

AP SSC Class 10 Science Previous Year Question Paper 2019 Solutions Part 2

1. What suggestion do you give to your friend suffering from constipation?

Answer: A diet full of fatty, sugary, or starchy foods can slow the bowels down. To get more fiber in your diet, try fresh fruits like pears, apples (with the skin), oranges, and ripe bananas, or dried fruits.

2. Why man is called a moving museum of vestigial organs?

Answer: There are nearly 180 vestigial organs in Man. That's why Man is considered as a moving museum of vestigial organs.

3. What is the apparatus used in your class while performing the demonstration of peristaltic movement in Oesophagus?

Answer: The apparatus used in class while performing the demonstration of peristaltic movement in Oesophagus are Cycle Tube, Potato and Oil.

4. Why should we conserve forests? Give two reasons.

Answer: We should conserve forests for the following reasons.

1. Forests absorb excess carbon dioxide from the atmosphere and decrease Global Warming.
2. Forests play an important role in rainfall.

5. Ram met with an accident. After that he lost the capacity to walk in straight manner and cannot smell anything. Which part of the brain got damaged in the above cases?

Answer: 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.

The olfactory lobes of Forebrain got damaged and lost the sense of smell.

6. Observe the following table and answer the questions.

Name of the animal	Weight of the body	Weight of the Heart	No. of beats/min
Blue Whale	1,50,000 kgs	750 kgs	7
Elephant	3,000 kgs	12-21 kgs	46
Man	60-70 kgs	300 grams	76
Coal Tit Bird	8 grams	0.15 grams	1200

(a) What is meant by Cardiac cycle?

(b) Write relation between the weight of the heart and heartbeat.

Answer a: One contraction and one relaxation of atria and ventricles is called one Cardiac Cycle.

Answer b: As the weight of the heart increases number of beats per minute decrease.

7. If you happen to meet a pulmonologist, what questions would you ask him about respiratory disorders?

Answer: We will ask questions such as:

1. What are the symptoms of Respiratory diseases?
2. How does smoking injure lungs?

8. There is an increase in the atmospheric temperature year by year. If it continues, guess and write what could be the consequences?

Answer: The consequences can be as follows:

1. As the temperature rises, ice melts at polar regions and it results in increase of water levels in the oceans.
2. Increase in temperatures lead to scanty rainfall and causes drought.

9. In your area, soil is polluted by the enormous usage of pesticides. Suggest any two programmes for prevention of soil pollution.

Answer: 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.
2. Biological control: Introducing natural predators or parasites of the pests.

10. (A) Lalitha visited a doctor with her grandfather. The doctor said that he is suffering from high BP.

- i. What is meant by high B.P?
- ii. What are the causes for high B.P?
- iii. Suggest some measures to control high B.P.

Answer i: People who have Blood Pressure more than the range of 120/80 mmHg during their resting period are said to have High BP.

Answer ii: The causes of high BP are overweight, smoking or too much stressful life.

Answer iii: Some of the measures to control high BP are:

1. Exercise Regularly.
2. Reduce fat rich food.
3. Avoid smoking and alcoholism
4. Be stress free.

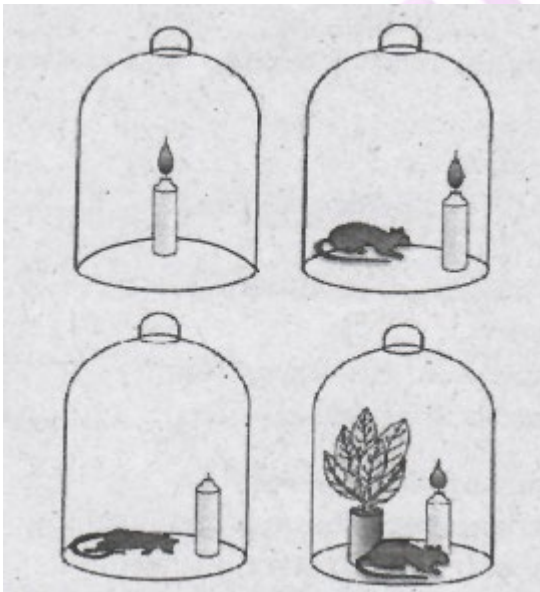
OR

Write salient features of Darwin's theory of Evolution.

Answer: The salient features of Darwin's theory of Evolution are:

1. Evolution is a slow and continuous process.
2. Variations may be passed from parent to offspring through heredity.
3. As the environment changes, the organism with in the environment adapt and changes to the new living conditions.
4. Over a long period of time, each species of organism can accumulate so many changes that it becomes a new species.

