KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
(Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956)

Accredited 'A' Grade by NAAC (2nd Cycle) **Placed in 'A' Category by MHRD (GoI)**

MBBS PHASE – I
DEGREE EXAMINATION – DECEMBER 2020

Time: 3 Hours **Max. Marks: 100**

ANATOMY
PAPER – I

Q.P. Code: 1001

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

1. M.C.Q. **25 X 1 = 25**

LONG ESSAY QUESTIONS: **2 X 10 = 20**

2. Describe the heart under following headings: a) External features b) Blood supply c) Applied Anatomy (4 + 4 + 2)

3. Describe the temporo-mandibular joint under the following headings: a) Articular surfaces with ligaments b) Movements c) Applied Anatomy (4 + 4 + 2)

SHORT ESSAY QUESTIONS: **8 X 5 = 40**

4. Describe the events occurring during fertilization.
5. Arterial supply and nerve supply of nasal septum
6. Enumerate the structures passing through foramen Magnum
7. Describe the blood supply of spinal cord
8. Ligaments of shoulder joint
9. Describe the origin, insertion, nerve supply and action of Biceps brachii muscle
10. Enumerate the types of epiphyses with examples
11. Enumerate the types of neuron with examples

SHORT ANSWER QUESTIONS: **5 X 3 = 15**

12. Name the types of pleura
13. List the importance of Sternal angle
14. Name the branches of medial cord of brachial plexus
15. Name the major openings in the diaphragm
16. List the derivatives of Neural crest cells

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-I, December 2020**	**Max. Marks:**	**25 Marks**
Subject :	**Anatomy Paper-I, QP Code: 1001**	**Time:**	**30 Minutes**

Instructions:

- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. Counting of ribs can be done at the level of
   (A) Sternal angle (B) Suprasternal notch
   (C) Xiphisternal joint (D) Body of the sternum

2. Myocardial infarction is
   (A) Necrosis of cardiac muscle (B) Necrosis of smooth muscle
   (C) Necrosis of skeletal muscle (D) None of the above

3. Bronchoscopy is done to visualise
   (A) Gastrointestinal Tract (B) Bronchialtree
   (C) Kidney Ureter Bladder (D) BloodVessels

4. Pulmonary veins drain into
   (A) Left ventricle (B) Rightventricle
   (C) Right atrium (D) Left atrium

5. Which one of the following joints is a primary cartilaginous joint?
   (A) Costovertebral (B) Costotransverse
   (C) First costochondral (D) Manubriosternal

6. Sphenoidal air sinus opens into
   (A) Spheno ethmoidal recess (B) Superior meatus
   (C) Middle meatus (D) Inferior meatus

7. Safety muscle of the tongue is _____
   (A) Palatoglossus (B) Styloglossus
   (C) Genioglossus (D) Chondroglossus

8. All the following are branches of the vertebral artery EXCEPT___artery
   (A) Posterior spinal (B) Anterior spinal
   (C) Posterior inferiorcerebellar (D) Posterior communicating

9. Spinal root of accessory nerve innervates __
   (A) Serratus anterior (B) Stylohyoid
   (C) Styloglossus (D) Sternocleidomastoid

10. Torticollis is caused by _____
    (A) Paralysis of sternocleidomastoid (B) Contraction of trapezius and sternocleidomastoid
    (C) Complete paralysis of trapezious (D) Avulsion of sternomastoid

11. Which part of the vertebral artery lies in the sub–occipital triangle?
    (A) First (B) Second
    (C) Third (D) Fourth

12. Which nucleus is related to ciliary ganglion?
(A) Superior salivatory
(B) Lacrimatory
(C) Inferior salivatory
(D) Edinger–Westphal

13. All the following nerves emerge from the pontomedullary junction EXCEPT ___
(A) Trigeminal
(B) Abducent
(C) Facial
(D) Vestibulocochlear

14. Broca's area is located in which lobe of the cerebral hemisphere?
(A) Parietal
(B) Frontal
(C) Temporal
(D) Occipital

