Q.P. CODE:M102A010

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – OCTOBER, 2024

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe the Elbow joint under the following headings:

   Type of the joint, Articulating bones and surfaces, Arterial anastomosis around it, Movements and muscles causing movements in the joint and Applied anatomy

2) Describe the Parotid gland under the following headings:

   Shape and location of the gland, Relations, Nerve supply including secretomotor pathway of the gland, Blood supply and Clinical anatomy

SHORT ANSWER QUESTIONS: 10X5-50

3) Classify joints with examples
4) Describe the histology of hyaline cartilage. Compare it with Fibro cartilage.
5) Describe the stages and salient differences between Spermatogenesis and Oogenesis.
6) Describe the attachments and relations of the Deltoid muscle
7) Describe the boundaries and contents of the Cubital fossa.
8) A 16-year-old boy was brought to OPD with complaints of on-and-off bleeding from his nose for three years, especially in summer. There were no other complaints and the clinical examination was unremarkable. Describe the arterial and venous drainage of the part affected.
9) Describe the boundaries and contents of the Carotid Triangle.
10) Describe the Circle of Willis.
11) Describe the Supero-medial surface of the brain.
12) Describe the Internal capsule of the brain.

Q.P. CODE:M102A011

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – OCTOBER, 2024
FIRST M.B.B.S. EXAMINATION
HUMAN ANATOMY – PAPER-II
(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions
Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe in detail the femoral triangle under the following headings:
   a) Location
   b) Boundaries
   c) Contents
   d) Femoral sheath and
   e) Add a note on femoral hernia

2) Describe the arterial supply and venous drainage of the heart. Add a note on their clinical anatomy.

SHORT ANSWER QUESTIONS: 10X5-50

3) Describe the origin, insertion, actions and nerve supply of hamstring muscles.
4) Describe the formation, course, important relations and branches of the Sciatic nerve.
5) Describe the bed of the stomach.
6) A 30 year old male came to emergency department with pain abdomen, vomiting, blood in the urine since 24 hours. On physical examination and ultrasound examination revealed that the patient is having renal stones in the right kidney. Describe the anterior and posterior relations of the Right Kidney.
7) Describe the boundaries and contents of Deep perineal pouches in males and females.
8) Describe the pelvic diaphragm.
9) Describe the autosomal dominant inheritance with examples.
10) Describe the development of the pancreas.
11) Describe the histology of the Testis.
12) Describe the origin, course and branches of the Internal iliac artery.

Q.P. CODE:M102A020

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – OCTOBER, 2024

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note : Answer all questions

Draw diagrammatic representations wherever necessary

SECTION-II (THEORY QUESTIONS) – 80 MARKS

STRUCTURED ESSAY QUESTIONS **2X15=30**

1) Define erythropoiesis. Discuss various stages and factors affecting erythropoiesis.
2) Define cardiac cycle. Discuss in detail about the pressure and volume changes in cardiac cycle.

SHORT ANSWER QUESTIONS: **10x5=50**

3) Describe the factors in the genesis of resting membrane potential.
4) Small intestinal movements
5) Functions of pancreatic juice
6) Explain defecation reflex
7) Describe the respiratory changes at high altitudes.
8) A 70-year-old male came with complaints of breathlessness and fatigue on exertion for the past three months. On examination, he had pedal edema and high jugular venous pressure, BP was 90/70mm Hg and HR 110 beats/min. What is your probable diagnosis? Explain the pathophysiological basis of the signs and symptoms (1+4)
9) Describe the composition and function of surfactants. (2+3)
10) Describe the neural regulation of respiration.
11) Describe the micturition reflex.
12) Describe the regulation of renal blood flow.

Q.P. CODE:M102A021

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP: VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – OCTOBER, 2024

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note : Answer all questions

Draw diagrammatic representations wherever necessary

SECTION-II (THEORY QUESTIONS) – 80 MARKS

STRUCTURED ESSAY QUESTIONS 2X15=30

1) What are the functional divisions of the cerebellum. Describe the functions of the cerebellum. List the features of cerebellar disorder

2) Describe the hormonal, ovarian and uterine changes during the menstrual cycle

SHORT ANSWER QUESTIONS: 10x5=50

3) Describe the functions of the thalamus
4) Describe the features of slow-wave sleep.
5) Describe the effects of lesions at various levels of the visual pathway.
6) Functions of thyroxine
7) Functions of insulin
8) Following thyroid surgery, a 50-year-old woman developed a carpopedal spasm. The blood report showed hyperphosphatemia and significant hypocalcemia. What is your probable diagnosis? Mention two other features that can be elicited on examination of this patient. What will you administer to improve the condition of this patient?
9) Describe the changes following nerve injury.
10) Describe the steps of neuromuscular transmission.
11) Describe the length-tension relationship in skeletal muscle.
12) Describe the mechanisms of heat loss from the body.

Q.P. CODE:M102A030

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – OCTOBER, 2024

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-I (Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) A 50 year old male attended to casualty department with complaints of chest pain, fatigue and uneasiness in the daily activities. On laboratory examination the total cholesterol - 293mg/dl, LDL cholesterol - 160mg/dl and his triglycerides were 300mg/dl.

   Write in detail about the types, characteristics and metabolism of the lipoproteins. Add a note on lipoprotein disorders.

2) Describe chemistry, biochemical functions, daily requirements, sources and deficiency manifestations of Vitamin A.

