This Question Paper contains 4 Printed Pages.

New Pattern

20E(A)

GENERAL SCIENCE, Paper - II

(Biological Science)

(English version)

Parts A and B

Time : 2 hrs. 45 min.] ***[Maximum Marks : 40***

Instructions :

1. ***Part-'A'*** *consist of three Sections. Answer the questions under* ***Part-'A'*** *on a separate answer book.*
2. *Write the answers to the questions under* ***Part 'B'*** *on the question paper itself and attach to the answer book of* ***Part 'A'****.*
3. *15 minutes is allotted to read the question paper. 2.30 hours is allocated to write answers.*

Part - A

Time : 2 hrs. ***Marks : 30***

SECTION - I

NOTE : *(i)* Answer the following questions. *4×1=4*

(ii) Each question carries **ONE** mark.

1. Which disease occurs is child when there is an immediate second pregnancy or repeated child births in a mother ?

2. What happens if blood platelets are absent in blood ?

3. What questions you ask the doctor, who visited your school on World AIDS day ?

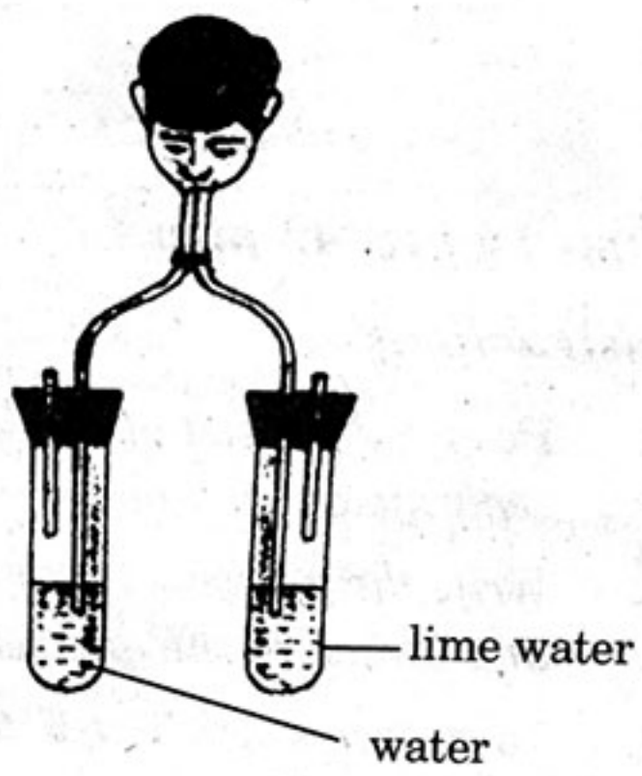
4. Suggest any two practices suitable to farmer with less water resources.

SECTION - II

NOTE : *(i)* Answer the following questions. *5×2=10*

(ii) Each question carries **TWO** marks.

5. *(a)* Which gas turns lime water milky in this experiment ?



(b) Which gas do you think might be present in less quantities in the air we breath out as compared to air around us ?

6. After reading the functions of lymphatic system, what precautions you would suggest to your elders about Edema ?

7. What habits you would like to follow for the proper functioning of kidneys ?

8. It is believed that the Diencephalon in fore-brain and vagus nerve (10th cranial nerve) plays an important role in carrying hunger signals to the brain. Hunger pangs continue upto 30-45 minutes. Increase in ghrelin levels results in sensation of hunger and motivation to consume food.

Read above content and prepare any two questions.