15. Area no 44 of frontal lobe is
(A) Sensory speech area
(B) Motor speech area
(C) Frontal eyefield
(D) Visual area

16. The length of spinal cord in an adult male is_____cm.
(A) 35
(B) 40
(C) 45
(D) 50

17. Elevation of scapula is done by---------- muscle
(A) Levator scapule.
(B) Pectoralis major.
(C) Deltoid.
(D) Supraspinatus

18. The quadrangular space of arm transmits _____
(A) Axillary nerve
(B) Axillary artery
(C) Radial nerve
(D) Circumflex scapular artery

19. Nerve of the second arch is
(A) Mandibular nerve
(B) Facial nerve
(C) Glossopharyngeal nerve
(D) Recurrent laryngeal nerve

20. 16 celled stage of cleavage is called a ------
(A) Blastocyst
(B) Morulla
(C) Zygote
(D) Graafian follicle

21. The thyroid follicles are lined by ___
(A) Simple cuboidal epithelium
(B) Simple squamous epithelium
(C) Simple columnar epithelium
(D) Stratified squamous epithelium

22. Sweat glands are example for---------- glands
(A) Apocrine
(B) Merocrine
(C) Holocrine
(D) Heterocrine

23. The first bone to start ossify:
(A) Mandible
(B) Femur
(C) Clavicle
(D) Humerus

24. The Coracoid process of Scapula is an example of:
(A) Traction epiphysis
(B) Pressure epiphysis
(C) Atavistic epiphysis
(D) Aberrant epiphysis

25. Thickest layer in an artery is:
(A) Tunica intima
(B) Tunica media
(C) Tunica adventitia
(D) All layers are equally thick

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MBBS PHASE – I
DEGREE EXAMINATION – DECEMBER 2020

Time: 3 Hours **Max. Marks: 100**

ANATOMY
PAPER – II

Q.P. Code: 1002

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

1. M.C.Q. **25 X 1 = 25**

LONG ESSAY QUESTIONS: **2 X 10 = 20**

2. Give the detailed morphological features of stomach. Mention its blood and nerve supply (6 + 2 + 2)
3. Describe the femoral triangle under following headings: a) Boundaries b) Contents and c) Applied anatomy. (4+4+ 2)

SHORT ESSAY QUESTIONS: **8 X 5 = 40**

4. Describe the development of pancreas and its congenital anomalies
5. Describe the formation and sites of Portacaval anastomosis.
6. Enumerate the differences between jejunum and ilium
7. Write a note on supports of the uterus
8. Describe the boundaries and contents of deep perineal pouch
9. Describe the ligaments of hip joint
10. Chromosome– structure and types
11. Explain the microscopic structure of liver.

SHORT ANSWER QUESTIONS: **5 X 3 = 15**

12. Enumerate the structures passing through lesser sciatic foramen.
13. Name the contents of adductor canal.
14. Name the coverings of testis.
15. Mention the boundaries and importance of Hepatorenal pouch.
16. Enumerate derivatives of Hindgut

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase I, December 2020**	**Max. Marks:**	**25 Marks**
Subject :	**Anatomy Paper II, QP Code: 1002**	**Time:**	**30 Minutes**

Instructions:

- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. All the following are parts of vermiform appendix **EXCEPT**
   (A) Head (B) Body
   (C) Base (D) Tip

2. The subcostal plane passes through
   (A) Ninth costal cartilage (B) Tenth costal cartilage
   (C) Eighth costal cartilage (D) Eleventh costal cartilage

3. The atypical lumbar vertebra is the
   (A) 5th lumbar (B) 1st lumbar
   (C) 3rd lumbar (D) Variable

4. Stomach bed is formed by following structures **EXCEPT**
   (A) Splenic artery (B) Transverse mesocolon
   (C) Right kidney (D) Anterior surface of pancreas

5. The cystic vein drains into
   (A) Right branch of portal vein (B) Left branch of portal vein
   (C) Stem of portal vein (D) Superior mesentric vein

6. Navicular fossa is found in
   (A) Preprostatic urethra (B) Prostatic urethra
   (C) Bulbar urethra (D) Penile urethra

