Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 28-Feb-2023

Time: 3 Hours **Max. Marks: 37 Marks**

BIOPHYSICS - (RS-3 & RS-4)

Q.P. Code: 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. What is a Machine? Explain different types of simple Machines.
2. State Newton's laws of gravitation. Write a note on centre of gravity and specific gravity.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Explain medicinal uses of Gamma rays.
4. Write a note on regulation of body temperature.
5. Use of Body mechanics in patient care.
6. Noise pollution and its prevention.
7. Draw normal ECG, label its parts.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Explain Voltage. Mention its S.I Unit.
9. Intracranial pressure.
10. SI and CGS units of length and time.
11. Write audible frequency range of human ear.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 23-May-2022

Time: 3 Hours **Max. Marks: 37 Marks**

BIOPHYSICS - (RS3 & RS4)

Q.P. Code: 1740

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. What is centre of gravity? Explain the application of gravity in nursing.
2. Explain biological effects of light.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. What are fundamental and derived units?
4. What are scalar and vector quantities?
5. Describe an inclined plane.
6. Write a note on body temperature regulation.
7. Use of light in therapy.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Define velocity and acceleration.
9. Define force and write its unit.
10. What is Traction?
11. Give the relation between energy and wavelength.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 09-Feb-2022

Time: 3 Hours **Max. Marks: 37 Marks**

BIOPHYSICS – (RS-3 & RS-4)

Q.P. Code: 1740

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. Explain briefly on ECG, EEG, EMG and ECT.
2. Explain the term force, work and energy. Mention their units. Explain the principles of Machine.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Application of principles of gravity in nursing.
4. Regulation of body temperature.
5. Defective vision and its correction.
6. Measurement of pressure in the body.
7. Use of ultrasound.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Why white cotton clothes are preferred in summer?
9. Why ice floats on the surface of water?
10. What are the principles of traction?
11. Uses of X-rays in the medicine.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 07-Sep-2020

Time: 3 Hours **Max. Marks: 37 Marks**

BIOPHYSICS
(RS3 & RS4)
Q.P. Code: 1740

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. Explain types and transformation of energy, forces of the body, static forces.
2. List different pressures of human body? Give their significance. How do you measure them (give two examples)?

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Explain different types of heat transfer.
4. Explain the uses of radioisotopes in medicine.
5. Write a note on defects of vision and their correction.
6. Noise pollution and its prevention.
7. What is a pacemaker? Write a note on Artificial pacemakers.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Convert 25°C to Fahrenheit.
9. Define friction.
10. Explain vector with an example.
11. What is normal blood pressure?

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 27-Nov-2020

Time: 3 Hours **Max. Marks: 37 Marks**

BIOPHYSICS – (RS-3 & RS-4)

Q.P. Code: 1740

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. What are X-rays? How are they produced? List the properties and uses of X-rays in medicine.
2. What is the normal audio frequency range of normal human ear? Explain the relation between frequency, velocity and wavelength. Write a note on audiometry?

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Use of pacemakers and defibrillation.
4. Explain hydrostatic pressure and osmotic pressure.
5. Use of heat for sterilization.
6. Use of light in therapy.
7. Effect of principles of gravity in nursing.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Explain why steam burn is more injurious than burn due to boiling water?
9. What are isotopes and isobars?
10. Define electrical resistance and write its units.
11. Write a neat diagram of ECG and label.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – OCT-2019

Time: 3 Hours **Max. Marks: 37 Marks**

Biophysics

Q.P. Code : 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. List focusing elements of eye. Explain defects of vision and their corrections.
2. What are X rays? How are they produced? List the properties and uses of x-rays in clinical practice.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Distinguish between fundamental units and derived units.
4. Pacemaker
5. Explain the applications of ultrasound in nursing
6. Applications of principles of gravity in nursing
7. What is noise pollution? How it can be prevented?

