■ Comprehensive MCQ Collection

Topic: **Cell**

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Question 1 of 21

Q1: Question
Download Solution PDF
The most important cell type associated with the immunity of the body is
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RBCs
platelets
lymphocytes
More than one of the above
None of the above

Options:

A. RBCs

B. platelets

C. lymphocytes

D. More than one of the above

E. None of the above

■ Answer & Detailed Solution:

The correct answer is lymphocytes.

Key Points

Immunity is protection from infectious agents.
The immune system consists of cells that kill the invading pathogen.
Our body comprises lymphocytes, monocytes, neutrophils, eosinophils and basophils.
Lymphocyte is a type of agranulocyte.
It is B-Lymphocyte and T-lymphocytes.
T-lymphocytes help in the production of antibodies, killing the pathogen.
B-lymphocytes produce antibodies and bind with a foreign antigen.
The most important cell type associated with the immunity of the body is lymphocytes.
Lymphocytes are formed inside bone marrow by hematopoiesis.
T-lymphocytes mature in the thymus, and B- lymphocytes differentiate and mature inside the bone marrow itself.

Additional Information
RBCs:

It is an erythrocyte.
It is without a nucleus and biconcave in shape.
It helps in the transport of gases.

Platelets:

It is thrombocytes.
It helps in blood clotting.
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Question 2 of 21

Q2: Question
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Most of the enzymes are
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lipids
acids
alkalis
proteins

Options:

A. lipids

B. acids

C. alkalis

D. proteins

■ Answer & Detailed Solution:

The correct answer is proteins.

Key Points

Enzymes are mostly made up of Protein.
Enzymes are produced naturally in our body.
The enzymes in our body help to perform very important tasks. These include building muscle, destroying toxins, and breaking down food particles during digestion.
There are three main types of digestive enzymes required for proper digestive system function.
Amylase :- breaks down starches and carbohydrates into sugars
Lipase :- break down lipids, which are fat and oil into glycerol and fatty acid.
Protease :- breaks down proteins into amino acid.

Additional Information

Protein is know as building Block of our body. Because, the main function of protein in the body is to build and repair cells and tissues. This includes supporting muscle development and all other cells in the body.
Sources of protein :- Milk, Egg, Meat, Fish Nuts, Pulses, Soyabean, Apples, Apricots, Blueberries, Cherries and Grapefruit. etc.
Protein deficiency leads to Kwashiorkor and Marasmus diseases in children
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Question 3 of 21

Q3: Question
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Which of the following photoelectric devices is most suitable for digital applications?
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Photodiode
Photovoltaic cell
Photoemitter
More than one of the above
None of the above

Options:

A. Photodiode

B. Photovoltaic cell

C. Photoemitter

D. More than one of the above

E. None of the above

■ Answer & Detailed Solution:

The correct answer is Photovoltaic cell.

Confusion Points

Photoelectric device means which uses the photoelectric effect, in other words, which produces electricity/electric signal from light.
A photovoltaic cell is one such device. Other devices in the option are exactly the opposite of this, in other words, they produce light on the flow of electricity.

Key Points

Photovoltaic cell:

A photovoltaic panel usually referred to as a module, is a structure made up of connected unique cells that produce an electric current when exposed to sunlight.
An electric field is produced when the cells are exposed to the sun.
Photovoltaic cells or commonly known as solar cells have vast use in digital technology.
For example entire satellite communication depends on it since this is the main source of power for it.

Additional Information

Photodiodes:

Photodiodes are used to accurately measure light intensity.
The photodiode works on the concept that an electric current begins to flow through it when the junction of this two-terminal semiconductor device is lit.
Photodiodes are utilized in CD players, smoke detectors, medical equipment, and the receivers for infrared remote controls used to operate everything from air conditioners to televisions.
Photodiodes all are used in photoelectric devices according to the requirements.
Devices like cameras, medical equipment, automobiles, and in many other applications.

Photoemitter:

A substance that emits photoemitted electrons when illuminated.
Emitting photons, particularly from metallic surfaces.
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Question 4 of 21

Q4: Question
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Which among the following is a character of chloroplast which makes them qualified to self-replication?
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Presence of both DNA and RNA
Presence of DNA only
Absence of RNA
More than one of the above
None of the above

Options:

A. Presence of both DNA and RNA

B. Presence of DNA only

C. Absence of RNA

D. More than one of the above

E. None of the above

■ Answer & Detailed Solution:

The correct answer is the Presence of both DNA and RNA.

