44. During generative fertilisation, a _____ fuses with a _____.

A. Polar nucleus, Secondary nucleus
B. Male gamete, Polar nucleus
C. Male gamete, Female gamete
D. Female gamete, Secondary nucleus

45. Refer to the given statements and select the option that correctly fills blanks in any two of them.

(i) Transpiration mainly occurs by the process of _____ through stomata.

(ii) __(a)__ temperature and __(b)__ humidity favour transpiration.

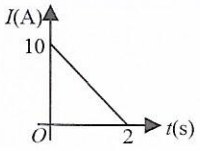
(iii) _____ is responsible for apical dominance and also controls tropic movements in plants.

(iv) At intervals, myelinated nerve fibres possess unmyelinated areas called _____.

A. (i)-Osmosis; (ii)-(a) Low, (b) High
B. (ii)-(a) High, (b) Low; (iii)-Auxin
C. (iii)-Abscisic acid; (iv)-Terminal arborization
D. (i)-Diffusion; (iii)-Ethylene

ACHIEVERS SECTION

46. A variable current flows through a 1 Ω resistor for 2 seconds. Time dependence of the current is shown in the graph.



Which of the following statements is/are correct regarding the given information?

I. Total charge flown through the resistor is 10 C.
II. Average current through the resistor is 5 A.
III. Maximum power during the flow of current is 100 W.

A. I only
B. II only
C. II and III only
D. I, II and III

Direction (Q. No. 47 and 48) : Read the given passage and answer the following questions.

On complete combustion, one mole of a hydrocarbon (X) produces four moles of carbon dioxide and five moles of water.

$$X \xrightarrow[(-1 \text{ mole of } H_2)]{\text{Dehydrogenation}} Y$$

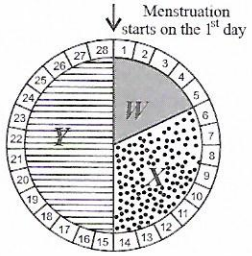
47. The total number of isomers possible for 'X' is

A. One
B. Three
C. Two
D. Four.

48. The isomers possible for 'Y' are

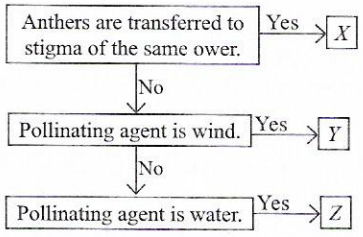
A. $CH_3CH_2CH{=}CH_2$ and $CH_3CH{=}CHCH_3$ only
B. $CH_3CH{=}CHCH_3$, $CH_3CH_2CH{=}CH_2$ and $(CH_3)_2C{=}CH_2$ only
C. $CH_3C{\equiv}CCH_3$ and $CH_3CH_2C{\equiv}CH$ only
D. $CH_3CH{=}CHCH_3$ and $(CH_3)_2C{=}CH_2$ only.

49. Refer to the given pie chart and select the incorrect option regarding it.



A. During W phase, a hormone released from anterior pituitary stimulates development of primary oocytes.
B. During X phase, a hormone that stimulates repair and development of lining of Fallopian tube is released.
C. During Y phase, a hormone is released that slightly increases body temperature in females.
D. The main hormone released during X phase is crucial for maintaining pregnancy hence low level of this hormone can lead to abortion in a pregnant female.

50. Identify X, Y and Z from the given flow chart and select the correct option.



	X	Y	Z
A.	*Mimosa*	*Urena*	Balsam
B.	*Ceratophyllum*	*Commelina*	*Urtica*
C.	*Vinca*	*Zostera*	*Mirabilis*
D.	*Commelina*	Barley	*Vallisneria*

SPACE FOR ROUGH WORK