36. Refer to the given table representing differences between processes *X* and *Y*.

	X	*Y*
(i)	No external pollinating agency is required.	A pollinating agency is required.
(ii)	The flowers remain closed so that anthers and stigma are never exposed.	The flowers open, exposing anthers and stigmas.

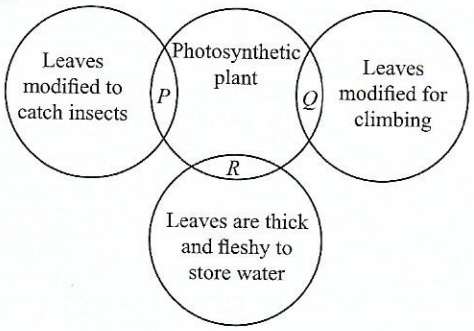
Identify processes *X* and *Y* and select the correct statement.

A. In process *X*, plant needs to produce large number of pollen grains whereas in process *Y*, plant needs to produce very few pollen grains.
B. Process *X* increases the adaptability of the offspring towards changes in the environment.
C. Process *Y* is a mechanism of producing new races, varieties and even species.
D. Plants with unisexual flowers undergo both *X* and *Y* whereas plants with bisexual flowers can undergo only process *Y*.

37. Which of the following correctly represents the approximate composition of exhaled air by humans?

A. $O_2 = 21\%$, $CO_2 = 4.4\%$
B. $O_2 = 21\%$, $CO_2 = 0.03\%$
C. $O_2 = 16.4\%$, $CO_2 = 4.4\%$
D. $O_2 = 16.4\%$, $CO_2 = 0.03\%$

38. Refer to the given Venn diagram and select the correct option.



A. *P* could be pitcher plant whereas *R* could be *Aloe*.
B. *Q* could be pea whereas *P* could be sundew.
C. *P* could be bladderwort whereas *R* could be *Opuntia*.
D. Both A and B

39. The parts of human excretory system are given below.
(i) Bladder (ii) Kidney
(iii) Ureter (iv) Urethra
In which order does urine pass through these structures?
A. (ii) → (iii) → (i) → (iv)
B. (i) → (iii) → (iv) → (ii)
C. (ii) → (iv) → (i) → (iii)
D. (iv) → (iii) → (i) → (ii)

40. Pick the odd one out from each of the given groups (i-iv) on the basis of respiratory organs and select the correct option.

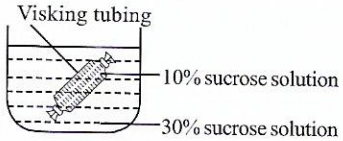
(i)	Turtle, Owl, Dolphin, Sea horse
(ii)	Ant, Butterfly, Earthworm, Mosquito
(iii)	Snake, Sparrow, Snail, Goat
(iv)	Eagle, Emu, Kiwi, Prawn

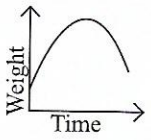
	(i)	(ii)	(iii)	(iv)
A.	Owl	Earthworm	Snail	Eagle
B.	Turtle	Mosquito	Goat	Kiwi
C.	Sea horse	Earthworm	Snail	Prawn
D.	Dolphin	Ant	Sparrow	Emu

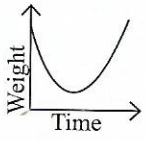
41. 400 mL of water takes 20 minutes to percolate through soil sample *X*. Which of the following is the percolation rate of *X*?

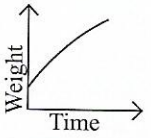
A. 10 mL/min
B. 20 mL/min
C. 40 mL/min
D. 80 mL/min

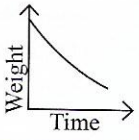
42. Refer to the given experimental set-up. Which of the following graphs correctly depicts the change in the weight of visking tubing after some time?



A. 

B. 

C. 

D. 

43. Study the given table carefully and select the option which correctly identifies *W*-*Z*.

Organism	Body temperature	Respiratory organ	Body covering
W	Can regulate to maintain a constant value	Lungs	Hair
X	Can regulate to maintain a constant value	Lungs	Feathers
Y	Varies with environmental temperature	Gills	Scale
Z	Varies with environmental temperature	Lungs	Scale

	W	*X*	*Y*	*Z*
A.	Salamander	Kiwi	Hedgehog	Platypus
B.	Hamster	Kite	Eel	Cobra
C.	Catfish	Swallow	Pangolin	Prawn
D.	Ostrich	Penguin	Earthworm	Lobster