Key Points

Chloroplast is a green color plastid present inside a plant cell.
Chloroplast is a double membrane structure.
It is semiautonomous, and it has its DNA.
DNA can replicates and forms its copy.
Replication is a process in which DNA forms its copy with the help of a DNA template and the enzyme DNA polymerase.
Chloroplasts contain their own DNA, which is separate from the nuclear DNA found in the cell's nucleus. While the presence of DNA is an important factor in chloroplast replication, it is not sufficient for self-replication.
Both DNA and RNA play important roles in the self-replication of chloroplasts, which are organelles found in plant cells that are responsible for photosynthesis.
Chloroplasts contain their own DNA, which encodes for some but not all of the proteins required for their replication and functioning.
In order for the proteins to be produced, the DNA must first be transcribed into RNA, which serves as a template for protein synthesis.
DNA provides the genetic information required for chloroplast replication, while RNA molecules are involved in the transcription of genetic information into proteins. Both DNA and RNA are essential for the self-replication of chloroplasts.

Additional Information

RNA :
It is ribonucleic acid.
It is the genetic material of bacteria, viruses, and viroids.

It is less stable than DNA.
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Question 5 of 21

Q5: Question
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What is the basis of most useful classification of medications in medical chemistry?
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Pharmacological effect
Molecular targets
Chemical structure
None of the above

Options:

A. Pharmacological effect

B. Molecular targets

C. Chemical structure

D. None of the above

■ Answer & Detailed Solution:

The correct answer is Molecular targets.

Key Points

The most useful classification of drugs for medicinal chemists is based on molecular targets.
This classification is based on the target molecules, which are usually biomolecules like carbohydrates, lipids, proteins, and nucleic acids.
Drugs that target specific biomolecules tend to have better results.
These drugs possess some common structural features and may have the same mechanism of action on a specific drug target.
There are other ways to classify drugs as well. For example, drugs can be classified based on their chemical structure, pharmacological effect, or drug action.
However, the classification based on molecular targets is considered the most useful for medicinal chemists.

Additional Information
Common examples of molecular targets:

Receptors: Many drugs work by binding to and modulating the activity of cell surface receptors. For example, beta-blockers target beta-adrenergic receptors in the heart to reduce heart rate

and blood pressure.
Enzymes: Enzymes are proteins that catalyze chemical reactions in the body. Drugs can inhibit or enhance the activity of specific enzymes to regulate biological processes.
DNA and RNA: Some drugs target nucleic acids. For example, chemotherapy drugs often target the DNA in cancer cells to inhibit their replication.
Proteins in Disease-Related Pathways: In diseases like cancer, drugs may target specific proteins or pathways that are dysregulated in the disease. For example, drugs like Imatinib target the BCR-ABL fusion protein in chronic myeloid leukemia.
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Question 6 of 21

Q6: Question
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By selling 45 lemons for ■40, a man loses 20%. How many should he sell for ■24 to gain 20% in the transaction?
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16
18
20
22
None of the above/More than one of the above

Options:

A. 16

B. 18

C. 20

D. 22

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

Given:

By selling 45 lemons for ■40, a man loses 20%.

Calculation:

Selling price of 45 lemons = 40

Loss % = 20%

Cost price of 45 lemons = (40/80) × 100 = 50

Cost price of 1 lemon = 50/45 = Rs. 10/9

If a man sells a lemons for Rs. 24 and gains 20%, then

Cost price = (24/120) × 100 = Rs. 20

If cost price of 1 lemon is Rs. 10/9 then number of lemons which can be brought in Rs. 20 = 20 × (9/10) = 18 lemons

Hence, option 2 is correct.

Alternate Method

Let's first find the cost price (CP) of the 45 lemons.

If selling price (SP) = ■40 represents 80% (100% - 20% loss), then:

80% of CP = ■40

=> CP = ■40 × 100/80

=> CP = ■50

Now, the cost price of 45 lemons is ■50.

Cost price of 1 lemon = ■50/45

Cost price of 1 lemon = ■10/9

Now,
Selling price (SP) = 120/100 × CP of 1 lemon

SP = 120/100 × (■10/9)

SP = ■12/9

SP = ■4/3

Now,

Number of lemons = Total amount / Selling price per lemon

Number of lemons = ■24 / (■4/3)

Number of lemons = ■24 × 3/■4

Number of lemons = 18.