SHORT ESSAY QUESTIONS: 10X5=50

3) Explain the specificity of an enzyme with examples
4) Describe the electron transport chain. Add a note on inhibitors of ETC.
5) Enumerate the types of polysaccharides and their functions.
6) Sucrose Intolerance.
7) Define BMR. What is its normal value? What are the factors affecting BMR?
8) A 40-year-old obese woman presented to the medical OPD with a complaint of right upper abdominal pain, mild fever, loss of appetite and generalized itching. Furthermore, she gave a history of frothy clay coloured stool and high coloured urine. Her lab data is as follows: Total bilirubin – 12 mg%, Direct bilirubin – 10 mg%, Indirect bilirubin – 2mg@, SGPT – 3 IU/L, SGOT – 50 IU/L, ALP -350 IU/L.
   A) What is the probable diagnosis?
   B) How do you differentiate jaundice based on Vanderberg's reaction?
9) What is clearance? What are the different types of clearance tests you know and write their importance?
10) Describe the metabolic adaptations during starvation.
11) Write about the biochemical effects of reactive oxygen species.
12) What are isoenzymes? Describe the clinical significance of cardiac isoenzymes.

Q.P.CODE:M102A031

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – OCTOBER, 2024
FIRST M.B.B.S. EXAMINATION
BIOCHEMISTRY – PAPER-II (Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

2X15=30

STRUCTURED ESSAY QUESTIONS:

1) Write the sources, RDA, absorption, transport, biochemical functions and deficiency manifestations of calcium. Add a note on regulation of plasma calcium levels.

2) A 35-year-old male attended to emergency department with complaints of nausea, vomiting and headache for the past one week and also he complained that for the last 15 days, he has a feeling very tired. His blood pH is 7.35 and HCO_3 is 22meq/l.
What is the normal blood pH? Enlist various buffers of body fluids. Explain role of plasma buffers, renal mechanisms in the maintenance of acid base balance.

10X5-50

SHORT ANSWER QUESTIONS:

3) Explain the transport mechanisms across the cell membrane.
4) A three-month-old baby was brought to the hospital with the complaint of the child's diaper becoming black.
   a) What is your probable diagnosis?
   b) What is the biochemical cause for the blackening of diapers?
   c) Write about the metabolism of Tyrosine.
5) Define and describe different types of mutations.
6) Classify hormones based on their mechanism of action.
7) A 50-year-old alcoholic man came to the hospital with complaints of excruciating pain in his great toe. What is our diagnosis? Enumerate the primary and secondary causes of the disease. What is the drug of choice for this condition?
8) Functions of Plasma Proteins.
9) Immunoglobulins.
10) Carcinogens.
11) Lesch-Nyhan syndrome.
12) PCR and its applications.

Q.P. CODE:M102A010 (THEORY)

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

M.B.B.S. DEGREE EXAMINATION – AUGUST, 2024

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions.

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe the anatomy of the Mammary gland under the following headings: (2+4+3+3+3)
   a) Location and extent
   b) Structure
   c) Blood supply
   d) Lymphatic drainage
   e) Applied anatomy
2) Describe the extraocular muscles under the following headings: (6+4+3+2)
   a) Attachments
   b) Movements
   c) Nerve supply
   d) Applied anatomy

SHORT ANSWER QUESTIONS: 10X5-50

3) A new born baby is examined by a neurologist. There is a history of difficult vaginal delivery. A diagnosis of Klumpke's palsy is made.
   a) Explain the anatomical basis of Klumpke's palsy.
   b) Describe the formation, root value, and branches of the lower trunk of the brachial plexus.
4) Blood supply to long bone.
5) Compare and contrast microscopic features of various types of cartilage.
6) Describe the process of neurulation.
7) Describe the cutaneous innervation of the palm and dorsum of the hand.
8) Describe the relations of the Thyroid gland.
9) Describe the origin, course and branches of the facial artery.
10) Draw a neat labeled diagram showing the floor of the 4th ventricle of the brain.
11) Describe the sulci, gyri and functional areas related to the superolateral surface of the cerebrum.
12) Define and classify the white matter of the cerebrum with examples.

Q.P. CODE:M102A011(THEORY)

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – AUGUST, 2024

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe the anatomy of the Liver under the following headings: (3+ 5+2+3+2)
   a) Location, Borders and surfaces
   b) Ligaments & Relations
   c) Blood supply
   d) Classification
   e) Applied anatomy
2) Describe the venous drainage of the lower limb under the following headings: (4+3+4+2+2)
   a) Great saphenous vein
   b) Short saphenous vein
   c) Valves and perforators
   d) Deep venous system
   e) Applied anatomy

SHORT ANSWER QUESTIONS: 10X5-50

3) A 44 year old lady visits a Gynecology OPD with complaints of a mass felt at the vagina whenever she passes urine. On examination, the gynecologist notices the uterus is visible through the vagina and a diagnosis of uterus prolapsed is made. Describe the Supports of Uterus.
4) Hamstring muscles
5) Microscopy of suprarenal glands
6) Medial Longitudinal arch of Foot
7) Development of Liver
8) Compare and contrast Down's, Edward's and Patau syndromes.
9) Blood supply and lymphatic drainage of Stomach
10) Nerve supply and blood supply of Parietal pleura
11) Bronchopulmonary segments
12) Arch of Aorta

Q.P. CODE:M102A020

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – AUGUST, 2024

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions.

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Define cardiac output. Discuss factors affecting cardiac out put and add a note on syncope.

2) Discuss the following:
   a. Nitrogen narcosis b. dysbarism c. hypercapnia d. Cheyne-stokes respiration e. kussmaul breathing

SHORT ANSWER QUESTIONS: 10X5=50

3) Describe and give examples of primary active transport.
4) Describe the steps in phagocytosis.
5) Pharyngeal phase of deglutition.
6) Functions of hemoglobin
7) Gastric emptying
8) A 35-year-old male presents with complaints of extreme tiredness, difficulty in concentration, giddiness and reduced appetite. On examination, oral mucosa and nail beds are pale in color. Peripheral smear showed microcytic hypochromic anaemia. What is the cause of this condition and classify anemia?
9) List the factors affecting venous return.
10) Tubular function tests
11) Discuss the functions of the juxta glomerular apparatus.
12) Mechanism of water reabsorption by the kidney and discuss loop diuretics

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Q.P. CODE:M102A021

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – AUGUST, 2024

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions.

Draw a diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Discuss synthesis of glucocorticoids, functions of glucocorticoids. Add a note on primary hyper aldosteronism.

