### Q.1) What type of mirrors are used in torches, search-lights and vehicle headlights?

- a) Convex mirrors
- b) Plane mirrors
- c) Concave mirrors
- d) Both (a) and (c)

### Q.1) Solution (c)

The concave mirror is a converging mirror, so that it is used for many purposes, It is used as a **torch to reflect the light**, It is used in the aircraft landing at the airports to guide the aero planes, It is used in **shaving to get an enlarged and erect image of the face**.

The concave mirror is used in **front lights of cars to reflect the light**, It is used in marine lighthouses that are found at the marine ports and at the airports to guide the ships and it is used in the solar ovens.

The concave mirror is used in the solar ovens and the solar furnaces to collect a large amount of solar energy in the focus of the mirror for cooking food, heating water, recharging power backups or melting metals respectively.

Concave mirrors are used in **satellite dishes**, they are used in telescopes, Dentist and ENT doctors use them to obtain a larger image than the original of the teeth, ear or skin etc.

#### Do you know?

- The convex mirror is used as side-view mirror on the passenger's side of a car because it forms an erect and smaller image for the way behind the car.
- The convex mirror is suitable for convenient shop and big supermarket and any other corner where need anti-thief, it is used in the turning off the road and parking.

#### THINK!

• Applications of convex and concave lenses

#### Q.2) Which of the following are the medical applications of ultrasound?

- 1. Echocardiography
- 2. Ultrasonography
- 3. Lithotripsy
- 4. SONAR

#### Select the correct answer using the codes given below

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) All the above

### Q.2) Solution (a)

Sound waves with frequencies higher than the upper audible limit of human hearing are called ultrasound. The limit varies from person to person but is approximately 20,000 hertz. The physical properties of ultrasound are similar to the normal audible sound.

#### Applications.

**Echocardiography:** In the process of electrocardiography, the ultrasonic waves are used to form an image of the heart using reflection and detection of these waves from various parts.

**Ultrasonography:** Medical ultrasound is a diagnostic imaging technique based on ultrasound. It is used for the imaging of internal body structures such as muscles, joints and internal organs. Ultrasonic images are known as sonograms. In this process, pulses of ultrasound are sent to the tissue using a probe. The sound echoes off the tissue, where different tissues reflect sound varying in degrees. These echoes are recorded and displayed an image.

**Lithotripsy:** Ultrasonic waves are used to break stones in the kidney. High-energy sound waves are passed through the body without injuring it and break the stone into small pieces. These small pieces move through the urinary tract and out of the body more easily than a large stone.

**SONAR:** SONAR, sound navigation and ranging is a technique in which sound waves are used to navigate, detect and communicate under the surface of the water.

#### Do you know?

 Echolocation is the process where sound waves and echoes are used to determine objects in space. Echolocation is used by bats to navigate and find their food in the dark. Bats send out sound waves from their mouth and nose, which then hit the objects in their vicinity producing echoes, which are then received by the bats. The nature of the echo helps them determine the size, the shape and the distance of the object.

#### THINK!

• Doppler effect

#### Q.3) Which of the following phenomenon are must for rainbow formation?

- 1. Reflection
- 2. Refraction
- 3. Dispersion
- 4. Polarization

#### Select the correct answer using the codes given below

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 2, 3 and 4 only
- d) All the above

#### Q.3) Solution (a)

A rainbow is a meteorological phenomenon that is **caused by reflection, refraction and dispersion of light in water droplets** resulting in a **spectrum of light appearing in the sky.** It takes the form of a multicolored circular arc. Rainbows caused by sunlight always appear in the section of sky directly opposite the sun.

In a primary rainbow, the arc shows red on the outer part and violet on the inner side. This rainbow is caused by light being refracted when entering a droplet of water, then reflected inside on the back of the droplet and refracted again when leaving it.

#### Do you know?

• Rainbows can be caused by many forms of airborne water. These include not only rain, but also mist, spray, and airborne dew.

#### THINK!

Monochrome rainbow

#### Q.4) Consider the following statements.

- 1. Metal detector works on the principle of electromagnetic induction.
- 2. Transformer works on the principle of mutual induction.

#### Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

### Q.4) Solution (c)

The operation of metal detectors is based upon the principles of electromagnetic induction. Metal detectors contain one or more inductor coils that are used to interact with metallic elements on the ground.

