1. Poriferans are characterized by presence of choanocyte cells. ‘Vanadocyte’ is the characteristic of which of the following animal groups?
a. Cnidarians  b. Ascidians
c. Annelids  d. Molluscs

2. Consider the following phyla: (1) Porifera, (2) Cnidaria, (3) Echinodermata. In which of these phylum/phyla, all are marine animals?
a. (3) only  b. (1) and (3)
c. (1), (2) and (3)  d. (1) only

3. Consider the following animals: (1) Sea Cow, (2) Sea Hare, (3) Sea Lion. Which of these is/are carnivore(s)?
a. (1) only  b. (3) only
c. (1) and (3)  d. (1) and (2)

4. Phylum arthropoda consists of the highest number of species in the world. Which of the following is the second largest phylum of the animal kingdom?
a. Annelida  b. Chordata
c. Platychelminthes  d. Mollusca

5. Spiders belong to the class Arachnida. Which of the following arthropods belong to the same class?
a. Ticks  b. Scorpions
c. Mites  d. All of the above

6. The amniotic egg first appeared in early
a. Amphibians  b. Reptiles
c. Birds  d. Mammals

7. Current phylogenetic studies indicate that seals and sea lions are part of
a. Perissodactyla  b. Sirenia
c. Carnivora  d. Cetacea

8. The scientific name of Sea Hare is
a. Aplysia sp.  b. Nymphon sp.
c. Aphrodita sp.  d. Mellita sp.

9. Which of the following animals is a medium-sized, burrowing, nocturnal mammal with ant eating habit, native to Africa and the only living species of the order Tubulidentata?
a. Pangolin  b. Giant anteater
c. Numbat  d. Aardvark

10. Orangutans are exclusively found in which of the following zoogeographical realms?
a. Neotropical  b. Ethiopian
c. Oriental  d. Palearctic

11. Which of the following animals is a vulnerable, endemic species of the eastern Himalayan region?
a. Lion tailed macaque  b. Red panda
c. Giant panda  d. Tiger

12. The largest molluscan class containing 75-80% of all molluscs is:
a. Gastropoda  b. Bivalvia
c. Cephalopoda  d. Scaphopoda

13. India’s national “aquatic” animal is:
a. Gharial  b. Crocodile
c. River dolphin  d. Otter

14. Pentameric radial symmetry is the characteristic feature of the phylum:
a. Porifera  b. Cnidaria
c. Echinodermata  d. Ctenophora

15. Which of the following animals communicate via “dancing” language?
a. Ants  b. Honey bees
c. Termites  d. Spiders

16. The animal considered as “living fossil” is
a. Archaeopteryx  b. Dinosaur
c. Dodo  d. Coelacanth

17. Which of the following animals is characterized as “Madagascar’s flagship mammal species” by Conservation International?
a. Lemur  b. Koala
c. Monkey  d. Chimpanzee

18. All marsupials are found in Australia. Can you name the only marsupial found in North America?
a. Kangaroo  b. Koala
c. Virginia Opossum  d. Platypus

19. The fastest bird in the world is
a. Gannet  b. Peregrine falcon
c. Bald eagle  d. Herring Gull

20. An example of “wingless insect” is
a. Termite  b. Spider
c. Scorpion  d. Silverfish

Answers:

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1. The device that guides the pollen tube in the cavity of the ovary is:
   a) Obturator  
   b) Transmitting tissue  
   c) Placenta  
   d) Synergids

2. Which one is the female gamete in embryo sac?
   a) Synergid  
   b) Antipodal cell  
   c) Oosphere  
   d) Central Cell

3. Embryo sac represents:
   a) Megaspore  
   b) Megagametophyte  
   c) Megasporophyll  
   d) Megagamete

4. If there are four sporogenous cells in an anther, what will be the number of pollen grains?
   a) 16  
   b) 12  
   c) 8  
   d) 4

5. An ovule which becomes curved so that the nucellus and embryo sac lie at right angles to the funicle is:
   a) Hemitropous  
   b) Campylotropous  
   c) Anatropous  
   d) Orthotropous

6. Male gametes in angiosperms are formed by the division of:
   a) Generative cell  
   b) Vegetative cell  
   c) Microspore mother cell  
   d) Microspore

7. In flowering plants, a mature male gametophyte is derived from a pollen mother cell by:
   a) Two mitotic divisions  
   b) One meiotic and two mitotic divisions  
   c) Three meiotic divisions  
   d) A single meiotic division

8. A plant has 24 chromosomes in “microspore mother cell”. The number of chromosomes in its endosperms will be:
   a) 36  
   b) 24  
   c) 12  
   d) 48

9. The sequence of development of embryo sac is:
   a) Archesporium > megaspore > megasporangium > embryo sac  
   b) Archesporium > megaspore > megasporangium > embryo sac  
   c) Aarchesporium > megaspore > megasporangium > embryo sac  
   d) Megaspore mother cell > embryo sac

10. A typical angiosperm embryo sac at maturity is eight-nucleate and:
    a) Single celled  
    b) Four celled  
    c) Seven celled  
    d) Eight celled

11. Tapetum is found in:
    a) Anther  
    b) Androecium  
    c) Ovary  
    d) Ovule

12. The egg apparatus of angiosperm comprises:
    a) An egg cell and two antipodals  
    b) An egg cell and two synergids  
    c) An egg cell and two polar nuclei  
    d) An egg cell and the central cell

13. Exine of pollen grain is made up of:
    a) Pectocellulose  
    b) Lignocellulose  
    c) Sporopollenin  
    d) Pollen kit

14. In angiosperms, functional megaspore develops into:
    a) Embryo sac  
    b) Ovule  
    c) Endosperm  
    d) Pollen sac

15. Pollination by snail and slug is known as:
    a) Ornithophily  
    b) Chiropterophily  
    c) Entomophily  
    d) Malacophily

16. Chiropterophily means:
    a) Pollination by snails  
    b) Pollination by bats  
    c) Pollination by wind  
    d) Pollination by insects

17. Wind-pollinated flowers are:
    a) Small, brightly coloured, producing large number of pollen grain  
    b) Small, producing large number of dry pollen grain  
    c) Large, producing abundant nectar and pollen  
    d) Small, producing nectar and dry pollen

18. The type of pollination involving transfer of pollen grains from anther to the stigma of the same flower is known as:
    a) Geitonogamy  
    b) Xenogamy  
    c) Autogamy  
    d) Apogamy

19. The type of pollination that involves transfer of pollen grains from the anther to the stigma of another flower on a different plant of the same species:
    a) Xenogamy  
    b) Geitonogamy  
    c) Chasmogamy  
    d) Autogamy

20. Plants with ovaries having only one or a few ovules are generally pollinated by:
    a) Bees  
    b) Butterflies  
    c) Birds  
    d) Wind

ANSWERS:

1.a  2.c  3.b  4.a  5.a  
6.a  7.b  8.a  9.c  10.c  
11.a  12.b  13.c  14.a  15.d  
16.b  17.b  18.c  19.a  20.d

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