7. Pyelography is a method to view
   (A) Gastro intestinal organs (B) Urinary organs
   (C) Genital organs in females (D) Piles

8. Zone of prostate- prone for carcinoma is
   (A) Peripheral zone (B) Central zone
   (C) Periurethral zone (D) paraurethral zone

9. Normal position of uterus is
   (A) Anteverted and anteflexed (B) Retroverted andretroflexed
   (C) Anteverted and retroflexed (D) Retroverted andanteflexed

10. Anal columns of Morgagni are present in_____part of anal canal.
    (A) Upper (B) Intermediate
    (C) Lower (D) All of the above

11. The lumbosacral trunk is formed by
    (A) L4 only (B) L5 only
    (C) L4 and L5 (D) S1and S2

12. Portal vein is formed by the junction of :
    (A) Superior mesenteric vein and inferior mesenteric vein
    (B) Splenic vein and superior mesenteric vein
    (C) Splenic vein and inferior mesenteric vein
    (D) Superior mesenteric vein and inferior rectal vein

13. Which ligament of stomach contain short gastric artery?
    (A) Lesser Omentum (B) Greater Omentum
    (C) Gastro–splenic (D) Gastro phrenic

14. Herring bone pattern is observed in:
    (A) Parotid duct (B) Accessory duct
    (C) Pancreatic duct (D) Inter lobular duct

15. Foot drop is due to damage to ---------- nerve.
    (A) Deep peroneal nerve. (B) Posterior tibial nerve.
    (C) Medial plantar nerve (D) Lateral plantar nerve

16. Locking of knee joint is ----------
    (A) Flexion (B) Extension
    (C) None of the above (D) All of the above

17. Which muscle is called the "peripheral heart"
    (A) Popliteus (B) Soleus
    (C) Gastrocnemius (D) Tibialis Posterior

18. Saphenous opening is an oval opening in the _____
    (A) Superficial fatty layer (B) Deep membranous layer
    (C) Deep fascia of the thigh (D) Iliotibial tract

19. Deltoid ligament stabilises the_____joint
    (A) Hip (B) Knee
    (C) Ankle (D) Superior tibiofibular

20. Derivatives of hindgut are all the following except
    (A) Descending colon (B) Sigmoid colon
    (C) Left one third of transverse colon (D) Proctodeum below anal membrane

21. Prostatic utricle in male is a remnant of
    (A) Mesonephric duct (B) Paramesonephric duct
    (C) Ejaculatory duct (D) Ductus deferens

22. The prominent feature in a medium sized artery is _____
    (A) Endothelium (B) Internal elastic lamina
    (C) Tunica adventitia (D) Sub–endothelial connective tissue

23. Centroacinar cells are seen in _____
    (A) Pancreas (B) Liver
    (C) Parotid gland (D) Pituitary gland

24. Down's syndrome is an example of
    (A) Monosomy (B) Trisomy
    (C) Triploidy (D) Polyploidy

25. Chromosome classification is called
    (A) Denver classification (B) Robert classification
    (C) Colorado classification (D) Denovo classification

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MBBS PHASE – I
DEGREE EXAMINATION – JANUARY 2021

Time: 3 Hours **Max. Marks: 100**

PHYSIOLOGY
PAPER – I

Q.P. Code: 1003

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

1. M.C.Q. **25 X 1 = 25**

LONG ESSAY QUESTIONS: **2 X 10 = 20**

2. Define & classify Immunity. Explain mechanism of Cell mediated immunity. (1+2+7)
3. Describe the conducting system of heart .Explain the pathway of spread of cardiac impulse. Add a note on heart block. (5+3+2)

SHORT ESSAY QUESTIONS: **8 X 5 = 40**

4. Classify body fluid compartments with their normal values. Add a note on measurement of ECF
5. Classification and functions of Immunoglobulins
6. Explain the role of peripheral chemoreceptors in regulation of respiration
7. Describe the pressure volume changes occurring during breathing cycle
8. Explain the mechanism of secretion of gastric juice
9. Describe the functions and regulation of Bile juice (2+3)
10. Explain acidification of urine
11. Explain Renin Angiotensin Aldosterone mechanism