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Question 7 of 21

Q7: Question
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Fungi are plants that lack
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carbon dioxide
chlorophyll
sunlight
oxygen
None of the above/More than one of the above

Options:

A. carbon dioxide

B. chlorophyll

C. sunlight

D. oxygen

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct answer is chlorophyll.

Key Points

Fungi are plants that lack chlorophyll and also they are distinguished by their unique structure as well as physiological features.
Fungi also have a cell wall that is made up of chitin and get the nutrients through absorption. As there is a lack of chlorophyll in fungi so photosynthesis will not take place.
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Question 8 of 21

Q8: Question
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Consider the following statements about the Production Linked Incentive (PLI) scheme :

1. The scheme offers a production-linked incentive to boost domestic manufacturing and attract large investments in mobile phone manufacturing and specified electronic components.

2. The scheme has two categories of applicants, namely, global companies and domestic companies.

3. The scheme shall extend an average incentive of around 8% on net incremental sales (over base year) of goods manufactured in India and covered under the target segment, to eligible companies, for a period of six years.

4. The target segment under PLI shall include (i) laptops, (ii) tablets, (iii) all-in one PCs, (iv) servers and (v) Ultra-Small Form Factor (USFF).

Which of the above statements is/are incorrect?

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1 and 4
2 and 4
1 and 3
2 and 3

Options:

A. 1 and 4

B. 2 and 4

C. 1 and 3

D. 2 and 3

■ Answer & Detailed Solution:

The correct answer is 2 and 3.

Key Points

Production-linked incentive (PLI) scheme:
The government recently announced the PLI scheme for mobile phones, pharma products, and medical equipment sectors to make India a manufacturing hub.
It was notified as a part of the National Policy on Electronics. Hence option 4 is correct.
It proposes a financial incentive to boost domestic manufacturing and attract large investments in the electronics value chain. So, option 1 is correct.
Key features:
The scheme shall extend an incentive of 4% to 6% on incremental sales (over a base year) of goods manufactured in India and covered under target segments, to eligible companies. Hence statement 3 is incorrect.
It is for a period of five years.
FY 2019-20 is considered as the base year for the calculation of incentives.
The Scheme will be implemented through a Nodal Agency which shall act as a Project Management Agency (PMA) and be responsible for providing secretarial, managerial, and implementation support and carrying out other responsibilities as assigned by MeitY from time to time.
The scheme has two categories of applicants, namely, global companies, Hybrid companies, and domestic companies. Hence, statement 2 is incorrect.
The scheme shall extend an average incentive of around 8% on net incremental sales (over base year) of goods manufactured in India and covered under the target segment, to eligible

companies, for a period of six years.
Eligibility:
Companies that make mobile phones which sell for Rs 15,000 or more will get an incentive of up to 6 percent on incremental sales of all such mobile phones made in India.
In the same category, for companies that are owned by Indian nationals and make such mobile phones, the incentive has been kept at Rs 200 crore for the next four years.
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Question 9 of 21

Q9: Question
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In transfusion, blood must be compatible not only in blood type but also in
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Rh factor
the number of white cells
the number of red cells
race of donor and recipient
None of the above/More than one of the above

Options:

A. Rh factor

B. the number of white cells

C. the number of red cells

D. race of donor and recipient

E. None of the above/More than one of the above

Answer & Detailed Solution:

The correct option is the Rh factor.
EXPLANATION:

A blood transfusion is a routine medical procedure in which donated blood is provided to you through a narrow tube placed within a vein in your arm. This potentially life-saving procedure can help replace blood lost due to surgery or injury.
During a blood transfusion, a healthcare professional will place a small needle into the vein, usually in the arm or hand. The blood then moves from a bag, through a rubber tube, and into the person's vein through the needle.
They will carefully monitor vital signs throughout the procedure.
Some doctors believe that hospital patients who fall below 10 g/dL should get a blood transfusion. But recent research found that: Many patients with levels between 7 and 10 g/dL may not need a blood transfusion. One unit of blood is usually as good as two, and it may even be safer.
If you have type AB blood, you can receive any type of blood and you’re called a universal

recipient. If you have Rh-negative blood, you can only receive Rh-negative blood.
So, In a transfusion, blood must be compatible not only in blood type but also with the Rh factor
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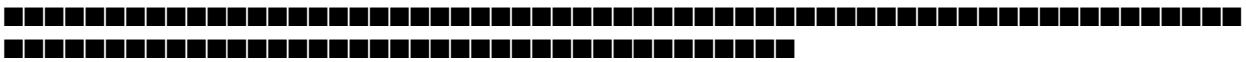

