

Energy Analyst Certification

Syllabus:

Energy Scenario: Commercial and Non-commercial energy, primary energy resources, commercial energy production, final energy consumption, energy needs of the growing economy, long-term energy scenario, energy pricing, energy sector reforms, energy and environment, energy security, energy conservation and its importance.

Basics of Energy and its various forms: Electricity basics- DC & AC currents, electricity tariff, Thermal Basics-fuels, thermal energy contents of fuel, temperature & pressure, heat capacity, sensible and latent heat, evaporation, condensation, steam, moist air and humidity & heat transfer, units and conversion.

Energy Management & Audit: Definition need and types of energy audit. Energy management (audit) approach-understanding energy costs, benchmarking, energy performance, matching energy use to the requirement, maximizing system efficiencies, optimizing the input energy requirements, fuel & energy substitution, energy audit instruments.

Financial Management: Investment-need, appraisal and criteria, financial analysis techniques-simple payback period, return on investment, net present value, internal rate of return, cash flows, risk and sensitivity analysis; financing options, energy performance contracts and role of ESCOs (Energy Service Companies).

Energy Action Planning: Key elements, force field analysis, Energy policy purpose, perspective, contents, formulation, ratification, Organizing - the location of energy management, top management support, managerial function, roles and responsibilities of energy manager, accountability. Motivating-motivation of employees: Information system-designing barriers, strategies; Marketing and communicating-training and planning.

References for Learning

Financial Management - Bureau of Energy Efficiency

<https://bit.ly/2Wr2Q2S>

Energy Management and Audit - Bureau of Energy Efficiency

<https://bit.ly/2TBcNIW>

Basics of Energy and its various forms - Bureau of Energy Efficiency

<https://bit.ly/2UcLOrA>

Energy Action Planning – National Institute of Technology

<https://bit.ly/2UUkKdH>

Energy Scenario--Bureau of Energy Efficiency

<https://bit.ly/2UVz8lZ>

Basics of Energy Audit

<https://www.youtube.com/watch?v=7hDyLuFJ0c8>

Energy Management & Conservation Techniques by Dr S Chatterji

<https://www.youtube.com/watch?v=6vOg-u7c1IE>

Additional Reading

Energy Auditing in Electrical Utilities, Rajiv Shankar, <https://amzn.to/2Tz48H5>

Energy Management and Conservation, K. V. Sharma and P. Venkateshaiah,

<https://amzn.to/2HSw06J>

Energy Engineering and Management, Amlan Chakrabarti, <https://amzn.to/2TvxeqQ>

EXAM DATES

Candidates can choose from one of the below listed exam dates at the time of registration.

Sunday 28 April 2019

Sunday 26 May 2019

Sunday 30 June 2019

Sunday 28 July 2019

Sunday 25 August 2019

Sunday 29 September 2019

Sunday 27 October 2019

Sunday 24 November 2019

Sunday 29 December 2019

EXAM TIME : 11:00 am - 12:10 pm

The examination is conducted online. The candidate can take examination from anywhere at the appointed time. Candidates can take the test at home, college or any other convenient location using a computer, mobile phone or tablet with access to internet. Login details for taking online test will be emailed to registered candidates.

SAMPLE QUESTIONS

1. Inexhaustible energy sources are known as?

A) Commercial energy B) Renewable energy C) Primary energy D) Secondary energy

Answer: B

2. The energy stored in the bonds of atoms and molecules is called?

A) Kinetic energy B) Magnetic energy C) Potential energy D) Chemical energy

Answer: D

3. kVA is also called as

A) Reactive power B) Apparent power C) Active power D) Captive power

Answer: B

4. Energy consumed by a 50 kW motor loaded at 40 kW over a period of 4 hours is?

A) 50 kWh B) 2000 kWh C) 40 kWh D) 160 kWh

Answer: D

5. Energy consumption per unit of GDP is called as?

A) Energy Ratio B) Per capita consumption C) Energy intensity D) None

Answer: C

POLICIES

Refund & Overpayment: Fees once paid through the payment gateway shall not be refunded other than in the following case:

1. Multiple times debiting of Candidate Card/Bank Account due to technical error OR Candidate's account being debited with excess amount in a single transaction due to technical error. In such cases, excess amount excluding Payment Gateway charges would be refunded to the candidate.

Re-evaluation: No re-evaluation of the performance of candidates appearing for the Certification Examination is conducted.

Re-examination : If you fail in the first attempt, you are given opportunities for re-test by paying additional fee of Rs 500 for repeated examination.