

(6)

Group - C

Answer any **one** of the following questions : 10×1=10

15. Write down the structure of Pyranose and Furanose. Discuss the physiological importance of fat. What are Ketogenic and glucogenic amino acid? What do you mean by D- and L- isomer of glucose? 3+2+3+2
16. Discuss about the “clover leaf” structure of “tRNA”. How many types of bond present in DNA? What is genetic RNA? Where it is found? 5+2+2+1
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Total Pages : 6

B.Sc./2nd Sem (H)/PHY/24(CBCS)/New

2024

2nd Semester Examination

PHYSIOLOGY (Honours)

Paper : C 4-T

(Circulation and Air-Trafficking)

(New Syllabus)

[Revised Syllabus, w.e.f. Session 2022-23]

[CBCS]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any **five** of the following questions : 2×5=10

1. What is Einthoven's hypothesis? 2
2. Define ejection fraction of heart. How is it calculated? 1+1
3. What do you mean by FVC? Mention the significance of FEV test. 1+1

P.T.O.

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4. Name two junctional tissues of heart. 2
5. State two peculiarities of renal circulation. 2
6. What is 'Frank Starling law' of heart? 2
7. Mention the muscles involved in inspiration and expiration. 2
8. What is lung compliance? 2

Group - B

Answer any **four** of the following questions : 5×4=20

9. State the role of renin-angiotensin system in long term regulation of blood pressure. 5
10. Discuss briefly the role of chemoreceptors in the regulation of respiration. 5
11. What are the different leads of ECG? State the medical significance of PR interval. 3+2
12. Discuss briefly the course of cerebral circulation. 5
13. Write briefly about the role of lungs in immune defense mechanism. 5
14. What is cardiac output? State the factors that affect cardiac output. 1+4

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Group - C

Answer any **one** of the following questions : 10×1=10

15. State the electrical basis of autorhythmicity. Discuss one method of cardiac output determination. Discuss the spread of cardiac impulse with relevant diagram(s). 4+2+4
16. Discuss the modern concept of neural regulation of respiration. State the factors that influence oxygen dissociation curve. What is chloride shift? 4+4+2

P.T.O.

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B.Sc./2nd Sem (H)/PHY/24(CBCS)/Old

2024

2nd Semester Examination

PHYSIOLOGY (Honours)

Paper : C 4-T

(Chemistry of Bio-molecules)

(Old Syllabus)

[CBCS]

Full Marks : 40

Time : Two Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any **five** of the following questions : 2×5=10

1. What do you mean by invert sugar? 2
2. Write down the difference between the saturated and unsaturated fatty acid with example. 2
3. What is glycosidic bond? 2
4. Write any two examples of aromatic and acidic amino acid with chemical structure. 2

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5. Write down the physiological importance of carbohydrate. 2
6. What do you mean by saponification number? 2
7. What is Chargaff's Rule? 2
8. Write down any two differences between A and Z DNA. 2

Group - B

Answer any **four** of the following questions : 5×4=20

9. Write down the biological properties of DNA. Write the name and structure of sugar which is present in DNA and RNA. 3+2
10. Discuss about the primary and secondary structure of protein. 2+3
11. Define oligosaccharide and polysaccharide. Write a note on mutarotation. 3+2
12. Discuss about the chemical structure of RNA. 5
13. What is "enediol"? How is it formed? What is Epimer? 1+2+2
14. Define essential fatty acid with example. What do you mean by denaturation and renaturation of DNA? What is NPN? 2+2+1

P.T.O.