2) Describe the spinal and medullary integration of regulation of posture and movement

SHORT ANSWER QUESTIONS: 10X5=50

3) Discuss about the molecular basis of muscle contraction
4) Discuss excitation and contraction coupling
5) Auditory pathways
6) Physiological actions of testosterone. Add a note on cryptorchidism
7) Discuss Hypothyroidism. Add a note on thyroid function tests
8) Maternal changes during pregnancy. Add a note on parturition reflex
9) Discuss neural mechanisms of learning and memory
10) Functions of limbic system. Add a note on Kluver-Bucy syndrome
11) Light adaptation vs. dark adaptation
12) A 13 years old boy attended to casualty department with the body temperature of 101 °F. He is also suffering with the running nose and cough for the last five days. The boy is advised to take the anti pyretics and anti histaminics for three days. How is the body temperature in humans regulated?

Q.P. CODE:M102A030

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008

M.B.B.S. DEGREE EXAMINATION – AUGUST, 2024

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-I (Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) A 30yrsold man, a strict vegetarian who does not consume even dairy products, came to the hospital with complaints of weakness, pallor, loss of sensation in the extremities and mental confusion. On investigation, his Hb levels were found to be 7g/dl. His blood picture showed large abnormal and immature RBC. On urine examination, large amounts of methylmalonic acid were detected. (3+4+4+2+2)

   a) What is your probable diagnosis? And interpret the case.
   b) What are the deficiency manifestations of Vitamin B12? And explain them.
   c) Write about absorption and transport of Vitamin B12?
   d) What are the biochemical functions of VitB12?
   e) Add a note on metabolic link between VitB12 and folic acid.

2) Describe the classification and structural organization of lipoproteins? Write in detail about the transportation of Lipids in the body. Add a note on disorders of lipoproteins

SHORT ESSAY QUESTIONS: 10X5=50

3) Write about glycemic index and its significance.
4) Describe the diagnostic importance of serum enzymes in various diseases.
5) Explain detoxification by conjugation with four examples
6) Write about the formation and significance of 2,3-BPG.
7) Write about mechanisms of amino acid absorption
8) What are enzymes involved in biological oxidation. Explain their functions with examples.
9) Describe uronic acid pathway and its clinical significance.
10) Metabolic changes in starvation.
11) Describe the tests to assess glomerular function.
12) Write about the sources and generation of reactive oxygen species

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Q.P. CODE:M102A031

Dr NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – AUGUST, 2024
FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-II (Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS:

1) A10 yrs old girl at neurology OP presented with recent history of generalized fits and pellagra like skin rashes for the past 2yrs. She also has a H/o psychotic behavior and difficulty in walking for the past 6months. Chromatography of urine revealed that excretion of tryptophan other neutral amino acids. In serum also low levels of these amino acids were observed. In urine by doing Obermeyer test, indicant products were identified. 2X15=30

(4+4+3+4)

a) What is your probable diagnosis? Interpret the case.
b) Describe the metabolic pathway of tryptophan.
c) Name the biologically important substances produced from tryptophan.
d) Write briefly on biological role of serotonin and melatonin.

2) Polymerase chain reaction : (2+4+4+5)

a) What is the principle of PCR?
b) Write about types of PCR and their uses.
c) Describe the technique of PCR
d) Write about the applications of PCR.

SHORT ESSAY QUESTIONS:

10X5=50

3) Write about composition and functions of extra cellular matrix.
4) Write about the synthesis and functions of catecholamines.
5) What is vaccine? Write about types of vaccines with their advantages and disadvantages?
6) Carcinogenic agents.
7) A 55 year old man was brought to hospital with severe abdominal pain. The patient was in a state of shock. On examination, his abdomen distended and both femoral pulses were obliterated. After laparotomy, the condition was identified as ruptured abdominal aortic aneurysms. The laboratory investigations were as follows:
Blood pH : 7.0, plasma HCO_2 : 8 mEq/L, pCO_2 : 25 mmHg, pO_2 : 90 mmHg, Anion gap : 24, mEq/L ***Interpret the data and discuss the case***
8) Describe the absorption, functions of magnesium in the body
9) Write about the de novo synthesis of purine nucleotides.
10 Write about the vesicular transport across the cell membrane.
11 Describe globulins with their functions.
12 Functions of Zinc.

Q.P. CODE:M102A010

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

M.B.B.S. DEGREE EXAMINATION – DECEMBER, 2023

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe the anatomy of mammary gland under following headings:
a. Extent b. Structure c. Blood supply d. Lymphatic drainage
What is the anatomical basis of Peau d' orange appearance of skin in carcinoma of breast

2) Classify dural venous sinuses. Describe in detail the cavernous sinus under following headings: a. Location b. Boundaries c. Structures in relation d. Communications and tributaries e. Applied Anatomy

SHORT ANSWER QUESTIONS: 10X5-50

3) Describe briefly the laws of ossification

4) Describe briefly the three types of acini in glands

5) Describe briefly the primitive streak

6) Describe briefly the axillary lymph nodes. Add a note on their clinical Anatomy

7) Draw a neat labelled diagram showing the features of a cross section of medulla oblongata at the level of olivary nucleus

8) Describe briefly the anatomical basis of production and circulation of CSF

9) Describe the components of Atlanto occipital and Atlanto axial joints and the movements occurring

10) A 45 year old woman came with complaints of numbness, tingling pain in the thumb, index, middle and ring fingers. Unable to button the clothes, dropping the clothes. What is the syndrome? Applied anatomy of the above syndrome

11) Describe the ophthalmic artery

12) Describe the structure of a typical spinal nerve and add a note on grey and white rami communication

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Q.P. CODE:M102A011

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

M.B.B.S. DEGREE EXAMINATION – DECEMBER, 2023

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) Describe the borders, relation, hilum, fissures and lobes of lungs. Draw a neat labelled diagram to show bronchopulmonary segments