Question 10 of 21

Q10: Question
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Covishield, the COVID vaccine of India which is approved by WHO, is manufactured by
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Serum Institute
Bharat Biotech
Panacea Biotec
Zydus Cadila
None of the above/More than one of the above

Options:

A. Serum Institute

B. Bharat Biotech

C. Panacea Biotec

D. Zydus Cadila

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct answer is Serum Institute.

Key Points

COVISHIELD

It is the name given to an Oxford-AstraZeneca Covid-19 vaccine candidate which is technically referred to as AZD1222 or ChAdOx 1 nCoV19.
It is a version of the vaccine developed by the University of Oxford in collaboration with Swedish-British drugmaker AstraZeneca.
Serum Institute of India (SII) is the manufacturing partner in India. Hence, Option 1 is correct.
It is based on a weakened version of a common cold virus or the adenovirus that is found in chimpanzees.
This viral vector contains the genetic material of the SARS-CoV-2 spike protein (protrusions) present on the outer surface of the virus that helps it bind with the human cell.
The body's immune system is supposed to recognize this protein as a threat and work on building antibodies against it.
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Question 11 of 21

Q11: Question
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Input and output nerves meet at
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liver
central nervous system
heart
None of the above

Options:

A. liver

B. central nervous system

C. heart

D. None of the above

■ Answer & Detailed Solution:

The correct answer is central nervous system.

Key Points

Input and output nerves meet at a structure called the synapse, part of central nervous system.
The synapse is a specialized junction between two nerve cells (neurons) or between a neuron and a target cell, such as a muscle cell or another neuron.
At the synapse, information is transmitted from the presynaptic neuron (the input) to the postsynaptic neuron (the output) or target cell.
This transmission is typically mediated by chemical neurotransmitters that are released from the presynaptic neuron and received by receptors on the postsynaptic neuron or target cell, allowing for the propagation of nerve signals.

Additional Information
Central Nervous System (CNS):

The central nervous system (CNS) is a crucial part of the human body responsible for processing and coordinating information from the body's sensory organs and controlling various bodily functions.

It consists of the brain and the spinal cord. Here are some key aspects of the central nervous system:

Brain:
The brain is the most complex and vital organ in the CNS.
It plays a central role in controlling and coordinating various bodily functions, such as thinking, memory, emotions, movement, and sensory perception.
It is protected by the skull and is divided into different regions, each with specific functions.
Spinal Cord:
The spinal cord is a long, thin, tubular structure that extends from the brain down the vertebral column.
It serves as a bridge between the brain and the rest of the body, carrying signals to and from the brain.
The spinal cord is responsible for reflex actions and relaying sensory and motor information.

Neurons:
Neurons are the functional units of the CNS.
They are specialized cells that transmit electrical and chemical signals, allowing communication within the nervous system.
Neurons have dendrites that receive signals, a cell body that processes information, and an axon that transmits signals to other neurons or to muscles and glands.
White Matter and Gray Matter:
The brain and spinal cord contain both white matter and gray matter.
Gray matter consists of neuron cell bodies and synapses and is involved in information processing.
White matter is composed of myelinated axons that transmit signals over longer distances and connects different regions of the CNS.
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Question 12 of 21

Q12: Question
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The stomata open or close due to change in the
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position of nucleus in cells
protein composition of cells
amount of water in cells
More than one of the above
None of the above

Options:

A. position of nucleus in cells

B. protein composition of cells

C. amount of water in cells

D. More than one of the above

E. None of the above

■ Answer & Detailed Solution:

The correct answer is -amount of water in cells.

Key Points

Stomata opening and closure is a process that regulates gas exchange and water balance in plants.
The process is controlled by two main cells called the guard cells.
Guard cells are located around the stomatal pore and are responsible for opening and closing

the pore.
The water uptake controls the opening of the stomata by the guard cells
It leads to turgor pressure and an increase in the size of the guard cells.
This causes the stomata to open and allow the exchange of gases
Gases such as carbon dioxide and oxygen are exchanged between the plant and the atmosphere.
The stomata's closure results from water loss from the guard cells and a decrease in turgor pressure.
This causes the guard cells to shrink, resulting in the stomata closing
Nucleus position and protein composition do not have any major effect on the stomata closure and opening.

