

B.Sc. 4th Semester (Honours) Examination, 2021

PHYSIOLOGY

Course ID: 42515

Paper: SH/PHY/405/SEC-2(T)

Course Title: Pathological Microbiology and Bio-Medical Technology

Time: 2 Hours

Full Marks: 40

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: 2×5=10

- (a) What is Einthoven's Law?
- (b) Give an example of gram positive and gram negative bacteria.
- (c) What is the significance of P wave?
- (d) Define centrifugation.
- (e) What is electrocardiogram?
- (f) Name the bacteria found in sputum.
- (g) What do you mean by myocardial infarction?
- (h) What do you mean by QRS complex?

2. Answer any four questions from the following: 5×4=20

- (a) Mention the position of chest leads used in ECG recording. What is vector? 4+1=5
- (b) Write the principle of spectrophotometer. How do you handle a spectrophotometer? 3+2=5
- (c) How colour intensity is measured in colorimeter? Discuss about the application of colorimeter. 3+2=5
- (d) Mention the protocol of gram staining procedure. 5
- (e) Differentiate between gram positive and gram negative bacteria. What is culture media? 3+2=5
- (f) Discuss about the application of spectrophotometer. What are the range of wave lengths of UV and visible spectrum? 3+2=5

3. Answer any one question from the following: 10×1=10

- (a) Describe the principle of centrifugation. Discuss about the application of centrifuge machine. How can you handle centrifuge machine in laboratory? 2+3+5= 10
- (b) How Mycobacterium tuberculosis is identified in the laboratory? Write the precautionary measures for handling Mycobacterium tuberculosis. 6+4=10