APRIL-2021

Q.P. CODE:501-A

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – APRIL, 2021
FIRST M.B.B.S. EXAMINATION

ANATOMY

PAPER-I

Time : 2 ½ Hours Max. Marks : 50

Note: Answer all questions
Illustrate your answers with suitable diagrams

1) Describe the parotid gland under the following headings: 3+3+2+2=10
   a. Borders and surfaces
   b. Relations
   c. Nerve supply
   d. Applied anatomy

2) Describe the radial nerve in the arm under the following headings 3+2+3+2=10
   a. Course
   b. Relations
   c. Distribution
   d. Applied anatomy

WRITE SHORT NOTES ON: 5x4=20

3) Floor of the IVth ventricle of brain
4) Corpus callosum
5) Intra-embryonic mesoderm
6) Histology of Thymus
7) Cavernous sinus of brain

WRITE BRIEFLY ON: 5x2=10

8) Nerve supply and actions of Sternocleidomastoid muscle
9) Anastomosis around the elbow joint
10) Cauda Equina
11) Carpal Tunnel Syndrome
12) Medial Epicondyle of Humerus

Q.P.CODE:502-A(OR)

DR NTR UNIVERSITY OF HEALTH SCIENCES :: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – APRIL, 2021
FIRST M.B.B.S. EXAMINATION

ANATOMY

PAPER-II
(Old Regulations)

Time : 2 ½ Hours | Max. Marks: 50

Note: Answer all questions
Illustrate your answers with suitable diagrams

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1) Describe the Right lung under the following headings: 4+3+2+1=10
   a. Bronchopulmonary segments
   b. Root of lung
   c. Nerve supply and blood supply
   d. Development

2) Describe the pancreas under the following headings: 2+4+2+2=10
   a. Parts
   b. Relations
   c. Blood supply
   d. Applied anatomy

WRITE SHORT NOTES ON: 5x4=20

3) Ligamentum patellae
4) Common Peroneal Nerve
5) Inheritance
6) Microscopic structure of uterus
7) Contents of Femoral Triangle

WRITE BRIEFLY ON: 5x2=10

8) Development of prostate gland
9) Evertors of foot
10) Inguinal hernia
11) Recesses of pleura
12) Tributaries of portal vein

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Q.P. CODE:M102A010

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – APRIL, 2021

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-I

Time : 3 Hours Max. Marks: 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1) Describe facial nerve under the following headings: 2+4+7+2 =15
   a) Functional components b) Course
   c) Branches and distribution d) Applied Anatomy
2) Describe the Brachial Plexus under following headings 4+4+4+3 =15
   a) Formation b) Relations
   c) Branches d) Add a Applied Anatomy

WRITE SHORT NOTES ON: 8x5=40

3) Describe the features of lateral wall of nasal cavity
4) Describe lymphatic drainage of tongue with clinical correlation
5) A 35 year male complained of weakness on extending elbow and wrist after sleeping overnight with arms resting against the armrest of chair. On examination he had wrist drop
   a. Describe the origin, branches and distribution of the involved structure in arm
   b. Give anatomical basis for wrist drop (4+1)
6) Describe the floor of Fourth ventricle of brain
7) Describe the formation, branches and distribution circle of Willis
8) Define anatomical position and explain the anatomical planes of body
9) Describe the microscopic structure of thin skin
10) Describe the formation and fate of notochord

WRITE BRIEFLY ON: 10x3=30

11) Enumerate the movements of eyeballs and the muscles producing them
12) A professional singer attends an ENT OPD with complaints of intermittent hoarseness, voice fatigue, loss of upper levels of singing, occasional pain in throat. With this case background answer the following questions
    a. Name the clinical condition and the structure involved
    b. Describe the anatomy of involved structure
13) Describe the attachments of flexor retinaculum and name the structures related superficial and deep to it
14) Briefly describe the origin, termination and branches of axillary artery
15) Describe the anatomical basis and effects of lateral medullary syndrome
16) Draw a neat labelled diagram of transverse section of spinal cord at midthoracic level
17) Describe superior cerebellar peduncle
18) Classify bones according to shape with examples
19) Draw a neat labelled diagram with microscopic structure of hyaline cartilage
20) Describe the embryological basis of twinning in monozygotic and dizygotic twins

