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National Testing Agency

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Energy Resources and conversion processes

Group Number :	1
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Energy Resources and conversion processes-I

Section Id :	512452802
Section Number :	1
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Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	512452838
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 51245213376 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A moving car possesses

1. Sound energy
2. Mechanical energy
3. Heat energy
4. Chemical energy

Options :

- 51245241505. 1
- 51245241506. 2
- 51245241507. 3
- 51245241508. 4

Question Number : 2 Question Id : 51245213377 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The unit of work is joule. The other physical quantity that has same unit is

1. Force
2. Energy
3. Power
4. Velocity

Options :

51245241509. 1

51245241510. 2

51245241511. 3

51245241512. 4

Question Number : 3 Question Id : 51245213378 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The gravitational potential energy of an object is due to

1. Its mass
2. Its acceleration due to gravity
3. Its height above the earth's surface
4. All of the above

Options :

51245241513. 1

51245241514. 2

51245241515. 3

51245241516. 4

Question Number : 4 Question Id : 51245213379 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A student carries a bag weighing 5 kg from the ground floor to his class on the first floor that is 2 m high.
The work done by the boy is

1. 10 J
2. 100 J
3. 1kJ
4. 100 kJ

Options :

51245241517. 1

51245241518. 2

51245241519. 3

51245241520. 4

Question Number : 5 Question Id : 51245213380 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following energies has the greatest potential among all the sources of renewable energy?

1. Solar energy
2. Wind energy
3. Thermal energy
4. Hydro-electrical energy

Options :

51245241521. 1

51245241522. 2

51245241523. 3

51245241524. 4

Question Number : 6 Question Id : 51245213381 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The rate of solar energy reaching the earth surface is :

1. 1016W
2. 865W
3. 2854W
4. 1912W

Options :

51245241525. 1

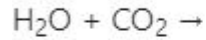
51245241526. 2

51245241527. 3

51245241528. 4

Question Number : 7 Question Id : 51245213382 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Complete the following reaction.



1. $\text{CH}_2\text{O} + \text{O}_2$
2. $\text{CO}_2 + \text{O}_2$
3. $\text{H} + \text{CO}_2 + \text{O}_2$
4. $\text{CH}_2\text{O} + \text{H}_2\text{O} + \text{O}_2$

Options :

- 51245241529. 1
- 51245241530. 2
- 51245241531. 3
- 51245241532. 4

Question Number : 8 Question Id : 51245213383 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In what form is solar energy is radiated from the sun?

1. Ultraviolet Radiation
2. Infrared radiation
3. Electromagnetic waves
4. Transverse waves

Options :

- 51245241533. 1
- 51245241534. 2
- 51245241535. 3
- 51245241536. 4

Question Number : 9 Question Id : 51245213384 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Solar radiation received at any point of earth is called

1. Insolation
2. Beam Radiation
3. Diffuse Radiation
4. Infrared rays

Options :

- 51245241537. 1
- 51245241538. 2
- 51245241539. 3
- 51245241540. 4

Question Number : 10 Question Id : 51245213385 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The wind speed is measured by using an instrument called

1. Hydrometer
2. Manometer
3. Anemometer
4. Wind vane

Options :

- 51245241541. 1
- 51245241542. 2
- 51245241543. 3
- 51245241544. 4

Question Number : 11 Question Id : 51245213386 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The source of energy caused by uneven heating of earth's surface is

1. Wind
2. Solar
3. Biomass
4. Geothermal

Options :

51245241545. 1
51245241546. 2
51245241547. 3
51245241548. 4

Question Number : 12 Question Id : 51245213387 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The region where winds are stronger and constant

1. Deserts
2. Offshore
3. Low altitudes sites
4. All of the above

Options :

51245241549. 1
51245241550. 2
51245241551. 3
51245241552. 4

Question Number : 13 Question Id : 51245213388 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which part of the windmill acts as a housing for the turbine?

