



Drishti IAS Presents...

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Multiple
Choice
Questions

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1. Which of the following is/are the characteristics of Semiconductors?

1. Formed due to ionic bonding
2. Positive temperature coefficient
3. Only four valence electrons in the outermost orbit.

Select the correct answers using the code given below:

- A. 1 and 3 only B. 2 and 3 only
C. 3 only D. 1, 2 and 3

2. With reference to the Open source software, consider the following statements:

1. It is a software that is distributed with its source code.
2. It allows anyone to modify the software to best fit their needs.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

3. Consider the following statements regarding the Defence Research and Development Organisation (DRDO) :

1. DRDO is the R&D (Research and Development) wing of the Ministry of Science & Technology.
2. It was formed in 1958 from the amalgamation of the Technical Development Establishment (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

4. Consider the following statements:

1. A mutation is a single change in the genetic material of the virus.
2. A variant is the whole sequence of the virus, which may contain one or more mutations.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

5. The launch of which of the following missions can be counted as an achievement of the Indian Space Research Organisation (ISRO)?

1. Rohini
2. Amazonia -1
3. UNITYsat

Select the correct answer using the code given below:

- A. 1 and 3 only
B. 2 and 3 only
C. 3 only
D. 1, 2 and 3

6. With reference to the 5G, consider the following statements:

1. The 5G networks will operate in the mm-Wave spectrum.
2. Use of mm-Wave spectrum may result in Out-of-band emission.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

7. Consider the following statements:

1. When meteoroids enter the Earth's atmosphere they are called Asteroids.
2. When a meteoroid enters the Earth's atmosphere and hits the ground, it is called a Meteors.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

8. With reference to the Rare Earth Metals, consider the following statements:

1. These minerals have unique magnetic, luminescent, and electrochemical properties.
2. They are a set of seventeen metallic elements.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

9. Consider the following statements:

1. Government has dedicated 207 Harmonized System of Nomenclature (HSN) codes to technical textiles to help in monitoring the data of import and export, in providing financial support and other incentives to manufacturers.
2. Technotex India is a flagship event organized by the Ministry of Textiles for the promotion of technical textile.
3. India is the largest technical textile exporter in the world.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

10. With reference to the 5G, consider the following statements:

1. It uses a Millimetre-wave spectrum.
2. It uses upgraded LTE.
3. It provides speeds up to 20 Gbps.

Which of the above statements are correct?

- A. 1 and 3 only B. 1 and 2 only
C. 2 and 3 only D. 1, 2 and 3 only

11. Consider the following statements:

1. Dark Matter was first detected in 1938 by Albert Einstein.
2. Dark Matter's gravitational force prevents stars in our Milky Way from flying apart.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

12. Recently discovered *Ganoderma keralense* is a new species in Kerala, it belongs to which of the following group of microorganisms?

- A. Bacteria B. Viruses
C. Fungi D. Protozoa

13. Consider the following statements:

1. Negative ions are not produced by any naturally occurring substance.
2. Negative ions are made when sunlight, radiation, air, or water break down oxygen.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

14. Consider the following statements:

1. Fungi are only single celled organisms.
2. Fungi doesn't cause diseases in humans.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

15. Consider the following pairs:

Constitutional Amendment	Significance
1. 1 st Amendment	Introduced 9 th Schedule
2. 24 th Amendment	Reduced Voting age
3. 61 st Amendment	Defection declared illegal

Which of the pairs given above is/are not correctly matched?

- A. 1 only B. 1 and 2 only
C. 2 and 3 only D. 1, 2 and 3

16. With respect to SSLV (Small Satellite Launch Vehicle), consider the following statements:

1. SSLV aims to cater to the market for the launch of small satellites into Earth's geostationary orbits.
2. New Space India Limited (NSIL) aims to mass-produce the SSLV in partnership with the private sector in India through technology transfers.

Which of the statements given above is/are correct ?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

17. Which of the following is/are correct regarding Partial Parasitic Plants:

1. They are also called holoparasitic plants.
2. They are chlorophyllous (contain chlorophyll).
3. They have a worldwide distribution in tropical as well as temperate habitats.

Select the correct answer using the code given below:

- A. 1 and 2 only B. 2 and 3 only
C. 1 and 3 only D. 1, 2 and 3

18. Consider the following statements:

1. The rare earth minerals are called rare because they are very scarcely available on earth.
2. China has a global domination in the production of rare earth metals.
3. India has the world's second-largest reserves of rare earth elements.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3



19. Consider the following statements:

1. It has gravitational attraction.
2. It does not seem to interact with light.
3. It may provide an explanation for anomalies in the laws of gravity.

The above description most appropriately is related to which of the following concepts related to space?

- A. Dark Matter B. Red Giant
C. Supernova D. Heliosphere

20. With reference to BrahMos Missile, consider the following statements:

1. It is a joint venture between India and Russia.
2. It operates on the "Fire and Forgets" principle.
3. Brahmos is currently operationally deployed at a speed nearly thrice the speed of sound.

Which of the statements given above is/are correct?

- A. 1 and 3 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

21. Consider the following pairs:

ISRO's Joint Projects	Countries of the Associated Partners
1. Duchifat 3	Japan
2. TRISHNA	France
3. Lunar Polar Exploration Mission (LUPEX)	Israel

Which of the pairs given above is/are correctly matched?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

22. Which of the following is not correct about the Lithium-ion Batteries:

- A. Fast charging time
- B. Expensive to manufacture
- C. Batteries catching fires
- D. Lack the range that would make batteries a viable alternative to internal combustion engines (for electric vehicle manufacturing)

23. Aquamation has been recently in the news. Which of the following statements most appropriately describes it?

- A. Flameless cremation
- B. Growing plants by only using water
- C. Growing fisheries on farms
- D. Extracting water from celestial bodies.

24. Consider the following statements regarding the Bioenergy Crops:

1. Bioenergy crops can induce a cooling effect on the areas where they are cultivated.
2. Wheat, corn, main edible oilseeds/edible oils, sugarcane, and other crops are some of the Bioenergy crops.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

25. Consider the following statements:

1. Fly ash is an unwanted unburnt residue of nuclear power plants.
2. Fly ash includes substantial amounts of silicon dioxide (SiO₂), aluminium oxide (Al₂O₃), ferric oxide (Fe₂O₃) and calcium oxide (CaO).

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

26. Consider the following statements:

1. Graphene is the most electrically and thermally conductive material in the world.
2. Graphene has applications in faster DNA sequencing and drug delivery.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

27. Consider the following statements:

1. A path of a satellite in polar orbit will exactly match the rotation of the Earth.
2. A Geosynchronous satellite orbit travels north-south over the poles and takes approximately 90 minutes for a full rotation.

Which of the above statement/s is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

28. Which of the following statements is/are correct regarding Nuclear Fusion?

1. Fusion requires the presence of uranium/plutonium for the reaction to take place.
2. Fusion reactions take place in the liquid state of matter.
3. Tritium, an isotope of hydrogen, is produced during nuclear fusion when the fusion neutrons interact with lithium.