SHORT ANSWER QUESTIONS: **5 X 3 = 15**

12. List the factors affecting rate of diffusion
13. Define Dead space volume. Write its normal value
14. List the functions of Colon
15. Define Glomerular filtration rate and write its normal value
16. Define AV nodal delay. Explain its clinical significance

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase – I, January 2021**	**Max. Marks:**	**25 Marks**
Subject :	**Physiology Paper I, QP Code: 1003**	**Time:**	**30 Minutes**

Instructions:
- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. Cell shape and mobility are provided by the following
   (A) smooth muscle (B) Ribosomes
   (C) Nucleus (D) Cytoskeleton

2. Synovial, intraocular and pericardial fluids are examples of
   (A) Lymph (B) Interstitial Fluid
   (C) Transcellular fluid (D) Intracellular fluid

3. Gap junctions are
   (A) Present in skeletal muscle (B) Absent in cardiac muscle
   (C) Present in cardiac muscle (D) Absent in smooth muscle

4. Kernicterus is caused due to accumulation of Bilirubin in
   (A) Liver (B) Spleen
   (C) Kidney (D) Brain

5. Erythropoiesis is stimulated by
   (A) Hypoxia (B) Thrombocytopenia
   (C) Polycythemia (D) Leucopenia

6. Intravascular clotting is normally prevented by
   (A) Heparin (B) Antithrombin
   (C) Protein C (D) All of the above

7. Most of the clotting factors are synthesized in :
   (A) Kidney (B) Liver
   (C) Red bone marrow (D) Spleen

8. Normal MCV in a healthy person is ---------- cubic microns
   (A) 40-60 (B) 70-90
   (C) 90-110 (D) 120-140

9. The type of haemoglobin that has the least affinity for 2,3-DPG
   (A) Hb A (B) HbF
   (C) Reduced hemoglobin (D) HbA2

10. Capacity of the tissue to use O_2 is lost in
    (A) Hypoxic Hypoxia (B) Anaemic Hypoxia
    (C) Stagnant Hypoxia (D) Histotoxic Hypoxia

11. The airway between the trachea and the alveolar sacs divide …….times
    (A) 17 (B) 23
    (C) 29 (D) 32

12. Inspiratory muscles during normal tidal breathing are
    (A) Diaphragm and internal intercostals
    (B) Diaphragm and external intercostals
    (C) Diaphragm and abdominal muscles
    (D) External intercostals and abdominal muscles

13. Which occurs in acclimatization to high altitude
(A) Hyperventilation (B) Anemia
(C) ODC shifts to left (D) Increased PO_2

14. Major percentage of airway resistance is offered by the
(A) Trachea and bigger bronchi (B) Terminal bronchioles
(C) Respiratory bronchioles (D) Alveolar ducts

15. The most potent stimulus for secretin secretion is
(A) Distension of intestine (B) Fats
(C) Proteins (D) Acid chyme

16. Activation of trypsin in the pancreas is prevented by
(A) Trypsin inhibitor (B) Enterokinase enzyme
(C) Trypsinogen (D) Chymotrypsin

17. Which of the following secretions have lowest pH?
(A) Saliva (B) Bile
(C) Gastric juice (D) Pancreatic juice

18. Cholelithiasis means
(A) Substances causing contraction of gall bladder
(B) Substances causing relaxation of gall bladder
(C) Stones in the gall bladder
(D) Bile salts and bile pigments

19. In the absence of vasopressin, the greatest fraction of filtered water is absorbed in the
(A) Proximal Tubule (B) Loop of Henle
(C) Distal tubule (D) Cortical collecting duct

20. Juxta–glomerular apparatus secretes
(A) Renin (B) Erythropoietin
(C) Cholecalciferol (D) Aldosterone

21. Widely used clinical test for estimation of GFR is
(A) Inulin clearance (B) Water clearance
(C) Sucrose clearance (D) Radioactive Cobalt labeled vitamin B_{12}