1. Wind Vane
2. Shaft
3. Wind mill head
4. Turbine

Options :

- 51245241553. 1
- 51245241554. 2
- 51245241555. 3
- 51245241556. 4

Question Number : 14 Question Id : 51245213389 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The inherent weakness of all wind machines is

1. their efficiency
2. they require powerful winds to rotate the fan
3. their dependency on the wind speed
4. they cannot be easily repaired

Options :

- 51245241557. 1
- 51245241558. 2
- 51245241559. 3
- 51245241560. 4

Question Number : 15 Question Id : 51245213390 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The term biomass most often refers to

1. Inorganic matter
2. Organic matter
3. Chemicals
4. Ammonium compounds

Options :

- 51245241561. 1
- 51245241562. 2
- 51245241563. 3
- 51245241564. 4

Question Number : 16 Question Id : 51245213391 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Biomass is useful to produce

1. Chemicals
2. Fibres
3. Biochemicals
4. Transportation fuels

Options :

- 51245241565. 1
- 51245241566. 2
- 51245241567. 3
- 51245241568. 4

Question Number : 17 Question Id : 51245213392 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The aerobic digestion of sewage is used to produce

1. Biomass
2. Bio fuels
3. Synthetic fuels
4. Metal articles

Options :

- 51245241569. 1
- 51245241570. 2
- 51245241571. 3
- 51245241572. 4

Question Number : 18 Question Id : 51245213393 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

To make transport fuel, bio ethanol is blended with

1. Diesel
2. Petrol
3. Any Oil
4. Kerosene

Options :

- 51245241573. 1
- 51245241574. 2
- 51245241575. 3
- 51245241576. 4

Question Number : 19 Question Id : 51245213394 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The percentage of Carbondioxide in the bio methane is

1. 30-40 %
2. 32-43 %
3. 35-45 %
4. 55-60 %

Options :

51245241577. 1
51245241578. 2
51245241579. 3
51245241580. 4

Question Number : 20 Question Id : 51245213395 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The following is/are the visible sign/s of a large amount of heat lying in the earth's interior

1. Volcanoes
2. Geysers
3. Hot springs
4. All of the above

Options :

51245241581. 1
51245241582. 2
51245241583. 3
51245241584. 4

Question Number : 21 Question Id : 51245213396 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

When water is ejected from earth's interior in the form of hot water, it is called

1. Geyser
2. Hot springs
3. Both (1) and (2)
4. None of the above

Options :

- 51245241585. 1
- 51245241586. 2
- 51245241587. 3
- 51245241588. 4

Question Number : 22 Question Id : 51245213397 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Hydrothermal fluids are ____ in nature.

1. Corrosive
2. Abrasive
3. Both (1) and (2)
4. None of the above

Options :

- 51245241589. 1
- 51245241590. 2
- 51245241591. 3
- 51245241592. 4

Question Number : 23 Question Id : 51245213398 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A continuous movement of water in a specific direction is called as

1. Float
2. Wave
3. Current
4. Tide

Options :

- 51245241593. 1
- 51245241594. 2
- 51245241595. 3
- 51245241596. 4

Question Number : 24 Question Id : 51245213399 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

When two high tides and two low tides of approximately equal size occur, the tide is called

1. Diurnal tide
2. Spring tide
3. Neap tide
4. Semi-diurnal tide

Options :

- 51245241597. 1
- 51245241598. 2
- 51245241599. 3
- 51245241600. 4

Question Number : 25 Question Id : 51245213400 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In geothermal power plants, waste water is :

1. Discharged back to earth
2. Discharged into the sea
3. Recirculated after cooling in cooling towers
4. Evaporated in pond

Options :

- 51245241601. 1
- 51245241602. 2
- 51245241603. 3
- 51245241604. 4

Question Number : 26 Question Id : 51245213401 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In the presence of which gas is fuel burnt to generate energy in the form of heat?