Select the correct answer using the code given below:

- A. 1 and 2 only B. 2 only
C. 3 only D. 1 and 3 only

29. With reference to the Earth Observation Satellites, consider the following statements:

1. These can be deployed only in Geo-synchronous orbit.
2. RISAT-1, Megha-Tropiques, SARAL are some examples of it.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

30. Consider the following statements:

1. It is the lightest metal and the lightest solid element.
2. It is highly reactive and flammable.
3. It is new 'white gold' as the demand for high performing rechargeable batteries is rising.

The above statements most appropriately are related to which of the following metals.

- A. Lithium B. Silicon
C. Graphite D. Hydrogen

31. Which of the following countries forms the "Lithium triangle" ?

- A. Chile, Argentina, and Bolivia
B. Pakistan, Afghanistan, and Iran
C. Myanmar, Thailand, and Vietnam
D. Canada, U.S, and Mexico

32. Consider the following statements:

1. Gaganyaan is an unmanned mission to the moon.
2. GSLV Mk III will be used to launch Gaganyaan mission.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

33. With reference to Imaging X-ray Polarimetry Explorer (IXPE), consider the following statements:

1. The IXPE observatory is a joint effort of NASA and the Italian Space Agency.
2. IXPE will replace the Chandra X-ray Observatory.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

34. With reference to the James Webb Space Telescope, consider the following statements:

1. It is considered a successor of the Kepler Mission and will extend and complement its discoveries.
2. It is the result of an international collaboration between NASA, the European Space Agency (ESA) and the Canadian Space Agency.

Which of the statements given above is/are correct ?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

35. With reference to Laser Communications Relay Demonstration, consider the following statements:

1. It uses infrared light for data transmission.
2. It is launched by NASA
3. It offers higher bandwidth than radio frequency systems.

Which of the above statements are correct?

- A. 1 and 3 only B. 1 and 2 only
C. 2 and 3 only D. 1, 2 and 3

36. Consider the following statements regarding the 'Log4Shell Vulnerability':

1. The vulnerability is based on an open-source logging library.
2. It allows attackers to execute code remotely on a target computer.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

37. With reference to Application Programming Interface (API), which of the following statements is/are correct?

1. Open source APIs are publicly available to consumers as well as software developers.
2. Every web service is an API.
3. APIs are protocol agnostic; can use any protocols or design styles.

Select the correct answer using the code given below:

- A. 1 and 2 only B. 1 and 3 only
C. 1 only D. 1, 2 and 3

38. Consider the following statements:

1. Inactivated Vaccines use a weakened (or attenuated) form of the germ that causes a disease.
2. They are used to protect diseases such as Hepatitis A, Flu, Polio and Rabies.

Which of the above statements is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2



39. Which of the following is/are the application of Quantum Technology?

1. Secure Communication
2. Disaster Management
3. Pharmaceutical Applications

Select the correct answer using the code given below:

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

40. Which of the following is/are the significance of the Imaging X-ray Polarimetry Explorer (IXPE) mission launched by NASA:

1. It will observe polarized X-rays from neutron stars.
2. It will help scientists understand the location of black holes in the past.
3. It will help unravel how pulsars shine so brightly in X-rays.

Select the correct answer using the code given below:

- A. 1 and 2 only B. 2 only
C. 1 and 3 only D. 1, 2 and 3

41. Consider the following statements:

1. The Double Asteroid Redirection Test (DART) is a joint mission of NASA and ISRO.
2. The DART mission aim is to test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

42. Quasi Satellites has been recently in the news. Which of the following statements most appropriately describes it?

- A. It is a satellite-based on quantum computing.
- B. Satellite to be launched on the far side of the moon
- C. Satellites of Mars
- D. Space rocks near the earth's orbit that moves around the Sun.

43. Hydraulic fracking has been recently in the news. Which of the following statements most appropriately describes it.

- A. Process used in extraction of shale gas.
- B. Process of centrifugation in nuclear fission.
- C. Process of extracting geothermal energy.
- D. Process of whaling

44. Which of the following statements are correct regarding the Navigation Indian Constellation (NavIC):

1. It consists of eight satellites; three in geostationary orbit and five in geosynchronous orbit.
2. Despite having a lesser number of satellites than GPS, NavIC has better positioning accuracy.
3. It was recognised by the IMO for operation in the Indian Ocean Region.
4. Apart from India, only the USA and China are the two countries that have their own navigation system.

Select the correct answer using the code given below:

- A. 1, 3 and 4 B. 2 and 3 only
C. 1, 2 and 3 D. 1, 2, 3 and 4

45. Consider the following statements regarding Hypersonic Technology:

1. Missiles based on this technology have at least 10 times the speed of sound.
2. Most hypersonic vehicles primarily use dual mode ramjet (DMRJ) technology.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

46. With reference to the White dwarfs, consider the following statements:

1. Every Star when it uses all its hydrogen fuel turns into white dwarfs.
2. Stars fuse hydrogen in their cores into helium through nuclear fusion reactions.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

47. The early warning anti-missile system named Kupol or dome, is related to which of the following countries?

- A. Russia
- B. Israel
- C. Canada
- D. China

48. Matosinhos Manifesto has been recently in the news. It is related to which of the following?

- A. To accelerate the use of space in Europe.
- B. G20 proposal for a global minimum tax
- C. New climate change pledge at COP 26
- D. New initiative by AUKUS grouping

49. Consider the following statements regarding the Leonid meteor shower:

1. It features the fastest meteors.
2. A Leonid shower turns into a meteor storm every 33 years.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

50. Which of the statements best describes the Astro Robot?

- A. It is designed to search water on the Lunar surface.
- B. It is designed to help customers with a range of tasks like home monitoring.
- C. It is designed to study the surface of asteroid Bennu.
- D. It is designed to explore earth-like planets outside the solar system.

51. Consider the following statements:

1. Somatosensation are proteins that serve both as sensors and effectors.
2. Mechanosensitive channels is a collective term for the sensations of touch, temperature, body position, and pain.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

52. Consider the following statements:

1. The 2021 Nobel Prize in Chemistry is awarded for the development of asymmetric organocatalysis.
2. Asymmetric organocatalysis uses small organic molecules as catalysts instead of traditional catalysts such as enzymes or metals.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

53. Consider the following statements:

1. Ethanol is derived from corn and sugarcane using the fermentation process.
2. Biodiesel is derived from vegetable oils and animal fats by a transesterification process.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

54. Consider the following statement with respect to "Mission Lucy":

1. It is a joint project of NASA and the European Space Agency.
2. The mission will visit 8 asteroids covering a distance of about 6.3 million km.
3. Trojan asteroids, unlike other asteroids, do not share orbit of a planet.

Which of the statements given above is/are not correct?