2) Describe the second part of duodenum under following headings a. Length and location b. Internal features c. Relations and d. Blood supply

SHORT ANSWER QUESTIONS: 10X5-50

3) Describe the histology of prostate with the help of a neat labelled diagram
4) Describe the blood circulation in mature placenta
5) Describe the genetic basis of Haemophilia
6) Describe the boundaries and contents of Femoral triangle
7) Enumerate the arches of foot. Describe the medial longitudinal arch
8) Describe the peritoneal and visceral relations of spleen
9) Describe the formation, relations and branches of inferior mesenteric artery
10) A 20 year foot ball player came with complaints of sudden, sharp pain in the back of the thigh and also teasing sensation. With in few hours swelling and tenderness develops. What are the muscles involved in this condition and their nerve supply
11) Trendelenburg sign
12) Dorsalis pedis artery

Q.P. CODE:M102A020

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

M.B.B.S. DEGREE EXAMINATION – DECEMBER, 2023

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions.

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) Describe the mechanism, factors affecting the glomerular filtration rate and measurement of GFR
2) Explain oxygen dissociation curve. Describe the various factors affecting on it. Describe Bohr's effect and Haldane effect with its importance (4+6+5)

SHORT ANSWER QUESTIONS: 10X5=50

3) Explain simple diffusion and facilitated diffusion with examples
4) Describe the regulation of erythropoiesis
5) Cardio vascular changes during moderate exercise
6) Describe the various factors affecting heart rate
7) Describe defecation reflex
8) Explain fat digestion and absorption
9) A 45 year old man met with a road traffic accident. He had a massive blood loss. He was disoriented and irritable. On examination his blood pressure was 80/40 mmHg. Respiratory rate was 22/minutes and pulse rate was 140/ minute. His ECG did not show any abnormality
   a. What is your diagnosis ?
   b. Mention the various causes for this condition
   c. Discuss the various clinical features seen with physiological basis
10) Draw the ECG in limb lead II. Describe its uses in clinical practice
11) Explain the functions of saliva
12) Explain the different steps of phagocytosis

Q.P. CODE:M102A021

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

M.B.B.S. DEGREE EXAMINATION – DECEMBER, 2023

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions.

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) Describe the functions and connections of cerebellum. Explain the basis for clinical manifestations of cerebellar lesions (5+5+5)
2) Describe a sarcomere. Explain the molecular basis of skeletal muscle contraction. Differentiate isotonic and isometric muscle contraction with examples. Explain electromyogram with clinical importance (2+6+4+3)

SHORT ANSWER QUESTIONS: 10X5=50

3) Explain crossed extensor reflex with a diagram. Give its functional importance
4) List the functions of reticular formation. Explain how does it regulate muscle tone
5) Mechanism of parturition
6) Draw a labelled diagram of taste pathway
7) Explain endocochlear potential
8) Describe physiological actions and regulation of secretion of insulin
9) A 50 year male attended OP with resting tremor, bradykinesia, rigidity and loss of postural reflexes. What is the diagnosis and its pathophysiological basis
10) Describe the spermatogenesis and list the factors regulating it
11) Explain aldosterone escape
12) A 35 year old female presenting with weight gain, fatigue, cold intolerance, dry skin, hair loss. What is the diagnosis. Discuss the pathophysiology of above disease

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Q.P. CODE:M102A030

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

M.B.B.S. DEGREE EXAMINATION – DECEMBER, 2023

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-I (Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) A young man of 45 years who is slightly overweight and has a sedentary job had a health check up and he was told that his lipid profile is abnormal (5+3+5+2)
   a. What are the parameters included in lipid profile and mention their reference values
   b. Explain the biochemical basis of type II hyperlipoproteinemia
   c. What is the most common complication of hypercholesterolemia
   d. What are the lifestyle modifications suggested ?
2) Describe chemistry, sources, RDA, bio chemical functions and deficiency manifestation of vitamin-D (2+2+6+5)

SHORT ESSAY QUESTIONS: 10X5=50

3) A 30 year old woman during her second pregnancy had a Glucose Tolerance Test (GTT) and the results are as follows:
   - Fasting blood glucose level: 125 mg/dL
   - 1 hour blood glucose level: 210 mg/dL
   - 2 hour blood glucose level: 170 mg/dL

   Plot a GTT graph with these results and interpret?

4) A 20 year old male presented with right hypochondrial pain and erosions, vesicles, bullae on the sun exposed areas of skin. Symptoms exaggerated after alcohol intake. Uroporphyrins present in the urine examination. What is the disorder? What is the enzyme that is deficient ?
5) Explain glycogenolysis
6) Explain detoxification by conjugation
7) Explain factors affecting Basal Metabolic Rate (BMR) and name conditions for decreased BMR
8) Name the inhibitors of Electron Transport Chain and uncouplers of oxidative phosphorylation
9) What is porphyria? Classify different types of porphyria's. Give an account of acute intermittent porphyria
10) Name the bile pigments. Give the significance of their presence in blood and urine. How are they detected in blood and urine?
11) Define clearance tests. How is creatinine clearance done? What is its diagnostic significance?
12) What is a balanced diet? How do you prepare a diet for a normal young adult male of sedentary habits?

Q.P. CODE:M102A031

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

M.B.B.S. DEGREE EXAMINATION – DECEMBER, 2023

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-II (Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) A 14 year old girl presented with tingling sensation in the hands and feet and carpopedal spasm. On examination, Trousseau's and Chvostek's signs were positive. Laboratory results revealed reduced serum calcium levels
   a. What is the normal serum calcium level?
   b. Explain regulation of serum calcium level
   c. Write the sources and daily requirement of calcium
   d. Write the biochemical functions and deficiency manifestations of calcium
   e. What is the significance of ionic calcium? (1+5+2+5+2)
2) A 6 month old infant was bought to hospital with complaints of irritability and failure to thrive. Blood investigations revealed elevated plasma phenylalanine levels.

