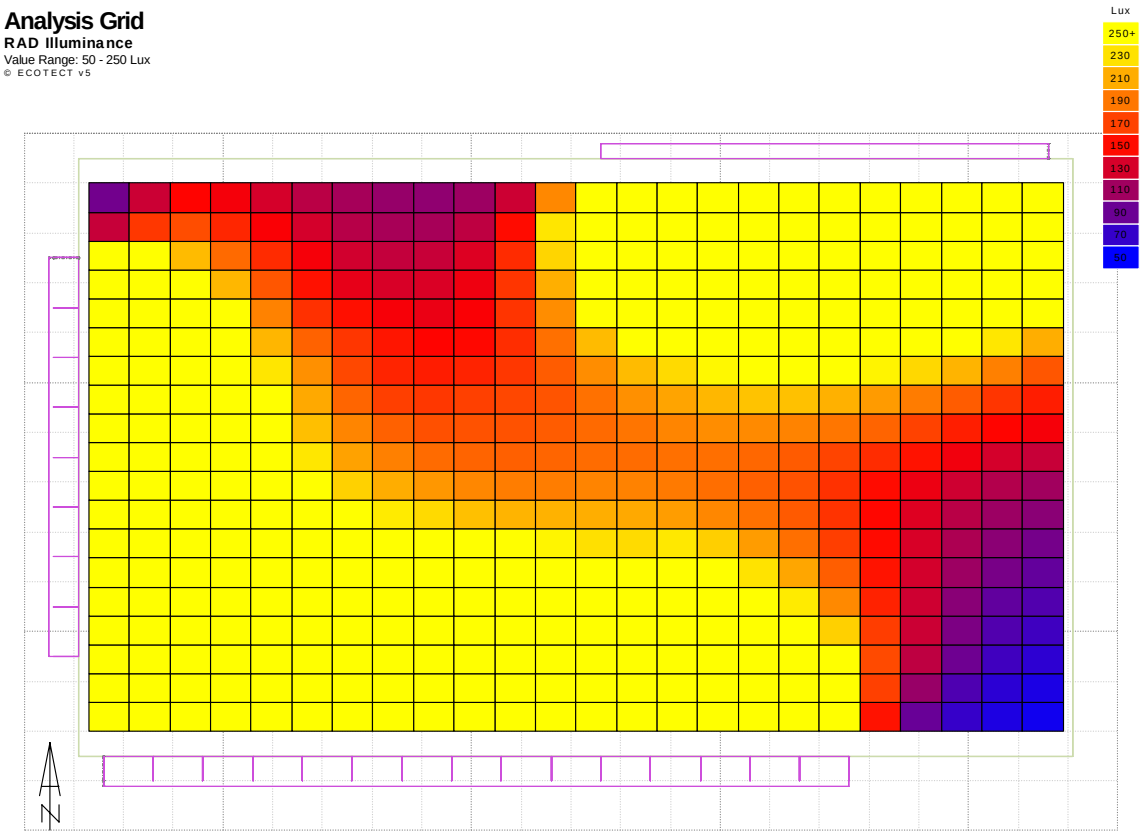
Question 4 (From the discipline: Energy Analyst)

Consider the following data:





- The location is Delhi (77.2 E, 28.6 N).
- Date and Time: March 22nd, 12:00 p.m.
- Outside sky: 8500 lux
- Room dimensions- 20m x 12m x 3m
- Window dimensions:
    - North: 9m x 2.4m
    - South: 15m x 2.4m
    - West: 8m x 2.4m



Based on the information provided above, answer the following:

1. What is the WWR for the above building?
2. What is the effective SHGC limit specified by ECBC for this building?
3. Based on the daylight simulation, answer if the project meets the required daylight factor of 2.5.

ANSWER

1. *The gross wall area is (20 x 3 x 2) + (12 x 3 x 2) = 192 sqm. The total window area is (9 x 2.4) + (15 x 2.4) + (8 x 2.4) = 76.8 sq.m. Therefore the WWR =(76.8/192) x 100 = 40%*
2. *The effective SHGC limit specified by ECBC for WWR =40% is 0.25.*
3. *The average lux level on the floor plate is 307.3 (from the simulation image). The outside lux conditions are 8500 lux. Therefore the average daylight factor on the floor plate = (307.3/8500) x 100= 3.6. Thus it meets the DF requirement.*