

SUMMATIVE ASSESSMENT – II

BIOLOGY-KEY (English Version)

X – Class

SECTION – I

1. Hunger pangs are initiated by the hormone – GRRELIN – (1/2M)
Hunger pangs are stopped by the Hormone – LEPTIN – (1/2M)
2. If the ducts of salivary gland B enclosed, then
 1. We can't recognize taste.
 2. Food doesn't mix with saliva thus breakdown will be incomplete carbohydrate.
 3. Food will be hard to swallow and Mucous layer of esophagus will be damaged.
(Any one point – 1 Mark)
3. Transpiration takes place in this experiment.
4. A) It is better to have dinner with whole family sitting together on there will be no need of heating food again and again. There also no need to use the lamps of kitchen again and again. So that energy also be conserved.
5. If meiosis doesn't take place:
 - A) There would be no chance of formation of gametes.
 - B) No of chromosomes will be doubled in next generation.
 - C) There would be no variations and diversity as there would be no crossing over.
 - D) The aim of the reproduction/ Evolution will not be attained.
(Any two points – 2 marks)
6.
 - a) Taste buds are present on tongue
 - b) Chemo – receptors are present in it which are connected to Brain.
 - c) Receptors are active when food in the form of liquid enters into it.
 - d) When the tongue is pressed against the palate the food substance is pressed against the opening of the taste bud letting it to reach the taste cells and triggering taste signals.

Thus the taste is recognized by the brain.
(Any relevant answer should be taken in to consideration)
7.
 - a) Our digestive tract comprises of more than 100 million neurons.
 - b) It has got its own complicated neural network that controls mixing and propulsion of contents during digestion, absorption and excretion.
 - c) At least 70% of our immune system is aimed at the gut to expel and kill foreign invaders.
 - d) It enables us to feel the inner world of our gut and its contents.
 - e) Some Hormones and enzyme actions are also controlled and co-ordinated by ENS.

Hence, Scientists consider ENS as a second brain.

(Any relevant answer should be taken into consideration)

8.
 - i) Antimalarial drug is extracted from the bark of the plant cinchona.
 - ii) Nicotine and pyrethroids are used on insecticides
9.
 - a) by using cement indiscriminately air gets polluted with increase of ash and other pollutants.
 - b) Industries lead to land, Water and Air pollution.
 - c) Broadcasting means lead to Radiation and affects environment adversely.
 - d) All the above means use plastic either directly or indirectly which harms our mother earths to maximum level.

(Any relevant answer should be taken into consideration)

10. SECTION – 3

- a) paste table at EM page no : 107

(Any Four- 4 Marks)

- b)
 - i) In sexually reproducing plants pollen grains are released and fall on stigma.
 - ii) A tube called pollen tube grows from stigma with two pollen nuclei.
 - iii) The tube with pollen or male nuclei enters through micropyle into ovary
 - iv) the ovule comprises of 7 cells i.e.
 - v) One male nuclei unites with egg cell and forms Zygote from PRIMARY ENDOSPERM NUCLEUS or PEN
 - vi) Later the Zygote forms an embryo and ovule a tough coat. The ovule turns into fruit.
 - vii) As the two male nuclei fertilize two times one with egg and the other with secondary Nucleus, we term it an 'double fertilization'.
 - viii) This is the unique character of phanerogams.

(Any relevant answer should be taken into consideration)

11. The aim of conducting this experiment is to

- i) Observe Rhizopus or bread mold.
 - ii) Bread mould is collected from a rotten food
- a) Materially far away from a bread carefully with help of a needle and placed on a slide.
 - b) Put a drop of water on the material and gently glide another slide in slanting position. Put a cover slip and observe under a microscope.
3. Precautions:
- a) Keep or wear gloves on hands.
 - b) Put a mask on Nose
 - c) Use needle to collect the material.
 - d) If you are allergic to fungi Don't do this experiment
 - e) People with COPD Should keep away.

(COPD: Chronic obstructive pulmonary Disease)

4. Sporangium that bears Spores

B) i) If Aim is defined correctly: 1/2M

ii) If all apparatus in mentioned (1M)

iii) Procedure with full sense is written (2M)

iv) In fervency /Result is defines (1/2M)

12. a) PROPHASE : B

METAPHASE : A If Correct Sequence is identified(1M)

ANAPHASE : D

TELOPHASE : C

b) Spindle fibres help to pull chromosome.

c) No. of Chromosome in daughter. Cell is equal to the number of chromosome in parent cell.

d) Two daughter nuclei are formed.

(Or)

B) a) The picture represents cell cycle (1m)

b) G1 (1M)

c) S Phase (1M)

d) Mitotic cell division (1M)

13. A: Calyx or Sepals

B: Corolla or petals

C: Androecium or anthers / stamens

D: Gynoecium or pistil/carpel

A: Calyx : Protects the flower at the time of bud.

B: Corolla: Attracts insects for their coloration or smell.

C: Androecium: Male reproductive system helps in formation of male gametes called pollen grains

D: Gynoecium: Produces egg cells and takes part in fertilization.

For parts : 2M

Table : 2M

B) a) Diagram with labeling : 3M

b) Function of Valves : 1M