

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Tanta University
Faculty of Medicine
Msc. & Dep. : Diagnostic Radiology,
1st Part
دور فبراير 2022

Radiation Physics

Time 3H

Examiner: Prof. Dr. Galal Zedan Farag
Faculty of Science /Physics Department

Answer the following Questions:

1- Explain:

(10 M.)

- (a) The physical meaning of Positron radiation attenuation,
- (b) The different PET, and DXR- scanners generations.

2- Discuss:

(10 M.)

- (a) The SONAR applications in medicine, and
- (b) The advantages of MRI technology.

3- "The PET scanner provide physicians with superior

(10 M.)

Information for determining tissue characterizations, and
Classifications with some of fatal errors. "Explain.

4- Discuss:

(15 M.)

- (a) The methods of radiation protection, and
- (b) Radioactive decay applications.

الرجا التوجه الى قسم الاشعة عقب الاختبار مباشرة لاداء الاختبار التطبيقي
والشفوى مباشرة

والله ولى التوفيق

Tanta University

23/2/2022

Faculty of Medicine

Time allowed : 3 hours

Radiodiagnosis Department

(List 2013)

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Radiobiology & Istotopes examination == Master & Diploma
degrees(45 degree)

All questions must be attempted

جميع الاسئلة اجبارية

- 1- Give an account on the response of irradiated cells. (5 marks)
- 2- Give an account on stochastic and deterministic (non- stochastic) effect. (5 marks)
- 3- Discuss acute radiation syndrome. (5 marks)
- 4- Bone scan: indication, produre and interpretation. (5 marks)
- 5- Indication , procdure and interpretation of renal scintigraphy. (5 marks)
- 6- Discuss scintigraphic anatomy of thyroid gland, type of nucleotides used in its examination & mentioned causes of non visaliized thyroid gland on thyroid scan. (10 marks)
- 7- Chraacters of ideal radioactive nucleids.(2.5)
- 8- Benign non physiological FDG uptake. (2.5 marks)
- 9- Radio-isotopes imaging in pulmonary embolism (istopes used, methods, image interpretation). (5 marks)

Good Luck

Tanta University
Faculty of Medicine
Radiodiagnosis Department

21/2/2022
Time allowed : 3 hours
(List 2013)

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Radiological anatomy & technology examination

Diploma & master degrees (total marks = 90)

All questions must be attempted (each question = 10 marks)

جميع الاسئلة اجبارية

- 1) Plain X-ray positions used for examination of upper three cervical vertebrae. (10 marks)
- 2) Plain X-ray oblique views of the chest. (10 marks)
- 3) Plain X-ray positions used for examination of sacroiliac joint. (10 marks)
- 4) Technique of Double contrast barium enema. (10 marks)
- 5) Radiological anatomy of upper limb venous system, imaging of a case of deep vein thrombosis. (10 marks).
- 6) Technique and contrast media of triphasic CT of liver. (10 marks)
- 7) Radiological anatomy of male urethra and technique of micturating cysto-urethrography. (10 marks)
- 8) Plain X-ray positions used for mammography.(10 marks)
- 9) Plain X-ray positions used for examination of the ankle joint. (10 marks)

Good Luck

امتحان العملى والشفوى يوم الاثنين الموافق 2022/2/28 الساعة الثامنة صباحا بالعياده الشامله .