



MSD CLASSES

Biology Olympiad Paper - 9

SAI + SA II

Q.1 Which of the following statements is not true for digestion of food in human beings?

- Digestion of fats is facilitated by components present in digestive juice secreted by largest gland of the body.
- Acidic chyme is made alkaline by hepatopancreatic secretions which are poured into the duodenum.
- Pancreatic juice secreted from endocrine part of pancreas is a complete digestive juice as it contains enzymes for digestion of all principal dietary components.
- Digestion of carbohydrates, proteins and lipids starts in oral cavity, stomach and intestine respectively and completes in small intestine.

Q.2 The steps necessary for setting up the experiment "To demonstrate that light is necessary for photosynthesis" are not given here in proper sequence.

- Keep the potted plant in sunlight for 3-4 hours.
- Keep the potted plant in darkness for about 48 hours.
- Cover the leaf of the plant with a strip of black paper.
- Pluck the leaf and test it for starch.

The correct sequence of step is:

- I, II, IV, II
- I, IV, III, II
- II, IV, III, I
- II, III, I, IV

Q.3 Kidney of vertebrates resembles with contractile vacuole of protozoans in

- Expelling out glucose
- Expelling out urea and uric acid
- Expelling out excess of water
- Expelling out salts

Q.4 Match column I with Column II

Column I

Column II

- | | |
|-------------------------|---|
| (A) Cretinism | (i) Under secretion of growth hormones, in childhood. |
| (B) Diabetes mellitus | (ii) Over secretion of growth hormone during childhood. |
| (C) Dwarfism | (iii) Excess of glucose in blood. |
| (D) Gigantism | (iv) Over secretion of thyroxin |
| (E) Acromegaly | (v) Dwarfism and mental retardation |
| (F) Exophthalmia goitre | (vi) Over secretion of growth hormones, in adults |
- a) a (i), b (ii), c (iii), d (iv), e (vi), f (v)
b) a (v), b (ii), c (i), d (ii), e (vi), f (iv)
c) a (iv), b (i), c (iii), d (ii), e (vi), f (v)
d) a (vi), b (i), c (ii), d (ii), e (v), f (iv)

Q.5 Which of the following statements are true?

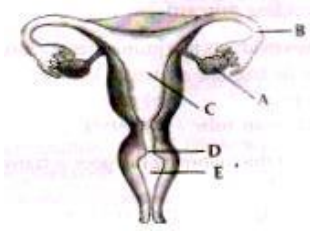
- Sudden action in response to something in the environment is called reflex action.
- Sensory neurons carry signals from spinal cord to muscles.
- Motor neurons carry signals from receptors to spinal cord.
- The path through which signals are transmitted from a receptor to a muscle or a gland is called reflex arc.

- | | |
|-----------------|------------------------|
| a) (i) and (ii) | b) (i) and (iii) |
| c) (i) and (iv) | d) (i), (ii) and (iii) |

Q.6 The dramatic changes in body features associated with puberty are mainly because of secretions of:

- Estrogen from testes and testosterone from ovary.
- Estrogen from adrenal gland and testosterone from pituitary gland
- Testosterone from testes and estrogen from ovary.
- Testosterone from thyroid gland and estrogen from pituitary gland.

Q.7 Match the labeled parts of the given figure with the correct option.



- | | | | | | |
|---|----------------|----------------|--------|--------|--------|
| | (i) | (ii) | (iii) | (iv) | (v) |
| a | Fallopian tube | Oviduct | Uterus | Cervix | Vagina |
| b | Oviduct | Vas deferens | Ovary | Vagina | Cervix |
| c | Ovary | Oviduct | Uterus | Cervix | Vagina |
| d | Ovary | Fallopian tube | Uterus | Vagina | Cervix |

Q.8 Study the different conclusion drawn by students of a class on the basis of observation of preserved/available specimens of plants and animals.

- (i) Potato and sweet potato are analogous organs in plants.
- (ii) Wings of insects and wings of birds are homologues organs in animals.
- (iii) Wings of insects and wings of Bats are analogous organs in animals.
- (iv) Thorns of citrus and tendrils of cucurbit are analogous organs in plants.

The correct conclusions are

- a) (i) and (ii)
- b) (ii) and (iv)
- c) (i) and (iii)
- d) (iii) and (iv)

Q.9 Paralysis is

- a) Anaerobic burning of wastes at high temperature.
- b) Aerobic burning of wastes at high temperature
- c) Aerobic burning of wastes at low temperature.
- d) None of these above

Q.10 Given below are a few statements related to biodiversity. Pock those that correctly describe the concept of biodiversity.

- (i) Biodiversity refers to the different species of flora and fauna present in an area.

(ii) Biodiversity refers to only the flora of a given area.

(iii) Biodiversity is greater in a forest.

(iv) Biodiversity refers to the total number of individual of a particular species living in an area.

a) (i) and (ii)

b) (ii) and (iv)

c) (i) and (iii)

d) (ii) and (iii)