1. Oxygen
2. Hydrogen
3. Methane
4. Nitrogen

Options :

- 51245241605. 1
- 51245241606. 2
- 51245241607. 3
- 51245241608. 4

Question Number : 27 Question Id : 51245213402 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The phenomenon of the formation of coal is called

1. Metamorphism
2. Diagenis'
3. Photosynthesis
4. Protolith

Options :

- 51245241609. 1
- 51245241610. 2
- 51245241611. 3
- 51245241612. 4

Question Number : 28 Question Id : 51245213403 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Fuels are classified as primary and secondary fuel based on their

1. Capacity to burn
2. Availability
3. State
4. Occurrence

Options :

- 51245241613. 1
- 51245241614. 2
- 51245241615. 3
- 51245241616. 4

Question Number : 29 Question Id : 51245213404 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following is partially carbonized and is considered as a primary stage in coal formation?

1. Coal bitumen
2. Anthracite
3. Peat
4. Lignite

Options :

51245241617. 1
51245241618. 2
51245241619. 3
51245241620. 4

Question Number : 30 Question Id : 51245213405 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following is produced by slow pyrolysis?

1. Dung cake
2. Coke
3. Charcoal
4. Briquette

Options :

51245241621. 1
51245241622. 2
51245241623. 3
51245241624. 4

Question Number : 31 Question Id : 51245213406 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The correct advantage of solid fuels is

1. They have low ignition temperature
2. They produce small amount of smoke
3. They have higher calorific value
4. They do not form any clinker

Options :

- 51245241625. 1
- 51245241626. 2
- 51245241627. 3
- 51245241628. 4

Question Number : 32 Question Id : 51245213407 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The liquid fuels are available in nature in this form

1. Light distillate
2. Petroleum spirit
3. Petroleum naphtha
4. Crude petroleum

Options :

- 51245241629. 1
- 51245241630. 2
- 51245241631. 3
- 51245241632. 4

Question Number : 33 Question Id : 51245213408 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Name the process used to eliminate impurities present in crude oil

1. Distillation
2. Filtration
3. Sedimentation
4. Coagulation

Options :

- 51245241633. 1
- 51245241634. 2
- 51245241635. 3
- 51245241636. 4

Question Number : 34 Question Id : 51245213409 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which gaseous fuel is called as Town gas?

1. Natural gas
2. Coke oven gas
3. Coal gas
4. Mond gas

Options :

- 51245241637. 1
- 51245241638. 2
- 51245241639. 3
- 51245241640. 4

Question Number : 35 Question Id : 51245213410 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following fuels gives an enormous amount of energy?

1. Gaseous
2. Solid
3. Liquid
4. Nuclear

Options :

51245241641. 1
51245241642. 2
51245241643. 3
51245241644. 4

Question Number : 36 Question Id : 51245213411 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following is the only nuclear fuel that occurs in nature abundantly?

1. Plutonium
2. Radium
3. Thorium
4. Uranium

Options :

51245241645. 1
51245241646. 2
51245241647. 3
51245241648. 4

Question Number : 37 Question Id : 51245213412 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What helps in converting uranium into fuel?

1. Breeder
2. Vitrification
3. Fuel fabricator
4. Enrichment plant

Options :

- 51245241649. 1
- 51245241650. 2
- 51245241651. 3
- 51245241652. 4

Question Number : 38 Question Id : 51245213413 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The amount of heat liberated by the complete combustion of a unit quantity of fuel is known as

1. Agitation
2. Combustion
3. Calorific value
4. Thermogenesis

Options :

- 51245241653. 1
- 51245241654. 2
- 51245241655. 3
- 51245241656. 4

Question Number : 39 Question Id : 51245213414 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which calorimeter is used to find calorific values of solid and liquid fuels?

1. Boy's calorimeter
2. Bomb calorimeter
3. Junker's calorimeter
4. Calvet-type calorimeter

Options :

51245241657. 1
51245241658. 2
51245241659. 3
51245241660. 4

Question Number : 40 Question Id : 51245213415 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which was the first combustion system used for solid fuels?

