1. What about the design of most flowers allows for self-fertilization?  
   FLOWERS ARE BISEXUAL

2. What characteristic of a plant’s ‘lifestyle’ makes self-fertilization very adaptive?  
   PLANTS ARE SEDENTARY

3. What is function of stigma?  
   RECEIVES POLLEN SO THAT SPERM CAN FERTILIZE OVARY OF FLOWER

4. What is function of anther?  
   WHERE POLLEN IS PRODUCED

5. What is meant by saying ‘the pollen of each species is unique’?  
   SHAPE OF POLLEN FITS PRECISELY INTO RECEPTORS ON STIGMA

6. Why have pollination systems become so complex and elaborate?  
   FORCES OF EVOLUTION REWARD DESIGNS THAT ENCOURAGE OUT-CROSSING

7. How has the hammer orchid of the Australian bush evolved to attract wasp pollinators?  
   HAMMER ORCHID FLOWER MIMICS THE SHAPE AND SMELL OF A WASP

8. Most grasses and many trees are wind pollinated. What is the disadvantage of wind pollination?  
   IT IS VERY WASTEFUL

9. What are five things that are included in the ‘cash currency’ of rewards offered by plants to pollinators?  
   POLLEN, NECTAR, WAX, SCENT COMPOUNDS, OFFER OF SEXUAL SATISFACTION

10. What is meant by ‘nectar robbing’?  
    REMOVAL OF NECTAR FROM FLOWER IN A WAY THAT RESULTS IN NO POLLEN BEING TRANSFERRED

11. What two mechanisms do plants use to discourage nectar robbing?  
    WATER-TRAP MOAT OF TEASLES PREVENTS ANTS FROM GETTING ACCESS TO FLOWERS; EXTRA-FLORAL NECTARIES ARE USED BY GINGER TO REWARD ANTS FOR DEFENDING FLOWERS AGAINST ‘UNAPPROVED’ VISITORS.

12. Who are the primary animal pollinators of night-blooming flowers?  
    MOTHS AND BATS

13. What type of animal is the ‘approved’ pollinator of ginger flowers?  
    BIRDS

14. What is ‘buzz’ pollination?  
    MOVING POLLEN USING ULTRASONIC VIBRATIONS
15. How does ant pollination affect flower size in desert plants?
   SINCE FLOWERS ARE NOT USED FOR SIGNALLING FLYING POLLINATORS, FLOWER SIZE IS GENERALLY SMALL.

16. Why is pollen desirable to a pollinator?
   POLLEN IS HIGH IN PROTEIN

17. Why is nectar desirable to a pollinator?
   SUGARS IN NECTAR PROVIDE ENERGY

18. Why is wax desirable to a pollinator?
   WAX CAN BE USED FOR NEST BUILDING AND OTHER PURPOSES

19. Why are scent compounds desirable to a pollinator?
   SCENT COMPOUNDS ARE USED BY POLLINATOR TO ATTRACT MATE

Pollination biologists are fond of saying ‘In plant sex it pays to advertise.’

20. What is being advertised?
   A REWARD THAT THE PLANT IS OFFERING TO THE POLLINATOR

21. What constitutes the payment for advertising to the plant?
   MOVING POLLEN FROM PLANT TO PLANT

22. What constitutes the cost of advertising, i.e., the payment to the pollinator?
   THE REWARD

23. Protea is a South African genus of plant known for having large striking flowers. In some species the flowers are very exposed and point straight up, in other species the flowers are hidden and point straight down. How do pollinators differ between the two species of Protea? SPECIES WITH UPWARD-FACING FLOWERS IS POLLINATED BY BIRDS; SPECIES WITH DOWNWARD-FACING FLOWERS IS POLLINATED BY MAMMALS.

24. What ‘special’ reward does the Arctic rose offer to pollinators in its frigid habitat?
   A PLACE TO WARM UP

25. What two characteristics of the Arctic rose allow it to offer this special reward to its pollinators?
   THE FLOWER TRACKS THE PATH OF THE SUN IN THE SKY; THE WHITE FLOWER PETALS REFLECT SUNLIGHT TOWARDS THE CENTER OF THE FLOWER.

26. What two things are unique about the pollination biology of orchids?
   MOST SPECIES OF ORCHIDS HAVE ONLY A SINGLE POLLINATOR; ORCHIDS PRODUCE POLLEN IN SPECIAL SACS CALLED POLLINIA, WHICH ARE TRANSFERRED BY POLLINATORS RATHER THAN INDIVIDUAL POLLEN GRAINS.

27. How is the reproduction of orchid bees tied to the reproduction of the bucket orchid?
   THE BUCKET ORCHID OFFERS A REWARD OF A SPECIAL WAX THAT IS COLLECTED BY MALE BEES AND USED TO ATTRACT FEMALE BEES. IN COLLECTING THE SPECIAL WAX THE BEE TRANSFERS POLLEN BETWEEN ORCHIDS.