

## EDGE Exam Sample Questions

To provide clarity on the types of questions being asked in the EDGE Exam and their format, following are some examples.

### I. General Information on EDGE

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1. EDGE is:
  - a. A green building standard
  - b. A software application
  - c. A certification program
  - d. All of the above
  
2. EDGE does not provide:
  - a. Projected operational savings
  - b. Projected baseline construction costs
  - c. Projected incremental costs
  - d. Projected carbon emission reductions
  
3. Which standard is used to calculate the heating and cooling demand in EDGE?
  - a. LEED V4
  - b. EN ISO 13790
  - c. ASHRAE 90.1
  - d. BREEAM
  
4. EDGE calculates energy use on a(n) \_\_\_\_\_ basis:
  - a. Hourly
  - b. Daily
  - c. Monthly
  - d. Annual

## II. The EDGE Standard – Building Types & Efficiency Measures

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5. Which of the following is not a building type in EDGE?
  - a. Serviced Apartments
  - b. Light Industry
  - c. Metro Station
  - d. Eye Hospital
  
6. A development includes 20,000m<sup>2</sup> of apartments located above 3,000m<sup>2</sup> of shopping area. Which EDGE typology should be used for modeling?
  - a. Homes
  - b. Homes and Offices
  - c. Homes and Retail
  - d. Hospitality and Retail
  
7. A 10,000m<sup>2</sup> building includes an 8,000m<sup>2</sup> shopping mall, 1,500m<sup>2</sup> of hotel rooms and a 500m<sup>2</sup> office space. Which EDGE typology should be used for modeling?
  - a. Hospitality
  - b. Retail
  - c. Hospitality and Retail
  - d. Retail and Offices
  
8. What is likely to be the most significant end-use to achieve energy savings in a hospital located in a hot and humid climate?
  - a. Space Heating
  - b. Space Cooling
  - c. Water Heating
  - d. Lighting
  
9. An air-conditioned hotel building has been designed with a 150mm air-filled cavity in the external walls. Replacing the air-filled cavity with polystyrene insulation would:
  - a. Reduce monthly utility costs
  - b. Reduce embodied energy of construction
  - c. Increase solar reflectance
  - d. Improve the external shading coefficient
  
10. A roof is composed of the following layers of materials: (1) a concrete slab with an R-value of 1 m<sup>2</sup>·K/W, (2) insulation with an R-value of 3 m<sup>2</sup>·K/W, and (3) a rubberized layer with an R-value of 1 m<sup>2</sup>·K/W. The U-value in W/m<sup>2</sup>·K of this roof assembly is:
  - a. 0.2
  - b. 0.4
  - c. 0.5
  - d. 5.0

11. A 20 cm thick brick has a k-value of 0.5 W/m·K. The R-value in m<sup>2</sup>·K/W of this brick is:

- a. 0.4
- b. 0.1
- c. 10
- d. 40

12. Installing low-E glass in a building will impact:

- a. Lighting energy use
- b. Heating energy use
- c. Hot water energy use
- d. Other energy use

### III. Local Market Conditions – Elements of the Base Case & Base Case vs. Improved Case

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13. The EDGE Assessment Base Case building is:

- a. Based on global best practice and compliance with ASHRAE Energy Standards
- b. Based on local current practice and compliance with national/local building regulations
- c. Based on a user-defined building and user-defined performance standards
- d. Based on regional best practice and ASHRAE Energy Standards

14. The Cooling System assignment of the EDGE Base Case is based on:

- a. EN ISO 13790
- b. ANSI 2008
- c. ASHRAE 90.1-2007
- d. Standard local building practices

15. If a measure is marked with an asterisk (\*) in the EDGE App, it means:

- a. It is an important measure for that building typology for efficiency
- b. It is an important measure for that building typology for carbon savings
- c. The relevant values must be input if an upgrade has been made for that measure
- d. The relevant values must be input regardless of whether an improvement has been made

16. If a building contains two cooling systems with the same capacity but with COP values of 3 and 5 respectively, the COP value entered in the EDGE App should be:

- a. 3
- b. 4
- c. 5
- d. 8

## IV. EDGE App

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17. The EDGE Software, used in EDGE Assessments throughout the design and construction stages, is available to:
- Developer clients for a subscription fee
  - Free of charge to professional design teams only, who are registered as EDGE operators
  - EDGE Experts who have achieved accreditation, for an annual fee
  - Free of charge to anyone after registering on the EDGE App

## V. Roles and Responsibilities of EDGE Project Members

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18. Which statement is not correct?
- Design and construction teams prepare supporting documents
  - An EDGE Expert advises on green design
  - An EDGE Auditor registers the project on the EDGE App
  - An EDGE Certifier trains Auditors
19. To become an EDGE Auditor, a candidate must:
- Become an EDGE Expert
  - Train with local or global Certifiers
  - Maintain their credentials
  - All of the above
20. The fees for the Auditor of a project applying for EDGE certification are paid by:
- The World Green Building Council
  - The developer
  - The building inspector
  - The design team
21. Who assigns an Auditor for the project?
- The Client
  - The Project Admin
  - The Certifier
  - IFC's EDGE Team
22. The EDGE Auditor must confirm a project's:
- Floor Area
  - Space Heating Fuel
  - Neither (a) or (b)
  - Both (a) and (b)

23. If a project team does not have the required measure compliance documents specified in the EDGE User Guide, the project team:
- Must try a different measure to achieve EDGE certification
  - Can contact the Certifier to request permission to use alternate documents
  - Must contact IFC's EDGE Team for an alternate solution
  - Must contact the Auditor to request an alternate solution

## VI. EDGE Certification Process

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24. The earliest a project can be registered is when:
- The project is in the concept phase
  - The project is in the design phase
  - The project is in the construction phase
  - The certificate of occupancy has been issued
25. An EDGE Certificate is issued to the Client when:
- The Design stage EDGE assessment meets all EDGE targets.
  - The Construction stage EDGE Assessment meets all EDGE targets.
  - The EDGE Certifier is satisfied that the audited Construction stage assessment is correct.
  - The EDGE Auditor is satisfied that the Design stage assessment is correct.