11. (A) Observe the experimental set up and answer the following questions.



- (1) Why did the candle extinguish?
- (2) In this experiment, do you find any relationship between mint plant and rat? Discuss
- (3) What were Priestly's observations in this experiment?
- (4) Why is the candle continuously burning, when the mint plant was kept inside the Belly jar ?

Answer 1: Candle extinguished due to lack of gas which helps in burning.

Answer 2: In this experiment Rat uses the gas (O_2) released by the Mint plant and the Mint plant utilizes the gas (CO_2) released by the Rat.

Answer 3: Priestly observed that plants were giving out a gas that supported burning and was essential for the survival of animals.

Answer 4: The oxygen gas released by the Mint plant is the main cause for the continuous burning of the candle.

OR

(B) Suneetha wanted to observe Rhizopui on the piece of bread.

- (i) Suggest the apparatus needed.
- (ii) Write the procedure to be followed.

Answer: i) Apparatus needed: Mold sample or Spoiled Bread, Plain glass slide, Cover slip, Water, Disposable gloves, Microscope.

Answer ii) Procedure

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.

12. A Observe the following table and answer the questions.

Division I	Division II
Auxins	Adrenalin
Gihberellins	Testosterone
Ethylene	Estrogen
Abscisic Acid	Thyroxin
Cytukinins	Growth Hormone.

- (a) On what basis the above classification done?
- (b) From which gland, Adrenalin released?
- (c) Which hormone is responsible for closing of stomata?
- (d) What are the functions of Auxins?

Answer a: The above classification is based on Plant and Animal hormones.

Answer b: Adrenalin released through Adrenal Gland.

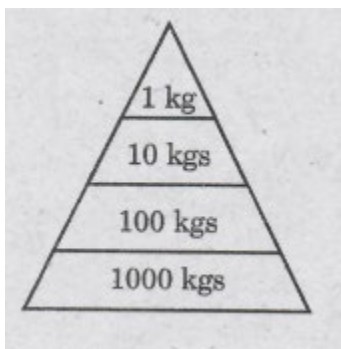
Answer c: The hormone responsible for closing of stomata is Abscisic Acid.

Answer d: The functions of Auxins are

- (i) Cell elongation
- (ii) Differentiation of shoots and roots in plants.

OR

(B) Observe the following pyramid of biomass and answer the following questions.



- (a) This pyramid shows a decrease in the biomass as we move up, why the biomass is decreasing?
- (b) Give some examples of producers and primary consumers.
- (c) Where do producers get the energy from?
- (d) How much biomass is lost at each step?

Answer a: In this pyramid, only 10% of biomass is transferred from one trophic level to the next.

Answer b: Some examples of producers and primary consumers are

Producers: Green Plants, Algae, Phytoplankton.

Primary Consumers: Herbivores, Rabbit, Cow, Goat, etc.

Answer c: The producers get the energy from Sunlight.

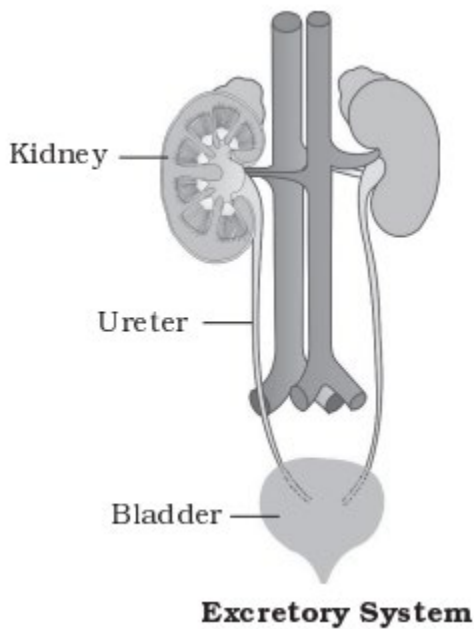
Answer d: The biomass lost at each step is 90%.

13. (A) The given parts belong to which system?

Draw a neat labelled diagram of the system

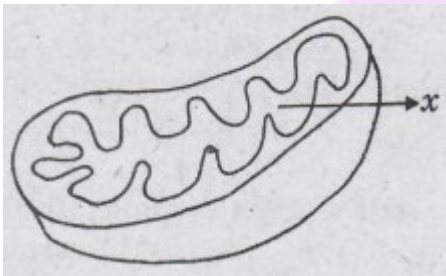
- (a) Kidneys
- (b) Ureters
- (c) Urinary bladder.

Answer A: Identification of the diagram. In the diagram provided below we have labelled Kidneys, Ureters and Urinary bladder.