9. Explain the role of green house gases in Global Warming.

SECTION - III

NOTE : *(i)* Answer the following questions. *4×4=16*

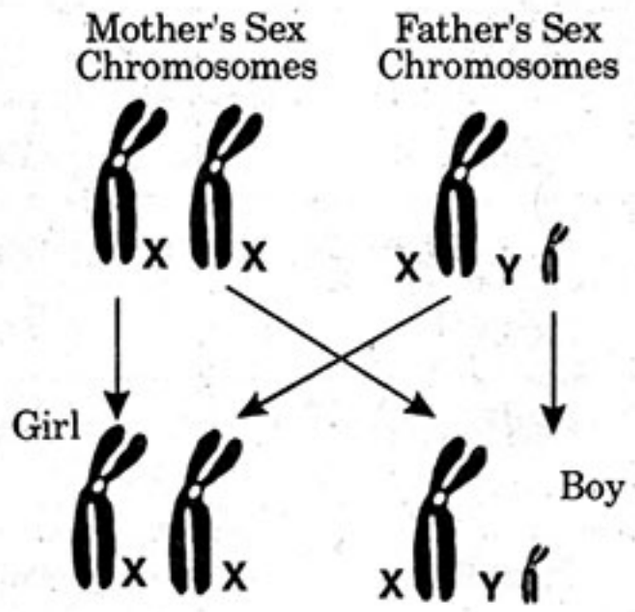
(ii) Each question carries **FOUR** marks.

(iii) There is internal choice for each question.

10. (A) During Photosynthesis, several events occurs in the Chloroplast. Explain the light dependent reactions.

OR

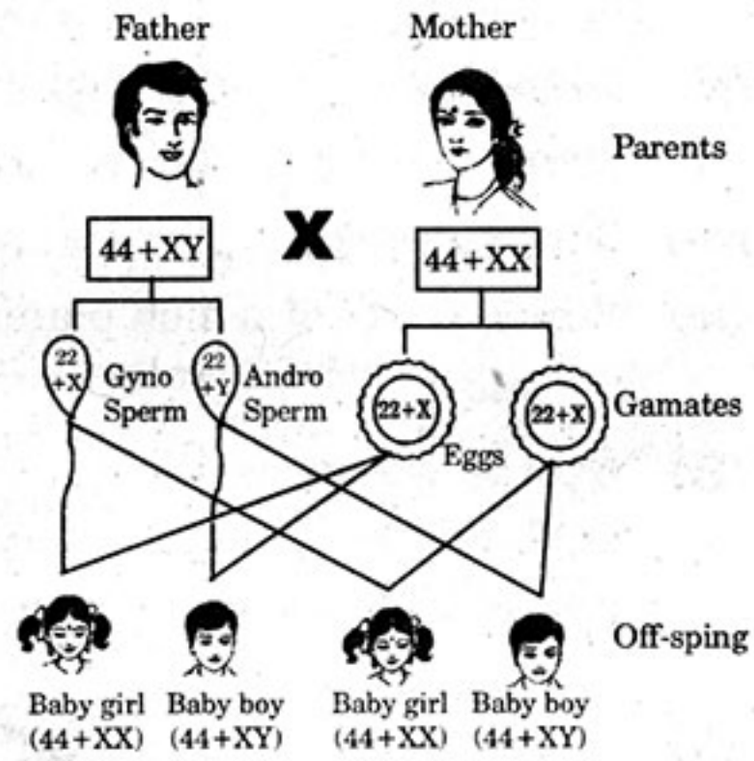
(B) *(i)* What does the given flow chart indicate?



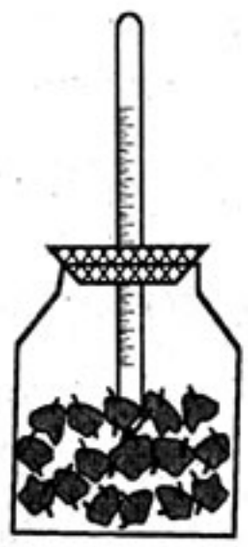
(ii) What will happen if the sperm containing 'X' chromosomes fertilises the ovum?

(iii) Who decides the sex of the baby - Mother or Father ?

(iv) How many pairs of chromosomes are present in off-spring ?



11. (A) *(i)* What change did you observe in the thermometer in the given experiment ?



