

## EDGE Experts Exam: Sample Questions

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

### I. General Information on EDGE

---

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

---

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

---

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

---

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

---

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

---

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.

Answer Key

1.d	6.c	11.a	16.b	21.c
2.b	7.c	12.b	17.d	22.d
3.b	8.b	13.b	18.c	23.d
4.d	9.a	14.c	19.d	24.a
5.c	10.a	15.d	20.b	25. c