

- Glucagon is produced by
  - acinar cells of pancreas
  - alpha cells of the islets of Langerhans of pancreas
  - beta cells of the islets of Langerhans of pancreas
  - All of the above
- Sympatric populations show
  - populations whose geographic ranges overlap
  - populations showing similar adaptations
  - populations showing similar behaviour
  - populations at the verge of extinction
- The cells that actively synthesize spongy bone are called
  - osteocytes
  - osteoclasts
  - osteoblasts
  - osteon
- A dioecious, triploblastic, pseudocoelomate, bilaterally symmetrical animal with unsegmented body possessing mouth and anus and showing some degree of cephalisation at the anterior end belongs to the phylum
  - Annelida
  - Nematoda
  - Platyhelminthes
  - Mollusca
- Which of the following is an example of transition mutation?
  - A replaced by T
  - A replaced by C
  - A replaced by G
  - A replaced by any base
- During which one of the following periods, first mammals appeared on the earth?
  - Devonian
  - Silurian
  - Triassic
  - Jurassic
- If a single strand of DNA molecule reads as 5'-ACCTAG-3', which one of the following is the complementary RNA molecule?
  - 3'-TGGATC-5'
  - 5'-TGGATC-3'
  - 3'-UGGAUC-5'
  - 5'-UGGAUC-3'
- A frog exhibits
  - cutaneous respiration only
  - buccal respiration only
  - pulmonary respiration only
  - All of the above
- The correct order for respiratory quotient for the following substrates is
  - Carbohydrate > Protein > Fat
  - Fat > Protein > Carbohydrate
  - Protein > Carbohydrate > Fat
  - Carbohydrate > Fat > Protein
- Study involving DNA difference suggests that chimpanzees are more closely related to
  - human
  - gibbon
  - capuchin
  - rhesus monkey
- The kingdom-Protista contains
  - prokaryotic unicellular autotrophic organisms
  - eukaryotic unicellular photosynthetic organisms
  - prokaryotic multicellular heterotrophic organism
  - eukaryotic multicellular heterotrophic organisms
- There are five major classes of immunoglobulin molecules. Which one of them is produced early during the immune response?
  - IgG
  - IgA
  - IgM
  - IgD
- A baby born to which one of these couples is most likely to suffer from haemolytic disease of the new born?
  - Rh<sup>+</sup> mother and Rh<sup>+</sup> father
  - Rh<sup>+</sup> mother and Rh<sup>-</sup> father
  - Rh<sup>-</sup> mother and Rh<sup>-</sup> father
  - Rh<sup>-</sup> mother and Rh<sup>+</sup> father
- If a cell has no rigid cell wall, has no chloroplast or plastids, and the stored carbohydrate is glycogen, then the cell is from
  - plant
  - fungus
  - bacteria
  - animal

15. In humans, the implantation of blastocyst occurs at

- (a) Immediately after ovulation
- (b) 1-2 days after ovulation
- (c) 6-8 days after ovulation
- (d) 2-5 days after ovulation

16. The pattern of growth in primate is

- (a) limited and allometric
- (b) limited and isometric
- (c) unlimited and isometric
- (d) unlimited and allometric

17. Homeotic mutations result in

- (a) loss of homeostasis
- (b) loss of homing of proteins to their targets
- (c) deletion of body parts
- (d) conversion of one body part to another

18. Bacillary dysentery is produced by the organism belonging to the genus

- (a) *Bacillus*
- (b) *Shigella*
- (c) *Mycobacterium*
- (d) *Clostridium*

19. Mitotic spindle is formed by bundles of

- (a) microtubules
- (b) microfilaments
- (c) microbodies
- (d) intermediate filaments

20. Interpretation of behavioural data in terms of human experience is called

- (a) anthropocentrism
- (b) anthropomorphism
- (c) Teleology
- (d) Ethology