1. Firing stoker
2. Tangential stoker
3. Grate firing
4. Pulverized fuel firing

Options :

51245241661. 1
51245241662. 2
51245241663. 3
51245241664. 4

Question Number : 41 Question Id : 51245213416 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How is the coal fed to the grate in the overfeed system?

1. Above the point of air admission
2. Between the beds of incandescent coke and green coal
3. Above the ash bed
4. Between the point of air admission

Options :

- 51245241665. 1
- 51245241666. 2
- 51245241667. 3
- 51245241668. 4

Question Number : 42 Question Id : 51245213417 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following facts is INCORRECT?

1. Global warming is the rise in the average temperature of the earth's climate system
2. Eutrophication is observed in water bodies
3. The greenhouse effect is a natural phenomenon
4. Ozone is harmless to breathe

Options :

- 51245241669. 1
- 51245241670. 2
- 51245241671. 3
- 51245241672. 4

Question Number : 43 Question Id : 51245213418 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The primary agenda of the Kyoto Protocol is :

1. The regulation of hazardous wastes
2. To regulate the production of nuclear energy
3. To control anthropogenic sources of greenhouse gases
4. None of the above

Options :

- 51245241673. 1
- 51245241674. 2
- 51245241675. 3
- 51245241676. 4

Question Number : 44 Question Id : 51245213419 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Carbon dioxide is primarily called a greenhouse gas because it traps

1. Heat
2. Light
3. Warm currents
4. None of the above

Options :

- 51245241677. 1
- 51245241678. 2
- 51245241679. 3
- 51245241680. 4

Question Number : 45 Question Id : 51245213420 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Depletion of the ozone layer damages human health. Its negative effects include

1. Skin cancer
2. Osteoporosis
3. Dyspepsia
4. None of the above

Options :

- 51245241681. 1
- 51245241682. 2
- 51245241683. 3
- 51245241684. 4

Question Number : 46 Question Id : 51245213421 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Hydropower plants are located in the

1. Desert area
2. Plane area
3. Hilly terrains
4. None of the above

Options :

- 51245241685. 1
- 51245241686. 2
- 51245241687. 3
- 51245241688. 4

Question Number : 47 Question Id : 51245213422 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is unique about the gasification agent entering in a fluidized gasifier? It enters from the

1. bottom at a relatively fast rate as compared to a fixed bed gasifier
2. bottom at a relatively slow rate as compared to a fixed bed gasifier
3. top at a relatively fast rate as compared to a fixed bed gasifier
4. top at a relatively slow rate as compared to a fixed bed gasifier

Options :

- 51245241689. 1
- 51245241690. 2
- 51245241691. 3
- 51245241692. 4

Question Number : 48 Question Id : 51245213423 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How is the temperature maintained in a bubbling fluidized bed?

1. Biomass
2. Gasification agent
3. A constant ratio of biomass and gasification agent
4. Manipulating the ratio of biomass and gasification agent

Options :

- 51245241693. 1
- 51245241694. 2
- 51245241695. 3
- 51245241696. 4

Question Number : 49 Question Id : 51245213424 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is water-gas shift reaction?

1. Carbon dioxide + water → Carbon monoxide + Hydrogen + small heat
2. Carbon monoxide + water → Carbon dioxide + Hydrogen + small heat
3. Carbon dioxide + water + heat → Carbon monoxide + Hydrogen
4. Carbon monoxide + water + heat → Carbon dioxide + Hydrogen

Options :

- 51245241697. 1
- 51245241698. 2
- 51245241699. 3
- 51245241700. 4

Question Number : 50 Question Id : 51245213425 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The product gas removed from the low temperature zone undergoes _____ before being used as fuel in combustion for electricity generator.

1. Liquefaction
2. Condensation
3. Evaporation
4. Cleaning

Options :

- 51245241701. 1
- 51245241702. 2
- 51245241703. 3
- 51245241704. 4

Question Number : 51 Question Id : 51245213426 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A module in a solar panel refers to :

1. Series arrangement of solar cells.
2. Parallel arrangement of solar cells.
3. Series and parallel arrangement of solar cells.
4. None of the above.

