

This Question Paper contains 4 Printed Pages.

**20E(A)**

**GENERAL SCIENCE, Paper - II**

*(Biological Science)*

*(English version)*

**Parts A and B**

**Time : 2 hours 45 min.]**

**[Maximum Marks : 40**

**Instructions :**

1. This paper contains **Part-A** and **Part-B**.
2. Answer the questions under **Part-A** on separate answer book. Write the answers to the questions under **Part-B** on the question paper itself and attach it to the answer book of **Part-A**.
3. Answer **all** the questions. Internal choice is given to the questions under Section- III.
4. In the duration of 2.45 hours, 15 minutes of time is allotted to read the question paper.

**Part - A**

**Time : 2 hours 15 min.**

**Marks : 30**

**SECTION - I**

**4×1=4**

- NOTE :** (i) Answer the following questions in one or two sentences.  
(ii) Each question carries **ONE** mark.

1. What suggestions do you give to your friend suffering from constipation ?
2. Why man is called a moving museum of vestigial organs ?
3. What is the apparatus used in your class, while performing the demonstration of peristaltic movement in Oesophagus ?
4. Why should we conserve forests ? Give two reasons.

20E(A)

**B**

**P.T.O.**

**SECTION - II**

5×2=10

- NOTE :** (i) Answer all the Questions.  
(ii) Answer the following questions in 3 to 4 sentences.  
(iii) Each question carries **Two** marks.

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 ?
6. Observe the following table and answer the questions.

<i>Name of the Animal</i>	<i>Weight of the Body</i>	<i>Weight of the Heart</i>	<i>No. of beats / min.</i>
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 heart beat.
7. If you happen to meet a pulmonologist, what questions would you ask him about respiratory disorders ?
8. There is an increase in the atmospheric temperature year by year. If it continues, guess and write what would be the consequences ?
9. In your area, soil is polluted by the enormous usage of pesticides. Suggest any two programmes for prevention of soil pollution.



**SECTION - III**

4×4=16

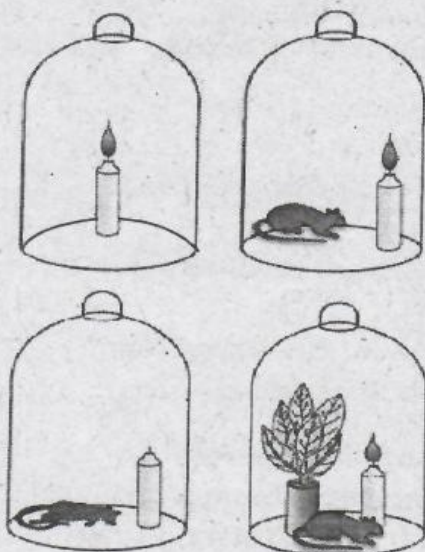
- NOTE :** (i) Answer the following questions in 8 to 10 sentences.  
(ii) Each question has internal choice.  
(iii) Each question carries **Four** marks.

10. (A) Lalitha visited a doctor with her grandfather. The doctor said that he is suffering from high B.P.
- What is meant by high B.P.?
  - What are the causes for high B.P.?
  - Suggest some measures to control high B.P.

**OR**

- (B) Write salient features of Darwin's theory of Evolution.

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



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

**OR**

- (B) Suneetha wanted to observe Rhizopus on the piece of bread.
- Suggest the apparatus needed.
  - Write the procedure to be followed.

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

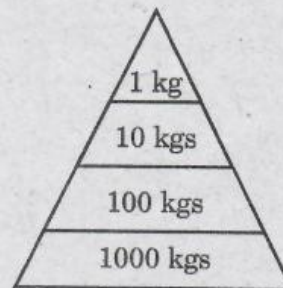
<i>Division - I</i>	<i>Division - II</i>
Auxins	Adrenalin
Gibberellins	Testosterone
Ethylene	Estrogen
Abscisic Acid	Thyroxin
Cytokinins	Growth Hormone

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

**OR**

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

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



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

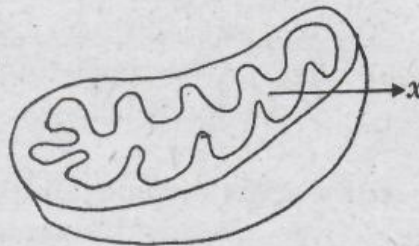
Draw a neat labelled diagram of the system.

- (a) Kidneys (b) Ureters (c) 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 ?





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**20E(B)**

**GENERAL SCIENCE, Paper-II**

*(Biological Science)*

*(English version)*

**Parts A and B**

**Time : 2 hours 45 min.]**

**[Maximum Marks : 40**

**Instruction :** Write the answers to the questions under **Part-B** on the question paper itself and attach it to the answer book of **Part-A**.

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**Part - B**

**Time : 30 minutes**

**Marks : 10**

**NOTE :**

1. Answer **all** the questions.
2. Each question carries  $\frac{1}{2}$  mark.
3. Marks will **not** be awarded in any case of over-written, rewritten or erased answers.
4. Write the **CAPITAL LETTER** (A, B, C, D) showing the correct answer for the following questions in the brackets provided against them.

**SECTION - IV**

$20 \times \frac{1}{2} = 10$

14. Vocal cords are found in ....

[     ]

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

20E(B)

**B**

**P.T.O.**

15. Identify the mis-matched pair : [ ]

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

16. Match the following. [ ]

**List - A**

- (i) Pepsin  
 (ii) Amylase  
 (iii) Lipase

**List - B**

- (a) Carbohydrates  
 (b) Proteins  
 (c) 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)

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

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

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

19. Blood pressure is measured with .... [ ]

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

20. Skin : Sweat :: Lungs : ....?.... [ ]

- (A) CO<sub>2</sub>  
 (B) Faeces  
 (C) Urea  
 (D) Saliva

21. Insulin is produced by ... [ ]

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



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.
23. From the third month of pregnancy, the embryo is called .... [ ]  
(A) Zygote (B) Placenta  
(C) Embryo (D) Foetus
24. Which part of the Brain helps to maintain posture and equilibrium ? [ ]  
(A) Cerebrum (B) Cerebellum  
(C) Midbrain (D) Diencephalon
25. How can we prevent AIDS ? [ ]  
(A) Use tested blood for blood transfusion.  
(B) Use disposable needles.  
(C) Avoid unsafe sexual relations.  
(D) All the above.
26. Sphincter that helps in opening of stomach into duodenum ... [ ]  
(A) Cardiac (B) Pyloric  
(C) Anal (D) Gastric
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
28. Who is known as the father of Genetics ? [ ]  
(A) Mendel (B) Darwin  
(C) Lamarck (D) Aristotle

29. Natural selection means .... [   ]  
(A) Nature selects desirable characters.  
(B) Nature selects undesirable characters.  
(C) Nature rejects desirable characters.  
(D) None of the above.
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.
31. A food chain always starts with .... [   ]  
(A) The herbivore                      (B) The carnivore  
(C) The producer                      (D) None of them
32. The given diagram represents .... [   ]



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