Question Paper

Exam Date & Time: 28-Jun-2022 (10:00 AM - 12:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BOT / B.Sc. PFT / BPT/ B.Sc. OPTOM. / B.Sc. CVT /B.Sc. RT /B.Sc. MIT /B.Sc. RRT&DT / B.Sc. EMT / B.Sc. AOTT / B.Sc. MLT / B.Sc. NMT / B.Sc. CND DEGREE EXAMINATION - JUNE 2022
SUBJECT: BIC1201 - BIOCHEMISTRY
(2020 SCHEME)

Marks: 50 **Duration: 120 mins.**

Answer all the questions.

1)	Write the reactions of gluconeogenesis from pyruvate mentioning the site and subcellular site.	(10)
2A)	Define micro and macro minerals. Mention the sources and THREE functions each of calcium and phosphorus.	(5)
2B)	Define biologic value of proteins. List the protein sources of high and low biologic values. Define limiting amino acids with suitable examples.	(5)
3A)	Explain the procedure and interpretation of oral glucose tolerance test. Add a note on significance of HbA1c estimation.	(5)
3B)	Explain the structure of starch and glycogen with schematic representation and list the difference between them.	(5)
3C)	Mention the site and subcellular site of lipolysis and describe the reactions. Name the regulatory enzyme.	(5)
3D)	Illustrate the complexes of ETC with their components and order of arrangement and mention the mobile electron carriers.	(5)
4A)	Write ONE reaction in the collagen biosynthesis which requires vitamin C and mention its significance.	(2)
4B)	Name the enzyme defect and tissue affected in Type I and Type V glycogen storage disorders.	(2)
4C)	Mention the TWO physiologically important compounds each derived from glycine and tyrosine.	(2)
4D)	What is the normal level of serum albumin? Name TWO conditions in which it is altered.	(2)
4E)	List TWO differences between DNA & RNA.	(2)

-----End-----

Question Paper

Exam Date & Time: 30-Jun-2022 (10:00 AM - 12:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BOT / BPT/ B.Sc. CVT /B.Sc. RT /B.Sc. MIT /B.Sc. RRT&DT / B.Sc. EMT / B.Sc. AOTT DEGREE EXAMINATION - JUNE/JULY 2022
SUBJECT: ANA1201 - ANATOMY - II
(2020 SCHEME)

Marks: 50 **Duration: 120 mins.**

Answer all the questions.

1. Describe the median nerve under following headings:

1A)	Origin and root value.	(2)
1B)	Course.	(2)
1C)	Distribution.	(5)
1D)	Applied anatomy.	(1)

2. Describe the gluteus maximus muscle under:

2A)	Attachments, nerve supply, actions.	(5)
2B)	Applied anatomy.	(1)
2C)	Mention Any EIGHT structures lying deep to it.	(4)

3A)	Describe the origin, course and distribution of obturator nerve.	(5)
3B)	Describe the attachments, nerve supply and action of sternocleidomastoid muscle.	(5)
3C)	Describe the elbow joint.	(5)
3D)	Describe the boundaries of popliteal fossa.	(5)
4A)	Mention the origin and applied aspect of radial artery.	(2)
4B)	List the carpal bones to which the flexor retinaculum is attached.	(2)
4C)	Mention the attachments of sartorius muscle.	(2)
4D)	Mention the formation and termination of cephalic vein.	(2)
4E)	Mention the muscles in the lateral compartment of leg and the nerve supplying them.	(2)

-----End-----

Question Paper

Exam Date & Time: 04-Jul-2022 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - JUNE/JULY 2022
SUBJECT: MIT1201 - RADIOGRAPHIC POSITIONING AND TECHNIQUES - II
(2020 SCHEME)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Explain the anatomy of pelvis with a labelled diagram. Explain in detail the views taken for Pelvic inlet and outlet.	(20)
2)	Explain in detail about the views taken in acute abdomen series.	(20)
3)	List the routine and special views for cervical spine. Explain the projection for cervical spine lateral.	(10)
4)	Explain the radiographic projections taken for mastoid.	(10)
5A)	Write a note on radiographic positioning and centring for sacrum Anterior Posterior axial view.	(5)
5B)	Explain the radiographic positioning, centring and evaluation criteria for scotty dog view.	(5)
5C)	Write the indications, positioning and centring for Rheese view.	(5)
5D)	Write a note on the role of X-ray technologist while performing paediatric radiography.	(5)
5E)	Write a note on Nolke method.	(5)
5F)	Explain the positioning, centring and evaluation criteria of towne's view.	(5)
6A)	List the indications for erect abdomen.	(2)
6B)	Name the cranial bones.	(2)
6C)	Write the exposure factors for sacroiliac joint Anterior posterior view and posterior oblique view.	(2)
6D)	List the views taken in spinal fusion series.	(2)
6E)	List the indications for taking hyperextension and hyperflexion views for lumbar spine.	(2)

-----End-----

Question Paper

Exam Date & Time: 06-Jul-2022 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - JUNE/JULY 2022
SUBJECT: MIT1202 - DIGITAL IMAGING & IMAGE PROCESSING METHODS IN RADIOGRAPHY
(2020 SCHEME)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Explain the construction of Computed Radiography (CR) image plate. Add a note on CR work flow. Mention the advantages and disadvantages of CR	(20)
2)	Define PACS. Explain the workflow of PACS with its components. Add a note on advantages and disadvantages of PACS?	(20)
3)	Explain in detail the magnification Radiography.	(10)
4)	Discuss types of cassettes and special cassettes	(10)
5A)	Add a note on the effects of crossover and irradiation on films and list out methods to prevent it.	(5)
5B)	Define contrast. Add a note on the types of contrast in radiographic images	(5)
5C)	Add a note on the effects of scattering and the measures to control the scattering.	(5)
5D)	Write a note on charge coupled device	(5)
5E)	Write a note on dark room illumination	(5)
5F)	Add a note on the factors affecting speed of intensifying screen	(5)
6A)	What is Photographic effect?	(2)
6B)	Mention any two applications of Macro radiography	(2)
6C)	Define photo-stimulable Luminescence	(2)
6D)	Mention any two artefacts seen in computer radiography	(2)
6E)	Define capture element in Digital Radiography	(2)

-----End-----