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Q.P. CODE:M102A011(CBME)

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – APRIL, 2021

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-II

Time : 3 Hours Max. Marks: 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1. Describe the kidney under: (1+4+4+2+1+1+2) 15
   a) Position b) External features c) Peritoneal & visceral relations
   d) Blood supply e) Nerve supply f) Lymphatic drainage g) Applied anatomy
2. Describe the formation, course, termination, tributaries, perforators and applied anatomy of great saphenous vein (1+3+1+5+3+2) 15

WRITE SHORT NOTES ON: 8x5=40

3. A 63 year old male came to surgical OPD with complaints of chronic cough and swelling in the groin for the past 9 months which increases in size during coughing. On performing the ring occlusion test it was found that the swelling did not increase in size
   a. Name the anatomical structure involved and the clinical condition
   b. Describe the boundaries of involved anatomical structure
   c. Explain the anatomical basis for the above clinical condition (1+3+1)
4. Describe the attachments, nerve supply, action of gluteus Medius and explain Trendelenburg's sign
5. Describe the origin, course, branches, distribution and applied anatomy of typical intercostal nerve
6. Describe the course, relations and branches of Arch of aorta
7. Second part of Duodenum
8. Expiain the development of interatrial septum of heart and its anomalies
9. Describe the development of palate
10. Describe the types of structural chromosomal abnormalities

WRITE BRIEFLY ON: 10x3=30

11. Describe the blood supply of suprarenal glands
12. Describe the features of internal trigone of urinary bladder
13. Describe the sites of portocaval anastomosis and the veins forming it with their clinical significance
14. Describe the origin, root value, distribution of Obturator nerve
15. Draw a neat labelled diagram of arterial anastomosis around knee joint
16. A 32 year old male came to medical OPD with complaints of breathlessness, cough. On examination there was reduced breath sounds over right lung fields. He was diagnosed with pleural effusion and advised pleural tap for investigation
    a) Enumerate the structures pierced by the needle during pleural tap
    b) Describe Costo-diaphragmatic pleural recess
17. Describe the boundaries and contents of superior mediastinum
18. Describe the microscopic structure of crypts of Lieberkuhn
19. Draw a neat labelled diagram of microscopic structure of liver
20. Enumerate the derivatives of second pharyngeal arch

Q.P. CODE:503-A(OR)

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – APRIL, 2021
FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY

PAPER-I
(Old Regulations)

Time : 2 ½ Hours Max. Marks: 50
Note : Answer all questions
Draw diagrammatic representation wherever necessary

1) Describe in detail all the events of cardiac cycle with suitable diagram 10

2) Define Erythropoiesis. Describe the stages of Erythropoiesis with suitable diagram and add a note on the factors influencing it (2+8) 10

WRITE SHORT NOTES ON: 5x4=20

3) Functions of plasma proteins
4) Micturition reflex
5) Cell mediated immunity
6) Hypoxia
7) Composition and functions of pancreatic juice

WRITE BRIEFLY ON: 5x2=10

8) Diagram of action potential of a skeletal muscle
9) Facilitated diffusion
10) Frank starlings law
11) Pharyngeal stage of deglutition
12) Structure of respiratory membrane

Q.P. CODE:504-A(OR)

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – APRIL, 2021
FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY

PAPER-II
(Old Regulations)

Time : 2 ½ Hours | Max. Marks : 50

Note: Answer all questions
Draw diagrammatic representation wherever necessary

1) Describe in detail the auditory pathway. Add a note on deafness (7+3) 10

2) Describe in detail the menstrual cycle and its regulation 10

WRITE SHORT NOTES ON: 5x4=20

3) Pain pathway

4) Accommodation reflex

5) Parkinsonism

6) Myasthenia Gravis

7) Functions of oxytocin

WRITE BRIEFLY ON: 5x2=10

8) Diagram of pyramidal tract

9) Two functions of hypothalamus

10) Two features of Cushing's syndrome

11) Astigmatism

12) Functions of vasopressin

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Q.P. CODE:M102A020(CBME)