22. Isometric contraction period of ventricles is associated with
(A) P wave of ECG (B) Closed AV valves & semilunar valves
(C) Maximum ventricular ejection (D) Second heart sound

23. Cardiac output is measured by the following methods EXCEPT
(A) Fick's principle (B) Inulin clearance
(C) Dye dilution method (D) Thermodilution method

24. Marey's law denotes relationship between heart rate &
(A) Blood volume (B) Blood pressure
(C) Force of contraction (D) Conductivity

25. Which of the following is not recorded in ECG?
(A) Atrial depolarization (B) Atrial repolarization
(C) Ventricular depolarization (D) Ventricular repolarization

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MBBS PHASE – I
DEGREE EXAMINATION – JANUARY 2021

Time: 3 Hours **Max. Marks: 100**

PHYSIOLOGY
PAPER – II

Q.P. Code: 1004

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

1. M.C.Q. **25 X 1 = 25**

LONG ESSAY QUESTIONS: **2 X 10 = 20**

2. Explain pathway for pain sensation with a neat–labelled diagram. Define referred pain and give 2 examples. Explain the mechanism of referred pain (5+2+3)
3. Discuss the molecular basis of skeletal muscle contraction. Add a note on Myasthenia Gravis (7+3)

SHORT ESSAY QUESTIONS: **8 X 5 = 40**

4. List the hormones secreted by posterior pituitary gland. Explain milk ejection reflex
5. Describe the regulation of Aldosterone secretion. Add a note on Aldosterone escape
6. List the different methods of Family Planning. Explain the physiological basis of Oral Contraceptives
7. Explain endocrine functions of Ovaries
8. Describe the Cochlear microphonic and Endocochlear potential
9. Describe the refractive errors of the eye with correction
10. Describe the mechanism of temperature regulation on exposure to cold environment
11. Explain the synaptic inhibition

SHORT ANSWER QUESTIONS: **5 X 3 = 15**

12. Explain Anti–inflammatory actions of Cortisol
13. List the placental hormones with their actions
14. Explain Purkinje Sanson Images
15. Classify Memory
16. Explain Salutatory Conduction and its importance

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase I, January 2021**	**Max. Marks:**	**25 Marks**
Subject :	**Physiology Paper II, QP Code: 1004**	**Time:**	**30 Minutes**

Instructions:
- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. Fertilization of ovum takes place in which part of fallopian tubes :
   (A) Fimbrial end (B) Infundibullum
   (C) Ampulla (D) Isthmus

2. In a normal healthy male sperm count per ml of seminal fluid is
   (A) 100-120 millions (B) 70-90 millions
   (C) 50-70 millions (D) 120-150 millions

3. Which of the following triggers the onset of labour:
   (A) ACTH in the fetus (B) ACTH in mother
   (C) Oxytocin (D) Proataglandins

4. The preovulatory LH and FSH surge is caused by a positive effect of:
   (A) Estradiol (B) Melatonin
   (C) Prolactin (D) Endorphine

5. Site where endolymph is present
   (A) Scala vestibuli (B) Scala Media
   (C) Helicotrema (D) Scala Tympani

6. In healthy adult ear, air conduction is
   (A) Better than bone conduction (B) Same as bone conduction
   (C) Less than bone conduction (D) None of the above

7. 'Near response' of eye is not associated with
   (A) Pupilliary constriction (B) Convergence of the visual axes
   (C) Increase in convexity of lens (D) Cilliary muscle relaxation

8. Transection of pituitary stalk leads to increase in
   (A) TSH (B) Prolactin
   (C) GH (D) ACTH

9. Hypothyroidism due to disease of the thyroid gland is associated with increased plasma levels of
   (A) Cholesterol (B) Albumin
   (C) Iodide (D) TBG

10. Action of thyroid hormones is
    (A) Decrease in cardiac output (B) Decrease heart rate
    (C) Decrease BMR (D) Increase BMR

