

19. Electromagnet is a temporary magnet. Strength of this magnet depends on number of turns of wire for a given current and material used as the core.

Electromagnet	Number of turns of wire	Number of pins attracted
W	10	4
X	25	10
Y	35	?
Z	50	20

What could most likely be the number of pins attracted by electromagnet Y?

- A. 6  
B. 19  
C. 14  
D. 24
20. Sohiti released a ball from point X in a bowl. The ball could only reach point Y. If Sohiti wants the ball to reach point Z, which of the following solutions will make that possible?



- I. Use an elastic ball.  
II. Release the ball from a lower position.  
III. Release the ball from a higher position.
- A. II only  
B. III only  
C. I and III only  
D. II and III only
21. Match column I with column II and select the correct option from the given codes.

**Column I**

**Column II**

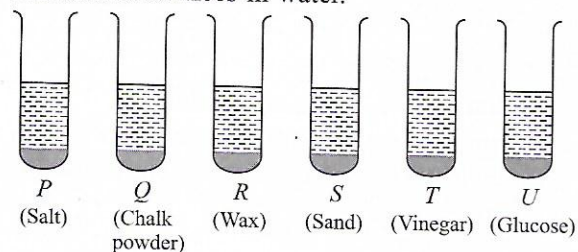
- |                 |                       |
|-----------------|-----------------------|
| P. Rubber band  | (i) Miscible in water |
| Q. Muslin cloth | (ii) Metal            |
| R. Honey        | (iii) Translucent     |
| S. Iron nail    | (iv) Floats on water  |
- A. P-(iv); Q-(iii); R-(ii); S-(i)  
B. P-(iv); Q-(iii); R-(i); S-(ii)  
C. P-(i); Q-(iv); R-(ii); S-(iii)  
D. P-(iii); Q-(ii); R-(iv); S-(i)

22. Which of the following statements are correct?
- I. Larger solid particles can be separated from smaller ones by filtration.  
II. Cream can be separated from milk by churning.  
III. A mixture of mud and water can be separated by loading, sedimentation and decantation.  
IV. Grains can be separated from stalks by threshing.
- A. I and II only  
B. II and IV only  
C. I, II and III only  
D. II, III and IV only
23. Neha observed a few changes and tried to classify them into three types as
- p* – Physical, irreversible changes  
*q* – Physical, reversible changes  
*r* – Chemical, irreversible changes.

Select the incorrect classification.

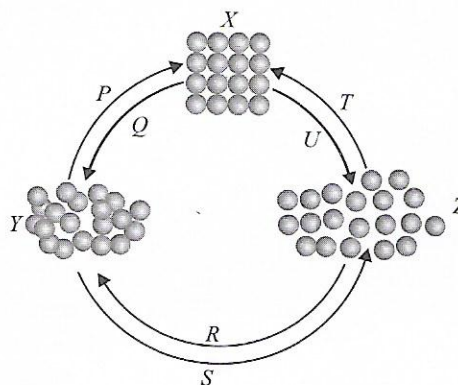
- | <i>p</i>              | <i>q</i>                   | <i>r</i>          |
|-----------------------|----------------------------|-------------------|
| A. Threshing          | Condensation               | Digestion         |
| B. Tearing of paper   | Shaping of clay into a toy | Rotting of fruits |
| C. Breaking of a vase | Folding of clothes         | Photosynthesis    |
| D. Baking of cake     | Glowing of bulb            | Crystallisation   |

24. The following experiment was conducted by class 6 students to check the solubility/miscibility of a few common substances in water.



Which of the following observations is/are correct?

- I. Components will disappear completely in test tubes P, R and T.  
II. Components will form a separate layer in test tubes R and U.  
III. Components in test tubes Q and S are insoluble in water.  
IV. Components in test tubes R and T are immiscible in water.
- A. III only  
B. I only  
C. I, II and IV only  
D. II and IV only
25. Study the given diagram carefully and select the correct statement(s).



- I. Substances X, Y and Z represent solid, liquid and gas phase respectively.  
II. The processes P, R and T take place with increase in temperature.  
III. The process U represents sublimation while the process R represents condensation.  
IV. Processes Q, S and U take place with increase in temperature.
- A. I and IV only  
B. I, III and IV only  
C. II only  
D. I, II, III and IV