

Annual Evaluation 2017-18

BIOLOGY

Std. : IX

Time : 1½ Hours

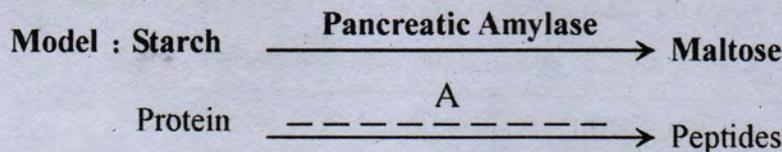
Score : 40

**Instructions :**

1. First 15 minute is given as cool off time. This time is to be used for reading and understanding the questions.
2. Answer the questions based on instructions.
3. Answer the questions according to the score and time.

I. Answer any 5 questions from 1 to 6. Each question carries 1 score. (5 x 1 = 5)

1. Observe the model and fill the blank represented as A.



2. Correct mistakes, if any, in the underlined part of the following statements.

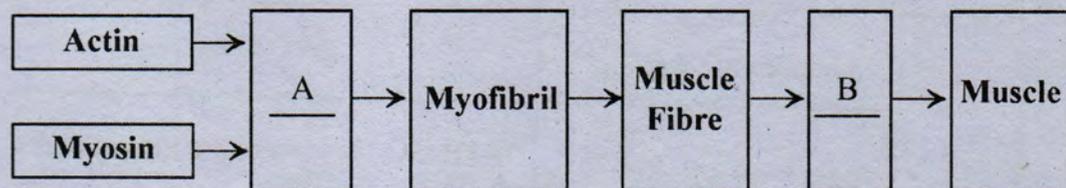
- a. A dark band and half of the light band on either side of it constitute a Sarcomere.
- b. Muscular fatigue is the condition that occurs due to the accumulation of Carbonic acid which is formed as a result of anaerobic respiration in the muscles.

3. Analyse the given statements related to tissue fluid and lymph and select the correct one from the options.

- a. Tissue fluid is the fluid formed by oozing of blood plasma into the intercellular space.
- b. 7% of CO<sub>2</sub> formed in our body is expelled through plasma.
- c. Lymph is the fluid produced by the lymph nodes.
- d. Lymph is the tissue fluid that has entered the lymph capillaries.

A : b, d correct    B : a, b correct    C : a, d correct    D : b, c correct

4. Complete the flow chart related to the structure of muscle.





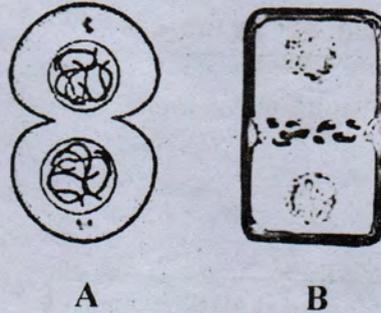
10. Analyse the given symptoms and answer the following questions.

Turbid urine, back pain and fever,  
Oedema in face and ankles

- A. Which may be the disease ?  
 B. If it is not treated well, how it become serious ? Mention its treatment ?
11. Arrange B and C columns in accordance with column A.

A	B	C
Earthworm	Kidney	Uric acid
Insect	Nephridia	Amino acid
	Malpighian tube	Ammonia

12. What difference can be noted, with respect to increase in girth of mango and arecanut trees ? Explain the reason.
13. Observe the illustration and answer the following questions.



- a. Which stage of cell division does the illustration indicate ?  
 b. What is the difference between the process indicated in A and B ?

