1.David, Kai, and Arjun are planning a community event. They want to ensure that their event is organized in a way that it meets the needs of the present community without limiting the ability of people, other species, and future generations to survive. What concept are they implementing? David、Kai 和 Arjun 正在策劃一場社區活動。他們希望確保該活動能滿足當前社區的需求，同時限制人類其他物種及未來世代的生存能力。這個概念稱為什麼？

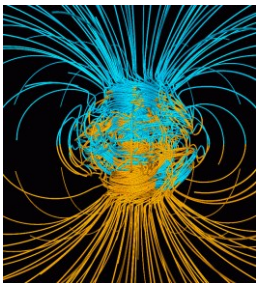
A.Mitigation 緩解 B.Adaptation 適應
C.Sustainability 可持續性 D.Carbon Tax 碳稅

2.Which of the following characteristics are correct for the image formed in a plane mirror?
平面鏡所形成的影像具有以下哪些特性？

I. Upright 直立 **II. Inverted** 倒立 **III. Real** 真實
IV. Same size as the object 與物體相同大小
V. Virtual 虛擬

A.I, II, III B.I, III, IV C.I, IV, V D.III, IV, V

3.The magnetic field produced by a given current in the conductor _____ as the distance from it increases. 導體中的電流所產生的磁場，當與導體的距離增加時，會如何變化？



A.decreases 減少 B.increases 增加
C.remains same 保持不變 D.none 以上皆非

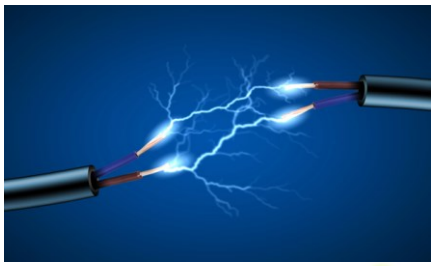
4.Xylem _____ and phloem _____ inside of the plant. 在植物內部，木質部 ____ 和篩管 ____？

A.transports water up, transports food down
向上輸送水，向下輸送養分
B.transports water down, transports food up
向下輸送水，向上輸送養分
C.transports food up, transports food down
向上輸送養分，向下輸送養分
D.transports food down, transports food up
向下輸送養分，向上輸送養分

5.This part of the eye carries the message from your eye to the part of your brain that controls vision. 眼睛的哪個部分負責將視覺信息傳遞到大腦？

A.cornea 角膜 B.lens 晶狀體
C.optic nerve 視神經 D.retina 視網膜

6.Which device finally converts wind energy to electrical energy. 哪種裝置最終將風能轉換為電能？



A.Boiler 鍋爐
B.Condenser 冷凝器
C.Generator 發電機
D.Transmitter 傳輸器

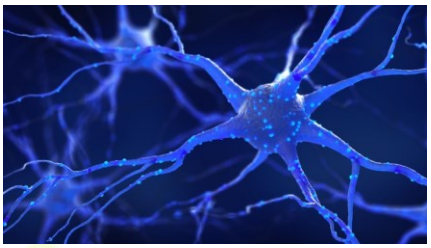
7.The nervous system is composed of the ___, ___, and ___.神經系統由哪些部分組成？

A.heart, brain, kidneys 心臟、大腦、腎臟
B.lungs, liver, stomach 肺臟、肝臟、胃
C.brain, spinal cord, nerves 大腦、脊髓、神經
D.eyes, pancreas, veins 眼睛、胰臟、靜脈

8.Wind spins the blades of a windmill which powers a turbine that generates energy. 風轉動風車的葉片，使渦輪機發電。這屬於哪種能源？

A.Geothermal Energy 地熱能
B.Solar Energy 太陽能
C.Wind Energy 風能
D.Hydroelectric Energy 水力發電

9.Correct sequence of electrical impulse transmission in a neuron is from____. 神經元中電信號的正確傳導順序為何？



A.dendrite, axon, axonal end, cell body
樹突， 軸突， 軸突末端， 細胞體
B.cell body, dendrite, axon,axonal end
細胞體，樹突，軸突，軸突末端
C.dendrite, cell body, axon, axonal end
樹突，細胞體， 軸突， 軸突末端
D.axonal end, axon, cell body, dendrite
軸突末端，軸突，細胞體，樹突

10.Why the sky look blue during midday and red during sunset 為何正午的天空呈現藍色，而日落時呈現紅色？

A.Reflection of light 光的反射
B.Refraction of light 光的折射
C.Dispersion of Light 光的色散
D.Scattering of Light 光的散射

11.Which one of the following adaptation will be selected by natural selection in rabbits living in polar region? 在極地生活的兔子，哪種適應特徵最可能被自然選擇保留？

A.Black colored thick fur 黑色厚毛
B.White coloured thick fur 白色厚毛
C.White coloured thin fur 白色薄毛
D.Black colored thin fur 黑色薄毛

12.How many chromosomes do humans have?
人類有多少條染色體？

A.46-- 23 from mom, 23 from dad 46
來自母親 23 條，來自父親 23 條
B.22--11 from mom, 11 from dad22
來自母親 11 條，來自父親 11 條
C.10-- 5 from mom, 5 from dad10
來自母親 5 條，來自父親 5 條
D.23 parent 23 父母

