

IX M.Sc. (Wildlife Science) National Entrance Test  
20 April 2003

SECTION III : OPTIONAL SUBJECT - LIFE SCIENCES

Max. Marks:30

1. Which is C<sub>4</sub> plant  
A. Papaya  
B. Potato  
C. Pea  
D. Maize [ ]
2. The boundary region between two different ecosystems is  
A. Eudam  
B. Niche  
C. Ecotone  
D. Ernone [ ]
3. "Green house effect" is because of  
A. CO<sub>2</sub>  
B. CO  
C. SO<sub>2</sub>  
D. NO<sub>2</sub> [ ]
4. Intercellular spaces are absent in  
A. Cortical tissue  
B. Meristematic tissue  
C. Spongy tissue  
D. Aerenchyma tissue [ ]
5. Sclerenchymatous cells are absent in the hydrophytes, because the plant gets mechanical support from  
A. Fibres  
B. Collenchymatous cells  
C. Parenchymatous cells  
D. Water [ ]

6. Identify the family to which the rubber yielding plant *Hevea brasiliensis* belongs
- A. Euphorbiaceae
  - B. Moraceae
  - C. Apocyanaceae
  - D. Rutaceae
- ( )
7. Identify the group of angiospermic plants which is considered most advanced in the evolutionary scale
- A. Annuals
  - B. Biennials
  - C. Perennials
  - D. All are equally evolved
- ( )
8. The endodermis layer is also known as
- A. Protein sheath
  - B. Starch sheath
  - C. Starch protein sheath
  - D. Protein lipid sheath
- ( )
9. Identify the family which is most widely distributed in different ecological habitats
- A. Liliaceae
  - B. Apocyanaceae
  - C. Palmaceae
  - D. Poaceae
- ( )
10. Association between fungus hyphae and plant root is termed as
- A. Rhizobiota
  - B. Mycorrhiza
  - C. Rhizoflora
  - D. Mycobiota
- ( )
11. Which law of thermodynamics explains ten % rule of energy flow in the ecosystem?
- A. 1<sup>st</sup> law of thermodynamics
  - B. 2<sup>nd</sup> law of thermodynamics
  - C. 3<sup>rd</sup> law of thermodynamics
  - D. both 1<sup>st</sup> and 2<sup>nd</sup> law of thermodynamics
- ( )

12. Mutualism is the result of following type of interaction between two species
- A. Positive and neutral
  - B. Positive and negative
  - C. Positive and positive
  - D. Negative and negative
- ( )
13. If two closely related populations differ in their breeding season the reproductive isolation is referred to as
- A. Ecological
  - B. Ethological
  - C. Geographical
  - D. Temporal
- ( )
14. Which of the following microbes was extensively used in discovering genetic role of DNA?
- A. Pneumococcus
  - B. Salmonella
  - C. Clostridium
  - D. Bacillus
- ( )
15. All viruses are composed of any one of the following combinations
- A. Nucleic acid and lipids
  - B. Nucleic acid and proteins
  - C. DNA and proteins
  - D. RNA and proteins
- ( )
16. Neurohypophysis of the pituitary gland secretes one of the following
- A. ADH
  - B. LTH
  - C. ACTH
  - D. Thyroxine
- ( )
17. In which of the following situations a mammalian cell will swell
- A. 0.9% NaCl
  - B. 0.9% KCl
  - C. 1% NaCl
  - D. 0.75% NaCl
- ( )

18. The metal ion associated with oxygen evolving system in chloroplast is
- A.  $Mg^{++}$
  - B.  $Mn^{++}$
  - C.  $Fe^{++}$  ( )
  - D.  $Ca^{++}$
19. One of the following is the larval form of Porifera
- A. Ephyra
  - B. Glochidium
  - C. Trochophora
  - D. Parenchymula ( )
20. Archaeopteryx forms a connecting link between
- A. Amphibians and birds
  - B. Reptiles and mammals
  - C. Birds and mammals
  - D. Reptiles and birds { }
21. The phenomenon of torsion in the typical gastropod which occur in the early embryo rotates the visceral mass upon the head and foot by
- A.  $180^\circ$  clockwise rotation
  - B.  $360^\circ$  clockwise rotation
  - C.  $180^\circ$  anticlockwise rotation
  - D.  $360^\circ$  anticlockwise rotation ( )
22. Ligaments join the mandibles in
- A. Lizards
  - B. Snakes
  - C. Fishes ( )
  - D. Birds
23. The skin and the nervous system in animals is derived from the germinal layer called
- A. Ectoderm
  - B. Mesoderm
  - C. Endoderm
  - D. None of the above ( )

24. Mark the odd one out of the following
- A. Urodela
  - B. Squamata
  - C. Anura
  - D. Gymnophiona ( )
25. Read the statements and answer:
- A. Dogs and wolves are placed together into a genus called *Canis*:
  - B. Dogs and wolves have structural similarities but not to an extent of getting them in the same species.
- A. Both the statements are true
  - B. A is true
  - C. Both the statements are false ( )
  - D. B is true
26. Biomembrane has a lipid bilayer structure because of presence of
- A. Nonpolar lipid
  - B. Membrane proteins
  - C. Amphipathic lipid ( )
  - D. Membrane bound sugars
27. Anticodon sequence is present in
- A. mRNA
  - B. tRNA
  - C. DNA
  - D. Amino acid ( )
28. The origin of Asafoetida (*Hing*), an aromatic condiment is
- A. Bark
  - B. Root or rhizome
  - C. Fruit ( )
  - D. Coelentrates
29. FSH is related to
- A. Pituitary
  - B. Thyroid
  - C. Pancreas
  - D. Prostrate ( )

30. Following is not an example of genetic disorder

- A. Albinism
- B. Galactosemia
- C. Turner syndrome
- D. Kala-azar or black sickness

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