- A. 1 and 3 only B. 2 and 3 only
C. 3 only D. 1, 2 and 3

55. Recently, some researchers studied a meteorite from Katol, Maharashtra belonging to the meteor shower of 2012. The study of this meteorite is significant because:

1. It tells about the evolution of earth
2. It helps in understanding the formation of layers of the earth
3. It explains the significance of phosphorus in sustaining life on earth

Select the correct answer using the code given below:

- A. 1 and 2 only B. 2 and 3 only
C. 3 only D. 1, 2 and 3

56. Consider the following statements:

1. An intermediate black hole is formed by the merger of two black holes.
2. Gravitational Waves are created when two black holes orbit each other and merge.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

57. Consider the following statement with respect to Indian Space Association (ISpA):

1. ISpA will act as a single-window and independent agency on matters related to space technology.
2. ISpA has been created to protect Indian Space Research Organisation (ISRO) from private competitors in the future.
3. ISpA will also act as the marketing arm of ISRO.

Which of the statements given above is/are correct?

- A. 1 only
B. 1 and 3 only
C. 2 and 3 only
D. 1, 2 and 3



58. Consider the following statements with respect to Quantum Key Distribution (QKD):

1. QKD provides a way of distributing and sharing secret keys that are necessary for cryptographic protocols.
2. In QKD, encryption keys are sent as quantum bits in an optical fibre.
3. The encryption in QKD will be unbreakable because the data is carried by electrons and it cannot be perfectly copied.

Which of the statements given above is/are correct?

- A. 1 only
B. 1 and 2 only
C. 3 only
D. 1, 2 and 3

59. Consider the following statements:

1. Hypersonic speeds are 5 or more times the Mach speed.
2. Mach number describes an aircraft's speed compared with the speed of sound in air.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

60. Which of the following statements is/are correct regarding the Ballistic Missiles?

1. It is a rocket-propelled self-guided strategic-weapons system.
2. It is capable of carrying conventional high explosives and chemical, biological, or nuclear munitions.
3. India is signatory to the Missile Technology Control Regime (MTCR) which aims to limit the spread of ballistic missiles.
4. Agni P, Shaurya and Prithvi are the ballistic missiles of India.

Select the correct answer using the code given below:

- A. 1 and 4 only
B. 2 and 3 only
C. 1, 3 and 4
D. 1, 2, 3 and 4

61. With reference to the 'Site Directed Nuclease (SDN) 1 and 2' technology, consider the following statements:

1. It aims to bring precision and efficiency into the breeding process using gene editing tools such as CRISPR.
2. It would allow the development of genetically modified crops without the need for conventional transgenic technology.
3. The developer of gene editing tool CRISPR won the Nobel Prize for Chemistry in 2020.

Which of the statements given above is/are correct?

- A. 1 only
B. 1 and 3 only
C. 2 only
D. 1, 2 and 3

62. Consider the following statements:

1. It is called marsh gas because it is found at the surface of marshy places.
2. Its incomplete combustion yields carbon black, which is widely used as a reinforcing agent in rubber used for automobile tires.
3. It is responsible for creating ground-level ozone, a dangerous air pollutant.

The above statements most appropriately describe which of the following carbon compounds?

- A. Methane
B. Carbontetrachloride
C. Nitromethane
D. Chloroform

63. With reference to the 'Samudrayaan mission', consider the following statements:

1. The mission is launched by the Ministry of Earth Sciences (MoES).
2. It aims to send men into the deep sea in a submersible vehicle for deep-ocean exploration and mining of rare minerals.
3. The MATSYA 6000 is a manned submersible vehicle to go for deep underwater studies.

Which of the statements given above is/are correct?

- A. 1 only
B. 1 and 2 only
C. 3 only
D. 1, 2 and 3

64. Consider the following statements:

1. White dwarfs are stars that have burned up all of the nuclear fuel.
2. The Sun fuses hydrogen in its cores into helium through nuclear fission reactions.

Which of the above statements is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

65. Which of the following statements is/are correct regarding the difference between Cruise Missile and Ballistic Missile:

1. Cruise Missile travel in projectile motion and trajectory depends on gravity, air resistance and Coriolis Force while Ballistic Missile comparatively follows a straight trajectory of motion.
2. Ballistic Missiles leave the earth's atmosphere and re-enter it while the Cruise Missiles path is within the earth's atmosphere.

Select the correct answer using the code given below:

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2



- 66.** Which of the following is/are the significance of the Geographic Information System (GIS)-based Geospatial Energy Map of India?
1. Identify and locate all primary and secondary sources of energy.
 2. Integrate energy data scattered across multiple organizations.
 3. Useful in planning and making investment decisions.
- Select the correct answer using the code given below:
- A. 1 and 3 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3
- 67.** Consider the following statements:
1. NASA has reported the presence of Jupiter and Mars trojans (asteroids) but no Earth trojan has been reported so far.
 2. Lucy is a NASA mission for Mars trojans.
- Which of the statements given above is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2
- 68.** Consider the following statements:
1. Black holes emit matter and radiation extending out hundreds of thousands of light years.
 2. Event horizon is the gravitational boundary beyond which light can escape but not matter.
 3. The merger happens between black holes of unequal masses only.
 4. The kick during a black hole merger can be estimated from mass of the merging black holes and their spin.
- Which of the statements given above is/are correct?
- A. 1 and 4 only B. 2 and 3 only
C. 3 only D. 1, 2, 3 and 4
- 69.** Consider the following statements:
1. Polysaccharides are biodegradable polymers.
 2. Polysaccharides have high mechanical properties and low water-solubility.
- Which of the statements given above is/are not correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2
- 70.** With reference to the 'Blue Straggler Stars', consider the following statements:
1. These are unusually hot and bright stars.
 2. They appear to violate standard theories of stellar evolution.
- Which of the statements given above is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2
- 71.** With reference to the Coronal Mass Ejections, consider the following statements:
1. It is the phenomenon of the sun spewing out vast quantities of gas and plasma.
 2. It can have a damaging effect on satellites and radio communication networks on Earth.
- Which of the above statements is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 and 2
- 72.** Consider the following statements regarding the Anatomy of the Sun:
1. The Chromosphere is the lowest layer of the solar atmosphere.
 2. The radiative zone in the Sun is the area where the energy is generated via thermonuclear reactions.
 3. Sunspots are the darker and cooler areas on the Sun's surface.
- Which of the statements given above is/are not correct?
- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 3 only
- 73.** Which of the following is/are the source(s) for methanol production?
1. High ash coal 2. Agricultural residue
 3. Natural gas 4. Municipal waste
- Select the correct answer using the code given below:
- A. 1 and 2 only B. 1 and 4 only
C. 3 only D. 1, 2, 3 and 4
- 74.** Which of the following is/are finding(s) of Chandrayaan-2 Orbiter?
1. Detection of Argon-40
 2. Detection of Chromium and Manganese
 3. Detection of the Subsurface Water-ice
- Select the correct answer using the code given below:
- A. 1 only B. 1 and 3 only
C. 3 only D. 1, 2 and 3
- 75.** With reference to the Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) technique, consider the following statements:
1. It depends on the natural tendency of a DNA strand to repair itself, when broken.
 2. Its development has led to a Nobel science prize being awarded to a women-only team for the first time.
- Which of the statements given above is/are correct?
- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

76. Consider the following statements:

1. Almost 100% of hydrogen produced in India comes from natural gas.
2. Hydrogen produced from natural gas is known as grey hydrogen.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

77. Consider the following statements:

1. The coal-based hydrogen is produced through the electrolysis process.
2. The process of coal gasification chemically transforms the fossil fuel into Synthetic Natural Gas (SNG).