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Question 13 of 21

Q13: Question
Download Solution PDF

Which of the following technologies will be enabled by the 5G mobile communication networks?

1. Internet of Things

2. Edge Computing

3. Network Slicing

Select the correct answer using the codes given below

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Only 1 and 2
Only 2 and 3
Only 1 and 3
1, 2 and 3

Options:

A. Only 1 and 2

B. Only 2 and 3

C. Only 1 and 3

D. 1, 2 and 3

■ Answer & Detailed Solution:

The Correct answer is Option 4.

Key Points

Internet of Things:

The Internet of Things is the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between devices themselves.

Edge Computing:

Edge computing is an emerging paradigm which refers to arrange of networks and devices at or near the user.
Key characteristics and benefits of edge computing include:
By processing data closer to its source, edge computing reduces the time it takes for data to travel to a distant data center and back.
Edge computing minimizes the need for large amounts of data to be transferred to the cloud, which can strain network bandwidth.
Storing and processing data at the edge can enhance data privacy and security.
Edge computing allows for the distribution of computing resources across a network, making it

easier to scale processing capabilities as needed.

Network Slicing:

‘Network Slicing’ is a network configuration that allows multiple networks to be created on top of common physical infrastructure. All three of these will be enabled by the 5G mobile communication networks.
It refers to the ability to create multiple virtualized, independent, and customizable network instances, or "slices," within a single physical network infrastructure. Each slice operates as a self-contained network with its own resources, capabilities, and characteristics, tailored to specific use cases, applications, or customer requirements.

Hence, all the options are correct.

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Question 14 of 21

Q14: Question
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Who has been awarded with the Dadasaheb Phalke Indian Television Award in 2022 from Bihar?
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Deep Shrestha
Madan Pande
Shatrughan Sinha
Sharad Sinha
None of the above/More than one of the above

Options:

A. Deep Shrestha

B. Madan Pande

C. Shatrughan Sinha

D. Sharad Sinha

E. None of the above/More than one of the above

■ **Answer & Detailed Solution:**

The correct answer is Deep Shrestha

Key Points

Deep Shrestha has been awarded the Dadasaheb Phalke Indian Television Award in 2022 from Bihar.

Deep Shrestha has been honored with about two hundred small and big honors. Recently, he received Dadasaheb Phalke Indian Television Award in Mumbai.
Deep Shrestha is associated with Bihar State BJP Art Culture Cell.
Deep is also the national convener of Shrestha Global Kayastha Conference Arts and Cultural Cell.
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Question 15 of 21

Q15: Question
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Pine, Fir, Spruce, Cedar, Larch and Cypress are famous timber-yielding plants of which several also occur widely in the hilly regions of India. All these belong to
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gymnosperm
monocotyledons
dicotyledons
angiosperm
None of the above/More than one of the above

Options:

A. gymnosperm

B. monocotyledons

C. dicotyledons

D. angiosperm

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct option is Gymnosperm.

Key Points

The gymnosperms are a group of seed-producing plants that includes cycads, Ginkgo, gnetophytes, and conifers.
The gymnosperms are also known as Acrogymnospermae.
Over 150 species of timber are produced in India.
The largest group of living gymnosperms are the conifers (pines, cypresses, and relatives).
After that Cycads, gnetophytes, and Ginkgo biloba (a single living species).

Additional Information
Angiosperm

In these plants, a seed is produced by flowering plants and is enclosed within an ovary.
The lifecycle of these plants is cyclical.
They are generally hardwood type.
The reproductive system is present in flowers in these plants.

Monocotyledons:

Monocotyledons commonly referred to as monocots, are grass and grass-like flowering plants (angiosperms), the seeds of which typically contain only one embryonic leaf, or cotyledon.

Dicotyledons:

The dicotyledons, also known as dicots.
It this group all the flowering plants were formerly divided.
The name refers to one of the typical characteristics of the group: namely, that the seed has two embryonic leaves or cotyledons.
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Q16: Question
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In the context of lab-grown diamonds (LGDs), what is used as a diamond seed?
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White sapphire
Moissanite
Graphite
Cubic zirconia (CZ)

Options:

A. White sapphire

B. Moissanite

C. Graphite

D. Cubic zirconia (CZ)

■ Answer & Detailed Solution:

The correct answer is option 3.

