

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2019 – 20 Examination

Semester: 5
Subject Code: 03111301
Subject Name: Basic Clinical Science-I

Date: 26/11/2019
Time: 10:30am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (All are compulsory, Each Question carry one mark) (15)

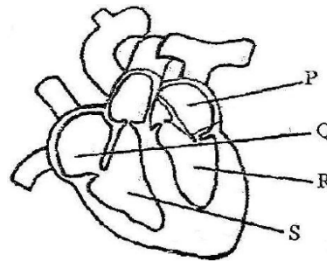
1. Increased potassium levels may cause the condition called:

(a) Hyperkalemia	(b) Hypercalcemia
(c) Hypocalcemia	(d) Hypokalemia
2. Which of the following is a coronary artery disease?

(a) Atherosclerosis	(b) Arteriosclerosis
(c) Both (a) & (b)	(d) None of the above
3. The circulation of blood in the blood vessels of the heart is called:

(a) Coronary circulation	(b) Pulmonary circulation
(c) Systemic circulation	(d) Fetal circulation
4. Pinna is a shell-like structure which is a part of _____.

(a) Inner ear	(b) Outer ear
(c) Middle ear	(d) None of them
5. The diagram below represents the human heart



Which lines on the diagram are pointing to the heart chambers that would contain deoxygenated blood?

- | | |
|-------------------|-------------------------|
| (a) Lines P and Q | (b) Lines P and R |
| (c) Lines Q and S | (d) Lines P, Q, R and S |
6. If heart rate of a patient is 72 beats/min, cardiac output is 5L/min. The stroke volume will be _____ml.
 7. Echocardiography is _____.
 8. There are _____ leads used for measuring ECG.
 9. Action potential is _____.
 10. Angioplasty used for _____.
 11. Local anesthesia is _____.
 12. Full form of IABP: _____.
 13. What is fibrillation?
 14. Hearing aid is _____.

15. Human blood pressure range is _____.

Q.2 Answer the following questions. (Attempt any three)

(15)

- (A) Write short note on audiometer.
- (B) Explain conducting system of heart in detail with its structure.
- (C) Write a short note on effect of changes in electrolyte concentration on heart.
- (D) Define bypass surgery & write a short note on coronary artery diseases.

Q.3(A) Define ophthalmology & Explain the following briefly:

(07)

- 1) Virectomy 2) Tonometry 3) Fundus camera

(B) List out any four cardiac arrhythmias. Explain them and draw their electrographic representations.

(08)

OR

(B) Define cardiac output. What are the different techniques to determine cardiac output? Explain all in detail.

(08)

Q.4 (A) Discuss hearing aids & cochlear implants in detail.

(07)

OR

(A) What is Diathermy? Discuss its different types and application.

(07)

Q.4 (B) Explain CO₂ Laser in detail.

(08)