

2019

B.Sc. (Hons.)

2nd Semester Examination

BIOTECHNOLOGY

Paper—C3T

Full Marks : 40

Time : 2 Hours

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

1. Answer any *five* questions from the following :
- 5×2
- (a) What is Bohr effect ? 2
 - (b) Mention the composition of saliva. 2
 - (c) State the functions of pacemaker cell of heart. 2
 - (d) What is chloride shift ? 2
 - (e) What do you mean by parathyroid tetany? 2
 - (f) Mention how intra-vascular clotting is prevented. 2

(g) State the importance of GABA. 2

(h) Write a brief note on pineal hormone. 2

2. Answer any *four* questions from the following :

4×5

(a) Describe the mechanism of digestion and absorption of lipid through GI tract. $2\frac{1}{2}+2\frac{1}{2}$

(b) Why is gall bladder bile more concentrated than liver bile ? Mention the functions of gastric juice. 2+3

(c) Describe the cellular mechanism of CO₂ transport in blood. 5

(d) Describe the events of cardiac cycle. 5

(e) State the events of chemical changes during muscle contraction. What is all-or-non law ? 3+2

(f) Describe the role of adrenal medullary hormone on metabolism. What is ornithine cycle ? 3+2

3. Answer any *one* question from the following :

1×10

- (a) (i) What is oxygen dissociation curve ? Describe the effects of pH and 2, 3 BPG on oxygen dissociation curve.
- (ii) State the composition and functions of pancreatic juice. (2+2)+2+(2+2)
- (b) (i) State the mechanism of generation and propagation of nerve impulses.
- (ii) Give a brief outline structure of synaptic junction. Describe the ionic basis of EPSP and IPSP. (3+2)+(2+3)
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