   Discuss the metabolism of phenylalanine. Write briefly about inborn errors related to phenylalanine

SHORT ANSWER QUESTIONS: 10X5-50

3) A 50 year known alcoholic male patient came with complaints of severe pain in the right big toe and right ankle. On examination swollen big toe redness over the joint and restricted movements. On blood examination uric acid levels increased. What is the disease? Discuss regulation of uric acid metabolism
4) A 8 year girl visited a plant nursery with parents. Girl suddenly developed sneezing, running nose, rashes over the body itching and red eyes. What is your diagnosis? Explain mechanism of action of steroid hormones
5) Name five (05) plasma proteins and write their functions
6) Name five (05) tumor markers and write their significance
7) Enumerate different immunoglobulins. Describe the structure of immunoglobulin and compare salient features of different classes of immunoglobulins
8) What are different types of blotting? Indicate the applications of southern blotting in medicine
9) How are purine nucleotides degraded? Add a note on abnormalities due to excessive purine catabolism
10) Name the important buffer systems in the body. Describe the role of kidney in acid base balance
11) What are the posttranslational modifications taking place in collagen?
12) Mitochondria

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old

Q.P.CODE:502-A-OR

Dr. YSR UNIVERSITY OF HEALTH SCIENCES :: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023
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

1) Describe arches of foot under the following headings: 2+4+2+1+1=10
   a) Classification
   b) Formation of each arch
   c) Factors responsible for maintenance of each arch
   d) Functions
   e) Applied Anatomy

2) Describe liver under the following headings: 1+3+2+3+1=10
   a) Location and extent
   b) Gross features
   c) Relations
   d) Peritoneal reflections
   e) Blood supply

WRITE SHORT NOTES ON: 5x4=20

3) Histology of uterus
4) Mesonephric duct
5) Peroneal artery
6) Femoral sheath
7) Blood supply of large intestine

WRITE BRIEFLY ON: 5x2=10

8) Features of Klinefelter syndrome
9) Synovial joint
10) Attachments of inguinal ligament
11) Blood supply of stomach
12) Pancreatic duct

Q.P. CODE:M102A010

DR. YSR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023
FIRST M.B.B.S. EXAMINATION
HUMAN ANATOMY – PAPER-I
(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80
Note: Answer all questions
Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe the formation and parts of brachial plexus. Describe briefly the vascular relations. Enumerate the branches and distribution of brachial plexus. (5+4+6)

2) Describe the Parotid gland under the following headings:
   a) Location
   b) Capsule
   c) Relations
   d) Structures within the gland and
   e) Nerve supply (2+2+5+3+3)

SHORT ANSWER QUESTIONS: 10X5-50

3) What are sesamoid bones? Enumerate their special features? Name any two.
4) Differentiate between the histology of Elastic and Muscular arteries.
5) Differentiate between Spermatogenesis and Oogenesis
6) What is an arterial anastomosis? Describe briefly the anastomosis around elbow joint.
7) Describe briefly the connections of Cerebellum. Enumerate the cerebellar nuclei.
8) Draw a neat labelled diagram showing the features of a cross section of midbrain at the level of Superior Colliculus.
9) Describe the boundaries and contents of Carotid triangle
10) Describe the relations and blood supply of Palatine tonsils
11) Describe the rotator cuff
12) Classify Synovial joints based on shape of articular surfaces and movements. Give examples to each.

Q.P. CODE:M102A011

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

M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) Describe in detail the origin, course, branches of Coronary arteries. Add a note on their applied anatomy. (3+3+5+4)

2) Describe the coverings, internal structure, blood supply and nerve supply of testis. Add a note on descent of testis. (3+3+3+3+3)

SHORT ANSWER QUESTIONS: 10X5-50

3) Describe the histology of Lung.

4) Describe the rotation of midgut

5) Describe briefly Lyon hypothesis

6) Describe briefly the anatomical basis of Trendelenburg sign

7) Describe briefly the intra-articular structures of knee joint

8) Describe briefly the boundaries, contents and communications of Lesser sac.

9) Describe briefly the relations of head of pancreas

10) Write about Great saphenous vein

11) Femoral triangle

12) What is the anatomical basis of pain in acute appendicitis? Draw a neat labelled diagram of arteries supplying the appendix.

Q.P. CODE:M102A020

DR. YSR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023
FIRST M.B.B.S. EXAMINATION
PHYSIOLOGY – PAPER-I
(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80
Note: Answer all questions.
Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) A 30 year old male patient was involved in a road traffic accident and had sustained multiple serious injuries. On examination he is anxious, pulse 120/minute, systolic blood pressure 70 mm of mercury and diastolic not recordable. Based on your knowledge in physiology answer the following questions:
   a) What is condition called as?
   b) Discuss about the pathophysiology of this condition
   c) What are the various stages of this condition and explain them in detail.
   d) What are the physiological mechanisms available in this patient to tide over the crisis
   e) How will you treat this case (1+4+3+5+2)
2) A 35-year-old apparently healthy male person attempted to climb Mount Everest without much practice. When he is half way through he started to experience shortness of breath. Answer the following questions based on your knowledge in physiology.
   a) What is the cause for his dyspnoea?
   b) Discuss about the pathophysiology of dyspnoea
   c) What is hypoxia?
   d) Discuss about the different types of hypoxia
   e) How does hypoxia differ from asphyxia (2+5+1+6+1)

SHORT ANSWER QUESTIONS: 10X5=50

3) Discuss the role of calcium ion as a second messenger
4) Draw a normal ECG and label. Discuss about the placement of leads
5) What are the different functions of plasma proteins? Name the different types of plasma proteins and their plasma concentration.
6) Discuss about the hazards of blood transfusion.
7) What is the most important site of RBC destruction? Discuss about metabolism of haemoglobin.
8) Discuss about the mechanism of secretion of hydrochloric acid
9) Write briefly about digestion and absorption of carbohydrates
10) Discuss about the principles of dialysis. Make a note on renal transplantation
11) Discuss about the mechanism of concentration of urine
12) Discuss about micturition reflex

