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BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Sc.(MRIT)-2022

Course Name – Interventional Radiology

Course Code - BMRITC602

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Angiography is defined as
 - a) Study of vein
 - b) Study of artery
 - c) Study of blood vessels
 - d) Study of lymph
- (ii) Identify the material used in Angiographic catheter construction
 - a) Polyurethane
 - b) Polyethylene
 - c) Teflon, or nylon
 - d) All of these
- (iii) Narrowing of a blood vessels is termed as
 - a) Thrombosis
 - b) Stenosis
 - c) Coagulation
 - d) Aterio venous formation
- (iv) Identify the catheter classification parameters
 - a) Based on Side holes
 - b) Based on Sizes
 - c) Based on Shapes
 - d) All of these
- (v) Define balloon angioplasty.
 - a) A technique to widen narrowed blood vessels using a balloon catheter
 - b) A procedure to remove blood clots using a catheter
 - c) A diagnostic imaging procedure for blood vessels
 - d) A surgical procedure to treat blockages
- (vi) Define the term "angioplasty."
 - a) A procedure to widen narrowed blood vessels using a balloon catheter
 - b) A procedure to remove plaque from blood vessels
 - c) An imaging technique to view blood vessels
 - d) A surgical method for heart bypass
- (vii) Define the main purpose of interventional radiography.
 - a) To diagnose using X-rays
 - b) To treat using minimally invasive procedures
 - c) To create 3D models of organs
 - d) To monitor heart rate
- (viii) What does DSA stand for?

- a) Digital Single Angiography
- b) Direct Subtraction Angiography
- c) Digital Subtraction Angiography
- d) Dynamic Subtraction Angiography
- (ix) Explain how asepsis is maintained during interventional procedures.
 - a) By wearing sterile gloves and using sterile equipment
 - b) By using antibiotics
 - c) By wearing a mask only
 - d) By using alcohol-based hand sanitizers
- (x) Define the purpose of vertebral angiography.
 - a) To visualize blood flow in the brain
 - b) To visualize the spinal cord and vertebral arteries
 - c) To treat spinal fractures
 - d) To diagnose heart conditions
- (xi) Identify the significant risk of femoral artery catheterization.
 - a) Hemorrhage or bleeding
 - b) Infection of the urinary tract
 - c) Dizziness
 - d) Respiratory distress
- (xii) Select the most appropriate diagnostic tool for evaluating a thyroid nodule.
 - a) MRI
 - b) CT scan
 - c) FNAC
 - d) USG
- (xiii) Select the most appropriate post-procedure care step after an angioplasty in interventional radiology.
 - a) Advising the patient to resume intense physical activity
 - b) Administering sedatives without physician consent
 - c) Immediate discharge without observation
 - d) Monitoring vital signs and puncture site for bleeding
- (xiv) Identify the type of contrast agent commonly used in interventional radiology.
 - a) Iodinated contrast
 - b) Barium sulfate
 - c) Gadolinium-based contrast
 - d) Carbon dioxide
- (xv) Identify the imaging modality most commonly used for guiding biopsies.
 - a) CT
 - b) MRI
 - c) Fluoroscopy
 - d) PET

Group-B

(Short Answer Type Questions)

3 x 5=15

- 2. Define the history of interventional radiography (3)
- 3. Discuss the different types of catheters used in interventional radiography. (3)
- 4. Write Common indication of Angioplasty procedures. (3)
- 5. Describe knee arthrography. (3)
- 6. Explain the purpose of 4-vessel angiography. (3)

OR

Explain cerebral venography. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

- 7. Explain classification of catheter. (5)
- 8. Write short notes on Angiography, Arteriography and Venography. (5)
- 9. Explain Seldinger technique. (5)
- 10. Explain Aspiration and Drainage. (5)
- 11. Explain the difference between selective and non-selective angiography. (5)
- 12. Differentiate between peripheral and central venography? (5)

OR

Differentiate between single-plane and bi-plane angiography? (5)

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