Key Points
Lab-grown diamonds (LGDs):

LGDs are manufactured in laboratories, as opposed to naturally occurring diamonds. However, the chemical composition and other physical and optical properties of the two are the same.
Naturally occurring diamonds take millions of years to form; they are created when carbon deposits buried within the earth are exposed to extreme heat and pressure.
They are mostly manufactured through two processes, High Pressure, High Temperature (HPHT) method or Chemical Vapour Deposition (CVD) method.
Both HPHT and CVD methods of growing diamonds artificially begin with a seed, a slice of another diamond.
A very thin slice (like a hair) of Graphite is used as a diamond seed.
In the HPHT method, the seed, along with pure graphite carbon, is exposed to temperatures around 1,500 degrees Celsius and extremely high pressure.
In the CVD method, the seed is heated to around 800 degrees Celsius inside a sealed chamber filled with a carbon-rich gas. The gas sticks to the seed, gradually building the diamond.

Hence, the correct answer is option 3.

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Question 17 of 21

Q17: Question
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Water passes from the soil into the roots by a physical process called
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diffusion
transpiration
absorption
osmosis
None of the above/More than one of the above

Options:

A. diffusion

B. transpiration

C. absorption

D. osmosis

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct option is osmosis.
EXPLANATION:

Soil moisture is not only needed by plants for growth but it is also the solvent through which the cations or nutrients essential to plants are brought to the plant roots.
The plant roots then take in the nutrients through their root-cell membranes, following the process called osmosis.
Water passes from the soil into the roots by a physical process called osmosis.
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Question 18 of 21

Q18: Question
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What are salt-loving plants called?
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67th BPSC Prelims Set - D (Re-Exam) 30 Sept 2022 Official Paper
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Mesophytes
Glycophytes
Halophytes
Xerophytes
None of the above/More than one of the above

Options:

A. Mesophytes

B. Glycophytes

C. Halophytes

D. Xerophytes

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct answer is Halophytes.

Key Points
Salt-loving plants -

They are called Halophytes.
They survive in saline environments and can tolerate salt concentrations of up to 1M NaCl.
They constitute about 1% of the total flora of the world.
Example: Mangroves.

Additional Information
Shade-loving plants:

They are called Sciophytes.
They thrive better in low intensity sunlight.
They are usually found growing as undergrowth of tall plants in a forest.
Example: Black pepper.

Water-loving plants:

They are called Hydrophytes.
They survive either partially or completely submerged in water.
They may also include plants growing in water-logged soil.
Example: Water lily, duckweed.

Sun-Loving Plants:

The sun-loving plants are known as heliophytes or sunstroke plants.
They are adapted to thrive in direct sunlight.
They are common in open fields and meadows.
Some features of heliophytes:
Thicker stems with well-developed xylem.
Shorter internodes with branching.
Thicker leaf blades with smaller stomata.
Leaves with thick cuticle and numerous hairs.
Leaf orientation is not at right angles.
Examples: Banyan, Thyme.

Xerophyte:

A xerophyte is a species of plant that has adaptations to survive in an environment with little liquid water, such as a desert or an ice- or snow-covered region in the Alps or the Arctic.

Glycophytes:

Glycophytes are salt-sensitive plants that do not grow in soil or water of high salinity.

Salt-sensitive plants such as glycophytes do not have the ability to grow and complete their life cycle in salt stress conditions.

Mesophyte:

Mesophytes are terrestrial plants which are neither adapted to particularly dry nor particularly wet environments.
An example of a mesophytic habitat would be a rural temperate meadow, which might contain goldenrod, clover, oxeye daisy, and Rosa multiflora
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Question 19 of 21

Q19: Question
Download Solution PDF
The theory of continental drift was developed by
This question was previously asked in
67th BPSC Prelims Held on 8 May 2022 Official Question Paper
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J. J. Wilson
A. Wegener
Du Toit
H. Hess
None of the above/More than one of the above

Options:

A. J. J. Wilson

B. A. Wegener

C. Du Toit

D. H. Hess

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct option is Alfred Wagner.