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – APRIL, 2021

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-I

Time : 3 Hours Max. Marks: 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1. What is arterial blood pressure. What are the factors affecting arterial BP. What are the different mechanisms of regulation of BP. 1+4+10=15
2. How is O_2 carried in the blood. What is Oxygen Dissociation Curve (ODC). Draw ODC. What are the factors affecting ODC. Mention about physiological significance of ODC. 2+1+2+5+5 =15

WRITE SHORT NOTES ON: 8x5=40

3. Diffusion of ion across cell membrane
4. Iron deficiency anemia
5. Intrinsic mechanism of blood clotting
6. What is GFR. How it is measured
7. Counter current exchanger system
8. Composition and functions of saliva
9. Cutaneous circulation
10. A 65 year old male patient presented with intense itching and progressively deepening jaundice. He gives H/o clay colored stools. O/E he is having scratch marks over the body and greenish-yellow sclera. Investigations revealed serum bilirubin 30. (1+1+1+1+1)
    a. What are different types of jaundice
    b. What type of jaundice he may be having
    c. Why the stool is having clay color
    d. Why the bilirubin level is increased
    e. What is the cause of itching

WRITE BRIEFLY ON: 10x3=30

11. Immunoglobulin
12. ABO blood group system
13. Erythropoietin
14. Law of Laplace
15. Draw a normal ECG and label
16. Hypoxia
17. Caisson's disease
18. Defecation reflex
19. Juxtaglomerular apparatus
20. A 10 year old child presented with bleeding gum and pin head sized bleeding points over the skin. O/E he is having pallor with generalized lymph node enlargement. Investigations revealed Hb – 7gm/dl, platelet count – 30000/cumm, total WBC count – 1.5lac/cumm. Peripheral smear shows lymphoblasts. Answer the following questions (1+1+1)
    a. What is the most likely diagnosis
    b. Why he is having bleeding tendency
    c. What is the abnormality in platelet count

Q.P. CODE:M102A021(CBME)

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – APRIL, 2021

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-II

Time : 3 Hours Max. Marks: 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1) Write from where insulin is secreted. Describe structure of insulin. Describe biosynthesis of insulin. What are the actions of insulin? How insulin secretion is regulated. Briefly mention about diabetes mellitus. (1+3+3+4+3+1) 15

2) What is CSF? Describe the formation and circulation of CSF. What are the functions of CSF? What is the normal amount of CSF in human adults? Mention about Hydrocephalus. (1+3+4+4+1+2) 15

WRITE SHORT NOTES ON: 8x5=40

3) Brown Sequard syndrome
4) Describe the metabolic changes and adjustments during exercise
5) Functions of hypothalamus
6) Functions of progesterone
7) Mechanism of hearing
8) Excitation contraction coupling
9) Pain pathway
10) A 50 year old lady presented with excessive tiredness, sleepiness. She had history of excessive post partum hemorrhage during her second pregnancy 25 years ago. She remembers that her BP was low that time. She is having irregular menstruation for many years. Axillary and pubic hair were absent (1+1+1+1+1)
    a. What could be the condition she is suffering
    b. What will be the cause for this condition
    c. What are the different hormones involved
    d. How will you treat this case
    e. What is the cause of absent axillary and pubic hair

WRITE BRIEFLY ON: 10x3=30

11) Pupillary Light Reflex
12) EEG
13) Myasthenia Gravis
14) Spermatozoa
15) Stretch reflex
16) Refractory period
17) Olfactory pathway
18) Temporary methods of contraception in female
19) LH surge
20) A 60 year old diabetic hypertensive patient developed weakness of right upper and lower limb and deviation of angle of mouth to left side
    a. What is this condition? (1+1+1)
    b. Which is the system involved?
    c. What is the most common site of lesion?