Q.P. CODE:M102A021

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

M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

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

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) A 62 year old man was admitted to the hospital with complaints of intention tremors in left arm and missing the target when he attempts to do a work. On examination there was nystagmus, pendular knee jerk and drunken gait. Answer the following questions based on your knowledge in physiology.
   a) What is the most probable diagnosis?
   b) List the connections of the organ involved
   c) Briefly explain four functions of the organ involved
   d) What is the relationship between the side of the organ affected and the side of body where clinical manifestation is observed
   (1+4+8+2)
2) A 45 year old woman presented with buffalo hump, round facies, thinning of limbs, prominent abdomen and purple striae. X-ray showed fracture of vertebra:
   a) What is the most probable endocrine disorder the woman is suffering from?
   b) Explain the physiological basis of the clinical features in the patient
   c) Write briefly about the actions of the hormone involved on blood sugar, blood pressure, blood cells and immunity
   d) Write two investigations needed for confirmation of the clinical diagnosis (1+4+8+2)

SHORT ANSWER QUESTIONS: 10X5=50

3) Draw and label an action potential in a nerve and explain
4) What are the common causes of injury to a nerve? How the nerve injury is graded. Discuss briefly about degenerative changes in a peripheral nerve.
5) Spermatogenesis
6) Oral contraceptive pills
7) Endocrine functions of ovary
8) Where is thalamus situated? Discuss about the functions of thalamus.
9) Differentiate between NREM and REM sleep with respect to behaviour observation, EEG, physiological changes and genesis
10) Draw a neat diagram of visual pathway and label
11) Discuss about the physiological anatomy and functions of middle ear
12) Physiological consequences of sedentary lifestyle

Q.P. CODE:M102A030

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

M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) A diabetic patient during a periodic checkup was found to have elevated plasma cholesterol levels.
   a) What are the biochemical parameters measured under lipid profile? Write their normal values.
   b) How is cholesterol transported in plasma?
   c) Explain the clinical importance of controlling plasma cholesterol in a diabetic patient.
   d) Name two drugs to lower plasma cholesterol levels (4+5+4+2)
2) A 6 year old child was brought to hospital with complaints of slow growth and pain in bones. On examination, he was anemic, had frontal bossing, bowing of legs and swelling of costochondral junctions. Laboratory investigation results were as follows:
   Serum Calcium : 6.2 mg/dL
   Serum Phosphorus : 2.8 mg/dL
   Alkaline phosphatase (ALP) : 720 U/L
   a) Interpret the findings and suggest the likely diagnosis.
   b) Mention the reference range and dietary sources of the nutrient.
   c) Describe the deficiency manifestation
   d) Explain biochemical functions of the nutrient (3+3+4+5)

SHORT ESSAY QUESTIONS: 10X5=50

3) Define enzymes. Enumerate the major classes of enzymes, giving one example for each.
4) Define oxidative phosphorylation. Explain the chemiosmotic theory
5) Define basal metabolic rate (BMR). What are the factors that affect BMR?
6) What is porphyria? Classify the different types of porphyria. Give an account of the acute intermittent porphyria.
7) Enumerate liver function tests and describe in detail any two of them with clinical significance.
8) Define clearance tests. Give details of any one of them.
9) What are the irreversible steps in glycolysis? How are these blocks circumvented?
10) Define Jaundice. Explain the types and classification of jaundice
11) Describe the significance of HMP shunt pathway
12) Describe transport mechanisms of glucose

Q.P. CODE:M102A031

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

M.B.B.S. DEGREE EXAMINATION – JANUARY, 2023

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) A patient with chronic obstructive pulmonary disease was admitted with respiratory infection. The arterial blood gas (ABG) results are as follows:
   pH: 7.2 pCO2 : 65 mmHg pO2 : 70mmHg HCO3 : 32 mmol/L
   a) What is the acid-base status of the patient?
   b) Explain the role of buffers in the regulation of acid-base balance.
   c) What is the role of lungs in the regulation of acid-base balance?
   d) Enumerate the primary changes and the secondary compensatory changes in the different types of acid-base disorders (2+4+4+5)
2) A 70-year-old man with complaints of passing smoky urine in small quantities was brought to the emergency department. He was disoriented and had nausea and hiccough. Laboratory results showed elevated urea levels.
   a) How is urea formed in the body?
   b) What is the normal blood urea level?
   c) How is urea handled by the kidney and how much urea is excreted per day?
   d) Give two causes of uremia (5+2+6+2)

SHORT ANSWER QUESTIONS: 10X5-50

3) Describe the sources, daily requirement, biochemical functions and deficiency manifestations of iron.
4) What is codon? Describe the salient features of genetic code.
5) Synthesis and functions of thyroid hormone
6) Describe the structure, classification and functions of immunoglobulin
7) Tumor markers
8) Explain degradation of collagen and write briefly on abnormalities in collagen.
9) Describe transcription
10) What are the importance functions of albumin. Give the major causes and manifestations of hypoalbuminemia.
11) Write about functions and deficiency manifestations of calcium
12) Enumerate the inborn errors of metabolism associated with the degradation pathway of purines. Mention the major clinical features and biochemical basis of management

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I MBBS - JAN/FEB -2022

Q.P. CODE:501-A-OR

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022
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) Classify white fibers of Cerebral Hemisphere. Give an account of internal capsule under the following headings: 5+3+2=10
   a) Relations
   b) Blood Supply
   c) Applied Anatomy

2) Describe the Brachial plexus under the following headings: 2+3+3+2=10
   a) Formation
   b) Relations
   c) Branches
   d) Applied Anatomy

WRITE SHORT NOTES ON: 5x4=20

3) Axillary group of lymph nodes
4) Biceps brachii muscle
5) Flexor Retinaculum of hand
6) Histology of mixed salivary gland
7) Blastocyst