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

78. Which of the following is/are the properties of Lithium?

1. Lightest solid element under solid conditions
2. Rare earth metal
3. Highly inflammable

Select the correct answer using the code given below?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1 and 3 only

79. Consider the following:

1. Agricultural fertilisers
2. Anaesthetic gases
3. Making of explosives

The above uses are most appropriately related to which of the following chemical compounds?

- A. Ammonium Nitrate B. Green Vitriol
C. Sodium bicarbonate D. Feldspar

80. With reference to the Solar DC cooking technology, consider the following statements:

1. It is a solar energy based cooking system developed by the Central Mechanical Engineering Research Institute (CMERI).
2. It has better efficiency than conventional solar based cooking systems.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

81. With reference to Electronic Microchip or Microflier, consider the following statements:

1. It is the smallest-ever human-made flying structure that works with the help of a motor or engine.
2. The design of micro fliers is optimised by studying the concept of wind-dispersed seeds.
3. It is ideal for monitoring air pollution.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 and 3 only
C. 3 only D. 1, 2 and 3

82. The XENON1T experiment recently in the news is associated with which of the following?

- A. Reactivity of Noble Gases
B. Dark Matter detection
C. Nuclear Magnetic Resonance (NMR) spectroscopy
D. Red Blood Cell (RBC) production

83. Which of the following is/are the impact(s) of Dark Energy?

- A. Expansion of Universe
B. Attraction and holding together of galaxies

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

84. With reference to the Landsat 9, consider the following statements:

1. It is an earth monitoring satellite launched by ISRO.
2. It will help study climate change.

Which of the above statement(s) is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

85. With reference to the Agni V Missiles, consider the following statements:

1. It is a surface-to-air tactical missile.
2. It has been developed under the Integrated Guided Missile Development Programme (IGMDP).
3. It is a fire and forget missile which once fired cannot be stopped in any case.

Which of the statements given above is/are correct?

- A. 2 only
B. 1 and 3 only
C. 2 and 3 only
D. 1, 2 and 3

86. Consider the following statements:

1. The virus is said to be mutated when there are changes to the viral genetic sequence.
2. A variant is the whole sequence of the virus, which may contain one or more mutations.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

87. With reference to the microplastics, consider the following statements:

1. Primary Microplastics are tiny particles designed for commercial use and microfibers shed from clothing and other textiles.
2. Plastic pellets and plastic fibres are examples of secondary plastics.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

88. Consider the following statements regarding transgenic crops:

1. Bt Brinjal is the only transgenic crop allowed in India.
2. Bt cotton is a transgenic crop that produces toxic protein against the pest called pink bollworm.
3. The genetic modification is DMH-11 mustard enabled self pollination in the crop.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

89. Consider the following about Food Fortification:

1. Hypervitaminosis
2. Toxicity
3. Loss of Dietary diversity

Which of the above effects can be termed as an adverse impact of Food Fortification?

- A. 1 only B. 2 only
C. 1 and 2 only D. 1, 2 and 3

90. With reference to the Crew Space Transportation-100 (CST-100), consider the following statements:

1. It is part of an uncrewed test flight to the International Space Station (ISS).
2. The mission is part of NASA's Commercial Crew Program.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

91. Consider the following statements:

1. Biomethanation is a process by which organic material is microbiologically converted to biogas under anaerobic conditions.
2. The Ministry of New and Renewable Energy and UNIDO launched the Interest Subvention Scheme to provide financial assistance to innovative waste to energy biomethanation projects.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

92. Consider the following statements:

1. A ballistic missile is a rocket-propelled self-guided strategic-weapons system.
2. India is signatory to the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC).

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

93. With reference to the Nuclear Fusion, Consider the following statements:

1. Heavy isotopes split apart to produce Energy.
2. It is the process that powers the Sun.
3. It takes place in a state of matter called plasma.

Which of the above statements is/are correct?

- A. 1 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3 only

94. Which of the following is/are applications of nanotechnology in the health sector?

1. Eye surgery
2. Detection of heart attack
3. Drug delivery
4. Removing toxins from the bloodstream

Select the correct answer using the code given below:

- A. 1 only B. 2 and 3 only
C. 3 and 4 only D. 1, 2, 3 and 4

95. Consider the following statements:

1. Chikungunya is transmitted to people through the bite of an infected mosquito.
2. BBV87 vaccine is a chikungunya vaccine developed by Bharat Biotech in partnership with the International Vaccine Institute (IVI).
3. BBV87 was funded by the Coalition for Epidemic Preparedness Innovations (CEPI) with support from the Ind-CEPI mission.

Which of the statements given above is/are correct?

- A. 1 only
B. 1 and 3 only
C. 2 only
D. 1, 2 and 3

96. Consider the following statements:

1. CD4 is a type of White Blood Cell in the body's immune system.
2. Human Immunodeficiency Virus (HIV) destroys CD4 cells.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

97. With reference to Green Hydrogen, consider the following statements:

1. Green hydrogen is produced by electrolysis of water using thermal power plants.
2. Electricity splits water into hydrogen and oxygen with Water Vapor as by product.

Which of the statements given above is/are correct ?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

98. With reference to the 'Gravitational Waves', consider the following statements:

1. These are invisible ripples in space formed by merger of the Neutron star-Black hole (NS-BH).
2. These were proposed by Albert Einstein in his General Theory of Relativity.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

99. Consider the following statements:

1. An Aurora is a display of light in the sky only seen in the Northern Hemisphere of Earth.
2. Auroras are caused when charged particles ejected from the Sun's surface enter the Earth's atmosphere.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

100. Consider the following statements:

1. Oral cancer is the most prevalent form of cancer among men in India.
2. The dbGENVOC is the world's first database for genomic variations in oral cancer created by India.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

101. Consider the following statements:

1. The Karman line is a point from where the boundary of space starts.
2. The suborbital trajectory allows the space flight to escape the gravity of earth.
3. The VSS Unity spaceship is launched by NASA to operate commercial space flights.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 and 3 only
C. 3 only
D. 1, 2 and 3

102. Consider the following statements regarding Superfluidity of Helium:

1. Superfluidity is the frictionless flow of electrons observed in liquid helium at room temperature.
2. A Single Electron Bubble (SEB) is created when an electron is injected into the superfluid form of Helium.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

103. Consider the following statements:

1. The Hubble Space Telescope (HST) is a part of NASA's Great Observatories Program.
2. The James Webb Space Telescope (JWST) is scheduled to replace HST.
3. The JWST is a joint project of NASA and ISRO.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 and 3 only
C. 3 only
D. 1, 2 and 3

104. Consider the following statements:

1. NEA Scout is a miniaturized spacecraft developed under NASA's Advanced Exploration Systems (AES) Program.
2. NEA Scout is envisaged to collect data from the asteroid belt between Mars and Jupiter.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

105. Consider the following statements:

1. Solar PhotoVoltaic uses concentrated solar radiation as a high temperature energy source to produce electricity.
2. Solar Thermal Power systems convert solar radiation directly into electricity.