**III. Answer any 5 questions from 14-20. Each question carries 3 score. (5 x 3 = 15)**

14. If you are asked to prepare an article on 'the benefits of exercise', how will you explain the benefits of exercise to the following systems ?
- Circulatory system
  - Respiratory system
  - Muscular system

15. Arrange the following data suitably in the table and give titles to them.

- a. Cylindrical muscle fibres
- b. No striations
- c. Make involuntary movements possible
- d. Seen in stomach
- e. Seen along with bones of leg
- f. Affect muscle fatigue

_____	_____
•	•
•	•
•	•

16. Analyse the following circumstances, identify and write which tropic movement does each one indicate.

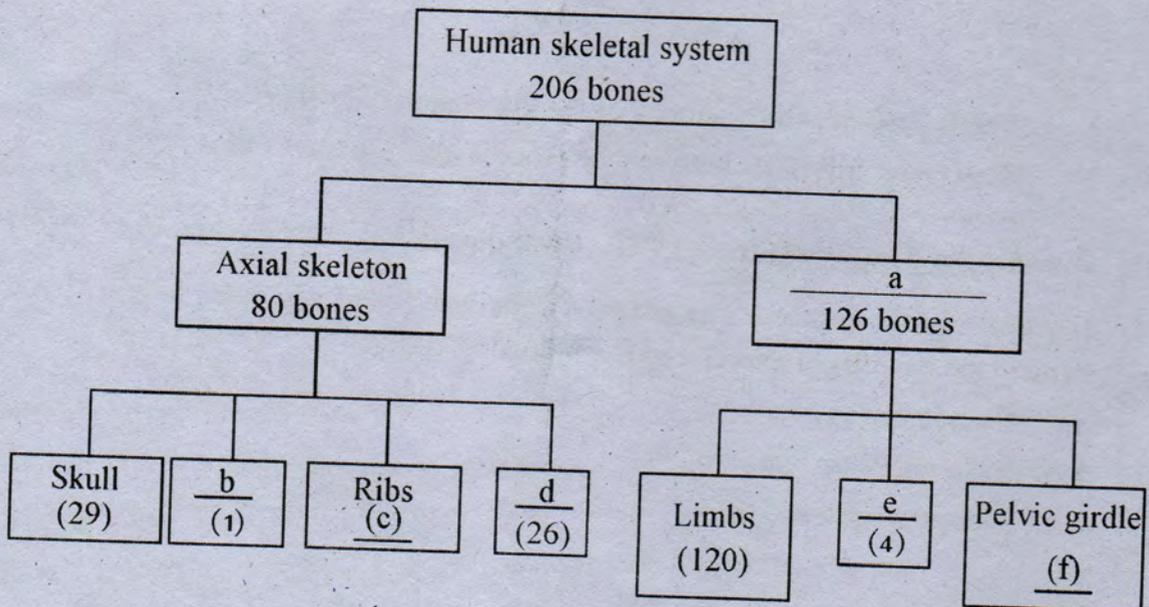
- a. The stem of pea plant grows towards sunlight.
- b. The roots of touch me not grow towards the soil.
- c. Pollen tube grows towards ovary.

17. Observe the statements given in the box and answer the question.

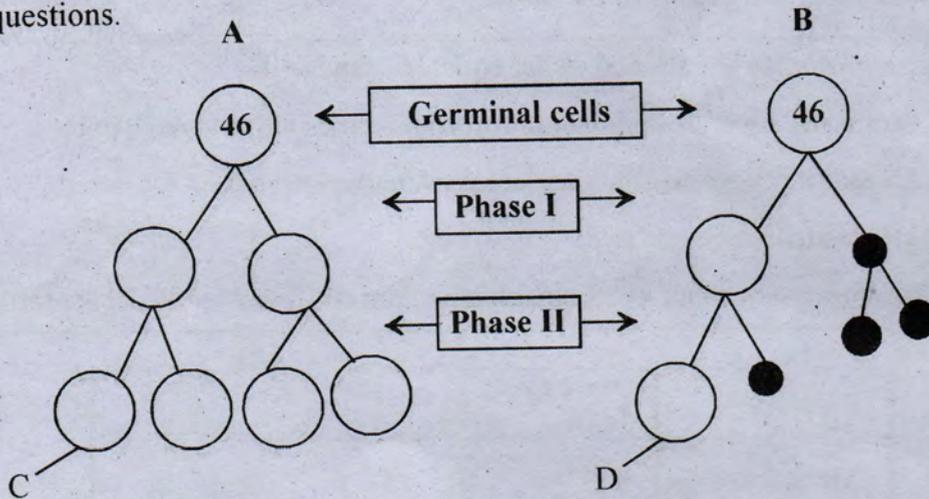
Neck and knee have joints. But knee can't move as neck does.  
What may be the reason ?

