

10<sup>th</sup> CLASS MARCH – 2020

SCIENCE PAPER– II

Time : 2.45 Hours]

[Max. Marks : 50

I. Answer ALL the following questions :

12 x ½ = 6 M

1. What is the reagent to test the presence of starch in leaves?
2. Proteins  $\xrightarrow{E}$  Peptones. What is 'E' indicates?
3. In which form the carbon dioxide is usually transported in our body?
4. In normal blood pressure  $\frac{120}{80}$  of a person, 120 indicates which pressure?
5. What is the part of a "Rauwolfia serpentina" is used as a medicine for snake bite?
6. "Raju has exited when he saw a snake, suddenly the hair on the body becomes erect and he get goose bumps". Which hormone responsible to this condition?
7. Observe the diagram.



8. What kind of "reproduction" is seen in this picture?
9. Which hormone suppress the hunger pangs?
10. Who is "Father of Genetics"?
11. How much percent of energy is transported in each trophic level?
12. "Sparrow campaign" was done in which country?



What about the logo indicates?

II. Answer ALL the following questions :

8 x 1 = 8 M

13. What is the longest part of the alimentary canal?

14. Nostrils → Nasal cavity → A → larynx → B. Here what is A & B?

15. What is the time required for one cardiac cycle?

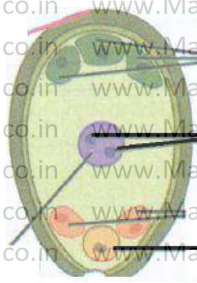
16. Expand PCT & ESRD.

17. a) In females-ovulation, development of corpus luteum

b) Control of the 28 days menstrual cycle

What are the responsible hormones of the functions 'a' and 'b' respectively?

18.



Observe the diagram and label X and Y

19. What is the genotypic ratio of Mendel's monohybrid cross?

20. Draw the pyramid of number for the following food chain

Banyan → Insects → Wood pecker

**III. Answer ALL the following questions :**

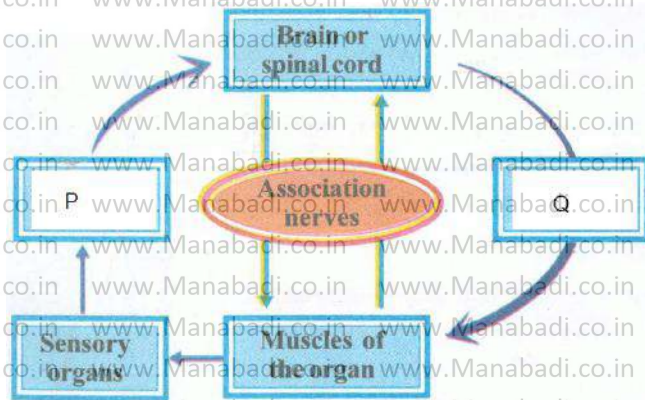
**8 x 2 = 16 M**

21. Write a short note on 3R's principle.

22. What are called homologous organs give examples.

23. Why Mendel has chosen only pea plants for his experiments?

24. Observe the flow chart.



1. Here 'P' & 'Q' indicates?

2. Give two examples of Reflex actions?



25. Draw a neat labeled diagram of mitochondria?

26. Read the following table and answer the questions.

Name of the valve	Location	Allows blood to flow from
1) Tricuspid valve	Right auriculoventricular spetum	Right atrium to right ventricle
2) Bicuspid valve	Left auriculoventricular septum	Left atrium to left ventricle

A) Which valve is called mitral valve ?

B) What is the function of tricuspid valve ?

27. What are the roles played by a) Cytokinins and b) Gibberellins

28. Draw the flow chart of process of haemodialysis.

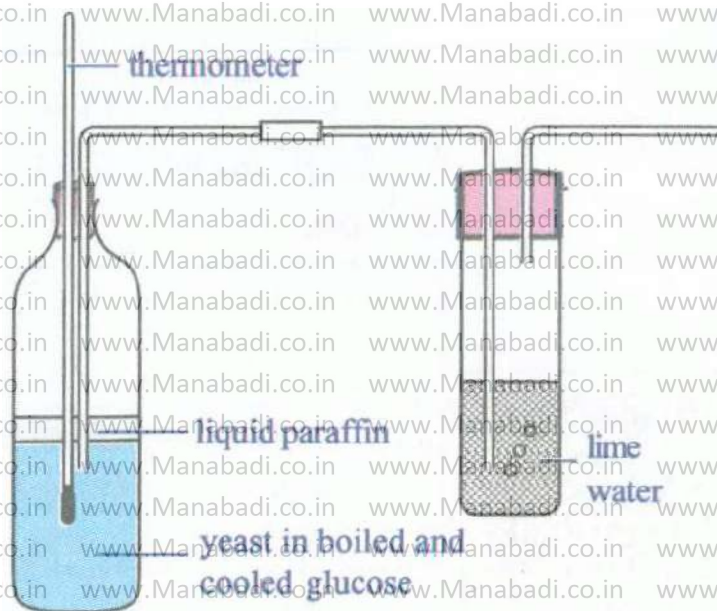
**IV. Answer ALL the questions. Each question has an Internal Choice.**

**5 x 4 = 20 M**

29. a) How do you prove O<sub>2</sub> is produced during photosynthesis in presence of light.

(or)

b)



a) What is the natural colour of Janus-Green B ?

b) What is the use of liquid parraffin?

c) How do you understand CO<sub>2</sub> is released under this experiment.

d) Why do we boil the glucose solution in this experiment.

30. a) Fill the table

Structure / Function	Artery	Vein
1. Thickness of walls(thick / thin)		
2. Valves (present / absent)		
3. Capacity to retain shape when blood is absent (can retain/collapse)		
4. Direction of blood flow (heart to organs / body organs to heart)		
5. Pressure in the vessel(low /high)		
6. Type of blood transported (oxygenated / de-oxygenated)		
7. Type of blood carried by pulmonary artery (de-oxygenated/oxygenated)		

(or)

b) Draw a well labeled diagram of "Structural and function unit of Kidney".

31. a) Fill the table

ALKALOID	PLANT	PART	USES
1	Cinchona officinalis (Cinchona)	Bark	Antimalarial drug
Nicotine	Nicotiana tobacum (Tobacco)	Leaves	Insecticide
Morphine, Cocaine	Papaver somniferum (Opium)	Fruit	Pain killer
Reserpine	Rauwolfia serpentina (Snake root)	Root, bark	2
Caffeine	Coffea arabica (Coffee plant)	Seed	Central nervous system Stimulant
Numbin	Azadirachta indica (neem)	3	Antiseptic
Scopolamine	Datura stramonium	Fruit, flower	Sedative
Pyrethroids	4	Flower	Insecticides

(or)

b) What procedure you follow to understand the effect of plant growth hormones in (agar medium) in the terminal portion of the tip of the stem?

32. a)





1. Label the diagram
2. From which parts of the flower gametes are produced?
3. Is this flower is unisexual / bisexual?

(or)

b) Write the different types of contraceptive methods?

33. a) Who decide the sex of the body-mother / father. Explain detail.

(or)

b) What will happen if we remove predators from food web?