Q.P. CODE:500-A(OR)

DR. NTR UNIVERSITY OF HEALTH SCIENCES: AP: VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – APRIL, 2021
FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY

PAPER-I
(Old Regulations)

Time : 2 ½ Hours Max. Marks: 50

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

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1) Describe in detail about citric acid cycle. Write briefly on energetics and regulation 6+2+2=10

2) Write in detail about vitamin B12 – its sources, coenzymes, RDA, functions, metabolism and deficiency manifestations 1+1+1+3+2+2 =10

WRITE SHORT NOTES ON: 5x4=20

3) Specific dynamic action

4) Metabolism of galactose

5) Regulation of cholesterol synthesis

6) Digestion and absorption of lipids

7) Pyruvate dehydrogenase complex

WRITE BRIEFLY ON: 5x2=10

8) Isoenzymes -- 2 Examples

9) Oral glucose tolerance test – Indications

10) Myoglobin – Functions

11) Enzymes elevated in acute pancreatitis

12) Balanced diet

Q.P. CODE:500-B(OR)

DR NTR UNIVERSITY OF HEALTH SCIENCES:: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – APRIL, 2021
FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY

PAPER-II
(Old Regulations)

Time : 2 ½ Hours Max. Marks : 50

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

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1) Write in detail about acid base balance 10

2) Describe in detail about purine catabolism. Add a note on Hyperuricemia 10

WRITE SHORT NOTES ON: 5x4=20

3) PCR Test

4) Homocystinuria

5) RFT

6) Mechanisms of hormone action

7) Electrolytes

WRITE BRIEFLY ON: 5x2=10

8) Two compounds derived from tyrosine

9) Two nucleosides

10) Structure of DNA

11) Normal blood and urine pH

12) Mention two carcinogens

Q.P. CODE:M102A030(CBME)

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – APRIL, 2021

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-I

Time : 3 Hours Max. Marks: 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1) Describe the sources, chemistry, biochemical functions, deficiency manifestations, RDA & Hypertoxicity of Vitamin D. (1+1+4+4+3+2) 15

2) Define enzyme and enzyme inhibition. Classify enzyme inhibition with one example for each class. Write in detail salient features of competitive enzyme inhibition with examples of clinical applications.(2+2+3+4+2+2) 15

8x5=40

WRITE SHORT NOTES ON:

3) A 8-year old girl had fatty eruption on the elbow and elevated cholesterol level. She was treated for the same and 4 months later her serum cholesterol was within biological range (1+2+2)
   a. What is the probable diagnosis
   b. Discuss the factors that regulate cholesterol synthesis
   c. Name important products formed from cholesterol and their function
4) Enumerate the phase I of detoxification with examples
5) Describe the steps and energetics of aerobic glycolysis
6) Describe the process of digestion and absorption of lipids from the GI tract
7) Name the blood buffers. Enumerate their role in regulation of blood pH
8) Describe galactose metabolism and associated disorders
9) Classify liver function tests. Enumerate excretory and metabolic functions of liver
10) Describe heme synthesis and its regulation

10x3=30

WRITE BRIEFLY ON:

11) A new born experienced abdominal distension, severe bowel cramps and diarrhoea after feeding milk
   a. What is the probable diagnosis and mention the deficient enzyme
   b. Write the reason for these manifestations and mention the line of treatment
12) Name three hormones synthesized by adrenal glands and their function
13) Creatinine clearance test and its clinical significance
14) Name three antioxidants and their action
15) High energy compounds
16) Allosteric regulation of enzyme activity
17) List the biomedical importance of carbohydrates with examples
18) Amphipathic lipids
19) Glycemic index
20) Dietary fibers

Q.P. CODE: M102A031(CBME)

DR NTR UNIVERSITY OF HEALTH SCIENCES :: VIJAYAWADA – 520 008

M.B.B.S. DEGREE EXAMINATION – APRIL, 2021

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY- PAPER-II

Time : 3 Hours Max. Marks : 100

Note: Answer all questions. Draw diagrammatic representation wherever necessary.