A transformer operates on the principals of "electromagnetic induction", in the form of **Mutual Induction**. Mutual induction is the process by which a coil of wire magnetically induces a voltage into another coil located in close proximity to it. Then we can say that transformers work in the "magnetic domain", and transformers get their name from the fact that they "transform" one voltage or current level into another.

#### Do you know?

- A cover meter is an instrument to locate rebars and measure the exact concrete cover. Rebar detectors are less sophisticated devices that can only locate metallic objects below the surface. Due to the cost-effective design, the pulse-induction method is one of the most commonly used solutions.
- The pulse-induction method is based on electromagnetic pulse induction technology to detect rebars.

#### THINK!

• MRI

#### Q.5) Which of the following are the applications of polaroid?

- 1. Polaroids are widely used as polarizing sun glasses.
- 2. Polaroid films are used to produce three-dimensional moving pictures.
- 3. In calculators and watches, letters and numbers are formed by liquid crystal display(LCD) through polarization of light.
- 4. Polarization is also used to study size and shape of molecules.

#### Select the correct answer using the codes given below

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 2, 3 and 4 only
- d) All the above

#### Q.5) Solution (d)

#### Applications of polaroid.

- Polaroids are widely used as polarizing sun glasses.
- Polaroid films are used to produce three-dimensional moving pictures.
- In calculators and watches, letters and numbers are formed by liquid crystal display(LCD) through polarization of light.
- Polarization is also used to study size and shape of molecules.
- Polaroids are used in the laboratory to produce and analyses plane polarized light.
- They are used to eliminate the head light glare in motor cars.
- They are used to improve color contrasts in old oil paintings.
- They are used as glass windows in trains and aero planes to control the intensity of light. In aero plane one polaroid is fixed outside the window while the other is fitted inside which can be rotated. The intensity of light can be adjusted by rotating the inner polaroid.
- Aerial pictures may be taken from slightly different angles and when viewed through
- polaroid's give a better perception of depth.

#### Do you know?

 A polarizing filter or polarising filter is often placed in front of the camera lens in photography in order to darken skies, manage reflections, or suppress glare from the surface of lakes or the sea. Since reflections (and sky-light) tend to be at least partially linearly-polarized, a linear polarizer can be used to change the balance of the light in the photograph.

#### THINK!

- LASER
- MASER

Q.6) When ant bites irritation/itching starts, which of the following substance will you rub on the place of bite to reduce irritation?

- a) Common salt
- b) Lemon
- c) Baking soda
- d) Chili powder

#### Q.6) Solution (c)

The sting of an ant contains formic acid. When an ant bites, it injects the acidic liquid into the skin. It causes irritation and burning effect on the skin. To relieve, skin should be rubbed by moist baking soda or calamine which are basic in nature.

#### Do you know?

• An antacid tablet is taken when one suffers from acidity, Because An antacid tablet consists of a base like Milk of Magnesia (magnesium hydroxide). It neutralises the effect of excessive hydrochloric acid released during indigestion.

#### THINK!

• Wound healing property of turmeric.

#### Q.7) We see lightning much before we hear its thunder because

- a) As a natural phenomenon, thunder occurs after lightning.
- b) Intensity of light waves is more than sound waves.
- c) Wavelengths of light waves is more than sound waves.
- d) All the above

#### Q.7) Solution (a)

Inside a cumulonimbus cloud, a constant churning goes on because of convectional currents. Updrafts and downdrafts leads to generation of large amount of static charge which falls on the ground as lightning. Once lightning occurs, the temperature for a fraction of second increases to thousands of degrees because of which a temporary vacuum is created. The surrounding air in order to fill this vacuum crashes in which causes a thunder.

Hence we can see lightning first and then thunder.

#### Do you know?

• At the sunrise and sunset, the sun appears flattered. This apparent flattering of sun's disc is due to the atmospheric refraction.

#### THINK!

• Optical fiber

Q.8) Piezoelectric Effect is the ability of certain materials to generate an electric charge in response to applied mechanical stress. Which of the following materials show this effect?

- a) Quarts
- b) Mica
- c) Limestone
- d) Diamond

### Q.8) Solution (a)

#### **Piezoelectric Effect**

Piezoelectric Effect is the ability of certain materials to generate an electric charge in response to applied mechanical stress.

When piezoelectric material is placed under mechanical stress, a shifting of the positive and negative charge centers in the material takes place, which then results in an external electrical field. When reversed, an outer electrical field either stretches or compresses the piezoelectric material.