13.How do fishes obtain oxygen?
魚類如何獲取氧氣？

A.Their gills absorb it from the water.
鰓從水中吸收氧氣
B.They take it in when they breathe the air.
直接從空氣中呼吸氧氣
C.Their eyes absorb it from the water.
眼睛從水中吸收氧氣
D.Axolotls do not need oxygen.
美西螈不需要氧氣

14.Which of the following is the correct equation for PHOTOSYNTHESIS? 以下哪個是光合作用的正確方程式？

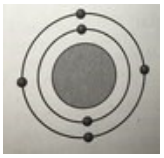
A.light + carbon dioxide + water --> glucose + oxygen 光能 + 二氧化碳 + 水 → 葡萄糖 + 氧氣
B.carbon dioxide + sugar + water --> oxygen + light
二氧化碳 + 糖 + 水 → 氧氣 + 光能
C.oxygen + light + water --> carbon dioxide + sugar
氧氣 + 光能 + 水 → 二氧化碳 + 糖
D.carbon dioxide + oxygen + water --> Light+ Sugar
二氧化碳 + 氧氣 + 水 → 光能 + 糖

15.Which of the following best describes homologous structures in living organisms?
下列哪個選項最能描述同源結構？

A.Structures that serve the same function but have different evolutionary origins 功能相同但進化來源不同的結構
B.Structures that serve different functions but have similar evolutionary origins 功能不同但進化來源相似的結構
C.Structures that are no longer functional in the organism 在生物體中已經無功能的結構
D.Structures that are unique to a particular species 特定物種獨有的結構

16.Which model represents the most reactive atom? 哪個模型代表最具反應性的原子？

A

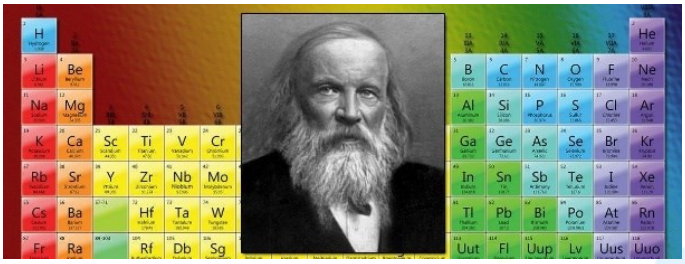
B

C

D

17.The greenhouse effect keeps the Earth _____; Greenhouse gases in polluted air make the greenhouse effect _____. 溫室效應使地球_____；污染空氣中的溫室氣體使溫室效應_____。

A.Cool; weaker 涼爽；減弱
B.cool; stronger 涼爽；增強
C.warm; weaker 溫暖；減弱
D.warm; stronger 溫暖；增強

18. At the time of Mendeleev, the number of elements known was 孟德列夫時期已知的元素數量為？



A. 63 B. 65 C. 62 D. 64

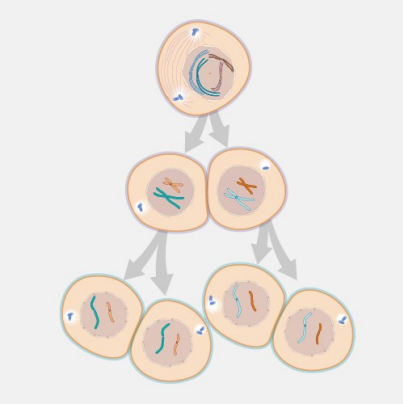
19. The process of plants losing water through their leaves is called ____.
植物通過葉子失水的過程稱為 _____？

A.condensation 凝結 B.evaporation 蒸發
C.transpiration 蒸騰作用 D.exhaling 呼氣

20.Chemical symbol for Gold is _____.
黃金的化學符號是 _____。

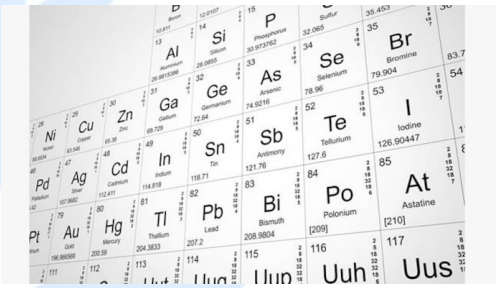
A.Ag B.G
C.Au D.Mn

21. During meiosis, if an organism has 10 chromosomes, how many will the new daughter cells have? 在減數分裂 (Meiosis) 過程中，若某生物有 10 條染色體，則其新產生的紡錘体細胞將有多少條染色體？



A. 20 B. 15 C. 10 D. 5

22. How many groups present in modern Periodic table ? 現代元素周期表中有多少組？



A. 10 B. 18 C. 12 D. 8

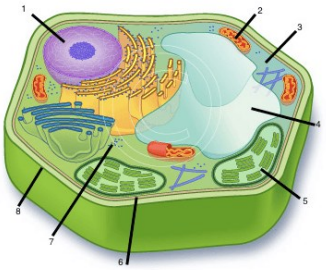
23. How many periods are there in Modern Periodic table? 現代元素周期表中有多少個周期？

A. 5 B. 6 C. 7 D. 8

24. X^+ The atomic number of an element X is 19. The number of electrons in its ion will be:
元素 X 的原子序數為 19，則其離子的電子數是多少？

A. 17 B. 18 C. 19 D. 20

25. Which number represents the mitochondria?
哪個數字代表粒線體?



A. 1 B. 2 C. 3 D. 4