Which of the above statements is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 and 2



106. Consider the following statements:

- Digital Twin is a virtual replica of the physical world to simulate real life situations and analyse its impact.
- Digital Twins integrate the historical data sets such as weather records and realtime dynamic interactions along with the digital representation of physical assets.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

107. Recently, a large space laboratory named Nauka has been launched to the International Space Station (ISS). It is launched by which of the following countries?

- A. Japan B. Canada
C. USA D. Russia

108. Consider the following statements regarding Gamma Ray Bursts:

- They are the most powerful events in the universe, detectable across billions of light-years.
- Long Gamma Ray Bursts are associated with the demise of massive stars.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

109. With reference to the 'Exoplanets', consider the following statements:

- An exoplanet is a planet outside the Solar system.
- They are hidden by the bright glare of the stars they orbit.

Which of the above statements is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 and 2

110. Consider the following statements:

- Gamma rays produced by neutron stars, supernova explosions and regions around black holes.
- GRB 200826A is the shortest Gamma Ray Burst detected by NASA's Hubble Telescope.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

111. Consider the following statements regarding Cyber Attacks:

- Malware is a malicious software designed to cause damage to a single computer, server, or computer network.

- Pegasus is a malicious software classified as Ransomware.
- India is not a signatory to the Budapest Convention on Cybercrime.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1 and 3 only

112. With reference to Geospatial Technologies, consider the following statements:

- It is the technology that is used for geographic mapping and analysis of the Earth and human societies.
- It consists of technologies like Remote Sensing, Geographic Information System and 3D modelling.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 and 2

113. With reference to the 'AmbiTAG', consider the following statements:

- It is an Internet of Things (IoT) based device.
- It is a temperature data logger for cold chain management.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

114. Consider the following statements:

- Venus and Uranus are the only planets of the solar system that spin anticlockwise about their own axis.
- The rotation period of Venus is the longest for any planet of the solar system.
- Venera and Vegas are the robotic missions of NASA to Venus.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 3 only D. 1, 2 and 3

115. Consider the following statements regarding 'I-Familia':

- It is launched by the Interpol.
- It is a global database to identify missing persons through family DNA.
- Bonaparte is a DNA matching software.

Which of the statements given above is/are correct?

- A. 1 only B. 2 and 3 only
C. 2 only D. 1, 2 and 3



- 116.** With reference to the EnVision mission, consider the following statements:
1. The mission is led by European Space Agency (ESA) with contributions from NASA.
 2. It will study the atmosphere and analyse the surface composition of Venus.
- Which of the statements given above is/are correct?
- A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. Neither 1 nor 2
- 117.** 'New Shepard' was recently in the news, it is?
- A. New techniques that will help increase productivity of sheeps.
 - B. A rocket system that has been designed to take astronauts in space.
 - C. American solar powered fighter plane.
 - D. Newly discovered exo-planet by NASA.
- 118.** Consider the following statements:
1. Tianhe is China's own space station module in lower earth orbit.
 2. China is the third country to carry out a manned mission on its own.
- Which of the statements given above is/are correct?
- A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. Neither 1 nor 2
- 119.** Consider the following statements:
1. Bt cotton is the only transgenic crop approved by the Government of India for commercial cultivation.
 2. Bt cotton has been genetically modified making the plant resistant to the herbicide glyphosate which has carcinogenic effects.
- Which of the statements given above is/are correct?
- A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. Neither 1 nor 2
- 120.** Consider the following statements:
1. Madhuban Gajar is a biofortified carrot variety containing higher iron content.
 2. CR DHAN 315 is a biofortified variety of rice having excess zinc content.
- Which of the statements given above is/are correct?
- A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. Neither 1 nor 2
- 121.** With reference to 'Light Detection and Ranging (LiDAR)', consider the following statements:
1. It is a remote sensing method that uses light to measure variable distances.
 2. Lidar is commonly used to make high-resolution maps.
 3. LiDAR receives light signals from the satellite and measures the required distance of any object.
- Which of the statements given above is/are correct ?
- A. 1 and 3 only
 - B. 1 and 2 only
 - C. 2 and 3 only
 - D. 1,2 and 3
- 122.** The 'PASIPHAE Survey', recently seen in the news, is related to?
- A. Magnetic tomography of the Milky Way Galaxy.
 - B. Mapping the ocean resources on Earth.
 - C. Measuring the height of various mountain Peaks.
 - D. Recording the depth of craters on the moon.
- 123.** Consider the following statements:
1. Neanderthal is a member of a group of archaic humans who emerged during the Pleistocene Epoch.
 2. Genome is defined as an organism's complete set of Deoxyribose Nucleic Acid (DNA), including all of its genes.
- Which of the statements given above is/are correct ?
- A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. Neither 1 nor 2
- 124.** Consider the following statements:
1. The Second Generation (2G) technology worked on analog radio signals.
 2. 4G Technology was launched with a peak speed of 100 Mbps to 1 Gbps.
 3. 5G technology works in only High-Band spectrum which has high speed as well as maximum coverage.
- Which of the statements given above is/are correct?
- A. 1 and 2 only
 - B. 2 only
 - C. 2 and 3 only
 - D. 1, 2 and 3
- 125.** Consider the following statements:
1. It is a geologically inactive planet.
 2. The atmosphere of Venus contains phosphine that indicates the possibility of the presence of lifeforms on it.
 3. Venus Express is NASA's mission to Venus.
- Which of the statements given above is/are not correct?
- A. 1 and 2 only
 - B. 2 only
 - C. 3 only
 - D. 1 and 3 only

126. Consider the following statements:

1. Methane is produced by the breakdown or decay of organic material.
2. Methane can be introduced into the atmosphere only through natural processes.
3. Methane is more potent greenhouse gas than carbon and stays in the atmosphere for a longer time.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

127. Consider the following statements:

1. Technology Development Board (TDB) is a statutory body.
2. TDB provides only technical assistance to enterprises.
3. TDB confers National Award for contribution to science and technology in India.

Which of the statements given above are correct ?

- A. 2 and 3 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

128. Consider the following statements:

1. The OSIRIS-REx is NASA's first mission to visit a near-Earth asteroid.
2. The OSIRIS-REx spacecraft was launched in 2016 for the journey to the Bennu asteroid.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

129. Consider the following statements:

1. Advanced Chemistry Cell (ACC) stores electrical energy as chemical energy and converts it back to electrical energy upon requirement.
2. The Production Linked Incentive (PLI) scheme is not applicable to the manufacturing of Advanced Chemistry Cells.
3. The National Programme on Advanced Chemistry Cell Battery Storage (NPACC) is launched under the Ministry of Electronics and Information Technology (MeitY).