The piezoelectric effect is very useful within many applications that involve the production and detection of sound, generation of high voltages, electronic frequency generation, microbalances, and ultra fine focusing of optical assemblies. It is also the basis of a number of scientific instrumental techniques with atomic resolution, such as scanning probe microscopes (STM, AFM, etc). The piezoelectric effect also has its use in more mundane applications as well, such as acting as the ignition source for cigarette lighters.

Quartz crystals were the first material to be commercially used for piezoelectric effect.

Q.9) Process of endoscopy is used to see the internal organs. Which of the following phenomenon is responsible for working of endoscopy?

- a) Reflection
- b) Total Internal reflection
- c) Scattering
- d) Diffraction

### Q.9) Solution (b)

#### Endoscopy

An endoscope is a bit like a bendy telescope a physician can use for seeing inside one of the body's cavities. Unlike a telescope, which is a very rigid tube, the part of an endoscope that enters a person's body is relatively flexible. It consists of two or three main optical cables, each of which comprises up to 50,000 separate optical fibers (made from optical-quality glass or plastic). One or two of the cables carry light down into the patient's body; another one carries reflected light (the image of the patient's body) back up to the physician's eyepiece (or into a camera, which can display it on a TV monitor).

The light travels through endoscope with the help of Total internal reflection.

#### Q.10) Which of the following phenomenon are studied under 'Fulminology'?

- a) Seismic waves
- b) Volcanoes
- c) Lightning
- d) Rainbows

#### Q.10) Solution (c)

#### **Fulminology**

The study or science of lightning is called **fulminology**, and someone who studies lightning is referred to as a fulminologist.

#### Q.11) Which of the following statements correctly explains the term 'Black Ice'?

- a) It is the name given to frozen petroleum.
- b) Solid Carbon dioxide
- c) It is a thin layer of transparent ice formed on the road.
- d) It is the name given to icebergs on which soot and black carbon has settled.

#### Q.11) Solution (c)

#### **Black Ice**

The most basic definition of black ice is a thin coat of highly transparent ice. The reason it is transparent is because it blends in with road pavements since it is so thin, making it nearly impossible to see. It's called black ice since it looks black, like the color of the road pavement it forms on.

If the temperature rises above freezing or the sun comes out during the day, any snow on the ground will slowly melt and cause road surfaces to become wet. If it rains, that could also lead to wet roadways with some puddles.

If the temperature then drops below freezing while the ground is still wet, black ice will likely form on paved surfaces due to the refreezing.

Black ice can also form if moisture in the air condenses and forms dew or fog, and then the temperature drops below freezing.

Since black ice is highly transparent, it is unlikely you'll be able to see it while driving down the road. Roadways become very slippery when black ice forms, leading to hazardous driving conditions and an increased risk of car accidents.

#### Think

• Dry ice

Q.12) Parsec is a unit of measurement used to measure distance in Space. One Parsec is equal to

- a) 5 light years
- b) 3.261 light years
- c) 7.48 light years
- d) 11.2 light years

#### Q.12) Solution (b)

#### Parsec

The parsec (symbol: pc) is a unit of length used to measure large distances to astronomical objects outside the Solar System. One parsec is equal to about 3.26 light-years (30 trillion km or 19 trillion miles) in length. The nearest star, Proxima Centauri, is about 1.3 parsecs (4.2 light-years) from the Sun.[2] Most of the stars visible to the unaided eye in the night sky are within 500 parsecs of the Sun.

Q.13) Almost everyone has switched to DTH connections from the archaic cable connections. Which part of the DTH satellite dish converts the radio wave signals to electrical signals?

- a) Modem
- b) Parabolic dish
- c) Orthomode tranceducer (OMT)
- d) Low Noise Block Convertor (LMB)

### Q.13) Solution (d)

#### Low Noise Block Convertor (LMB)

A low-noise block downconverter (LNB) is the receiving device mounted on satellite dishes used for satellite TV reception, which collects the radio waves from the dish and converts them to a signal which is sent through a cable to the receiver inside the building. Also called a low-noise block, low-noise converter (LNC), or even low-noise downconverter (LND), the device is sometimes inaccurately called a low-noise amplifier (LNA).

Q.14) After your selection if you would want to boil water in your academy, in which of the following academies, the water will boil at the lowest temperature?

- a) LABSNAA, Mussoorie
- b) National Police Academy, Hyderabad
- c) National Academy of Direct Taxes, Nagpur
- d) Water will boil at the same temperature everywhere

#### Q.14) Solution (a)

Water boils at a lower temperature at higher altitudes. This is because atmospheric pressure is low. Since Mussoorie is at the highest altitude in the given options, that will be the correct answer.

