

# CTET 2019

## 20 Most Imp Science Questions



1. Ms. Kumar, principal of a school, wants integrated approach to the teaching of Science rather teaching different subjects separately. The reason of this is
  - A. Difficulty in the adjustment of the teachers in the time-table
  - B. Difficulty of students to adjust with different teachers
  - C. Non-availability of qualified teachers in her school to teach different subjects
  - D. All the subjects are interlinked and a teacher can draw on cross curricular linkage
2. "By Education I mean an all-round drawing out the best in child and man ... his body. mind and spirit." Above statement is of
  - A. Swami Vivekananda
  - B. Mahatma Gandhi
  - C. John Dcwey
  - D. Prof Bagley
3. Which of the following method will you use to develop aquarium?
  - A. Heuristic method
  - B. Problem solving method
  - C. Project method
  - D. Programmed method
4. Which of the following teaching method was invented by Kilpatrick?
  - A. Problem solving method
  - B. Project method
  - C. Heuristic method
  - D. Demonstration method
5. Which of the following is not objective of a science laboratory?
  - A. To arouse interest towards science amongst the students
  - B. To prove scientific principles
  - C. To use the spare time of students
  - D. To develop the measuring skills
6. The first step of the scientific method is
  - A. forming a hypothesis
  - B. making an observation
  - C. conducting an experiment
  - D. predicting the result of the experiment
7. Which of the following statements is not correct?
  - A. Aims are directives in the educational programmes
  - B. Aims could not be achieved only by school programmes
  - C. Objectives can achieve by school programmes
  - D. Aims and objectives are same
8. Learning science can be enriched if
  - A. teachers use different types of lectures and explanations
  - B. real-world situations be brought into the classroom in which students interact with each other and the teacher acts as a facilitator
  - C. due attention be paid to peiodic tests in the classroom
  - D. maximum teaching aids be used in the class
9. "Science is the investigation and interpretation of events or phenomenon that occurs in natural environment and within our own body." Above mentioned definition of science is given by
  - A. Albert Einstein
  - B. W. C. Dampier
  - C. J. Jacobson
  - D. B. S. Bloom.
10. Who established the Indian Parliamentary and Scientific Committee for improvement of Science teaching?
  - A. Jawaharlal Nehru
  - B. Lai Bahadur Shastri
  - C. Indira Gandhi
  - D. Morarji Desai.
11. Ritu is standing in front of a plane mirror. The distance between Ritu and her image is 10 m. If she moves 2m towards the mirror, then the distance between Ritu and her image is :
  - A. 8 m
  - B. 10 m
  - C. 12 m
  - D. 6 m
12. A teacher of Class VIII demonstrates the following activity in her class :  
"The teacher takes a small amount of Sulphur in a spoon and burns it. She then puts the spoon into a tumbler with a lid to ensure that the gas produced does not escape. After a few minutes, she adds water to the tumbler."  
Which process skills can be promoted through the above activity?
  - A. Observation & controlling variables
  - B. Observation, inference and measurement
  - C. Observation, classification and inference
  - D. Observation and measurement

13. Read the following examples from daily life and select the appropriate option:  
 A- When food gets spoiled, it produces a foul smell.  
 B- A slice of apple acquires brown colour when kept out for same time.  
 C- When an ant bites, calamine is used to ease the irritation on skin.  
 A. All are chemical changes  
 B. A and B represent chemical changes  
 C. B is a physical change  
 D. A and B are physical changes
14. **Direction:** Answer the following question by selecting the correct / **most appropriate** options.  
 A rubber sucker, when pressed on a surface sticks to it because of :  
 A. atmospheric pressure.  
 B. the glue on it.  
 C. surface tension.  
 D. gravitational force.
15. **Direction:** Answer the following question by selecting the correct / **most appropriate** options.  
 All of the following are non-contact forces except :  
 A. Gravitational force  
 B. Magnetic force  
 C. Frictional force  
 D. Electrostatic force
16. **Directions:** Answer the following questions by selecting the **most appropriate** option.  
 Which one among the following is a solid lubricant?  
 A. Sulphur                      B. Graphite  
 C. Germanium                 D. Indium
17. **Directions:** Answer the following questions by selecting the **most appropriate** option.  
 The term PVC used in the plastic industry stands for  
 A. phosphaviny chloride  
 B. phosphor vanadiu chloride  
 C. polyvinyl chloride  
 D. polyvinyl carbobate
18. **Directions:** Answer the following questions by selecting the **most appropriate** option.  
 Which synthetic fiber is known as artificial silk?  
 A. Nylon                              B. Rayon  
 C. Cotton                             D. Terylene
19. Match the following metals and non-metals with their uses :  
 (a) Iodine  
 (b) Mercury  
 (c) Aluminium  
 (d) Chloriine  
 (i) Water purification  
 (ii) On wounds  
 (iii) Thermometers  
 (iv) Food packaging  
 A. a-iv, b-ii, c-iii, d-i  
 B. a-i, b-ii, c-iii, d-iv  
 C. a-ii, b-iii, c-iv, d-i  
 D. a-iii, b-ii, c-iv, d-i
20. **Direction:** Answer the following question by selecting the **most appropriate** option.  
 Match the following :  
**Alloy**  
 (a) Bronze  
 (b) Brass  
 (c) German Silver  
 (d) Type metal  
**Composition**  
 1. Lead, antimony, tin  
 2. Copper, zinc, nickel  
 3. Copper, zinc  
 4. Copper, tin  
 A. a-1, b-4, c-3, d-2  
 B. a-1, b-1, c-4, d-3  
 C. a-3, b-2, c-1, d-4  
 D. a-4, b-3, c-2, d-1

## ANSWERS

1. Ans. D.

The reason of this is all the subjects are interlinked and a teacher can draw on the cross-curricular linkage. She wants to develop an interdisciplinary approach among the students so that they can make inter-connections between different subjects and disciplines easily. It will help the student to understand the concepts easily. For instance, the carbon emission has repercussions for social world and economy too.