OR

B. Observe the diagram and answer the questions below:



- What does the given diagram indicate?
- What is the part 'x' in the diagram?
- What is the function of the given picture?
- To which system the given picture belongs to?

Answer a: The given diagram indicates Mitochondria.

Answer b: The part 'x' in the diagram is Matrix.

Answer c: The function of the given picture are

- Participates in cellular respiration
- Produces energy.

Answer d: The given picture belongs to Respiratory system.

14. Vocal cords are found in

- (A) Larynx
- (B) Pharynx
- (C) Nasal Cavity
- (D) Trachea

Answer: Larynx.

15. Identify the mis-matched pair:

- (A) Vitamin A – Retinol
- (B) Vitamin D – Calciferol
- (C) Vitamin K – Tocoferol
- (D) Vitamin C – Ascorbic Acid.

Answer: Vitamin K – Tocoferol

16. Match the following

List A	List B
Pepsin	Carbohydrates
Amylase	Proteins
Lipase	Fats

- (A) (i) – (b), (ii) – (a), (iii) – (c)
- (B) (i) – (a), (ii) –(b), (iii) –(c)
- (C) (i) – (c), (ii) – (b), (iii) – (a)
- (D) (i) – (a), (ii) – (c), (iii) –(b)

Answer: (i) – (b), (ii) – (a), (iii) –(c).

17. Which reagent do you use in the lab to know the presence of oxygen in the solutions?

- (A) KOH solution.
- (B) Janus Green B
- (C) Iodine solution
- (D) Methylene Blue

Answer: Janus Green B

18. Which of the following has no role in blood clotting?

- (A) Phylloquinone
- (B) Fibrin
- (C) Thrombin
- (D) Thiamine

Answer: Thiamine

19. Blood pressure is measured with

- (A) Stethoscope
- (B) Sphygmomanometer
- (C) Lense
- (D) Scanner

Answer: Sphygmomanometer

20. Skin: Sweat : Lungs:

- (A) CO₂
 - (B) Faeces
 - (C) Urea
 - (D) Saliva
- (E) Answer: CO₂

21. Insulin is produced by

- (A) Liver
- (B) Pancreas
- (C) Kidney
- (D) Stomach

Answer: Pancreas

22. Suggest a practice to keep your kidneys healthy.

- (A) Controlling the blood sugar levels.
- (B) Avoid smoking, alcoholism
- (C) Controlling the blood pressure levels.
- (D) All the above.

Answer: All the above.

23. From the third month of pregnancy, the embryo is called

- (A) Zygote
- (B) Placenta
- (C) Embryo
- (D) Foetus

Answer: Foetus

24. Which part of the brain helps to maintain posture and equilibrium.

- (A) Cerebrum
- (B) Cerebellum
- (C) Midbrain
- (D) Diencephalon

Answer: Cerebellum

25. How can we prevent AIDS?

- (A) Use texted blood for blood transfusion.
- (B) Use disposable needles
- (C) Avoid unsafe sexual relations.
- (D) All the above

Answer: All the above.

26. Sphincter that helps in opening stomach into duodenum

- (A) Cardiac
- (B) Pyloric
- (C) Anal
- (D) Gastric

Answer: Pyloric

27. How much time the hunger pangs will continue.

- (A) 10-15 minutes
- (B) 1-2 hours
- (C) 15-20 minutes

(D) 30-45 minutes.

Answer: 30-45 minutes.

28. Who is known as the father of Genetics?

- (A) Mendel
- (B) Darwin
- (C) Lamarck
- (D) Aristotle

Answer: Mendel

29. Natural selection means.

- (A) Nature selects desirable characters.
- (B) Nature selects undesirable characters.
- (C) Nature rejects desirable characters.
- (D) None of the above.

Answer: Nature selects desirable characters.

30. Which is not suitable method for growing crops?

- (A) Rotation of crops
- (B) Biological control
- (C) Cultivating mixed crops
- (D) Using chemical fertilizers and pesticides.

Answer: Using chemical fertilizers and pesticides.

31. A food chain always starts with

- (A) The herbivore
- (B) The carnivore
- (C) The producer.
- (D) None of them.

Answer: The producer.

32. The given diagram represents.



- (A) Recycle
- (B) Sustainable development
- (C) Micro Irrigation
- (D) UNDP

Answer: Sustainable development.

33. The recent studies showed that the yield of Sunflower is considerably came down. What is the reason?

- (A) Reduction in pollinating insects.
- (B) Usage of Chemical fertilizers.
- (C) Drought conditions.
- (D) None of the above.

Answer: Reduction in pollinating insects.