


Science and Technology

1. An atom consists of three basic sub- atomic particles: electrons, protons and neutrons. Which of them would you not find in the nucleus?
(a) Electron
(b) Proton
(c) Neutron
(d) All of these
2. The Milky Way is the galaxy that contains our solar system. The solar system is located within the disc, about 27,000 light years from the Galactic Centre, on the inner edge of one of the spiral-shaped concentrations of gas and dust called the _____ arm.
(a) Sagittarius
(b) Orion
(c) Keplerian
(d) Auriga
3. Gunpowder is the earliest known chemical explosive. It was invented in the 9th century in China. Gunpowder is a mixture of
(a) Sulphur, charcoal and common sail
(b) Saltpeter, sugar and sodium hydroxide
(c) Sulphur, charcoal and potassium nitrate
(d) Potassium nitrate, sugar and table salt
4. Which of these chemical elements is the most abundant in our universe?
(a) Carbon
(b) Helium
(c) Hydrogen
(d) Oxygen
5. Alexander Graham Bell is credited with patenting the first practical telephone. Many other inventions marked Bell's later life, including groundbreaking work In which of the following?
(a) Optical telecommunications
(b) Aeronautics
(c) Hydrofoils
(d) All of these
6. Distances in space cannot be measured using conventional measures such as kilometres and knots. Which of these is a unit of distance used to measure large distances of objects outside the solar system?
(a) Fathom
(b) Angstrom
(c) Parsec
(d) Dioptre
7. This element exists as liquid at room temperature. It is a metal used in thermometers, barometers, fluorescent lamps; etc. it is commonly known as quicksilver. Which element is this?
(a) Silver
(b) Gold
(c) Mercury
(d) Tungsten
8. The process by which a solid changes to gas without becoming a liquid Is called
(a) Vapourisation
(b) Sublimation
(c) Boiling
(d) Absorption
9. The area around the equator is of intense low pressure where the prevailing winds are calm, particularly in the Atlantic and Pacific Oceans. Indeed, the term has a nautical history. What is it called colloquially?
(a) Fohn
(b) Doldrums
(c) Horse latitudes
(d) Equatorial calm
10. The first process of photography produced a highly detailed permanent photograph on a silver-plated sheet of copper. It was developed by a Frenchman after whom it was named in 1839. What was this called?

(a) Calotype
(b) Heliograph
(c) Daguerreotype
(d) Pantograph

- 11.** Aqua regia, literally 'king's water', is a yellow-orange fuming liquid. It was so named by alchemists because it could dissolve the noble metals, gold and platinum. What does it consist of?
- (a) Hydrochloric acid and nitric acid
 - (b) Hydrofluoric acid and hydrochloric acid
 - (c) Hydrochloric acid and sulphuric acid
 - (d) Nitric acid and sulphuric acid

- 12.** This painless medical process makes use of computer-processed combinations of many X-ray images taken from different angles to produce cross-sectional (virtual "slices") of specific areas of a scanned object, allowing the user to see inside the object without cutting. What is it called?



- (a) X-ray imaging
 - (b) Electroencephalography
 - (c) Electrocardiography
 - (d) Computer Aided Tomography
- 13.** Tungsten is a metal used in the filament of incandescent bulbs. What is the chemical symbol of Tungsten?
- (a) W
 - (b) Tn
 - (c) Tu
 - (d) Wo
- 14.** Which of these metals is used in electroplating, a process that involves coating an object with a rust-proof substance?
- (a) Iron
 - (b) Silver
 - (c) Sodium
 - (d) Zinc
- 15.** What are Java, Perl and Fortran?
- (a) Types of plastics
 - (b) Computer programming languages
 - (c) Operating systems
 - (d) Types of coffee

- 16.** Which of these elements is needed to make nuclear energy and nuclear weapons?
- (a) Sodium chloride
 - (b) Uranium
 - (c) Nitrogen
 - (d) Carbon dioxide

- 17.** Sound waves that cannot be heard by the human ear are aimed at the body. The organs reflect them back giving a three-dimensional image that can be studied on a monitor. What is this form of imaging called?



- (a) Electrocardiography
 - (b) Electroencephalography
 - (c) Magnetic Resonance Imaging
 - (d) Ultrasound scan
- 18.** It is a thermosetting plastic which is used in making good quality table wares. It is fire-resistant material so, also used as a coating on firemen uniforms. What is it?
- (a) Melamine
 - (b) Teflon
 - (c) Bakelite
 - (d) Nylon
- 19.** Fructose, raff nose, mannose and dextrose are different forms of
- (a) Salt
 - (b) Ester
 - (c) Acid
 - (d) Sugar
- 20.** This chemical has a strong sharp smell and is used in nail polish removers. What is this substance?
- (a) Acetone
 - (b) Varnish
 - (c) Turpentine
 - (d) Linseed oil
- 21.** Which of the following is based on the principle of formation of many images by mirrors placed at fixed angles to each other?
- (a) Telescope
 - (b) Kaleidoscope
 - (c) Periscope
 - (d) Microscope

- 22.** In nature, this simple organic acid is found in the sting of many insects, particularly ants after which it is named. What is it called?



- (a) Benzole acid
 - (b) Formic acid
 - (c) Hyaluronic acid
 - (d) Sulphuric acid
- 23.** Fill in the blank with the correct option.
Gravitational force acts between ____.
- (a) Sun and planets only
 - (b) Earth and heavenly bodies only
 - (c) All the bodies in the universe
 - (d) Sun and Earth only
- 24.** Which of the following combustible substances has the lowest ignition temperature?
- (a) Kerosene
 - (b) Coal
 - (c) Plastic
 - (d) Wood

- 25.** This element catches fire when it comes in contact with oxygen and moisture. To prevent this, it must be stored in kerosene. Name the element.
- (a) Gold
 - (b) Magnesium
 - (c) Sodium
 - (d) Iron

Answer - Key

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| 1. A | 2. B | 3. C | 4. C | 5. D |
| 6. C | 7. C | 8. B | 9. B | 10. C |
| 11. A | 12. D | 13. A | 14. D | 15. C |
| 16. D | 17. D | 18. A | 19. D | 20. A |
| 21. B | 22. B | 23. C | 24. A | 25. C |