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Normal Blood Pressure
9. What is inclined plane?
10. What are radio active isotopes?
11. Define acceleration, mention its unit

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – APRIL-2019

Time: 3 Hours **Max. Marks: 37 Marks**

Biophysics

Q.P. Code : 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. Describe simple machines with examples.
2. What is blood pressure? Give the principles and working of sphygmomanometer.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Give the application of lasers in medicine.
4. Discuss scales of temperature.
5. Discuss the modes of heat transfer.
6. Discuss line and centre of gravity of a human body.
7. Give structure and working principle of autoclave.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. What is least distance of distinct vision?
9. What is humidification of air?
10. What are the uses of MRI?
11. What are the systems of units that are being used so far?

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – SEP-2018

Time: 3 Hours **Max. Marks: 37 Marks**

Biophysics

Q.P. Code : 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. What are X rays? How are they produced? What are the properties and uses of X-rays in medical practice?
2. State and explain Pascal's law. How this law finds its application in the measurement of blood pressure? Explain the constructions and working of sphygmomanometer.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Distinguish between Kinetic energy and Potential energy with examples.
4. State and explain the Newton's laws of motion.
5. Explain the mechanism of hearing.
6. Give the different effects of electricity on human body.
7. What is Radio Isotope? Mention the applications of the Radio Isotopes in medical practice.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Gravity affects circulation of blood - explain
9. Write a neat diagram of Lead – II ECG and label.
10. What is a lever? Mention types of levers.
11. What is normal audio frequency range of human ear?

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – APRIL 2018

Time: 3 Hours **Max. Marks: 37 Marks**

Biophysics

Q.P. Code : 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. Define Current, Voltage and Resistance, Mention their units and write a note on Ohm's law.
2. Write the principle of electrocardiography. Explain procedure to record electrocardiography.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Distinguish between Kinetic Energy and Potential Energy with examples.
4. Explain the defects of vision and their corrections.
5. Pacemakers
6. What is lever? Mention its types with examples.
7. Regulation of body temperature

SHORT ANSWERS **4 x 2 = 8 Marks**

8. List applications of X-rays
9. Convert 40°C to Fahrenheit scale
10. Why white clothes are preferred in summer?
11. What are SI units?

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – APRIL 2017

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Describe TCA cycle. Indicate the energy yielding steps in this cycle, how is this regulated.
2. Describe ketone bodies metabolism. Add a note on ketosis.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Describe water balance in human body.
4. Classify enzymes with suitable examples.
5. Plasma proteins and their functions
6. Digestion and adsorption of lipids
7. Urea cycle

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Name two phospholipids and mention their function.
9. Benedict's test
10. Essential amino acids
11. Hypoglycemia

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – SEP - 2016

Time: 3 Hours **Max. Marks: 37 Marks**

Biophysics

Q.P. Code : 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. State Newton's law of Gravitation. List the clinical applications of gravity.
2. Explain radioactivity. Write the uses of radioactive isotopes in medicine.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. List the types of temperature scales and explain clinical thermometer in detail.
4. Mention the types of heat transmission with suitable examples
5. Distinguish between ECG and EMG
6. List the applications of light in nursing
7. Define energy and it's types with suitable examples.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Intracranial pressure
9. Simple machines
10. Insulators
11. Convert 98.6 Fahrenheit in to centigrade scale

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – MAY 2016

Time: 3 Hours **Max. Marks: 37 Marks**

Biophysics

Q.P. Code : 1740

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 9 = 9 Marks**

1. Discuss visual defects of human eye.
2. Discuss physiological effects of heat.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. What are scalar and vector quantities?
4. What are density and specific gravity?
5. Write a note on vocalization & hearing.
6. Discuss law of conservation of energy.
7. What are X-rays? How they are produced? Give its uses.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. What is Laser?
9. Give the relation between energy and wavelength.
10. What is systolic and diastolic blood pressure?
11. Convert 1.5 Ton to Kilogram.

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