# Q.15) The "Lodestone" has a historical significance as being humans' first encounter with a new phenomenon. What mineral is closest to this material?

- a) Limonite
- b) Hematite
- c) Magnetite
- d) Siderite

#### Q.15) Solution (c)

A lodestone is a naturally magnetized piece of the mineral magnetite. They are naturally occurring magnets, which can attract iron.

The property of magnetism was first discovered in antiquity through lodestones. Pieces of lodestone, suspended so they could turn, were the first magnetic compasses, and their importance to early navigation is indicated by the name lodestone, which in Middle English means 'course stone' or 'leading stone', from the now-obsolete meaning of lode as 'journey, way'.

#### Do you know?

Lodestone is one of only a very few minerals that is found naturally magnetized.

The process by which lodestone is created has long been an open question in geology. Only a small amount of the magnetite on the Earth is found magnetized as lodestone.

Q.16) Recently a discovery of what was named 'Ata' after its location in the Atacama desert of Chile led to the suspicion that it may be an 'Alien' from outer space. What was this in fact?

- a) A flying saucer-like object
- b) A six-inch fossil skeleton
- c) A hitherto unknown animal species
- d) A five-feet reptile

#### Q.16) Solution (b)

Ata is the common name given to the 6-inch (15 cm) long skeletal remains of a human fetus found in 2003 in a deserted Chilean town in the Atacama Desert, hence the abbreviated name Ata.



Its unusual alien-like features – an elongated skull ending in a point and enlarged eye sockets – prompted many to treat it as evidence of extraterrestrial life.

However, recent study which used whole genome sequencing has shown that Ata is a female of human origin, likely of Chilean descent.

Whole DNA (genome) analysis of the remains determined that it was a female human fetus that had 64 unusual mutations in 7 genes linked to the skeletal system.

Source: <u>http://www.thehindu.com/sci-tech/science/bizarre-alien-skeleton-was-of-human-foetus-study/article23344011.ece</u>

### Q.17) Which of these discoveries is a landmark evidence of Big Bang theory?

- a) Quasars
- b) The first exoplanet 51 Pegasi b
- c) Cosmic Microwave Background Radiation
- d) Supernova

### Q.17) Solution (c)

The cosmic microwave background (CMB) is electromagnetic radiation as a remnant from an early stage of the universe in Big Bang cosmology. In older literature, the CMB is also variously known as cosmic microwave background radiation (CMBR) or "relic radiation".

The CMB is a faint cosmic background radiation filling all space that is an important source of data on the early universe because it is the oldest electromagnetic radiation in the universe, dating to the epoch of recombination. With a traditional optical telescope, the space between stars and galaxies (the background) is completely dark. However, a sufficiently sensitive radio telescope shows a faint background noise, or glow, almost isotropic, that is not associated with any star, galaxy, or other object. This glow is strongest in the microwave region of the radio spectrum.

The accidental discovery of the CMB in 1964 by American radio astronomers Arno Penzias and Robert Wilson was the culmination of work initiated in the 1940s, and earned the discoverers the 1978 Nobel Prize in Physics.

#### Do you know?

• After the Big Bang, the universe was filled with different types of radiation. The microwave background radiation (MBR) is one of the earliest radiations and we can find it scattered everywhere in the universe.

• The discovery of CMBR is landmark evidence of the Big Bang origin of the universe.

Source:

http://www.thehindu.com/education/catching-the-cosmic-

<u>rays/article22643466.ece</u>

# Q.18) Invisible to the naked eye, prokaryotes such as archaea and bacteria form a huge section of the living world. What is the characteristic of these microbes?

- a) They have a well-defined membrane-bound nucleus.
- b) They are found only in water bodies.
- c) They contain membrane-bound organelles.
- d) They have no well-defined membrane-bound nucleus.

#### Q.18) Solution (d)

The distinction between prokaryotes and eukaryotes is considered to be the most important distinction among groups of organisms. Eukaryotic cells contain membrane-bound organelles, such as the nucleus, while prokaryotic cells do not. Differences in cellular structure of prokaryotes and eukaryotes include the presence of mitochondria and chloroplasts, the cell wall, and the structure of chromosomal DNA.

Prokaryotes were the only form of life on Earth for millions of years until more complicated eukaryotic cells came into being through the process of evolution.

