S.No. M21317 Course code: 32718201

# VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM B.Sc(NUCLEAR MEDICINE TECHNOLOGY) DEGREE

### **EXAMINATIONS - September 2021**

**Second Year** 

## COMPUTER & IMAGING PROCESSING TECHNIQUES IN NUCLEAR MEDICINE

| Three 1 | Hours                                     |                      | Maximum: 75 marks |  |  |  |
|---------|---|----------------------|-------------------|--|--|--|
|         | SECT                                      | ION - A              |                   |  |  |  |
| I. Cho  | ose the Best Answer :                     | $(10 \times 1 = 10)$ |                   |  |  |  |
| 1.      | Who is the father of Computer science?    |                      |                   |  |  |  |
|         | a.Allen Turing                            | b.Charles Babbage    |                   |  |  |  |
|         | c.Simur Cray                              | d.Augusta Adaming    |                   |  |  |  |
| 2.      | The first computers were programmed using |                      |                   |  |  |  |
|         | a.assembly language                       | b.machine language   | 9                 |  |  |  |
|         | c.source code                             | d.object code        |                   |  |  |  |
| 3.      | CD-ROM stands for                         |                      |                   |  |  |  |
|         | a.Compactable Read Only Memory            |                      |                   |  |  |  |
|         | b.Compact Data Read Only Memory           |                      |                   |  |  |  |
|         | c.Compactable Disk Read Only Memory       |                      |                   |  |  |  |
|         | d.Compact Disk Read Only Memory           |                      |                   |  |  |  |
| 4.      | Who is the chief of Microsoft             |                      |                   |  |  |  |
|         | a.Babbage                                 |                      |                   |  |  |  |
|         | b.BillGates                               |                      |                   |  |  |  |
|         | c.BillClinton                             |                      |                   |  |  |  |
|         | d.none of these                           |                      |                   |  |  |  |
| 5.      | Which of the following is also known as   | brain of computer    |                   |  |  |  |
|         | a.Control unit                            |                      |                   |  |  |  |
|         | b.Central Processing unit                 |                      |                   |  |  |  |
|         | c.Arithmetic and language unit            |                      |                   |  |  |  |
|         | d.Monitor                                 |                      |                   |  |  |  |
| 6.      | is commonly used for hardene              |                      |                   |  |  |  |
| 7.      | Single coated film is common used in      | •                    |                   |  |  |  |
| 8.      | Drawroom is called                        |                      |                   |  |  |  |
| 9.      | TheMas.                                   |                      |                   |  |  |  |
| 10.     | Place the patient in kneeling portion on  | the film incase of   |                   |  |  |  |

#### II. Write Short Answers on any FIVE of the following:

 $(5 \times 5 = 25)$ 

- 11. What is the difference between scatter and attenuation correction?
- 12. Picture Archieving and Communication System.
- 13. List mode acquisition.
- 14. Gray scale.
- 15. Image acquisition interface.
- 16. Image storage in scan format.
- 17. CPU.

#### III. Write Short Essays on any TWO of the following:

 $(2 \times 10 = 20)$ 

- 18. What is CPU incomputer? Write about its components
- 19. Explain various steps involved in the manual wetfilm processing.
- 20. Explain the Nuclear Medicine Image Acquisition process.
- 21. The parameters related to optimum viewing of nuclear medicine images.

#### IV. Write Essays on any ONE of the following:

 $(1 \times 20 = 20)$ 

- 22. The various methods of display of nuclear medicine images.
- 23. Define a Computer and its main compartments, input and output devices.

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