11. Inhibitor of Glucagon secretion is
    (A) Insulin (B) Decrease blood glucose
    (C) Stress (D) Exercise

12. Reduced blood pressure and pigmentation are features of
    (A) Addison's disease (B) Conn's syndrome
    (C) Cushing's syndrome (D) Myxedema

13. A patient with parathyroid deficiency 10 days after inadvertent damage to the parathyroid glands during thyroid surgery would probably have
(A) Low plasma Phosphate & Calcium levels & Tetany
(B) High plasma Phosphate & Calcium levels & Tetanus
(C) A low plamsa Calcium level, increased muscular excitability & a characteristics spasm of the muscle of the upper extremity
(D) High plasma phosphate & calcium levels & bone demineralization

14. Which one plays a major role in coordinating motor activity?
(A) Thalamus (B) Hypothalamus
(C) Cerebellum (D) Basal ganglia

15. Clinically cerebellar disturbances can be demonstrated by all of the following EXCEPT:
(A) Finger–nose test (B) Adiadochokinesia
(C) Rebound phenomenon (D) Shuffling gait

16. Weber–Fechner law deals with:
(A) Frequency discrimination (B) Receptive field organisation
(C) Intensity discrimination (D) Two point discrimination

17. One of the following is an important function of thalamus:
(A) A major sensory relay station (B) Planning and programming of movements
(C) Coordination of movements (D) Control of circadian rhythm

18. The receptor that takes part in inverse stretch reflex is:
(A) Muscle spindle (B) Golgi tendon organ
(C) Pacinian corpuscles (D) Krause's end bulb

19. Somatosensory cortex exhibits highest degree of representation for:
(A) Lips (B) Head
(C) Lowerlimb (D) Trunk

20. According to gate control theory of pain, the gate cell (neuron) is:
(A) Dorsal horn cell (B) Interneurons of substantia gelatinosa
(C) Lateral horn cell (D) Alpha motor neuron

21. NREM sleep is associated with:
(A) Alpha waves (B) Beta waves
(C) Theta waves (D) Delta waves

22. Type of synapse which most commonly exists in the nervous system is:
(A) Dendrodentritic (B) Axo–axonal
(C) Axo–somatic (D) Axo–dendritic

23. Reward and punishment centers are located in which part of brain:
(A) Spinal cord (B) Brainstem
(C) Limbic system (D) Cerebellum

24. Intrafusal fiber of striated skeletal muscle are innervated mainly by following type motor neurons
(A) Alpha (B) Beta
(C) Gamma (D) Delta

25. A traveling nerve impulse does not depolarize the area immediately behind it, because
(A) It is hyperpolarized (B) It is refractory
(C) It is not self– Propagating (D) The condition is always orthodromic

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MBBS PHASE – I
DEGREE EXAMINATION – JANUARY 2021

Time: 2 Hours **Max. Marks: 50**

BIOCHEMISTRY
PAPER-I

Q.P. Code: 1997

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

1. M.C.Q. **15 X 1 = 15**

LONG ESSAY QUESTIONS: **1 X 10 = 10**

2. Describe how Acetyl CoA is completely oxidized via Kreb's cycle. Add a note on energetics of cycle. (8+2)

SHORT ESSAY QUESTIONS: **2 X 5 = 10**

3. Explain with diagram competitive inhibition. Give one example
4. Name two common types of secondary structures. Describe the features of Alpha Helix (1+4)

SHORT ANSWER QUESTIONS: **5 X 3 = 15**

5. What are isoenzymes? Give two examples
6. Explain the role of bile salts in the digestion and absorption of lipids
7. What is Transamination? Give its biological significance
8. Mention the conditions which cause negative Nitrogen balance
9. Mention health risks associated with obesity

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase – I, January 2021**	**Max. Marks:**	**15 Marks**
Subject :	**Biochemistry, QP Code: 1997**	**Time:**	**30 Minutes**

Instructions:

- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. An aqueous solution that supports the cell organelles is :
   (A) Cytosol (B) Centrioles
   (C) Ribosomes (D) Golgi complex