2. Ans. B.

Mahatma Gandhi talks about education is more comprehensive than that of the literal meaning. He says, "By education I mean an all-round drawing out of the best in child and man—body mind and spirit. Literacy is not the end of education not even the beginning. It is one of the means whereby man and women can be educated. Literacy in itself is no education."

3. Ans. C.

We will use project method to develop aquarium. This method of teaching is one of the standard teaching methods. With this method, students can develop independence and responsibility. They can also practice social and democratic modes of behavior. Project method of teaching first became popular in 1590 in architectural schools in Europe.

4. Ans. B.

The project method is an educational enterprise in which children solve a practical problem over a period of several days or weeks. It may involve building a rocket, designing a playground, or publishing a class newspaper. The projects may be suggested by the teacher, but they are planned and executed as far as possible by the students themselves, individually or in groups. Project work focuses on applying, not imparting, specific knowledge or skills, and on improving student involvement and motivation in order to foster independent thinking, self-confidence, and social responsibility. Project method was discovered by William H. Kilpatrick. William Heard Kilpatrick was an American pedagogue and a pupil, a colleague and a successor of John Dewey. He was a major figure in the progressive education movement of the early 20th century.

5. Ans. C.

Except for C (use the spare time of students), rest of all are the objectives of a Science laboratory. It is a facility that provides controlled conditions in which scientific or technological research, experiments, and measurement may be performed. It arouses interest towards science amongst the students, prove scientific principles and also develop the measuring skills.

6. Ans. B.

The scientific method is a method of procedure that has characterized natural science since the 17th century, consisting in systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypothesis. Therefore, the first step of the scientific method is making an observation.

7. Ans. D.

'Aims and objectives are same'. This statement is not correct. Because, the aim is the what of the research, and the objective is the how. So taking this what-how as a kind of loose and sloppy differentiation between the two, the rough rule of thumb with aims and objectives.

8. Ans. B.

Learning science can be enriched if the real-world situation is brought into the classroom in which students interact with each other and the teacher acts as a facilitator. It encourages students to engage more senses and learning providing by this will be life-long. It is also meaningful to students and prepares them for their professional lives outside of school.

9. Ans. C.

Mentioned definition of science is given by J. Jacobson. **Jacobson** is a British novelist and journalist.

10. Ans. A.

Jawaharlal Nehru established the Indian Parliamentary and Scientific Committee for improvement of Science teaching. Indian parliamentary & scientific committee – was set up in 1961 under the chairman ship of Shri. Lal Bahadur Shastri. The committee took up the study of 'science education in schools', with a view to find out the relation between the policies and decision of the centre & the states, & the courses offered in the schools.

11. Ans. D.

then the distance between Ritu and her image is  $10 - 2 \times 2 = 6$  cm

12. Ans. C.

Observation- Using your 5 senses to gain information. see, feel, taste, smell and hear.

Inferences- An educated guess that's based on information or an observation.  
Classification- A way of grouping or organizing things based on your observations and it's characteristics.

13. Ans. A.

All the three process are chemical changes as all shows oxidation reaction. Anoxidation-reduction (redox) reaction is a type of chemical reaction that involves a transfer of electrons between two species. An oxidation-reduction reaction is any chemical reaction in which the oxidation number of a molecule, atom, or ion changes by gaining or losing an electron.

14. Ans. A.

A rubber sucker, when pressed on a surface sticks to it because of atmospheric pressure. As, inside the rubber sucker when it is stuck to the surface there is low pressure area and the atmospheric pressure is acted on the surface of sucker is more.

15. Ans. C.

A contact force is any force that requires contact to occur. Contact forces are ubiquitous and are responsible for most visible interactions between macroscopic collections of matter. And non-contact force is a force which acts on an object without coming physically in contact with. The most familiar example of a non-contact force is weight.

So, Except C, rest of all are the non-contact force.

16. Ans. B.

Dry lubricants or solid lubricants are materials which, are able to reduce friction between two surfaces sliding against each other without the need for a liquid oil medium. The two main dry lubricants are graphite and molybdenum disulphide.

17. Ans. C.

Polyvinyl chloride, commonly abbreviated PVC, is the third-most widely produced synthetic plastic polymer, after polyethylene and polypropylene. PVC comes in two basic forms: rigid and flexible. The rigid form of PVC is used in construction for pipe and in profile applications such as doors and windows. It is also used for bottles, other non-food packaging, and cards.

18. Ans. B.

Rayon is a manufactured regenerated cellulose fiber. It is made from purified cellulose, primarily from wood pulp, which is chemically converted into a soluble compound. It is then dissolved and forced through a spinneret to produce filaments which are chemically solidified, resulting in synthetic fibers of nearly pure cellulose.

19. Ans. C.

Iodine is a highly effective topical antimicrobial that has been used clinically in the treatment of wounds for more than 170 years.

Mercury- it is not a mercury thermometer. If the liquid in the thermometer bulb is any color other than silver, it is not a mercury thermometer.

Aluminum- Aluminum foil is one of the basic materials for flexible food packaging.  
Chlorine- Chlorine is used to kill certain bacteria and other microbes in tap water as chlorine is highly toxic.

20. Ans. D.

Bronze: An alloy of copper with up to one-third tin.

Brass: A yellow alloy of copper and zinc  
German silver: A white alloy of nickel, zinc and copper.

Type metal: An alloy of lead, antimony and tin.