(ii) Where does the heat come from ?

(iii) What result you will get, if you perform this experiment with dry seeds ?

(iv) What are the apparatus used in this experiment ?

OR

(B) *(i)* Explain the procedure followed in the experiment conducted to understand the action of saliva on starch.

(ii) What apparatus and chemicals are used to do this experiment ?

12. (A) Analyse the following information and answer the questions.

Alkaloid	*Part of the plant*	*Uses*
Quinine	Bark	Anti-malarial drug
Pyrethroids	Leaves	Insecticide
Reserpine	Roots	Medicine for snake bite
Caffeine	Seeds	Central nervous system stimulant
Nimbin	Seeds, Barks, Leaves	Antiseptic

(i) Name the alkaloid which is used to cure malaria.

(ii) Name the alkaloids used as insecticides.

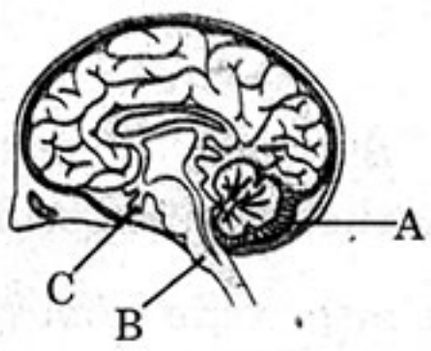
(iii) Which system is stimulated by the alkaloid caffeine?

(iv) Which parts of which plant is used as medicine for snake bite?

OR

(B) Should we use pesticides as they prevent our crop and food from pests or should we think of alternatives ? Write your view about this issue and give sound reason for your answer.

13. (A)



(i) This diagram belongs to which system of the body ?

(ii) Name the parts A and B.

(iii) The part 'C' is endocrinal gland. This is called master gland. What is the name of this gland ?

(iv) Which part in this diagram is useful to solve problems and puzzles ?

OR

(B) *(i)* Draw a neat labelled diagram of L.S. of flower.

(ii) What are the sexual parts in the flower ?

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20E(B)

GENERAL SCIENCE, Paper-II

(Biological Science)

(English version)

Parts A and B

Time : 2 hrs. 45 min.] **[Maximum Marks : 40**

Instructions :

1. *Answer **all** the questions.*
2. *Each question carries ½ mark.*
3. *Marks will not be awarded in any case of over-writing, 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.*

Part - B

Time : 30 minutes ***Marks : 10***

SECTION - IV

NOTE : *(i)* Answer all the questions.

(ii) Each question carries ½ mark.

(iii) Answer should be written on question paper itself.

Put correct answer in the brackets given below. *20×½=10 marks*

14. Pepsin : Proteins :: Lipase : ..... [ ]

(A) Carbohydrates (B) Fats

(C) Vitamins (D) Sucrose

15. $C_6H_{12}O_6 + 6O_2 \longrightarrow$ .....$+ 6H_2O$ + energy [ ]

(A) $6CO_2$ (B) $C_6H_{12}O_6$

(C) $6O_2$ (D) $12CO_2$

16. 1. Chlorophyll is similar to the haemoglobin of blood. [ ]

2. Haemoglobin has iron while chlorophyll has magnesium.

(A) 1 is correct, 2 is wrong. (B) 1 is wrong, 2 is correct.

(C) 1, 2 both are correct. (D) 1, 2 both are wrong.