WRITE BRIEFLY ON: 5x2=10

8) Lower end of Humerus
9) Nerve supply of tongue
10) Dangerous layer of scalp
11) Name the tributaries of internal jugular vein
12) Nerve supply of ring finger

I MBBS- JAN/FEB-2022

Q.P.CODE:502-A-OR

DR NTR UNIVERSITY OF HEALTH SCIENCES :: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022
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 Hip joint under the following headings: 1+4+4+1=10
   a) Type and articulating bones
   b) Fibrous capsule and ligaments
   c) Movements and muscles producing them
   d) Applied Anatomy

2) Describe the stomach under the following headings: 2+3+3+2=10
   a) Morphology and parts
   b) Relations
   c) Blood supply
   d) Lymphatic drainage

WRITE SHORT NOTES ON: 5x4=20

3) Histology of Testis
4) Classification of chromosomes
5) Psoas major muscle
6) Superficial inguinal group of lymphnodes
7) Ligamentum arteriosum

WRITE BRIEFLY ON: 5x2=10

8) Adductor canal boundaries and contents
9) Major opening in thoraco abdominal diaphragm
10) Inguinal (Hasselbach's) triangle boundaries and applied aspect
11) Sternal angle
12) Name the parts of uterine (Fallopian) tube

Q.P. CODE:501-A-CBME

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

M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-I

(Theory Questions)

Time : 2 ½ Hours Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) Describe the mammary gland under
   a. Morphology
   b. Mammary bed
   c. Blood supply
   d. Applied anatomy
2) Enumerate the cranial nerves in order. Describe the course, branches and applied anatomy of facial nerve

SHORT ANSWER QUESTIONS: 10X5-50

3) Neurons
4) Development of bones
5) Cubital fossa
6) Digastric triangle
7) Histology of parotid gland
8) Histology of loose areolar tissue
9) White fibres of brain
10) Wrist drop
11) Adipose tissue
12) Implantation

Q.P. CODE:502-A-CBME

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

M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022

FIRST M.B.B.S. EXAMINATION

HUMAN ANATOMY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) Describe the knee joint under following
   a. Formation
   b. Ligaments
   c. Relations
   d. Applied anatomy
2) Describe the rectum under following
   a. Morphology
   b. Relations
   c. Blood supply
   d. Applied anatomy

SHORT ANSWER QUESTIONS: 10X5-50

3) Neural crest cells
4) Histology of pancreas
5) Great saphenous vein
6) Ischial tuberocity
7) Plural recesses
8) Intercostal nerve
9) Azygos vein
10) Histology of gall bladder
11) Medial malleolus
12) Openings of diaphragm

I MBBS - JAN/FEB-2022

Q.P. CODE:503-A-OR

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022
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 blood pressure. Mention the normal value. Explain in detail the short term regulation of blood pressure. 2+2+6=10

2) Describe the phases of gastric juice secretion. Add a note on peptic ulcer. 7+3=10

WRITE SHORT NOTES ON: 5x4=20

3) Functions of skin
4) Stages of Hemostasis
5) Extra cellular fluid
6) Forced Expiratory Volume (FEV1)
7) Dead Space

WRITE BRIEFLY ON: 5x2=10

8) Diagram of Pacemaker potential
9) Functions of Juxta glomerular apparatus
10) Conducting system of Hear
11) Uses of Ficks Principle
12) Types of Cyanosis

Q.P. CODE:503-A-CBME

DR. NTR UNIVERSITY OF HEALTH SCIENCES:AP:VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022
FIRST M.B.B.S. EXAMINATION
PHYSIOLOGY – PAPER-I
(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80
Note: Answer all questions
Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS:

2X15=30

1) With the help of a suitable diagram, describe the O_2-Hb dissociation curve and mention two factors shifting the curve to right. Enumerate four special features of pulmonary circulation. What is Haldane effect? (6+2+4+3)
2) Define systolic and diastolic blood pressure and give their normal values. Explain the baroreceptor reflex in response to decreased blood pressure. Add a note on orthostatic hypotension. (4+8+3)

SHORT ANSWER QUESTIONS:

10X5-50

3) Facilitated diffusion
4) Mechanism of humoral immunity
5) Megaloblastic anemia
6) Mechanism of HCI secretion from stomach
7) Regulation of pancreatic secretion
8) Mechanism and function of peristalsis and segmental contraction of intestine
9) A new born male presented with anemia, jaundice and generalized edema. His blood group was AB+ and the mother's blood group was A-. Three years back his sister was born and she was normal with blood group of A+.
   a) What is your provisional diagnosis?
   b) What is the cause of anaemia?
   c) How will you treat this condition?
   d) How could you have prevented these symptoms?
10) Counter current multiplier
11) Mechanism of glucose absorption in renal tubule
12) A 70 year old male presented with breathlessness on exertion. On examination, his pulse was 110/min and he had edema in the ankle and feet. The liver and spleen were found to be enlarged and jugular venous pulse was raised.
   a) What is your probable diagnosis?
   b) Explain the pathophysiology of edema in this condition
   c) Mention one drug treat this condition and write its mechanism of action.

I MBBS JAN/FEB-2022

Q.P. CODE:504-A-CBME

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

M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022

FIRST M.B.B.S. EXAMINATION

PHYSIOLOGY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) Describe the structure and function of muscle spindle. List four differences between upper and lower motor neuron paralysis. Explain the physiological basis of any one feature of upper motor neuron paralysis. (4+4+4+3)

2) Describe the mechanism of action and list the functions of insulin. Write four features of diabetes mellitus. Explain the physiological basis of any one feature. (3+6+4+2)

SHORT ANSWER QUESTIONS: 10X5-50

3) Functions of thalamus
4) Consensual light reflex
5) Indicators of ovulation
6) Auditory pathways
7) Steps of spermatogenesis and factors affecting it
8) Draw a labelled diagram and give the ionic basis of nerve action potential
9) A 60 year old male presented with mask face, resting tremor of hand and he walked with short, shuffling steps. Also, he was found to have bradykinesia of movements.
10) List the electrical and mechanical properties of smooth muscle
11) Bodily responses activated by cold
12) A 50 year old female complaints of intolerance to heat and increased appetite. She was found to have exophthalmos and sinus tachycardia.
    a) What is your provisional diagnosis?
    b) Give the physiological basis of sinus tachycardia and intolerance to heat
    c) Name a drug used to treat this condition