Key Points

Continental Drift Theory (Alfred Wegener in 1912):

Continental drift theory was proposed by Alfred Wegener in 1912.
It was first put forward by Abraham Ortelius in 1596 before fully being developed by Albert Wegener.
The theory deals with the distribution of the oceans and the continents.
According to Wegener's Continental Drift theory, all the continents were one single continental mass (called a Supercontinent) – Pangaea and a Mega Ocean surrounded this supercontinent.
The Mega Ocean is known by the name Panthalassa.
Although Wegener's initial theory did not cover mantle convection until Arthur Holmes later proposed the theory.
According to this theory, the supercontinent, Pangaea, began to split some two hundred million years back.
Pangaea first split into 2 big continental masses known as Gondwanaland and Laurasia forming the southern and northern modules respectively.
Later, Gondwanaland and Laurasia continued to break into several smaller continents that exist today.

Continental Drift Theory

Additional Information

Theory hypothesis

Scientist/Philosopher

Gaseous Hypothesis

Immanuel Kant

Nebular hypothesis

Laplace

Planetesimal Hypothesis

Chamberlin and Moulton

Tidal Hypothesis

Jeans and Jefferys

Binary star Hypothesis

Russell

Supernova Hypothesis

Hoyle

Interstellar Dust Hypothesis

Otto Schmidt

Big bang theory

Georges Henri Lemaitre

Question 20 of 21

Q20: Question
Download Solution PDF
Which one of the following is correct for Bihar's economy?
This question was previously asked in
68th BPSC Prelims (Held on 12 Feb 2023) (Set: B) - Official Paper
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The occupational structure of the economy is stagnant from above.
The growth rate is one of the lowest in India at 2.5%
Bihar produces mostly primary goods.
More than one of the above
None of the above

Options:

A. The occupational structure of the economy is stagnant from above.

B. The growth rate is one of the lowest in India at 2.5%

C. Bihar produces mostly primary goods.

D. More than one of the above

E. None of the above

■ Answer & Detailed Solution:

The correct answer is

Key Points
Bihar’s Economy

Bihar’s GSDP (at constant prices) grew by 2.5% in 2020-21, which is less than the growth rate of 7.4% in 2019-20. In 2020-21, the agriculture sector as well as the services sector registered a marginal contraction.
Bihar’s growth rate in 2020-21 was higher than the growth in national GDP (which registered a negative growth of 6.6% in 2020-21). Hence statement 2 is incorrect.
In 2020-21, at current prices, agriculture, manufacturing, and services sectors contributed to 24%, 15%, and 61% of the economy.
The per capita GSDP of Bihar in 2020-21 (at current prices) was Rs 50,555; 2.6% higher than the corresponding figure in 2019-20.
In comparison, per capita GDP at the national level was Rs 1,46,087 in 2020-21 (at current prices).
Further, Bihar’s per capita GSDP in 2020-21 was the lowest among all states in the country.
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Question 21 of 21

Q21: Question
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Which of the following is the major constituent of the liquefied petroleum gas?
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Methane
Ethane
Propane
Butane
None of the above/More than one of the above

Options:

A. Methane

B. Ethane

C. Propane

D. Butane

E. None of the above/More than one of the above

■ Answer & Detailed Solution:

The correct option is Butane.
EXPLANATION:
The gas, which we use in our home for the preparation of food is called liquid petroleum gas.
The main constituents of LPG are the liquid form of butane and isobutane.
Liquefied petroleum gas (LPG) is a combination of propane and butane.
It is odorless that's why Ethyl Mercaptan is added to it so there may be a smell if LPG leaks from its storage container.

Additional Information

Water Gas :
Water-gas is a mixture of CO and H2.
However, by-products such as char, tar, soot, ash, and condensates are also produced.
Natural gas (also called fossil gas; sometimes just gas), is a naturally occurring hydrocarbon gas mixture consisting primarily of methane, but commonly including varying amounts of other higher alkanes, and sometimes a small percentage of carbon dioxide, nitrogen, hydrogen sulfide, or helium.
Compressed natural gas is a fuel that can be used in place of petrol (gasoline), diesel fuel, and liquefied petroleum gas (LPG).
CNG combustion produces fewer undesirable gases than the aforementioned fuels.
In comparison to other fuels, natural gas poses less of a threat in the event of a spill, because it is lighter than air and disperses quickly when released.
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■ End of MCQ Collection

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