



Register Number:

Date:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27

B.A/B.Sc - IV SEMESTER

SEMESTER EXAMINATION: MARCH/APRIL 2020.

PHOE 4218: MEDICAL PHYSICS

Time: 1.5 hours

Max Marks: 35

This paper contains two printed pages and four parts

PART A

(5x 1=5)

Answer all the following questions

1. In Electrocardiogram P wave represents
 - a) Depolarisation of the ventricles
 - b) Depolarisation of the atrium
 - c) Repolarisation of the ventricles
 - d) Repolarisation of the atrium
2. What is a dental curing light?
 - a) Blue light
 - b) UV light
 - c) Green light
 - d) IR light
3. Inward Curvature of Spinal cord named as
 - a) Lordosis
 - b) Kyphosis
 - c) Scoliosis
 - d) Monosis
4. Nail clipper, Bottle opener, Stapler are the examples of
 - a) First lever
 - b) Second lever
 - c) Third lever
 - d) Pivot
5. When should you give rescue breathing
 - a) Conscious choking victim
 - b) Unconscious choking victim
 - c) Unconscious, no pulse, not breathing.
 - d) Unconscious, no pulse, has breathing.

PART B

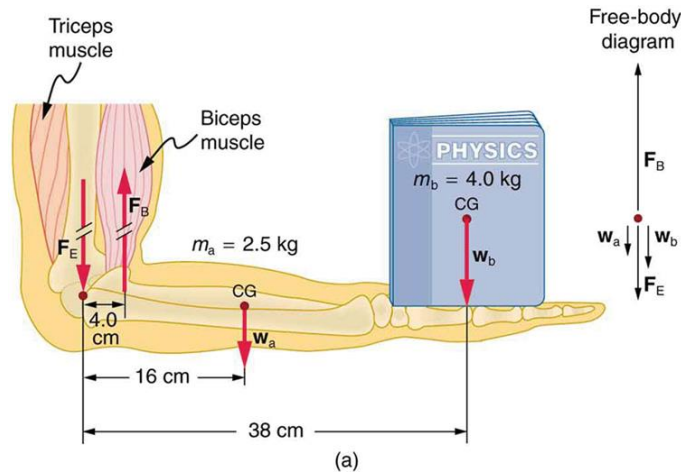
Answer any FIVE of the following questions. Each question carries Two marks (5 x 2=10)

6. How does the center of gravity affect stability of human body?
7. What is photocoagulation treatment?
8. What time of day is your blood pressure is highest? Give the reason.
9. What is the simplest imaging system to detect corona virus? Explain briefly.
10. What are the characteristics of X rays?
11. What do you mean by nuclear medicine?
12. What is the difference between the bell and the diaphragm of a stethoscope?

PART C

Answer any TWO of the following questions. Each question carries Five marks (2 x 5 = 10)

13. Calculate the force that the biceps muscle must exert to hold the forearm and its load as shown in the figure below, and compare this force with the weight of the forearm plus its load.



14. How many levers are there in human body? Explain with an example
15. Draw a suitable diagram and explain the production of x-rays. Mention its medical applications.

PART D

(1x10=10)

16. Explain in detail how ultrasonic ABC-Scan display techniques are used in ultrasound imaging system in medical field.