Q.P. CODE:500-B-CBME

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

M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-I

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: 2X15=30

1) What are essential fatty acids? Give examples. What are the steps in cholesterol synthesis? Add a note on regulation of cholesterol synthesis. Name the degraded products or derivatives of cholesterol. (2+2+6+3+2)

2) What is polysaccharide? Give examples. How is glycogen synthesized from glucose and broken down to glucose? Add a note on type I glycogen storage disorders. (2+2+4+4+3)

SHORT ESSAY QUESTIONS: 10X5-50

3) A 65 year old chronic smoker and alcoholic suffered from non specific symptoms like epigastric discomfort, recurrent diarrhoea. On examination he had stomatitis, esophagitis and exfoliative dermatitis. Lab test showed raised AST, ALT & GGT with ultrasound features of fatty liver. Treatment with 500 mg daily niacinamide was started. dermatitis and other symptoms reduced. He restricted alcohol and increased consumption of other B complex Vitamins and food sources of B complex vitamins.
   a) What is the diagnosis?
   b) Name the Coenzymes of this Vitamin
   c) What are its Biochemical functions?

4) A 4 year old boy came to the hospital and his serum ALP levels are high:
   a) Enumerate physiological and pathological conditions for raised ALP in this age group
   b) List the isoenzymes of ALP
   c) Reference range of serum ALP
5) What is Detoxification? Add a note on phase one reactions.
6) Describe the types of Protein Energy Malnutrition.
7) Describe Glomerular function tests.
8) What is Nitrogen balance and what are the factors affecting Nitrogen balance?
9) Enumerate the steps of Heme degradation.
10) List out the Biochemical functions of Pyridoxine.
11) What are the therapeutic and diagnostic applications of enzymes?
12) Describe chemiosmotic theory and give two examples for uncouplers.

Q.P. CODE:500-B-CBME

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

M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY – PAPER-II

(Theory Questions)

Time : 2 Hours 40 Minutes Max. Marks: 80

Note: Answer all questions

Draw diagrammatic representation wherever necessary.

SECTION-II – (THEORY QUESTIONS - 80 MARKS)

ESSAY QUESTIONS: 2X15=30

1) What is central dogma of life? Describe the process of translation. What are post translational modification of proteins. Mention three inhibitors of translation. (2+6+4+3)

2) Mention major elements and trace elements of minerals. Describe the functions of calcium. Explain the regulation of serum calcium level. What is normal serum calcium level and add a note on its deficiency manifestations. (2+2+4+4+1+2)

SHORT ANSWER QUESTIONS: 10X5-50

3) A three-year-old girl presented with megaloblastic anaemia and failure to thrive. Obstetric history was uneventful. Aneamia was present, which did not improve despite blood transfusions. There was no response to B12, Folate and Pyridoxine therapy. Urine analysis shown orotic acid crystals. Very high levels of orotate (above 1.0 gm/day, normal is less than 1.4 mg/day) Were excreted. Enzyme assay showed deficiency of orotate phosphoribosyl transferase.
   a) What is the probable diagnosis?
   b) What is the pathogenesis of the finding?
   c) What is the treatment for this condition?

4) A five-year-old child admitted in psychiatry ward has mental retardation with IQ of 50. The child is agitated, hyperactive, tremors and convulsions are noted. The child has hypopigmentation, body sweat and urine has a mousy odour.
   a) What is the diagnosis?
   b) What is the enzyme deficient in this disorder?

5) Describe urea cycle and its disorders.
6) Name Purine bases and add a note on Purine Catabolism.
7) What are plasma proteins and what are the functions of Albumin?
8) Describe the structure of collagen
9) What is transamination reaction? Give two examples.
10) Describe fluid mosaic model of cell membrane.
11) Define acids and basis. Add a note on metabolic acidosis.
12) Describe the types of acquired immunity and their functions.

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DR. NTR UNIVERSITY OF HEALTH SCIENCES: AP: VIJAYAWADA-520 008
M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022
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.

1) Write in detail about oxidation of Glucose in the anerobic conditions. Add a note on regulation and energetics. 6+2+2=10

2) Write in detail about ATP synthesis in the body. Write briefly about inhibitors of ATP. 6+4=10

WRITE SHORT NOTES ON: 5x4=20

3) Digestion and absorption of carbohydrates
4) Oxidative phase of HMP Pathway
5) Protein Energy Malnutrition
6) Phospholipids
7) Functions of Vitamin C

WRITE BRIEFLY ON: 5x2=10

8) Coenzyme forms of Niacin and Riboflavin
9) Enzymes deficient in Galactosemia
10) Products derived from cholesterol
11) Two factors which shift oxygen dissociation curve to the right
12) High Energy Compounds

I MBBS - JAN/FEB 2022

Q.P. CODE:500-B-OR

DR NTR UNIVERSITY OF HEALTH SCIENCES:: VIJAYAWADA – 520 008
M.B.B.S. DEGREE EXAMINATION – JAN/FEB, 2022
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 Urea Cycle. Add a note on Hyperammonemia. 7+3=10

2) Write in detail about DNA Replication. 10

WRITE SHORT NOTES ON: 5x4=20

3) Plasma Calcium

4) Features of Genetic Code

5) Thyroid Function Tests

6) Functions of Immunoglobulins

7) Components of Plasma Membrane

WRITE BRIEFLY ON: 5x2=10

8) Antioxidant Vitamins

9) Functions of Fluorine and Cobalt

10) Mention two causes for elevation in Conjugated Bilirubin

11) Functions of Glucocorticoids

12) Deficiency manifestations of Vitamin D