#### THINK!

Know the differences between prokaryotes and eukaryotes

#### Q.19) What is solar geoengineering?

- a) Study on how to reduce the glare from the sun to curb climate change
- b) Study of the sun's surface
- c) Study of the relationship between Earth and Sun
- d) All of the above

#### Q.19) Solution (a)

Solar geo-engineering or Solar radiation management (SRM) projects are a type of climate engineering which seek to reflect sunlight and thus reduce global warming.

Proposed methods include increasing the planetary albedo, for example using stratospheric sulfate aerosols. Restorative methods have been proposed regarding the protection of natural heat reflectors like sea ice, snow and glaciers with engineering projects. Their principal advantages as an approach to climate engineering is the speed with which they can be deployed and become fully active, their potential low financial cost, and the reversibility of their direct climatic effects.

Solar radiation management projects could serve as a temporary response while levels of greenhouse gases can be brought under control by mitigation and greenhouse gas removal techniques. They would not reduce greenhouse gas concentrations in the atmosphere, and thus do not address problems such as ocean acidification caused by excess carbon dioxide (CO2).

#### Do you know?

- In the last decade, solar geo-engineering has rapidly garnered attention as a plausible method to counteract global warming.
- So-called solar radiation management works by preventing some of the sun's rays from hitting the planet's surface, forcing them instead back up into space.

Source: <u>http://www.thehindu.com/sci-tech/science/developing-nations-to-study-ways-</u> to-dim-sunshine-slow-warming/article23433930.ece

#### Q.20) We all know WiFi. Now, what is SoFi?

- a) Robotic fish, built with a generic fish design
- b) The first robot declared a citizen by Saudi Arabia
- c) Next generation WiFi
- d) Social Finance, online personal finance company

### Q.20) Solution (a)

SoFi is a robotic fish, built with a generic fish design. A remote-controlled robot that swims quietly through coral reefs and schools of fish and uses a fisheye lens to capture high-resolution photos and video with a camera built into its nose.

SoFi can swim forward, move up and down, turn and change speeds, propelling itself by wiggling its tail side to side like a real fish, a motion created by pumping water with a small motor into two balloon-like tail chambers. SoFi, built with a generic fish design, is white, weighs less than 1.6 kg and is about 47 cm long.

#### Do you know?

- SoFi's "soft artificial muscle" tail is made of silicone elastomer, a type of rubber. Its nose houses the electronic elements. It has two side fins for maneuvering.
- SoFi abbreviates the word Soft Fish
- SoFi is operated using a waterproofed Super Nintendo controller by a diver who can be almost 70 feet away.
- The robot can be used as a marine biology instrument and also to measure pollution in coastal waters, to create maps, to do inspection, to monitor and track.

Source: <u>http://www.thehindu.com/sci-tech/science/new-robot-fish-from-mit-to-study-ocean-life/article23319825.ece</u>

Q.21) Recently, a 3D conic device called 'Artificial Transpiration' that can increase solarthermal conversion was developed by –

- a) France
- b) Faroe Islands
- c) China
- d) USA

### Q.21) Solution (c)

Chinese scientists have developed a new device of 3D hollow-cone structure that can greatly increase the solar-thermal conversion efficiency.

The device, named 'Artificial Transpiration' by Zhu Jia and his team from the Nanjing University, is inspired by the transpiration process of trees.

#### Do you know?

It has a special 1D water path within it, which can reduce the energy loss in conduction, China's state-run Xinhua news agency quoted the article as saying.

The cone structure, based on a graphene film, can collect more sunlight throughout the day when compared with a flat device, as about 10 per cent to 50 per cent of sunlight is diffusive. Thus it performs even better in the real world than in the laboratory.

As a result, the device can enhance the solar-thermal conversion rate to 85 per cent, which is much higher than the 40 per cent rate of common devices, it said.

Many sectors have refrained from using solar power because of its low conversion rate caused by losses in radiation, convection and conduction. The device will open new possibilities in utilisation of solar energy.

Zhu's team first applied this structure to solar waste-water treatment, and the test showed that it could not only retrieve clean water but also recycle heavy metals such as copper and cadmium.

In the future, the structure can be further optimised to have a longer life and recycle more heavy metals.

Source: <u>http://www.thehindu.com/sci-tech/technology/china-develops-3d-conic-device-to-increase-solar-thermal-conversion/article23555120.ece</u>

Q.22) 'Vientiane Vision' is concerned with which of the following organizations?