1) Describe in detail the process of replication of both strands of DNA in eukaryotes. Name the inhibitors of DNA replication and DNA repair mechanisms (8+3+4) 15

2) Describe the sources, RDA, blood level, biochemical function, regulation and deficiency manifestation of calcium in the body. (2+1+6+2+3+1) 15

8x5=40

WRITE SHORT NOTES ON:

3) 32 hours after birth, a male infant had grunting sound during respiration. The infant was lethargic and unresponsive. The infant had vomiting after taking small feeds, blood ammonia was very high. Blood urea was very low
   a. What is the probable diagnosis and name the deficient enzyme
   b. Which metabolic pathway is affected. Discuss the metabolic pathway
4) Describe the mechanism of regulation of blood pH
5) Describe the functions of plasma proteins. What is normal A:G ratio and mention its significance
6) What are proto-oncogenes. Name four tumor markers and mention their clinical significance
7) Describe secondary and tertiary structure of proteins
8) Describe degradation of purine nucleotides
9) Describe disorders of iron metabolism
10) Define secondary messengers. Describe mechanism of hormone action

10x3=30

WRITE BRIEFLY ON:

11) A 3 year old boy was admitted to hospital with symptoms of pellagra, accompanied by mental retardation and had excretion of neutral amino acids. Diagnosis of Hartnup disease was made
   a. What is the cause of Hartnup disease
   b. What is the cause of mental retardation and pellagra like symptoms in this case
   c. Mention the treatment of pellagra like symptom
12) Structure and function of collagen
13) Gene therapy
14) Denaturation and coagulation of proteins
15) Carcinogens and mutagens
16) Role of T- helper cells in immune responses
17) Anion gap and chloride shift
18) Proteoglycans
19) Ionophores and its applications
20) Purine analogues

Q.P. CODE:501-A

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION

ANATOMY

PAPER-I

Time : 2 ½ Hours Max. Marks : 50

Note: Answer all questions
Illustrate your answers with suitable diagrams

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1) Describe the Tongue under the following headings: 2+3+3+2=10
   a) Muscles
   b) Nerve supply
   c) Development
   d) Lymphatic drainage

2) Describe the Wrist joint under the following headings: 2+3+3+2=10
   a) Articulations
   b) Relations
   c) Movements
   d) Applied Anatomy

WRITE SHORT NOTES ON: 5x4=20

3) Ligamentum denticulatum
4) Auditory pathways
5) Polar bodies during development of zygote
6) Histology of Hypophysis cerebri
7) Blood supply Superolateral surface of cerebral cortex

WRITE BRIEFLY ON: 5x2=10

8) Nerve supply of Lacrimal Gland
9) Superficial palmar arch
10) Diploic veins
11) Horner's Syndrome
12) Flexor Retinaculum

Q.P.CODE:502-A

DR NTR UNIVERSITY OF HEALTH SCIENCES :: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION

ANATOMY

PAPER-II

Time : 2 ½ Hours Max. Marks: 50

Note: Answer all questions
Illustrate your answers with suitable diagrams

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1) Describe the Arch of aorta under the following headings. 4+1+3+2=10
   a) Relations
   b) Development
   c) Microscopic anatomy
   d) Applied anatomy

2) Describe the Second part of Duodenum under the following headings: 3+1+3+3=10
   a) Relations
   b) Development
   c) Blood supply
   d) Applied anatomy

WRITE SHORT NOTES ON: 5x4=20

3) Popliteal artery
4) Medial longitudinal arch of foot
5) Down's Syndrome
6) Microscopic structure of Liver
7) Hamstring muscles

WRITE BRIEFLY ON: 5x2=10

8) Development of Kidney
9) Cutaneous innervation of dorsum of foot
10) Sartorius muscle
11) Cardiac plexus
12) Epiploic foramen

FIRST MBBS JANUARY-2021

Q.P. CODE:M102A010

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION
HUMAN ANATOMY – PAPER-I

Time : 3 Hours Max. Marks: 100

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

1) Describe the Scalp under the following headings: 5+3+3+4=15
   a)Layers of scalp
   b)Blood supply
   c) Nerve supply
   d) Applied Anatomy

2) Describe shoulder joint under the following headings: 1+3+5+5+1=15
   a) Type of joint
   b) Articular surfaces
   c) Capsule and ligaments
   d) Movements and muscles producing those movements, and
   e) Applied anatomy

8x5=40

WRITE SHORT NOTES ON:

3) Histology of Thymus
4) Formation and Fate of Notochord
5) Structure and functions of skin
6) Intermuscular spaces in the arm
7) Lateral Pterygoid muscle
8) Draw a neat labelled diagram of Transverse Section of Medulla Oblongata at Pyramidal decussation.
9) Name the functional areas of superolateral surface of cerebrum
10) An elderly man fell on the road with an outstretched right hand while trying to get into the bus. He developed localized pain and swelling on the dorsal aspect of his right wrist. On examination, doctors observed a typical deformity in the right hand. (2+1+1+1)
    a) What is the diagnosis?
    b) Which bone is affected?
    c) Name the deformity in X-ray
    d) Which nerve is likely to be affected?

10x3=30

WRITE BRIEFLY ON:

11) Name the arteries forming Scapular Anastomosis
12) Mid palmar space
13) Name the structures forming placental barrier
14) Draw neat labelled diagram of Elastic Cartilage
15) Differences between spinal ganglion and sympathetic ganglion
16) Complete sulcus with examples
17) Name the branches of ophthalmic artery
18) Classification of white matter
19) Name the branches of vagus nerve in the neck
20) Where do you feel the pulsation of common carotid artery? What is the position of the neck? Which muscle is put into action? (1+1+1)

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FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY

PAPER-I

Time : 2 ½ Hours Max. Marks: 50

Note : Answer all questions
Give diagrammatic representation wherever possible

1) Define Hemostasis and explain the various steps involved in hemostasis. Add a note on anticoagulants. (2+6+2) 10

2) Define GFR. Give the normal value. Describe the factors influencing glomerular filtration rate. Add a note on measurement of GFR. (2+5+3) 10

WRITE SHORT NOTES ON: 5x4=20

3) Measurement of Blood Pressure
4) Functions of gastric juice
5) Lung Volumes and Capacities
6) Edema
7) Active Transport

WRITE BRIEFLY ON: 5x2=10

8) Surfactant
9) Packed cell volume (PCV)
10) Diagram of Lead II ECG
11) Functions of Macrophage
12) Definition of Asphyxia

Q.P. CODE:504-A

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M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY

PAPER-II

Time : 2 ½ Hours | Max. Marks : 50

Note: Answer all questions
Give diagrammatic representation wherever possible

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1) Describe in detail the visual pathway. Add a note on the effects of lesions at various levels of the visual pathway. (7+3) — 10

2) List the hormones of Anterior Pituitary. Describe in detail the actions of Growth Hormone. Add a note on acromegaly? (2+5+3) — 10

WRITE SHORT NOTES ON: — 5x4=20

3) Taste pathway
4) Sarcomere
5) Tests for hearing
6) Neuromuscular junction
7) Functions of testosterone

WRITE BRIEFLY ON: — 5x2=10

8) Immunological test for pregnancy
9) Two differences between UMN and LMN lesion
10) Two features of Diabetes Mellitus
11) Myopia
12) Two Cerebellar function tests

Q.P. CODE:M102A011

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-II

Time : 3 Hours Max. Marks: 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1) Describe the Hip joint under the following headings: 2+4+4+3+2=15
   a) Type and articulating bones
   b) Capsule and ligaments
   c) Movements and muscles producing them
   d) Blood supply and Nerve supply
   e) Applied Anatomy

2) Describe the Uterus under the following headings: 2+2+7+2+2=15
   a) Development of uterus with its anomalies
   b) Normal Anatomical Position
   c) Supports of Uterus
   d) Blood supply and Nerve supply
   e) Applied Anatomy

WRITE SHORT NOTES ON: 8x5=40

3) Histology of Liver
4) Development of Pancreas with anomalies
5) Development of Portal Vein
6) Karyotyping
7) Superficial inguinal group of Lymph nodes
8) Stomach Bed
9) Sinuses of pericardium
10) A middle aged man comes with a history of chest pain which is radiating to the arm and neck region. Pain is not relieved by any analgesics. (1+1+1+2)
    a) Which structure is affected in this condition?
    b) Name the commonest artery affected.
    c) Name the branches of the artery affected.
    d) What investigations will you advise?

