

SAMPLE PAPER 3

REASONING

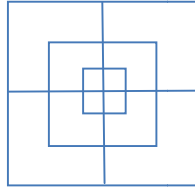
1. There is a certain relationship between figures (i) and (ii) Establish a similar relationship between figures (iii) and (iv) by selecting a suitable figure from the options for figure (iv):



2. Select the correct set of symbols that will fit in the blank spaces of $5_0_3_5 = 20$
- x, x, x
 - $x, +, x$
 - $-, +, x$
 - $+, -, x$

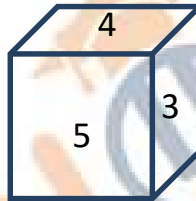
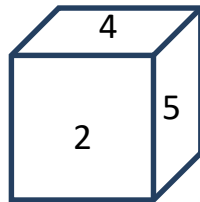


3. Find the number of squares in the figure below:



- a. 17
- b. 15
- c. 13
- d. 11

4. Two positions of the dice are shown below.



When number 2 is at the top which number will be at the bottom of the dice:

- a. 4
- b. 6
- c. 1
- d. 3

5. Select the correct pair from the options that best explains the relationship in the sample pair:

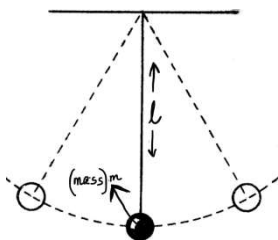
Sample:- COVID-19 → Covidshield

- a. Furlough → Civil Servant
- b. Enemy → Fortification
- c. Tourist → Vacation
- d. Heat → Furnace



SCIENCE

6. Alnico is a strong ferromagnet. One of the main components of Alnico is
- Iron
 - Actinium
 - Carbonmonooxide
 - Nobilium
7. If a train travels at a velocity of 125 km per hour for 1 hour and 15 minutes. The distance covered by the train will be
- 78125m
 - 10417m
 - 312500m
 - 156250m
8. The strength of the magnetic force is expressed in
- Candela
 - Tesla
 - Lumen
 - Coulomb
9. Below is a pendulum in which the time taken by the bob to complete one oscillation is the Time period 'T'.



What will happen to the time period (T) if the density of the bob is reduced to half:

- a. The time period will increase by two fold
- b. The time period will increase by half.
- c. The time period will decrease by two fold.
- d. The time period will not change

10. Electric motor converts

- a. mechanical energy into electrical energy
- b. electrical energy into mechanical energy.
- c. kinetic energy into electrical energy
- d. magnetic energy into electrical energy

11. Which of the following do not work on magnetic forces

- a. mic
- b. Calorimeter
- c. Gold leaf electroscope
- d. Floppy

12. Identify the type of motion Earth undergoes while it moves around the sun:

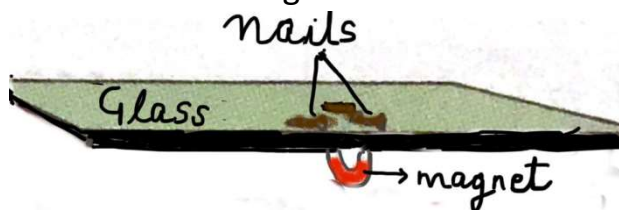
- a. Circular
- b. Rectilinear
- c. Elliptical
- d. Curvilinear



13. Magnets can have better magnetic property when

- a. Kept in a wool cloth for long time
- b. hammered
- c. Kept at around 0°C
- d. Kept at above 100°

14. Some iron nails are spread over a glass slab. A horse shoemagnet is moved below the glass as shown in the above diagram.



Which of the following statements will be correct

- a. the iron nails will be attracted by the magnet
- b. the iron nails will not be attracted by the magnet
- c. the iron nails will be repelled by the magnet
- d. the force of attraction will depend on the thickness of the glass slab and the strength of the magnet.

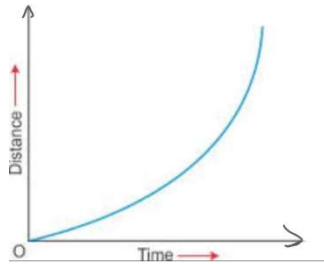
15. The least count of a measuring tape is

- a. 1 mm
- b. 10 mm
- c. 1 cm
- d. 1 inch



ACHIEVER'S SECTION

16. Observe the distance time graph of a car given below



What do you infer:

- a. The car is stationary
- b. The car is accelerating
- c. the car is moving with a constant velocity
- d. the car is decelerating

17.

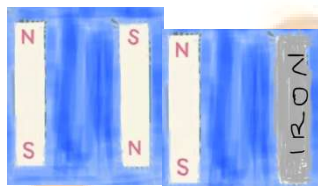


Fig 1

Fig 2

In the above figure 1, two identical bar magnets are kept near each other as shown. In figure 2, one of the bar magnets is replaced by an iron bar.

Choose the correct option

- a. Magnetic force of attraction in figure 1 will be strong
- b. Magnetic force of attraction in figure 2 will be strong
- c. Both figure 1 and 2 will have the same force of attraction
- d. Depends on the magnetic field of the bar magnets.



Use the following codes for question no **18 and 19**

- a. A and R both are correct, and R is the correct explanation of A.
- b. A and R both are correct, but R is not the correct explanation of A.
- c. A is correct but R is wrong.
- d. A is wrong but R is correct.

18.Assertion:High speed trains use electromagnet to move very fast.

Reason;The electromagnet help the train to float above the tracks and thus reduce the friction.

- a. b. c. d.

19.Assertion: A screwdriver undergoes both circular and rectilinear motion.

Reason:The screwdriver follows a straight line while it pushes the screw in.

- a b. c. d.

20.In a train moving 100 kilometres per hour a child throws ball at a speed of 10 kilometres per hour, In the moving direction of the train. What will be the speed of the ball with respect to a person standing on the road outside the moving train ?

- a. 100 km/hr
- b. 10 km/hr
- c. 90 km/ hr
- d. 110 km/hr



Answer Key

1.(d)	2.(c)	3.(b)	4.(d)	5.(b)	6.(a)	7.(d)	8.(b)	9.(d)	10.(b)	11.(b)	12.(c)	13.(c)	14.(d)	15.(a)
16.(b)	17.(a)	18.(a)	19.(d)	20.(d)										

LEARN  TEST