Options :

- 51245241705. 1
- 51245241706. 2
- 51245241707. 3
- 51245241708. 4

Question Number : 52 Question Id : 51245213427 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

For satellites the source of energy is :

1. Solar cell
2. Fuel cells
3. Edison cells
4. Cryogenic storage

Options :

- 51245241709. 1
- 51245241710. 2
- 51245241711. 3
- 51245241712. 4

Question Number : 53 Question Id : 51245213428 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Fuel cell converts chemical energy to electrical energy using a reaction that

1. Eliminates combustion of fuel
2. Requires combustion of fuel
3. Requires no ignition of fuel
4. Fuel is not required

Options :

- 51245241713. 1
- 51245241714. 2
- 51245241715. 3
- 51245241716. 4

Question Number : 54 Question Id : 51245213429 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

For which of these devices does negative charge carriers flow from anode to cathode in the external circuit?

1. MHD generator
2. Thermionic generator
3. Thermoelectric generator
4. Fuel cell

Options :

- 51245241717. 1
- 51245241718. 2
- 51245241719. 3
- 51245241720. 4

Question Number : 55 Question Id : 51245213430 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of these fuel cells operates at high temperatures and pressures?

1. High temperature solid oxide fuel cell
2. Alkaline fuel cell
3. Molten carbon fuel cell
4. Phosphoric acid fuel cell

Options :

- 51245241721. 1
- 51245241722. 2
- 51245241723. 3
- 51245241724. 4

Question Number : 56 Question Id : 51245213431 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of these is not a property of MHD power generation?

1. Has no moving part, so is reliable
2. Overall generation cost is less
3. Closed cycle has almost no pollution
4. Conversion is about 80-90%

Options :

- 51245241725. 1
- 51245241726. 2
- 51245241727. 3
- 51245241728. 4

Question Number : 57 Question Id : 51245213432 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Combustion is a

1. Physical process
2. Chemical process
3. Both (1) & (2)
4. None of the above

Options :

- 51245241729. 1
- 51245241730. 2
- 51245241731. 3
- 51245241732. 4

Question Number : 58 Question Id : 51245213433 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The lowest temperature at which a substance catches fire is called its

1. Boiling point
2. Melting point
3. Ignition temperature
4. Critical temperature

Options :

- 51245241733. 1
- 51245241734. 2
- 51245241735. 3
- 51245241736. 4

Question Number : 59 Question Id : 51245213434 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Explosion is the evolution of

1. Heat
2. light
3. Sound
4. All of the above

Options :

- 51245241737. 1
- 51245241738. 2
- 51245241739. 3
- 51245241740. 4

Question Number : 60 Question Id : 51245213435 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Use of in a vehicle reduces pollution.

1. Petrol
2. Diesel
3. CNG
4. None of the above

Options :

- 51245241741. 1
- 51245241742. 2
- 51245241743. 3
- 51245241744. 4

Question Number : 61 Question Id : 51245213436 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Operation of thermocouple is governed by _____

1. Peltier effect
2. Seebeck effect
3. Thomson effect
4. All of the above

Options :

- 51245241745. 1
- 51245241746. 2
- 51245241747. 3
- 51245241748. 4

Question Number : 62 Question Id : 51245213437 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The function of a solar collector is to convert

1. Solar Energy into Electricity
2. Solar Energy into radiation
3. Solar Energy into thermal energy
4. Solar Energy into mechanical energy

Options :

- 51245241749. 1
- 51245241750. 2
- 51245241751. 3
- 51245241752. 4

Question Number : 63 Question Id : 51245213438 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Reflecting mirrors used for exploiting solar energy are called

1. Mantles
2. Ponds
3. Diffusers
4. Heliostats

Options :

- 51245241753. 1
- 51245241754. 2
- 51245241755. 3
- 51245241756. 4

Question Number : 64 Question Id : 51245213439 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Solar cells, for power generation, entail the following major disadvantage.