- a) BRICS
- b) ASEAN
- c) The Quad
- d) APEC

#### Q.22) Solution (b)

#### **Vientiane Vision**

- It is a guiding principle for Japan's defence cooperation with ASEAN, announced as Japan's own initiative by Defence Minister Inada at the second ASEAN-Japan Defence Ministers' Informal Meeting held in Vientiane, Lao PDR in 16 November 2016.
- The vision for the first time shows, in a transparent manner, the full picture of the future direction of defence cooperation with the ASEAN as a whole in the priority fields.

#### Q.23) Consider the following statements about 'Sela Pass'

- 1. It carries the main road connecting Tawang with the rest of India
- 2. It is a sacred site in Tibetan Buddhism
- 3. A tunnel is being constructed through the pass by Border Roads Organisation under 'Project SAMPARK'

#### Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) 1, 2 and 3

### Q.23) Solution (a)

The Sela Pass is a high-altitude mountain pass located on the border between the Tawang and West Kameng Districts of Arunachal Pradesh state in India. It has an elevation of 4170 m (13,700 ft) and connects the Tibetan Buddhist town of Tawang to Dirang and Guwahati. The pass carries the main road connecting Tawang with the rest of India. The pass supports scarce amounts of vegetation and is usually snow-covered to some extent throughout the year. Sela Lake, near the summit of the pass, is one of approximately 101 lakes in the area that are sacred in Tibetan Buddhism.

Tunnel is being constructed under BRO's Project VARTAK

Project VARTKA – Arunachal Pradesh and Assam

Project SAMPARK – J&K

# Q.24) Which of the following is under the ambit of Clinical Establishments (Registration and Regulation) Act, 2010

- 1. Establishments under the military forces
- 2. All public establishments
- 3. All private establishments
- 4. AYUSH establishments

### Select the correct code:

- a) 2 and 3 Only
- b) 2, 3 and 4
- c) 1, 2, 3 and 4
- d) 1, 2 and 3

### Q.24) Solution (b)

### Clinical Establishments (Registration and Regulation) Act, 2010

- It has been enacted by the Central Government to provide for registration and regulation of all clinical establishments in the country with a view to prescribing the minimum standards of facilities and services provided by them
- The Act requires all clinical establishments to register themselves and provides a set of standard treatment guidelines for common diseases and conditions.
- The Act cannot be directly applied to all states of India. The states have the choice of passing a resolution to adopt the bill or passing a similar bill.
- With the exception of the establishments under the military forces, all public and private establishments, including AYUSH establishments, are required to register.
- The Act is applicable to all types (both therapeutic and diagnostic types) of clinical establishments from the public and private sectors, belonging to all recognized systems of medicine, including single doctor clinics.
- The Act lays down establishment for the a Council Body called The National Council for Clinical Establishment which is responsible primarily for setting up standards for ensuring proper healthcare by the clinical establishment and develop the minimum standards and their periodic review.

#### Q.25) Find the odd one out

- a) Giant ant eater
- b) Echidna
- c) Pangolin
- d) Tamandua

#### Q.25) Solution (b)

It is one of the five extant species of monotremes, the only mammals that lay eggs instead of giving birth to live young.

#### Q.26) Consider the following statements about Systematic Country Diagnostic (SCD)

- 1. It looks at a range of issues in a particular country, and seeks to identify barriers to and/or opportunities for sustainable poverty reduction and shared prosperity
- 2. It is an analytical exercise conducted by World Economic Forum

#### Select the correct statements

- a) 1 Only
- b) 2 Only

- c) Both 1 and 2
- d) Neither 1 nor 2

#### Q.26) Solution (a)

#### Systematic Country Diagnostic (SCD)

- World Bank Group's first Systematic Country Diagnostic (SCD) for India.
- The SCD is an analytical exercise World Bank conducts in all countries.
- It articulates, from the perspective of the World Bank Group, an analysis of the most important opportunities and challenges to achieving, in that country, the two goals the Bank Group holds itself accountable for – eliminating extreme poverty and boosting shared prosperity.
- Introduced in July 2014, the SCD looks at a range of issues in a particular country, and seeks to identify barriers to and/or opportunities for sustainable poverty reduction and shared prosperity.
- Systematic Country Diagnostic (SCD) reports are prepared by World Bank Group staff in close consultation with national authorities and other stakeholders.

#### Think

• World Bank Group's Country Partnership Framework (CPF)