SSC PUBLIC EXAMINATIONS, MARCH - 2019

GENERAL SCIENCE - PAPER – II

(BIOLOGICAL SCIENCE)

PRINCIPLES OF VALUATION

General Instructions

1. Credit may be given to any relevant answer other than the one given here under.
2. The examiner is requested to go through the Text Book carefully.
3. Border cases may be looked into very carefully.
4. Please avoid awarding 1/4 or 3/4 mark.

PART - A

SECTION - I

1. Give importance to fibres in your regular diet. **1 M**

Note : Any other relevant answer should be considered.

2. There are nearly 180 vestigial organs in Man. That's why Man is considered as a moving museum of vestigial organs. **1 M**

3. Cycle Tube, Potato, Oil. **1 M**

4. 1) Forests absorb excess Carbondioxide from the atmosphere and decrease Global Warming. **$^1/_2$ M**

2) We get valuable resources from forests such as Medicines, Timber, Lac, Honey etc. **$^1/_2$ M**

3) Forests play an important role in rainfall.

1 M

[1 Mark for any 2 relevant reasons]

SECTION - II

5. 1) As Ram met with an accident, his **Cerebellum** was damaged and lost the equilibrium state of the body. So he was unable to walk in a straight manner. **1 M**

2) The **olfactory lobes** of Forebrain got damaged and lost the sense of smell. **1 M**

2 M

6. a) One contraction and one relaxation of atria and ventricles is called one Cardiac Cycle. **1 M**

(OR)

One Systole and Diastole together called as Cardiac Cycle.

b) As the weight of the heart increases number of beats per minute decrease. **1 M**

[Note : Any relevant answer should be considered.]

2 M

7. 1) What are the symptoms of Respiratory diseases ?

2) What precautions should I follow to prevent Respiratory diseases?

3) How does smoking injure Lungs ?

4) What are the common Respiratory disorders in human beings ?

2 × 1 = 2 M

[Any 2 relevant questions carry 2 Marks]

8. 1) As the temperature rises, ice melts at polar regions and it results in increase of water levels in the oceans.

2) As the water level in oceans increase, small islands may disappear.

3) Increase in temperatures lead to scanty rainfall and causes Drought.

4) Raise in temperatures lead to extinction of some species.

2 × 1 = 2 M

[Note : Any 2 relevant consequences shall be awarded 2 Marks]

9. By using the following **biological methods** the usage of pesticides can be reduced and prevent soil pollution.

1) Rotation of crops : Growing different crops on a particular piece of land in successive years reduces the occurrence of pests. **1 M**

2) Biological control : Introducing natural predators or parasites of the pests. **1 M**

2M

[Note : Any other 2 relevant answers shall be awarded.]

SECTION -III

10.A) i) People who have Blood Pressure more than the range of 120/80 mmHg during their resting period are said to have High B.P. **1 M**

ii) Over weight or obesity/smoking/Too much stressful life. **1 M**

[Consider any one relevant reason.]

iii) 1) Exercise Regularly. **2 M**

2) Reduce fat rich food.

3) Avoid Smoking and Alcoholism.

4) Be stress free.

4 M

[Consider any two relevant suggestions.]

(OR)

B) 1) Evolution is a slow and continuous process.

2) Any group of population of an organism has variations.

3) Variations may be passed from parent to offspring through heredity.

4) Over abundance of offspring leads to a constant struggle for their survival in any population.

5) Organisms with useful characters succeed in struggle for existence.

6) As the environment changes, the organism with in the environment adapt and changes to the new living conditions.

7) Over a long period of time, each species of organism can accumulate so many changes that it becomes a new species.

4 × 1 = 4 M

[Consider any Four relevant points.]

11. A) 1) Candle extinguished due to the lack of gas which helps in burning (oxygen). **1 M**

2) In this experiment Rat uses the gas (O_2) released by the Mint plant and the Mint plant utilises the gas (CO_2) released by the Rat. **1 M**

3) Priestly observed that plants were giving out a gas that supported burning and was essential for the survival of animals. **1 M**

4) The oxygen gas released by the Mint plant is the main cause for the continuous burning of the candle. **1 M**

4 M

(OR)

B) **i) Apparatus needed :** Mold sample (or) Spoiled Bread, Plain glass slide, Cover slip, Water, Disposable gloves, Microscope. **1 M**

ii) Procedure : **3 M**

1) Place a drop of water at the centre of the slide.

2) By using a toothpick, scrape very little of the mold, and place it on the drop of water.

3) Place the cover slip on the mold sample without any air bubbles.

4) Use tissue paper to blot up the excess water present at the edges of the cover slip.

5) View the slide with a compound microscope.

4 M

12. A) a) The above classification is based on Plant and Animal hormones. **1 M**

b) Adrenal Gland **1 M**

c) Abscisic Acid **1 M**

d) Cell elongation and differentiation of shoots and roots in plants. **1 M**

4 M

(Or)

B) a) In this pyramid, only 10% of Biomass is transferred from one trophic level to the next. **1 M**

b) **Producers :** Green Plants, Algae, Phytoplankton. **1 M**

Primary Consumers : Herbivores (or) Rabbit, Cow, Goat. etc.

[Note : Any relevant examples can be considered]

c) Sunlight / Sun **1 M**

d) 90% of biomass is lost at each step. **1 M**

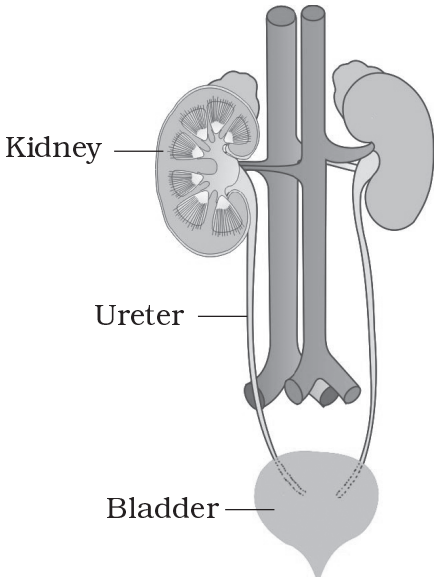
4 M

13. A) Identification of the diagram **1 M**

Diagram **2 M**

Labelling the given parts **1 M**

4 M



Excretory System

(OR)

B) a) Mitochondria **1 M**

b) Matrix **1 M**

c) Participates in cellular respiration and produces energy. **1 M**

[Any other relevant answer should be considered.]

d) Respiratory System. **1 M**

4 M

PART-B **$20 \times {}^{1}/_{2} = 10$ M**

SECTION - IV

14.	A	24.	B
15.	C	25.	D
16.	A	26.	B
17.	B	27.	D
18.	D	28.	A
19.	B	29.	A
20.	A	30.	D
21.	B	31.	C
22.	D	32.	B
23.	D	33.	A