1. Variable power
2. High cost
3. Lack of availability
4. Large area requirement

Options :

- 51245241757. 1
- 51245241758. 2
- 51245241759. 3
- 51245241760. 4

Question Number : 65 Question Id : 51245213440 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Largest geothermal plant in operation is in

1. Mexico
2. Italy
3. Russia
4. California

Options :

- 51245241761. 1
- 51245241762. 2
- 51245241763. 3
- 51245241764. 4

Question Number : 66 Question Id : 51245213441 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In a hydro-electric plant, spillways are used

1. To discharge all surplus water
2. To discharge surplus water on the downstream side of dam
3. Water is not available in sufficient quantity
4. None of the above

Options :

- 51245241765. 1
- 51245241766. 2
- 51245241767. 3
- 51245241768. 4

Question Number : 67 Question Id : 51245213442 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Francis and kaplan turbine is used for hydro-electric plant.

1. Medium and low head
2. High head
3. Low head
4. Low and high head

Options :

- 51245241769. 1
- 51245241770. 2
- 51245241771. 3
- 51245241772. 4

Question Number : 68 Question Id : 51245213443 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The cost of fuel transportation is minimum in

1. Thermal power plant
2. Hydro-electric power plant
3. Nuclear power plant
4. None of the above

Options :

- 51245241773. 1
- 51245241774. 2
- 51245241775. 3
- 51245241776. 4

Question Number : 69 Question Id : 51245213444 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The first nuclear power plant in the world was commissioned in

1. U.S.A.
2. U.S.S.R
3. England
4. None of the above

Options :

51245241777. 1
51245241778. 2
51245241779. 3
51245241780. 4

Question Number : 70 Question Id : 51245213445 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In the nuclear fission reaction, isotope of uranium is used.

1. U^{238}
2. U^{235}
3. U^{233}
4. None of the above

Options :

51245241781. 1
51245241782. 2
51245241783. 3
51245241784. 4

Question Number : 71 Question Id : 51245213446 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The function of a moderator in a nuclear reaction is to

1. Stop chain reaction
2. Absorb neutrons
3. Reduce the speed of neutrons
4. Reduce temperature

Options :

- 51245241785. 1
- 51245241786. 2
- 51245241787. 3
- 51245241788. 4

Question Number : 72 Question Id : 51245213447 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which types of plant are fed and emptied regularly?

1. Batch type plants
2. Continuous type plants
3. Dome type plants
4. Drum type plants

Options :

- 51245241789. 1
- 51245241790. 2
- 51245241791. 3
- 51245241792. 4

Question Number : 73 Question Id : 51245213448 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Khadi village industries type biogas plant is example of _____

1. Flexible Bag biogas plant
2. Fixed dome biogas plant
3. Floating drum biogas plant
4. Semi-batch type

Options :

- 51245241793. 1
- 51245241794. 2
- 51245241795. 3
- 51245241796. 4

Question Number : 74 Question Id : 51245213449 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which plant has no movable parts?

1. KVIC
2. JANATA model
3. Pragati design plant
4. Ferro – cement plant

Options :

- 51245241797. 1
- 51245241798. 2
- 51245241799. 3
- 51245241800. 4

Question Number : 75 Question Id : 51245213450 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The upper portion of the _____ is in the shape of bell mouth and constructed using bricks and cements mortar in fixed dome plant.

1. Gas storage chamber
2. Inlet chamber
3. Outlet chamber
4. Digester

Options :

- 51245241801. 1
- 51245241802. 2
- 51245241803. 3
- 51245241804. 4

Question Number : 76 Question Id : 51245213451 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

For minimum of how many days within starting of fermentation, initiates anaerobic bacterial action?

