Mathematics

1 The measurements of $\triangle DEF$ are EF = 8.4 cm, $\angle E$ = 103°

and $\angle F$ = 85°. Which of the following is correct ?

(A) $\triangle DEF$ can be constructed.

(B) $\triangle DEF$ is an obtuse angled triangle.

(C) $\triangle DEF$ cannot be constructed.

(D) $\triangle DEF$ is an acute angled triangle.

2 The table shows the number of hours Pavan studies on different days of a week.

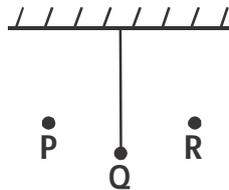| Mon	Tue	Wed	Thurs	Fri	Sat
3	4	2	5	4	3

How many hours per day does he study on an average ?

(A) 3.5 hours

(B) 3 hours

(C) 4 hours

(D) 4.5 hours

3 If a, b and c are the sides of a triangle, which of the following is *correct*?

(A) $a - b > c$

(B) $c > a + b$

(C) $c = a + b$

(D) $b < c + a$

4 The S.I. on a sum of money is $\dfrac{1}{9}^{th}$ of the principal and the number of years is equal to the rate percent per annum. Find the rate percent.

(A) $2\dfrac{1}{3}\%$

(B) $3\dfrac{1}{3}\%$

(C) $4\dfrac{1}{2}\%$

(D) $3\dfrac{1}{2}\%$

5 In a coconut grove, (x + 2) trees yield 60 coconuts per year, x trees yield 120 coconuts per year and (x – 2) trees yield 180 coconuts per year. If the average yield per year per tree is 100, find x.
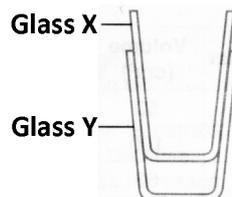
(A) 4   (B) 3   (C) 2   (D) 1

Class : VII   *Physics*

6 A faster moving object covers

(A) less distance in more time.
(B) more distance in more time.
(C) less distance in less time.
(D) more distance in less time.

7 Which of these represents one complete oscillation of the pendulum shown below ?

(A) PQR   (B) PQQP   (C) QRRP   (D) PQR RQP

8 The two glasses X and Y are stuck together as shown below.

How can the glasses be separated ?
(A) Heating both the glasses
(B) Soaking glass Y in ice cubes
(C) Pouring hot water into glass X
(D) Pouring hot water over glass Y

9 Which surface cannot produce a clear image of an object?

(A) Rough   (B) Ideal
(C) Smooth   (D) Curved

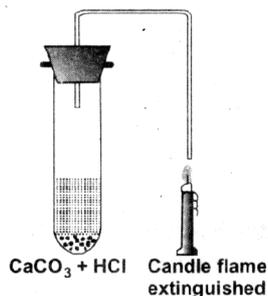**10** Which of these effects can be produced by an electric current ?

(1) Chemical	(2) Heating
(3) Lighting	(4) Magnetic

(A) 1 and 2 only   (B) 1, 2 and 3 only
(C) 2, 3 and 4 only   (D) 1, 2, 3 and 4

Class : VII	Chemistry

11 Which solution has the highest concentration of hydroxide ions ?

(A) Solution of pH 3   (B) Solution of pH 5
(C) Solution of pH 7   (D) Solution of pH 12

12 What causes the candle flame to get extinguished ?

$CaCO_3$ + HCl   Candle flame extinguished

(A) Evolution of O_2 gas   (B) Evolution of CO_2 gas
(C) Formation of $Ca(OH)_2$ (D) Formation of $CaCl_2$

13 Which of these is a chemical change ?

(A) A substance with different chemical properties is formed.

(B) A substance in a different state but similar chemical properties is formed.

(C) The molecules of the substances do not undergo any change.

(D) A substance with a different shape and size but similar chemical properties is formed.

14 Which action is the best to do during heavy lightning ?

(A) Lying on the ground in an open place

(B) Going into the nearest water body

(C) Staying indoors away from metallic doors or windows

(D) Standing under a tall tree

15 Wind currents occur across the globe due to

(A) the rotation of the earth.

(B) change in season.

(C) uneven heating between the equator and poles.

(D) gravitational pull of the sun.

Class : VII   *Biology*

16   **The diagram given shows the flow of oxygen in our body.**

Which of the labelled arrows is drawn INCORRECTLY ?

(A) P   (B) Q

(C) R   (D) S

17   **Where does most of the transpiration take place in the given figure ?**

(A) P   (B) R

(C) Q   (D) S

18 The following statements describe how the transport system in a plant works.

> P - Xylem tubes carry water and mineral salts to other parts of the plant
> Q - The leaves make food in the presence of sunlight
> R - The leaves receive water and mineral salts
> S - Phloem tubes transport food to other parts of the plant
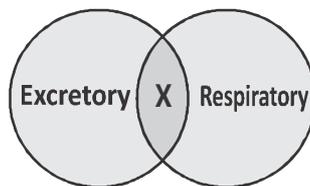> T - Root hairs absorb water and mineral salts from the soil

Which of these is a correct sequence ?

(A) $P \rightarrow T \rightarrow Q \rightarrow R \rightarrow S$ (B) $T \rightarrow P \rightarrow R \rightarrow Q \rightarrow S$

(C) $P \rightarrow R \rightarrow Q \rightarrow S \rightarrow T$ (D) $R \rightarrow Q \rightarrow P \rightarrow S \rightarrow T$

19 A student identified the following characteristics in an animal.
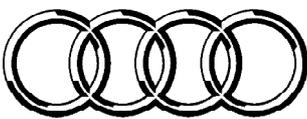
> i. Able to live both on land and in water.
> ii. Breathes through skin and lungs.
> iii. Use webbed toes for locomotion.

Choose the suitable title for the given description.

(A) Terrestrial   (B) Aquatic

(C) Amphibian   (D) Arboreal

20 Identify organ 'X'.

Excretory | X | Respiratory

(A) Skin   (B) Heart

(C) Lungs   (D) Kidneys

Class : VII   *General Awareness*

21   **Which is the capital city of Russia ?**
(A) Moscow   (B) Sydney
(C) Samara   (D) Damascus

22   **The given logo belongs to which company ?**

(A) Audi   (B) Maruti Suzuki
(C) Honda   (D) Volvo

23   **Who wrote the National Anthem of Bangladesh "Amar Shonar Bangla" ?**
(A) Rabindranath Tagore
(B) Bankim Chandra Cahttopadhyay
(C) Kazi Nazrul Islam
(D) Syed Ali Ahsan

24   **What does the acronym CBI stand for ?**

(A) Crime Bureau of Investigation
(B) Central Branch of Investigation
(C) Crime Branch Investigation
(D) Central Bureau of Investigation

25   **Chemotherapy is mainly used to treat which of these diseases ?**
(A) Asthma   (B) Tuberculosis
(C) Cancer   (D) Polio