Which of the statements given above is/are not correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

130. Consider the following statements regarding Mars:

1. Its axial tilt and rotation period is similar to that of Earth.
2. It has two moons namely Olympus Mons and Phobos.
3. Chang'e-5 is China's interplanetary mission to Mars.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

131. Consider the following statements regarding International Space Station(ISS):

1. ISS is a habitable artificial satellite in high earth orbit.
2. It is a joint project between four participating space agencies -NASA (United States), Roscosmos (Russia), JAXA (Japan) and ESA (Europe).
3. Baby squids will be sent to ISS for conducting various scientific studies.

Which of the statements given above is/are correct ?

- A. 1 and 3 only
- B. 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

132. Consider the following statements regarding FASTag:

1. It uses Radio Frequency Identification (RFID) technology to read and capture information stored on the tag.
2. It is not mandatory for two wheelers.
3. It is operated by National Highway Authority of India (NHAI).

Which of the statements given above is/are not correct?

- A. 1 and 2 only
- B. 2 only
- C. 3 only
- D. 1 and 3 only

133. Consider the following statements regarding White Fungus:

1. It is a fungal infection caused by a group of molds.
2. The disease is more likely to afflict people with compromised immune systems or pre-existing medical conditions.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2



134. Consider the following statements::

1. It is a type of invasive floating plant found in water bodies across the world.
2. It is also referred to as the terror of Bengal.
3. Recently, a fishing community of Assam has developed Moorhen Yoga Mat, a 100% biodegradable and compostable mat, from this plant.

The above statements most appropriately describe which of the following aquatic plants:

- | | |
|-------------------|--------------------|
| A. Water Hyacinth | B. Water Stargrass |
| C. Golden Pothos | D. Water Caltrop |

135. With reference to Yellow fungus, consider the following statements:

1. It is also called Mucor septic
2. It may cause fatigue and burning sensation on skin.
3. It can invade internal organs of the body and affects the entire functioning.

Which of the statements given above is/are correct ?

- | | |
|-----------------|---------------|
| A. 2 and 3 only | B. 2 only |
| C. 1 and 3 only | D. 1, 2 and 3 |

136. The term 'Narrow-Line Seyfert 1 (NLS1)' recently seen in news related to?

- | | |
|----------------------|--------------------------|
| A. New active galaxy | B. Near earth asteroid |
| C. Crater on Mars | D. Planet in Kuiper belt |

137. Consider the following statements:

1. An Internet Exchange Point is a facility that allows Internet Service Providers to "meet" and exchange traffic.
2. National Internet Exchange of India manages Internet Exchanges, domain code name, and Internet protocol.

Which of the above statements is/are correct?

- | | |
|-----------------|--------------------|
| A. 1 only | B. 2 only |
| C. Both 1 and 2 | D. Neither 1 and 2 |

138. With reference to the Mutation, consider the following statements:

1. When a virus mutates, it always produces its clone.
2. Viruses with new mutations are sometimes called Variants.

Which of the statements given above is/are correct?

- | |
|--------------------|
| A. 1 only |
| B. 2 only |
| C. Both 1 and 2 |
| D. Neither 1 nor 2 |

139. With reference to Ultra White Paint, consider the following statements:

1. It was created by the Defence Research & Development Organisation (DRDO).
2. It reflects 99% of all light that hits it, remaining significantly cooler than the ambient temperature, even when sitting in full sunlight.

Which of the statements given above is/are correct?

- | |
|--------------------|
| A. 1 only |
| B. 2 only |
| C. Both 1 and 2 |
| D. Neither 1 nor 2 |

140. Consider the following statements regarding Aditya-L1 Mission:

1. It is India's first scientific expedition to study the Sun.
2. It will be launched using the Polar Satellite Launch Vehicle (PSLV).
3. It will be placed in polar sun synchronous orbit.

Which of the statements given above are correct ?

- | | |
|-----------------|-----------------|
| A. 2 and 3 only | B. 1 and 2 only |
| C. 1 and 3 only | D. 1,2 and 3 |

141. Consider the following statements regarding Dhruv Mk III:

1. It is an indigenously developed Advanced Light Helicopter (ALH).
2. The aircraft is designed to mitigate low visibility during rescue operations at night.

Which of the statements given above is/are not correct?

- | | |
|-----------------|--------------------|
| A. 1 only | B. 2 only |
| C. Both 1 and 2 | D. Neither 1 nor 2 |

142. With reference to "RESPOND Programme", consider the following statements:

1. The programme was started by Indian Space Research Organisation (ISRO).
2. It is a research sponsorship programme for encouraging academia to participate and contribute in various space related research activities.

Which of the statements given above is/are correct?

- | |
|--------------------|
| A. only |
| B. 2 only |
| C. Both 1 and 2 |
| D. Neither 1 nor 2 |

143. With reference to Coal Gasification, consider the following statements:

1. It is the process of converting coal into syngas.
2. The hydrogen obtained from coal gasification can be used for various purposes such as powering a hydrogen economy.
3. India is yet to set a target for coal gasification.

Which of the statements given above is/are correct ?

- A. 2 and 3 only B. 1 and 2 only
C. 1 and 3 only D. 1, 2 and 3

144. Consider the following statements regarding the Free and Open Source Software (FOSS):

1. It is free of cost software which has no constraints on copyrights.
2. The 'Aadhar' is built using FOSS.
3. The Ministry of Electronics & IT (MeitY) has announced the '#FOSS4GOV Innovation Challenge' to accelerate adoption of FOSS.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

145. Q.145 Consider the following statements regarding Liquid Medical Oxygen (LMO):

1. It provides a basis for virtually all modern anaesthetic techniques.
2. It is under India's National as well as WHO's List of Essential Medicines.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

146. Consider the following statements regarding Antimicrobial Resistance (AMR):

1. It is the resistance acquired by any microorganism against antimicrobial drugs.
2. The microorganisms that develop AMR are known as superbugs.
3. AMR is among the top ten priority works of the Ministry of Health & Family Welfare in collaboration with WHO.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 1 and 3 only D. 1, 2 and 3

147. Which of the following statements is correct regarding 'MACS 1407'?

- A. It is an asteroid in near earth orbit.
B. It is a crater on mars where NASA's Perseverance landed.
C. It is an e-Learning portal launched by the Ministry of Education.
D. It is a newly developed high-yielding and pest-resistant soybean variety.

148. Consider the following statements:

1. National Science Day (NSD) is celebrated to commemorate the Birth Anniversary of Sir Chandrasekhara Venkata Raman.
2. Sir Chandrasekhara Venkata Raman was awarded the Nobel Prize in 1930 for the discovery of the Raman Effect.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

149. Which of the following are correct about the satellites of PSLV-C51?

1. Amazonia 1 has been placed in a geo-synchronous polar orbit.
2. UNITYsat satellites have been deployed to provide radio relay services.
3. SDSAT is a nano satellite.

Select the correct answer using the code given below:

- A. 1, and 3 only
B. 2 and 3 only
C. 1 and 2 only
D. 1, 2 and 3

150. With reference to Waste to Wealth Mission, consider the following statements:

1. The mission is undertaken by the Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC).
2. The mission will assist and augment the Smart Cities projects to create a circular economic model.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2



151. Q.151 Consider the following statements about Quasars:

1. These are very luminous objects that emit jets at gamma frequencies.
2. They are only found in the galaxies that have supermassive blackholes.
3. The nearest quasar to Earth has been recently discovered by the Thirty Meter Telescope (TMT).