How will you explain the reason for this doubt ?

18. Complete the illustration



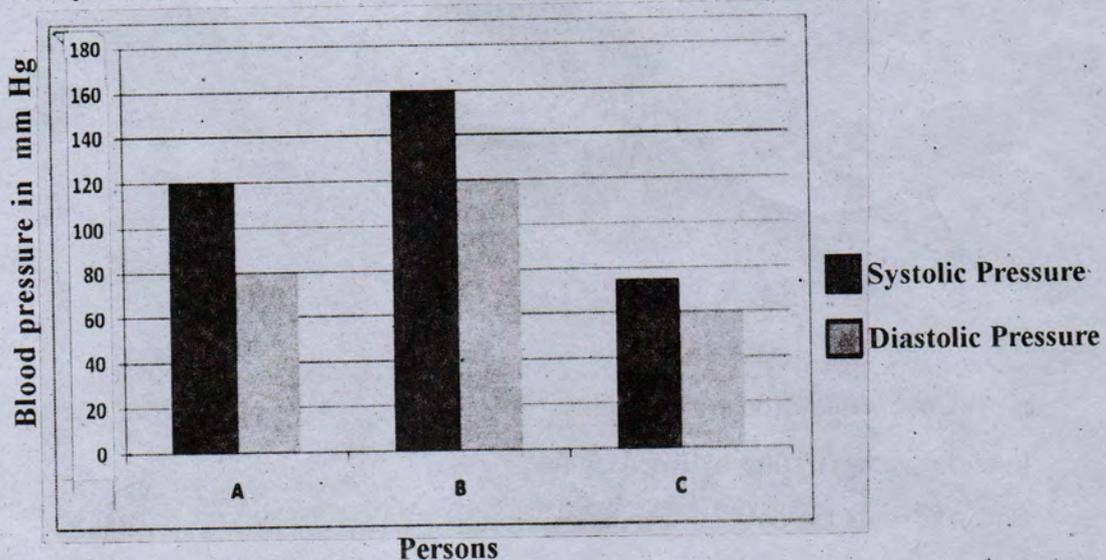
19. Observe the Illustration related to gamete formation and answer the following questions.



- Which are the gametes indicated by C and D ?
  - What is the importance of Phase I in the gamete formation process ?
  - Is there any difference in the number of gametes that are formed in the process A & B. Explain.
20. Aged people also deserve special consideration as children. Substantiate your opinion based on any six physical changes that lead to aging.

**IV. Answer any 2 questions from 21-23. Each question carries 4 marks. (4 x 2 = 8)**

21. Analyse the following graph and answer the following questions.



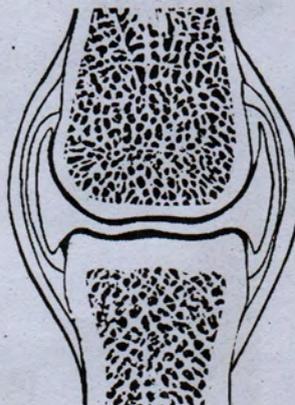
- Which person is having normal blood pressure ? Mention his blood pressure.
- Mention the person having high blood pressure. Write any two changes that is to be made in his life style.
- It is not in veins, but in arteries that we feel blood pressure. Give reason.

22. Characteristics of different stages of mitosis are given in the box. Select the appropriate ones and complete the table.

- a. Chromosomes get aligned at the equator of the cell.
- b. Chromatids separate and daughter chromosomes move to each pole.
- c. Chromatin reticulum condenses to form chromosomes.
- d. Cytoplasm divides into two.
- e. Chromosomes change to chromatin reticulum and daughter nuclei are formed.

Prophase	•
Metaphase	•
Anaphase	•
Telophase	•

23. Copy the structure of the joint and write the name of the parts that perform the following functions. Also label these parts.



- a. Covers and protects the joints.
- b. Reduces friction between bones.
- c. Prevents the bones from dislocation.