📣 Now Paper A is included in the subject (Chemical sciences, Physical sciences, Life sciences, Earth Sciences, Engineering Sciences and Mathematical Sciences) question papers starting 2013.

CSIR General Science Physics and Geology

1. A block of wood is floating in a lake. The apparent weight of the floating block is
   a. Zero
   b. Equal to its true weight
   c. More than its true weight
   d. Less than its true weight
2. A bomb explodes on the moon. How long will it take for the sound to reach the earth?
   a. 10s
   b. 1000s
   c. 1 day
   d. None of these
3. A bomb, initially at rest, explodes into a large number of tiny fragments. The total momentum of all the fragments
   a. Is zero
   b. Is infinity
   c. Depends on the total mass of all the fragments
   d. Depends on the speeds of various fragments
4. Both a Celsius and Fahrenheit thermometer give the same reading at a particular temperature. What is that temperature?
   a. -2730C
   b. -1800C
   c. -400C
   d. 00C
5. A concave mirror produces a real, inverted image of the same size of the object. Then the object is at a distance

a. Less than f from the mirror
b. Equal to f from the mirror
c. Equal to 2f from the mirror
d. Larger than 2f from the mirror where f is the focal length of the mirror

6. A fuse wire is characterized by
   a. High resistance and high melting point
   b. Low resistance and high melting point
   c. High resistance and low melting point
   d. Low resistance and low melting point
7. A fuse wire is used to
   a. Make the electrical circuit strong
   b. Convert AC into DC
   c. Convert DC into AC
   d. Prevent an unduly high electric current from passing through a circuit
8. A heavenly body that emits radio signals at regular intervals of time is called a
   a. Quasar
   b. White dwarf
   c. Red giant
   d. Pulsar
9. A heavenly body that has enormous surface gravity and swallows any particle, or even light, that approaches it is called a
   a. Pulsar
   b. Quasar
   c. Neutron star
   d. Black hole
10. A hydrogen filled balloon rises in air because
    a. The atmospheric pressure decreases with altitude
    b. The acceleration due to gravity decreases with altitude
    c. The density of air decreases with altitude
    d. The buoyant force exerted by the air on the balloon is greater than the weight of the
       - balloon.
11. A large ship can float but a steel needle sinks because of
    a. Viscosity
    b. Surface tension

c. Density

d. None of these

12. A magnetic needle is kept in a non-uniform management field. It experiences

a. A force and a torque

b. A force but not a torque

c. A torque but not a force

d. Neither a force nor a torque

13. A molecule is

a. A class of organic compounds

b. The smallest unit of a substance that retains the properties of the substance

c. The spectrum of a substance

d. A small mass

14. A moving body on earth ordinarily comes to rest by itself because of the

a. Law of inertia

b. Forces of friction

c. Conservation of momentum

d. Gravity

15. A person climbing a hill bends forward is order to

a. Avoid slipping

b. Increase speed

c. Reduce fatigue

d. Increase stability

16. A piece of rock was brought from the moon to earth. Then

a. Its mass alone changed

b. Its weight alone changed

c. Both mass as well as weight changed

d. Neither its mass nor its weight changed

17. A radar that detects the presence of an enemy aircraft uses

a. Sound waves

b. Radiowaves

c. Electric waves

d. Ultrasonic waves

18. A red light is used in a traffic signal because

a. It has the longest wavelength and can be easily noticed from a long distance

b. It is beautiful

c. It is visible even to people with bad eyesight

d. None of these

19. A rocket works on the principle of conservation of

a. Mass

b. Energy

c. Linear momentum

d. Angular momentum

20. A shell, initially at rest suddenly explodes into two equal fragments A and B. Which one of the following is observed?

a. A and B move in the same direction with the same speed

b. A and B move in the same direction with the different speed

c. A and B move in opposite directions with same speeds

d. A and B move in opposite directions with different speeds

21. A shooting star is

a. A small star moving away from the earth at a very high speed

b. A fast moving satellite that shines by sunlight

c. A heavenly object that shines because it is heated by the friction of the earth's atmosphere as it falls at a great speed

d. A star of an extremely high density

22. A shooting star is basically a

a. Meteor

b. Supernova

c. Comet trail

d. Disturbance in atmosphere