English Exam Correction **7th Semester** **Miss F.Bouziani**

Task 1 : Identify the significance of each letter in the underlined abbreviations/acronyms and and present a brief definition for the terms. (1*1) 10pts

1. **ALARA** As Low As Reasonably Achievable. :It is a radiation safety principle in medical imaging that emphasizes keeping radiation exposure to the lowest possible level.
2. **MRI:** Magnetic Resonance Imaging : It is a medical imaging technique that uses a strong magnetic field and radio waves to generate detailed images of the internal structures of the body.
3. **CT:** Computed Tomography.It is a medical imaging technique that uses X-rays to create detailed cross-sectional images of the body.
4. **MDCT:** Multidetector Computed Tomography. It is an advanced CT technology that uses multiple detectors to acquire images more rapidly and with higher resolution.
5. **CTA:** Computed Tomography Angiography. :It is a specialized CT technique used to visualize blood vessels and blood flow in various parts of the body.
6. **fMRI:** Functional Magnetic Resonance Imaging. : It is a type of MRI that measures and maps brain activity by detecting changes in blood flow.
7. **MRA:** Magnetic Resonance Angiography. :It is an MRI technique specifically focused on imaging blood vessels, providing detailed pictures of the vascular structures.
8. **CEUS:** Contrast-Enhanced Ultrasound. :It is an ultrasound imaging technique that uses contrast agents to improve visualization of blood flow and organ structures.
9. **HIFU:** High-Intensity Focused Ultrasound. :It is a non-invasive therapeutic technique that uses focused ultrasound waves to target and treat specific tissues, often used for tumor destruction and other medical applications.
10. **HU:** Hounsfield Unit.It is a unit of measurement used in CT imaging to quantify the radiodensity of tissues.

Task 2 : In your role as a healthcare professional, how would you articulate advanced imaging procedures to these patients? **(0.75*1) 2.25pts**

Medical Professional 1 : For the chest X-ray, you'll stand in front of an X-ray machine, and we'll capture images of your chest. It's a quick and painless process, helping us assess the health of your lungs and identify any issues causing difficulty breathing.

Medical Professional 2 : For the knee MRI, you'll lie down on a comfortable bed, and the MRI machine, like a large tube, will surround your knee. It's a non-invasive.

procedure using a strong magnetic field and radio waves to create detailed images.We'll provide ear protection for any noise the machine makes.

Medical Professional 3: For the abdominal ultrasound, you'll lie down, and we'll apply a gel to your abdomen. Then, using a device called a transducer, we'll gently move it around to capture images of your internal organs. It's painless and provides valuable information about your health.

Task 3 : According to the following medical cases propose the most suitable imaging procedure for each scenario**.(0.5*1) 3 pts**

1. **Back Pain:** MRI
2. **Twisted Ankle:** X-ray / MRI
3. **Breast Lump:** Mammogram /Ultrasound
4. **Stroke:**CT /MRI
5. **Headache:** CT/MRI
6. **Pregnancy:** Ultrasound

Part II : Give a title to this paragraph and translate it into Arabic : **4.75 pts**

Title : The Role and Challenges of Medical Imaging in Modern Healthcare. **0.75pts**

Translation : 4pts

تعتبر تقنيات التصوير الطبي أداة مفيدة للأطباء لتشخيص الأمراض وعلاجها. بعض هذه التقنيات تقليدية وتشمل الأشعة السينية والموجات فوق الصوتية والبعض الآخر طرائق تصوير متقدمة مثل التصوير بالرنين المغناطيسي والأشعة المقطعية. في الآونة الأخيرة، يعتمد المزيد والمزيد من الأطباء على طرائق التصوير المتقدمة هذه بسبب التقدم في التكنولوجيا، وزيادة طلب المرضى، وزيادة الموارد المالية وخوفهم من أي دعاوى قضائية في حالة عدم تشخيص صحيح على الرغم من أن هذه التقنيات، بلا شك، تقدم تشخيصًا أسرع وصحيحًا بسبب دقتها وحساسيتها، إلا أنها تعرض المريض لمصدر كبير للإشعاع، وهي باهظة الثمن وتستغرق وقتًا طويلاً وليست طريقة مثالية للاستخدام في جميع المواقف. لذلك، من الضروري تقليل استخدامها غير الضروري.