

## Section III

### Optional Subject – Life Sciences

Max. Marks: 30

1. Neurotransmitter between neuron and muscle cell is
  - A. Dopamine
  - B. Serotonin
  - C. Endorphin
  - D. Acetylcholine[ ]
  
2. The gland which is exocrine and endocrine is
  - A. Adrenal
  - B. Pituitary
  - C. Pancreas
  - D. Liver[ ]
  
3. Lactose operon is considered to be glucose sensitive due to
  - A. Catabolic induction
  - B. Allosteric inhibition
  - C. Anabolic inhibition
  - D. None of these[ ]
  
4. Jumping genes in maize were discovered by
  - A. Johhanesen
  - B. Dobzhansky
  - C. Gregor Mendel
  - D. Barbara McClintock[ ]
  
5. DNA strands are antiparallel because of the
  - A. H-bands
  - B. Phosphodiaster bond
  - C. Disulphide bond
  - D. Peptide bond[ ]
  
6. Cellulose is
  - A. Heptose polysaccharide
  - B. Pentose polysaccharide
  - C. Hetero polysaccharide
  - D. Hexose polysaccharide[ ]

7. All amino acids possess free amino and carboxyl group except
- A. Proline
  - B. Arginine
  - C. Histidine
  - D. All the above [ ]
8. The wishbone of the birds is derived from
- A. Skull
  - B. Pectoral girdle
  - C. Pelvic girdle
  - D. Hind limb [ ]
9. Equus rests on
- A. One digit
  - B. Three digits
  - C. Four digits
  - D. Five digits [ ]
10. In mammals placenta is formed by
- A. Amnion
  - B. Chorion
  - C. Yolk sac
  - D. Chorion allantois [ ]
11. Dinosaurs were present during
- A. Paleozoic era
  - B. Cenozoic era
  - C. Mesozoic era
  - D. Pre-Cambrian era [ ]
12. Corpus luteum secretes mainly
- A. FSH
  - B. Estradiol
  - C. Progesterone
  - D. Estrogen [ ]
13. Grafting of tissue or organ between individuals of different species is called
- A. Autograft
  - B. Isograft
  - C. Xenograft
  - D. Allograft [ ]

14. Organisms reproducing once in life time are respectively referred in plants and animals as
- A. Monocarpic & semelparous
  - B. Polycarpic & iteroparous
  - C. Monophyletic & polyphyletic
  - D. Viviparous & semelparous [ ]
15. Desert plant adaptations include
- A. Thin cuticle, hypodermis, top stomata
  - B. No chlorenchyma, hypodermis or succulence
  - C. Thick cuticle, hypodermis, sunken stomata and succulence
  - D. Lacking hypodermis and stomata [ ]
16. Endemics are
- A. Species with wide distribution
  - B. Species with restricted distribution
  - C. Biomes of wide range
  - D. Biomes of narrow range [ ]
17. Anaerobic conditions are common in
- A. Lentic system
  - B. Lotic system
  - C. Drylands
  - D. Wetlands [ ]
18. Methods of fossilization include
- A. Sublimation, impression, predation & dispersion
  - B. Sedimentation, impression, compression & petrification
  - C. Nitrification, cryopreservation, compression & pollination
  - D. Denitrification, crystallization, fossilization & preservation [ ]
19. Echinoderms include
- A. Finfish, bivalves & gastropods
  - B. Shelfish, gastropods & oysters
  - C. Star fish, sea urchins & sea cucumbers
  - D. Clams, prawns & shrimps [ ]
20. Marine mammals include
- A. Seacucumber, corals & polychaetes
  - B. Mammoths, mouse deer & marsh crocodile
  - C. Manatees, dugongs & whales
  - D. Caulapa, halimeda & codium [ ]

21. Population regulation mechanisms help in
- A. Density reduction & diversity maintenance
  - B. Density increase & diversity reduction
  - C. Diversity and density increase equally
  - D. Diversity and density decrease equally [ ]
22. In which of the following ecosystem an ecological pyramid of energy flow is often an inverted one
- A. Ocean
  - B. Tundra
  - C. Rainforest
  - D. Desert [ ]
23. Mercury pollution causes the disease called minamata, which affects
- A. Lymphatic
  - B. Nervous system
  - C. Respiratory system
  - D. Ophthalmic complex [ ]
24. Tropical rain forests occur in
- A. Polar region, Russia
  - B. Central Africa, Central & South America, South & South East Asia
  - C. North America, Russia
  - D. Deccan Plateau, North America [ ]
25. Conifers include
- A. Pines, firs, spruce & yews
  - B. Alders, beeches, ashes & poplars
  - C. Eucalypts, myricas & myristicas
  - D. Teak sal, & terminalias [ ]
26. Arthropods include four major groups
- A. Canids, felids, scuirids & bovids
  - B. Annelids, centipedes, crabs & polychaetes
  - C. Millepedes, crabs, lepidopterans & arachnids
  - D. Nematodes, flatworms, earthworms & corals [ ]
27. In post-fertilization stage ovary, ovule & zygote respectively develop into
- A. Seed, embryo & fruit
  - B. Seed, endosperm & perisperm
  - C. Fruit, seed & embryo
  - D. Embryo, endosperm and fruit [ ]

28. Vertebral column is derived from
- A. Dorsal nerve cord
  - B. Ventral nerve cord
  - C. Outgrowth of cranium
  - D. Notochord
- [   ]
29. Bone marrow is absent in
- A. Reptiles
  - B. Amphibians
  - C. Birds
  - D. Mammals
- [   ]
30. The process of ecdysis in insects is related with
- A. Respiration
  - B. Growth
  - C. Excretion
  - D. Digestion
- [   ]

