



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 3rd Semester Examination, 2021

CC6-PHYSIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1. Attempt any *five* questions from the following: 1×5 = 5
- (a) What is cardiac arrhythmia?
 - (b) What is meant by 'mean pressure'?
 - (c) Define pacemaker of the heart.
 - (d) What is tachycardia?
 - (e) How much is the resting membrane potential in cardiac muscle fiber and SA node?
 - (f) Why cardiac muscle cannot be tetanized?
 - (g) Define mean blood pressure.
 - (h) What do you mean by sino-aortic nerves?
 - (i) Why cardiac muscle does not fatigue?
 - (j) Write special characteristic of A-V bundle.

GROUP-B

Answer any *three* questions from the following 5×3 = 15

2. (a) What is ballistocardiography? 2
(b) Mention the significance of various heart sounds. 3
3. (a) Define haemorrhage. 2
(b) What are its consequences? 3
4. Discuss briefly the regulation of cerebral circulation. 5
5. Write the role of arterial receptor on the regulation of blood volume. 5
6. Describe the physiological significance of lymphatic circulation. 5

GROUP-C

Answer any two questions from the following

10×2 = 20

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| 7. (a) What is cardiac index? | 1 |
| (b) Write a note on factors affecting cardiac output. | 3 |
| (c) Describe the measurement of cardiac output by applying Fick principle. | 6 |
| 8. (a) Describe the cause and features of different heart sounds. | 3+3 |
| (b) State different intervals of ECG with significance. | 4 |
| 9. (a) Explain the ionic basis of cardiac autorhythmicity. | 4 |
| (b) What are baroreceptors? | 2 |
| (c) Describe their role in the regulation of blood pressure. | 4 |
| 10. Describe the impulse conduction from SA node to Purkinje System. | 10 |

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