1. 2
2. 10
3. 14
4. 20

Options :

- 51245241805. 1
- 51245241806. 2
- 51245241807. 3
- 51245241808. 4

Question Number : 77 Question Id : 51245213452 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the full form of TVS?

1. Tempered volatile solid
2. Total variant solid
3. Total volatile solid
4. Termed variant solid

Options :

- 51245241809. 1
- 51245241810. 2
- 51245241811. 3
- 51245241812. 4

Question Number : 78 Question Id : 51245213453 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which is the initial issue of the biogas plant?

1. Feedstock
2. Contaminants
3. Moisture contents
4. Nutrients

Options :

- 51245241813. 1
- 51245241814. 2
- 51245241815. 3
- 51245241816. 4

Question Number : 79 Question Id : 51245213454 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What does CNG stands?

1. Converted natural gas
2. Compressed natural gas
3. Compressed Non-soluble gas
4. Compressed natural gasoline

Options :

51245241817. 1

51245241818. 2

51245241819. 3

51245241820. 4

Question Number : 80 Question Id : 51245213455 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A device for converting substances (chemically or physically) into gas is called _____

1. Gasifiers
2. Biogas plants
3. Draughts
4. Gas chambers

Options :

51245241821. 1

51245241822. 2

51245241823. 3

51245241824. 4

Question Number : 81 Question Id : 51245213456 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following is an example of starch crops biomass feed stocks?

1. Sugar cane
2. Wheat straw
3. Corn stover
4. Orchard prunings

Options :

- 51245241825. 1
- 51245241826. 2
- 51245241827. 3
- 51245241828. 4

Question Number : 82 Question Id : 51245213457 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The bio ethanol is subjected to rectification to remove _____

1. Sugar
2. Enzymes
3. Yeast
4. Impurities

Options :

- 51245241829. 1
- 51245241830. 2
- 51245241831. 3
- 51245241832. 4

Question Number : 83 Question Id : 51245213458 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Noise and thermal pollution is _____ for fuel cells.

1. High
2. Low
3. Moderate
4. Zero

Options :

- 51245241833. 1
- 51245241834. 2
- 51245241835. 3
- 51245241836. 4

Question Number : 84 Question Id : 51245213459 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Direct conversion of heat energy into electrical energy is possible through

1. MHD generators
2. Fuel or solar cells
3. Thermionic converters.
4. Both (1) and (3)

Options :

- 51245241837. 1
- 51245241838. 2
- 51245241839. 3
- 51245241840. 4

Question Number : 85 Question Id : 51245213460 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which is the type of energy where the energy is harnessed by the heat accumulated on the surface of the water?

1. Wind energy
2. Wave energy
3. Ocean thermal energy conversion
4. Solar energy

Options :

- 51245241841. 1
- 51245241842. 2
- 51245241843. 3
- 51245241844. 4

Question Number : 86 Question Id : 51245213461 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Two basin tidal schemes

1. Are more economical than single basin schemes
2. Operate on ebb cycles in both basins
3. Produce less uniform power
4. Produce more uniform power

Options :

- 51245241845. 1
- 51245241846. 2
- 51245241847. 3
- 51245241848. 4

Sub-Section Number :

2

Sub-Section Id :

512452839

Question Shuffling Allowed :

Yes

Question Number : 87 Question Id : 51245213462 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

All the commercial liquid fuels are derived from natural petroleum (or crude oil).

1. True
2. False

Options :

51245241849. 1
51245241850. 2

Sub-Section Number : 3
Sub-Section Id : 512452840
Question Shuffling Allowed : Yes

Question Number : 88 Question Id : 51245213463 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Zeroth law of thermodynamics

1. Deals with conversion of mass and energy
2. Deals with reversibility and irreversibility of process
3. States that if two systems are both in equilibrium with a third system, they are in thermal equilibrium with each other
4. Deals with heat engines

Options :

51245241851. 1
51245241852. 2
51245241853. 3
51245241854. 4

Question Number : 89 Question Id : 51245213464 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