WRITE BRIEFLY ON: 10x3=30

11) Draw a neat labelled diagram of Vas deferens.
12) Draw a neat labelled diagram of Appendix
13) Name the derivatives of midgut
14) Dorsalis pedis Artery
15) Contents of Adductor Canal
16) Sternal angle
17) Opening of Right Atrium
18) Ligaments of Spleen
19) Any six branches of Internal Iliac Artery
20) An old man who crossed the age of 60 years comes with a history of distension of Abdomen and is unable to pass urine (1+2)
    a) What is the clinical condition?
    b) How do you classify anatomically the lobes of the organ affected?

Q.P. CODE:M102A021

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION
PHYSIOLOGY – PAPER-II

Time : 3 Hours Max. Marks: 100

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

1) What are the different hormones produced from thyroid gland? How the thyroid hormones are synthesized? What are the actions of thyroid hormone? How the thyroid hormone secretion is regulated? Make a note on anti-thyroid drugs. 1+5+5+3+1=15

2) What is pyramidal tract? Describe the origin and course of pyramidal tract? What are the functions of Pyramidal tract? 2+10+3=15

WRITE SHORT NOTES ON: 8x5=40

3) Acromegaly
4) Functions of Cerebellum
5) Organ of Corti
6) Spermatogenesis
7) Properties of Receptors
8) Stretch Reflex. Cardiorespiratory adjustments during exercise
9) Uterine changes during Menstruation
10) A 30 year old male presented with severe headache and vomiting. Examination revealed difficulty for vision in temporal area of the field of vision. (2+1+1+1)
    a) What may be the cause for this?
    b) Why is he having headache and vomiting?
    c) Why is he having this type of visual abnormality?
    d) Does this patient is likely to have hormonal disturbances?

WRITE BRIEFLY ON: 10x3=30

11) Oral Contraceptive Pills
12) Draw a diagram and explain neuromuscular junction
13) Wallerian Degeneration
14) All or None Law
15) Composition of Semen
16) Functions of Testosterone
17) Draw a neat diagram of Thalamus and Label the nuclei
18) Referred Pain
19) Taste Receptors
20) A 60 year old female presented with history of taking some drug for long duration. On examination, she is obese and is having moon like facies, Purple Striae and Buffalo hump like appearance. (1+1+1)
    a) What is your Diagnosis?
    b) What are the causes for this condition?
    c) What change you can expect in blood glucose level?

Q.P. CODE:500-A

DR. NTR UNIVERSITY OF HEALTH SCIENCES: AP: VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY

PAPER-I

Time : 2 ½ Hours Max. Marks: 50

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

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1) Describe in detail about Glycogen Metabolism. Write briefly about Regulation. 7+3=10

2) Write in detail about HDL Metabolism. Mention the Reference Interval for Lipid Profile. 6+4=10

WRITE SHORT NOTES ON: 5x4=20

3) Rapaport Luebering Cycle

4) Ketone bodies synthesis

5) Phase II Reactions of Detoxification

6) Heme Catabolism

7) Shuttle Pathways

WRITE BRIEFLY ON: 5x2=10

8) Lipotropic Factors

9) Vitamin E

10) Poly unsaturated fatty acids

11) Acute Intermittent Porphyria

12) Mention two heteropolysaccharides and their functions

Q.P. CODE:500-B

DR NTR UNIVERSITY OF HEALTH SCIENCES:: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY

PAPER-II

Time : 2 ½ Hours Max. Marks : 50

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

1) Describe in detail about transcription. Add a note on post-transcriptional modifications. 6+4=10

2) Write in detail about integration of metabolism taking place in Liver. 10

WRITE SHORT NOTES ON: 5x4=20

3) Cell cycle

4) Lac Operon

5) Adrenal Function Tests

6) Digestion and absorption of proteins

7) Transamination reactions

WRITE BRIEFLY ON: 5x2=10

8) Active Methionine

9) Functions of Selenium

10) Two conditions of metabolic acidosis

11) Two functions of Albumin

12) Mention two blood buffers

Q.P. CODE:M102A030

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021
FIRST M.B.B.S. EXAMINATION
BIOCHEMISTRY – PAPER-I

Time : 3 Hours Max. Marks: 100

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

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1) Write the Recommended Daily Allowance (RDA) and sources of Vitamin A. Explain the biochemical functions and deficiency manifestations of Vitamin A. Add a note on hypervitaminosis A. 1+2+5+5+2=15

