

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0222]

**FEBRUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 2302

**M.Sc. NUCLEAR MEDICINE TECHNOLOGY
FIRST YEAR**

(Candidates admitted from 2019-2020 onwards – Paper II)

(Candidates admitted from 2020-2021 onwards – Paper III)

**PAPER II & III – COMPUTERS, FUNDAMENTALS OF ELECTRICITY AND
ELECTRONIC**

Q.P. Code : 282302

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Write in detail about applications of computer in Nuclear Medicine.
2. Explain different types of Power Supply.

II. Write Short Notes on:

(10x6 = 60)

1. Functional units of computer.
2. Networking software.
3. How to insert table in word application.
4. Types of Operating system.
5. TCP/IP Protocol.
6. Ohm's law and the triangle.
7. Half wave rectifier.
8. Field effect transistor.
9. Filter circuits.
10. Pulse height analyser.

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[AHS 1022]

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**PAPER – II & III – COMPUTERS, FUNDAMENTALS OF ELECTRICITY AND
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Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(2 x 20 = 40)

1. With the help of a neat diagram explain basic structure and operation of a computer. Explain the functions of central processing unit (CPU), control unit (CI) and arithmetic logic unit (ALU).
2. What is pulse a height analyzer and its role in nuclear medicine imaging? What is the difference between single channel analyzer (SCA) and multi-channel analyzer (MCA)?

II. Write notes on:

(10 x 6 = 60)

1. What are Input and output devices? Give 3 examples.
2. Networking in nuclear medicine.
3. Boolean algebra.
4. Different type of logical gates.
5. Full wave rectifier.
6. Function of analog to digital converter and its application in computer.
7. Bit, nibble, byte and word.
8. Different types of computer operating system.
9. SMPS power supply.
10. Fourier Transforms.