One watt is equal to

1. 1 Nm/s
2. 1 N/ms
3. 1 Nm/hr
4. 1 kNm/s

Options :

51245241855. 1
51245241856. 2
51245241857. 3
51245241858. 4

Question Number : 90 Question Id : 51245213465 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

First law of thermodynamics furnishes the relationship between

1. Heat and work
2. Heat, work and properties of the system
3. Various properties of the system
4. Various thermodynamic processes

Options :

51245241859. 1
51245241860. 2
51245241861. 3
51245241862. 4

Question Number : 91 Question Id : 51245213466 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What happens to wind speed when many turbines operate collectively?

1. Wind speed reduces
2. Wind speed increases
3. Wind speed does not change
4. Wind speed increases exponentially and then decreases linearly

Options :

- 51245241863. 1
- 51245241864. 2
- 51245241865. 3
- 51245241866. 4

Question Number : 92 Question Id : 51245213467 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A system is at rest, the kinetic energy of the system is

1. Infinite
2. Greater than zero
3. Less than zero
4. Zero

Options :

- 51245241867. 1
- 51245241868. 2
- 51245241869. 3
- 51245241870. 4

Question Number : 93 Question Id : 51245213468 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Lignite, bituminous and anthracite are different ranks of:

1. Nuclear fuel
2. Coal
3. Natural gas
4. Biogas

Options :

51245241871. 1
51245241872. 2
51245241873. 3
51245241874. 4

Sub-Section Number : 4
Sub-Section Id : 512452841
Question Shuffling Allowed : Yes

Question Number : 94 Question Id : 51245213469 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The distribution of hydrogen in the fuel cells is proper.

1. True
2. False

Options :

51245241875. 1
51245241876. 2

Sub-Section Number : 5
Sub-Section Id : 512452842
Question Shuffling Allowed : Yes

Question Number : 95 Question Id : 51245213470 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Lower wind speeds result in _____

1. Higher wind energy obtained
2. No wind energy obtained
3. Lower wind energy obtained
4. 100% energy conversion for half the operation time and less than 10% energy conversion for the remaining half of the operation time

Options :

- 51245241877. 1
- 51245241878. 2
- 51245241879. 3
- 51245241880. 4

Question Number : 96 Question Id : 51245213471 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is rated speed?

1. Wind turbines generate least output power
2. Wind turbines do not generate any output power
3. Wind turbines generate maximum output power
4. Wind turbines have no rated speed as the output power always increases

Options :

- 51245241881. 1
- 51245241882. 2
- 51245241883. 3
- 51245241884. 4

Question Number : 97 Question Id : 51245213472 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The combustion in compression ignition engine is

1. Homogeneous
2. Heterogeneous
3. Laminar
4. None of the above

Options :

- 51245241885. 1
- 51245241886. 2
- 51245241887. 3
- 51245241888. 4

Question Number : 98 Question Id : 51245213473 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The first Pilot-cum-demonstration project of Small Wind Solar Hybrid System of 25 KW capacity will be installed at

1. Tamil Nadu
2. Gujarat
3. Rajasthan
4. Maharashtra

Options :

- 51245241889. 1
- 51245241890. 2
- 51245241891. 3
- 51245241892. 4

Question Number : 99 Question Id : 51245213474 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which energy accounts for largest share in the renewable energy basket of India?

1. Wind
2. Nuclear
3. Hydel
4. Solar

Options :

- 51245241893. 1
- 51245241894. 2
- 51245241895. 3
- 51245241896. 4

Question Number : 100 Question Id : 51245213475 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Given below are two statements

Statement I: Biomass is a renewable energy resource derived from plants and animal waste.

Statement II: However, burning of biomass increases atmospheric carbon dioxide.

In light of the above statements, choose the **correct** answer from the options given below

1. Only 1
2. Only 2
3. Both 1 and 2
4. None of the above

Options :

- 51245241897. 1
- 51245241898. 2
- 51245241899. 3
- 51245241900. 4