2) What is the normal blood glucose level? Discuss in detail the regulation of blood glucose. What are the criteria for the diagnosis of Diabetes Mellitus? 2+9+4=15

8x5=40

WRITE SHORT NOTES ON:

3) 40 year old male was brought to the casualty with complaint of chest pain. He had ECG changes suggestive of myocardial infarction and was admitted to the ICU. His blood reports showed: (1+1+3)
Blood sugar 110 mg%, Serum cholesterol 350 mg%, LDL Cholesterol 150 mg%, HDL Cholesterol 35 mg% and Triglyceride 150 mg%
a) What is likely cause of heart attack at such a young age?
b) Discuss the catabolism of LDL.
c) Name three biologically important compounds formed from cholesterol.

4) Importance of dietary fibre
5) Metabolic Syndrome
6) Haemolytic jaundice – causes and diagnosis
7) Suicidal inhibition
8) Synthesis of Prostaglandins
9) Kwashiorkor
10) Chemiosmotic Hypothesis

10x3=30

WRITE BRIEFLY ON:

11) A 15 year old female complaining of severe pain in back and legs was hospitalized and sickle cell anemia was diagnosed. (1+1+1)
a) Mention the cause of sickle cell anemia
b) Mention the cause of sickling of red blood cells (RBC)
c)Why does a person with sickle cell trait show increased resistance to malaria?

12) Ketone bodies
13) Liposomes
14) Name three uncouplers of Oxidative Phosphorylation
15) Epimers
16) Coenzyme Q
17) Regulation of enzyme activity by compartmentalization
18) Renal glycosuria
19) Standard urea clearance
20) Acute intermittent porphyria

Q.P. CODE: M102A031

DR NTR UNIVERSITY OF HEALTH SCIENCES :: VIJAYAWADA – 520 008

M.B.B.S. DEGREE EXAMINATION – JANUARY, 2021

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY- PAPER-II

Time : 3 Hours Max. Marks : 100

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

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1) Define transcription. Describe the process of transcription in eukaryotes. Elaborate post transcriptional modification of mRNA. Name the inhibitors of transcription. 1+8+3+3=15

2) Describe in detail metabolism of sulfur containing amino acids and associated disorders. Mention the products of transmethylation reactions. 10+5=15

WRITE SHORT NOTES ON: 8x5=40

3) An obese 45 year old male was awoken from sleep by excruciating pain in his left metatarsophalangeal joint. The affected joint was hot, swollen, red and extremely tender. He was diagnosed with gout. (2+1+2)
   a) What are the causes of primary gout?
   b) Mention the causes for secondary gout
   c) What is the biochemical basis of treating gout with the drug Allopurinol?
4) Describe biochemistry of cancer
5) Describe structure, types and function of immunoglobulins
6) Describe biochemical function and deficiency manifestations of calcium in the body
7) What are secondary messengers? Elaborate the mechanism of action of steroidal hormones
8) Describe regulation of water and electrolyte balance in the body
9) Describe the basic procedure and applications of polymerase chain reactions
10) Describe the metabolism of tyrosine and important products formed from tyrosine

WRITE BRIEFLY ON: 10x3=30

11) A 57-year-old man was admitted into hospital with neurological manifestations. On ophthalmic examination, brown pigment ring (KF ring) around his cornea was observed. (1+1+1)
   a) What is the probable diagnosis?
   b) Mention the cause of these manifestations
   c) What is the probable treatment for this order?
12) Function of heme and non heme containing compounds
13) Essential amino acids
14) Metabolic acidosis and alkali reserve
15) Structure and function of cell membrane
16) Name three plasma proteins and their functions
17) Isoelectric pH
18) Oncogene and antioncogene
19) Salvage pathway
20) Zinc containing proteins and their functions