Which of the statements given above is/are not correct?

- A. 1 and 2 only B. 2 only
C. 3 only D. 1 and 3 only

152. With reference to Air Independent Propulsion (AIP) System, consider the following statements:

1. It is used in nuclear submarines to increase their lethality and stealth multifold.
2. The AIP system based submarines can stay underwater for a longer duration.

Which of the statements given above is/are correct ?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

153. Consider the following statements:

1. The '2001 FO32' asteroid has been designated a potentially hazardous asteroid.
2. Trojans asteroids share an orbit with a larger planet, but do not collide with it.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

154. Which of the following statements is/are correct?

1. Raman Thermometry technique is used to determine the local temperature in microelectronics systems.
2. The Raman scattering phenomena is used for temperature detection.
3. C.V Raman won the Nobel prize in science for the discovery of Raman scattering.

Select the correct answer using the code given below:

- A. 1 only B. 1 and 2 only
C. 2 and 3 only D. 1, 2 and 3

155. With reference to Gravitational Waves, consider the following statements:

1. Gravitational waves are produced only when two black holes merge into each other.
2. They travel at the speed of light.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

156. Consider the following statements about Helium:

1. It is a monatomic gas with the lowest boiling point as compared to all other elements.
2. The Rajmahal volcanic basin is the storehouse of Helium in India.
3. Qatar is the largest exporter of Helium in the world.

Which of the statements given above is/are correct?

- A. 1 only B. 1 and 2 only
C. 2 and 3 only D. 1, 2 and 3

157. Consider the following statements about NISAR:

1. It is a collaborative effort of ISRO and JAXA.
2. NISAR will be launched in the geosynchronous orbit.
3. The ISRO has provided the S-band radar and launch vehicle in this mission.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 3 only D. 1, 2 and 3

158. Consider the following statements:

1. Trojans are the asteroid found in the main asteroid belt between Mars and Jupiter.
2. The Near-Earth Asteroids (NEA) shares the orbit with Earth.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

159. With reference to Raman Effect, consider the following statements:

1. Raman effect is related to the scattering of a photon by molecules of a medium.
2. It can be used by scientists to gain information about materials composition.
3. The principle of Raman effect is used in Doppler Radar.

Which of the statements given above is/are correct ?

- A. 1 and 2 only B. 2 and 3 only
C. 1 and 3 only D. 1, 2 and 3 only

160. With reference to the 'European Southern Observatory's Very Large Telescope (ESO's VLT)', consider the following statements:

1. The astronomers recently discovered the most distant 'Radio-Loud' Quasar with the help of ESO's VLT.
2. ESO's VLT is located at Paranal Observatory in the Atacama Desert.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2



161. Consider the following statements about Science and Engineering Board (SERB):

1. It is a statutory body under the Department of Science and Technology.
2. The SERB is chaired by the Prime Minister of India.
3. PRISM is a portal of SERB that offers real time information on various SERB projects.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 1 and 3 only D. 1, 2 and 3

162. With reference to the Black Hole, consider the following statements:

1. The concept of was theorized by Albert Einstein in 1915.
2. The merger of two black holes creates gravitational waves.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

163. '2001 FO32' which was recently seen in news, is:

- A. A quasar
B. A white dwarf
C. An extraterrestrial planet
D. An asteroid

164. Consider the following statements regarding Helium:

1. The boiling point of helium is lowest among all the elements.
2. It is only found in the gaseous atmosphere surrounding the Sun.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

165. Consider the following statements:

1. The Square Kilometre Array Observatory (SKAO) is an intergovernmental organisation dedicated to radio astronomy.
2. India is not a member of SKAO
3. SKAO is headquartered in the United Kingdom.

Which of the statements given above is/are correct?

- A. 1 and 2 only
B. 3 only
C. 1 and 3 only
D. 1, 2 and 3

166. Consider the following statements:

1. Araka Shubha is a new variety of wheat developed by the Indian Institute of Horticultural Research (IIHR).
2. Arka Shubha has the highest carotene content among all plant sources.
3. Carotenes are carotenoid pigments that are oxygen-free.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

167. Consider the following statements:

1. Gaganyaan will be India's first manned mission in space.
2. Gaganyaan will be launched by Polar Satellite Launch Vehicle (PSLV).
3. IN-SPACe will be established to increase private partnership in the space sector.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 and 3 only
C. 1 and 3 only D. 1, 2 and 3

168. Consider the following statements about Navigation in Indian Constellation (NavIC):

1. It is an Indian regional navigation satellite developed by the Indian Space Research Organization (ISRO).
2. It consists of eight satellites in the geosynchronous orbit.
3. It works similar to the Global Positioning System (GPS) but within the Indian subcontinent only.

Which of the statements given above is/are not correct?

- A. 1 and 2 only B. 2 and 3 only
C. 1 and 3 only D. 1, 2 and 3

169. With reference to Perseverance Rover, consider the following statements:

1. It is the European Space Agency mission.
2. It aims to study the geology of Mars and signs of ancient life.
3. Jezero Crater on Mars is the landing site of the rover.

Which of the statements given above are correct?

- A. 1 only
B. 2 and 3 only
C. 1 and 2 only
D. 1, 2 and 3 only



170. With reference to Indian Anti-tank Guided Missile, consider the following statements:

1. Helina and Dhruvastra are Anti-tank guided missiles for the Indian Airforce and Army respectively.
2. DRDO has developed anti guided NAG Missiles under the Project 75I.

Which of the statements given above is/are correct ?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

171. With reference to the Thermo-electric effect, consider the following statements:

1. It involves the process by which heat is transformed to electrical energy.
2. Being a good conductor of electricity but a bad conductor of heat is important property for thermo-electric effect.

Which of the statements given above is/are correct ?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

172. Consider the following statements:

1. Blue hydrogen is produced using renewable energy and electrolysis to split water.
2. Grey hydrogen is produced from methane and releases greenhouse gases into the atmosphere.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

173. Consider the following statements:

1. Hydrogen is abundantly found in nature in its pure form.
2. Blue Hydrogen is generated from renewable energy by splitting water into hydrogen and oxygen.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

174. With reference to the Indian National Centre for Ocean Information Services (INCOIS), consider the following statements:

1. It is an autonomous organization under the Ministry of Earth Sciences (MoES).
2. It is located in Hyderabad.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

175. Consider the following statements about Coal:

1. The non-coking coal is used along with iron ore to produce steel.
2. The coking coal is used in thermal power plants to generate electricity.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

176. Consider the following pairs:

Global Navigation System	Country
1. Galileo	Russia
2. Quasi-Zenith Satellite System (QZSS)	UK
3. BeiDou	China
4. GLONASS	Europe

Select the correct answer using the code given below:

- A. 1 and 2 only B. 3 and 4 only
C. 3 only D. 1, 2, 3 and 4

177. With reference to Hydrogen Fuel Cell, consider the following statements:

1. These are far more energy-efficient than traditional combustion technologies.
2. Hydrogen Fuel Cells are safer than traditional combustion engines owing to the lesser explosive fuel being used in fuel cells.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

178. Consider the following statements:

1. It is India's first indigenously produced medium-range Surface to Air missile.
2. It is a part of the integrated guided-missile development programme.
3. It is a supersonic nuclear-capable missile.