17. The percentage of Carbon di oxide in exhaled air is ..... [ ]

(A) 44 (B) 4.4
(C) 0.4 (D) 0.04

18. The given blood vessel carries blood from body parts to heart. [ ]
Name the blood vessel.

(A) Artery (B) Capillary
(C) Vein (D) Muscular fibre

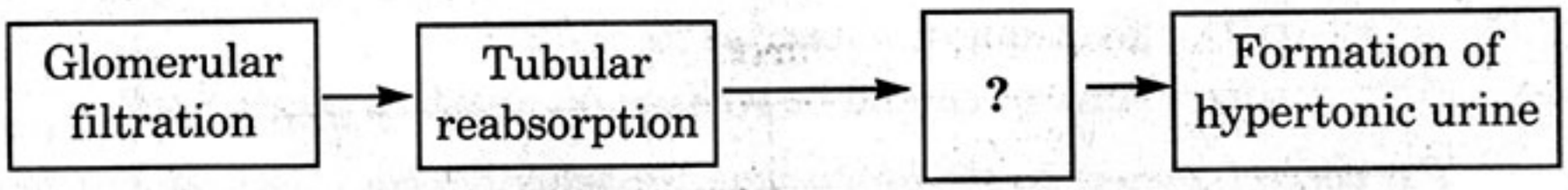
19. Study the following pairs. [ ]

(a) Stethoscope - Rene Laennec
(b) Blood pressure - Thermometer
(c) Amoeba - Brownian movement

Identify the mis-matched pair.

(A) *a* (B) *b*
(C) *c* (D) None

20. Fill the flow chart of urine formation. [ ]



(A) Tubular secretion. (B) Tubular filtration.
(C) Tubular excretion. (D) Urine formation.

21. I am a plant. My seeds are used for production of bio-fuel. Who am I ? [ ]

(A) Rubber plant (B) Neem plant
(C) Cactus plant (D) Jatropa plant

22. The excretory organs in phylum Mollusca is ..... [ ]

(A) Renette cells. (B) Green glands.
(C) Meta nephridia. (D) Kidneys.

23. Leaf movement in mimosa helps to ..... [ ]

(A) reduce photosynthesis.
(B) regulate it's growth.
(C) releasing phytohormones.
(D) protect from grazers.

24. Name the part 'X' in the given diagram. [ ]

(A) Acrosome
(B) Head
(C) Nucleus
(D) Tail

25. In which organisms, budding occurs ? [ ]

(A) Yeast
(B) Paramoecium
(C) Earthworm
(D) Amoeba

26. When your stomach is full and there is no need of food anymore, a hormone is secreted that suppresses hunger. Name the hormone. [ ]

(A) Ghrelin
(B) Vasopressin
(C) Leptin
(D) Insulin

27. Find out the missing thing from the table. [ ]

Type of pyramid	*Base*
Pyramid of number	Number of organism
.....?.....	Flow of energy

(A) Ecological pyramid.
(B) Pyramid of energy.
(C) Pyramid of bio-mass.
(D) Giza pyramid.

28. Match the following. [ ]

1. DNA	*a.* Father of genetics.
2. Mendel	*b.* Natural selection.
3. Darwin	*c.* Double helix.

(A) 1-*a*, 2-*b*, 3-*c*
(B) 1-*b*, 2-*c*, 3-*a*
(C) 1-*c*, 2-*b*, 3-*a*
(D) 1-*c*, 2-*a*, 3-*b*

29. Which of the following statements is NOT true about the Mendel's selection of garden pea for his experiment ? [ ]

(A) Well defined characters.

(B) Bisexual flowers.

(C) Predominantly self fertilisation.

(D) Cheap in cost.

30. The cruel campaign against which bird is initiated in 1958 in China ? [ ]

(A) Parrots (B) Sparrows

(C) Crows (D) Vultures

31. This symbol denotes that ..... [ ]

(A) UNDP (B) Percolation pits

(C) Sustainable development (D) Recycling logo

32. Ban all pesticides, this means that ..... [ ]

(A) Promote eco-friendly agricultural practices.

(B) Prevention of pesticides.

(C) Control on usage of pesticides.

(D) Stop bio-chemical factories.

33. Which of the following statement is true ? [ ]

(a) Development is necessary.

(b) Development should be eco-friendly.

(A) '*a*' true, '*b*' false

(B) '*a*' false, '*b*' true

(C) both *a*, *b* are false.

(D) both *a*, *b* are true.