The above statements most appropriately explain which of the following missiles?

- A. Akash B. Astra
C. Brahmos D. Helena

179. With reference to trans fatty acids (TFA), consider the following statements:

1. The natural TFAs are present in meats and dairy products.
2. They have adverse effects on a human body.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2



180. With reference to COVAXIN vaccines, consider the following statements:

1. It is an inactivated vaccine that destroys the ability of the pathogen to replicate.
2. It aims to develop an immune response to the nucleocapsid protein.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

181. Consider the following statements:

1. Mukundpura CM2 is the most primitive meteorite and a remnant of the first solid bodies to accrete in the solar system.
2. The Mukundpura CM2 is classified to be a carbonaceous chondrite.
3. The composition of carbonaceous chondrites are similar to the Sun.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 and 3 only
C. 3 only D. 1, 2 and 3

182. Consider the following statements about Vanadium:

1. It is a superior conductor of heat as well as electricity.
2. The vanadium reserve is found in Arunachal Pradesh and West Bengal.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

183. Consider the following statements:

1. Antibodies bind to the surface structures of bacteria or viruses and prevent their replication.
2. Nanobodies can be produced by bacteria as well as yeast.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

184. Consider the following statements:

1. The Two Dimensional Electron Gas (2DEG) is an electron gas that is confined to move only in two dimensions.
2. The 2DEG electron gas has the potential utility in electronics technology.
3. Spintronics is the study of the intrinsic spin of the electron and its associated magnetic moment.

Which of the statements given above is/are not correct?

- A. 1 only B. 1 and 2 only
C. 2 and 3 only D. 1, 2 and 3

185. With reference to Mitochondria, which of the following statements are correct?

1. Mitochondrial DNA is the small circular chromosome.
2. The mitochondria produce cellular energy in the form of adenosine triphosphate (ATP).
3. Mitochondrial DNA is inherited from the mother, while nuclear DNA is inherited from both parents.

Select the correct answer using the code given below:

- A. 1, and 3 only B. 2 and 3 only
C. 1 and 2 only D. 1, 2 and 3

186. Which of the following is not a ballistic Missiles of India?

1. Shaurya 2. BrahMos
3. Prithvi 4. NAG

Select the correct answer using the code given below:

- A. 1 and 2 only B. 2 and 4 only
C. 4 only D. 1, 2 and 3

187. With reference to AstroSat, consider the following statements:

1. It is the first dedicated Indian astronomy mission.
2. It enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

188. Consider the following statements:

1. Angiogenesis is the process through which new blood vessels are formed from pre-existing vessels.
2. Angiogenesis inhibitors are unique cancer-fighting agents.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

189. Consider the following statements:

1. The metamaterials are naturally found substances usually found in deep oceans.
2. The origami metamaterials are based on the Japanese art of paper folding.
3. The origami metamaterials show a constant value of Poisson Ratio when subjected to stress.

Which of the statements given above is/are correct?

- A. 1 and 2 only B. 2 only
C. 2 and 3 only D. 1, 2 and 3

190. Consider the following statements regarding Artificial Intelligence:

1. Artificial Intelligence describes the action of machines accomplishing tasks that have historically required human intelligence.
2. Artificial Intelligence also includes big data technology.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

191. With reference to Synthetic Biology, consider the following statements:

1. The term has been used with reference to efforts to 'redesign life'.
2. India adopted a National Policy on Synthetic Biology in the 10th Five Year Plan.

Which of the statements given above is/are correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

192. Consider the following statements regarding Stem cells:

1. Stem cells are special cells that can make copies of themselves and change into the many different kinds of cells
2. Stem cell therapy helps in replacing lost or damaged cells that the bodies can't replace naturally.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

193. Recently, an Earth Observation Satellite (EOS-04) was launched by the Indian Space Research Organisation (ISRO) using which of the following launch vehicles ?

- A. Satellite Launch Vehicle (SLV)
B. Polar Satellite Launch Vehicle (PSLV)
C. Geosynchronous Satellite Launch Vehicle (GSLV)
D. Small Satellite Launch Vehicle (SSLV)

194. Consider the following statements regarding Geospatial Technology:

1. Global Positioning System is one of the tools used in this geospatial technology
2. The location of objects captured through this technology is always static.

Which of the statements given above is/are not correct?

- A. 1 only B. 2 only
C. Both 1 and 2 D. Neither 1 nor 2

195. With reference to the Neutrinos, consider the following statements:

1. It is a fundamental elementary particle.
2. They are very hard to detect.
3. They are produced in high-energy processes

Which of the above statements are correct?

- A. 1 and 3 only
B. 1 and 2 only
C. 2 and 3 only
D. 1, 2 and 3

196. Consider the following statements:

1. Giant Metrewave Radio Telescope (GMRT) is an array of thirty fully steerable parabolic radio telescopes of 45 metre diameter.
2. GMRT is an indigenous project of India.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

197. With reference to the National Supercomputing Mission (NSM), consider the following statements:

1. It was launched to enhance the research capacities and capabilities in the country by connecting them to form a Supercomputing grid.
2. The Mission is being solely steered by the Ministry of Electronics and Information Technology (MeitY).

Which of the statements given above is/are correct ?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

198. Consider the following statements:

1. In the Haber process, hydrogen and nitrogen reacted together at high temperatures and pressures to produce ammonia, NH₃.
2. Green ammonia production is the one where the process of making ammonia is 100% renewable and carbon-free.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2



199. Which of the following statements is/are correct regarding Japanese Encephalitis (JE)?

1. It is caused by a virus belonging to the family of adenoviruses.
2. In most of the cases, JE is asymptomatic or only mildly symptomatic.
3. There is no antiviral treatment for patients with JE.

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

200. With reference to Quantum Key Distribution (QKD), consider the following statements:

1. It is a mechanism to develop secure communication.
2. It uses qubits for transmission of messages.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

201. Which of the following is/are correct regarding the Artificial Neural Network (ANN)?

1. It mimics the working of nerve cells in the human brain.
2. It is a machine learning algorithm that crunches numbers and organizes data.
3. Information that runs through the network does not affect the structure of the artificial neural network.

Select the correct answer using the code given below:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

202. With reference to Bioremediation, consider the following statements:

1. It employs the use of living organisms in the removal of contaminants.
2. Bioremediation can only be done "in situ"—at the site of the contamination.
3. It solely rely on natural processes, thus minimizes damage to ecosystems

Select the correct answer from the given code given below.

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

203. Consider the following statements:

1. Nuclear fusion and nuclear fission, both require extremely high energy to take place.
2. Nuclear fusion takes place in the sun and stars whereas fission reactions do not occur normally in nature.

Which of the statements given above is/are not correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2