2. Insulin dependent glucose transporter is
   (A) GLUT-1 (B) GLUT-2
   (C) GLUT-3 (D) GLUT-4

3. Enzyme containing zinc
   (A) Fructokinase (B) Pyruvate oxidase
   (C) Alcohol dehydrogenase (D) Xanthine oxidase

4. Which of the following enzyme levels increases in obstructive jaundice?
   (A) Lipase (B) Amylase
   (C) Acid phosphatase (D) Alkaline phosphatase

5. The conversion of pyruvate to acetyl CoA and CO_2
   (A) Is reversible (B) Is catalyzed by Pyruvate dehydrogenase
   (C) Depends on the coenzyme biotin (D) Occurs in the cytosol

6. All the following are hyperglycemic hormones expect,
   (A) Cortisol (B) Epinephrine
   (C) Insulin (D) Glucagon

7. Cori's cycle involves the conversion of:
   (A) Liver glucose to lactate (B) Pyruvate to lactate in muscle
   (C) Muscle lactate to glucose in the liver (D) Pyruvate to glucose in the liver

8. The lipoprotein with the fastest electrophoretic mobility is
   (A) Chylomicron (B) VLDL
   (C) IDL (D) HDL

9. A 20-carbon fatty acid among the following is
   (A) Oleic acid (B) Linoleic acid
   (C) Linolenic acid (D) Arachidonic acid

10. Which of the following lipids is deficient in infants with respiratory distress syndrome?
    (A) Sphingomyelin (B) Cardiolipins
    (C) Leukotrienes (D) Dipalmitoyl phosphatidyl choline

11. Example for defense protein is
    (A) Apoferritin (B) Immunoglobulin
    (C) Keratin (D) Elastin

12. The pH at which the molecule acts as zwitterion is called as:
    (A) Isoelectric pH (B) Isoelectric focussing
    (C) Optimum pH (D) Neutral pH

13. Which of the following is sulfur containg amino acid?
    (A) Tyrosine (B) Phenylalanine
    (C) Methionine (D) Valine

14. Basal Metabolic rate (BMR) is raised in
    (A) Hyperthyroidism (B) Under nutrition
    (C) Starvation (D) Hypothyroidism

15. Respiratory quotient of Carbohydrates is about
    (A) 0.7 (B) 0.8
    (C) 0.9 (D) 1

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KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
(Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956)

Accredited 'A' Grade by NAAC (2nd Cycle) **Placed in 'A' Category by MHRD (GoI)**

MBBS PHASE – I
DEGREE EXAMINATION – JANUARY 2021

Time: 2 Hours **Max. Marks: 50**

BIOCHEMISTRY
PAPER-II

Q.P. Code: 1998

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

1. M.C.Q. **10 X 1 = 10**

LONG ESSAY QUESTIONS: **1 X 10 = 10**

2. Write a note on body distribution of calcium, sources, RDA, absorption and regulation of blood Calcium levels (1+1+1+3+4)

SHORT ESSAY QUESTIONS: **3 X 5 = 15**

3. Explain Post–transcription modification of mRNA
4. What are salient features of Watson Crick model of DNA
5. Describe the functions of vitamin A

SHORT ANSWER QUESTIONS: **5 X 3 = 15**

6. What is meant by semiconservative mechanism of replication?
7. State the deficiency of folic acid –causes and manifestations
8. Mention any three causes of respiratory acidosis
9. Mention the blood and urinary findings in Hemolytic Jaundice
10. Enumerate any three causes of Proteinuria (1+1+1)

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase – I, January 2021**	**Max. Marks:**	**10 Marks**
Subject :	**Biochemistry, QP Code: 1998**	**Time:**	**30 Minutes**

Instructions:

- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. A base substitution that causes regular codon to change into another codon that codes for different amino acid is said to be
   (A) Nonsense mutation (B) Silent mutation
   (C) Missense mutation (D) None of the above

2. Intron is that portion of :
   (A) DNA that is cleaved off during replication (B) mRNA that is removed after transcription
   (C) tRNA that is added on after its synthesis (D) Protein that is removed after translation

3. Gout is a metabolic disorder of catabolism of:
   (A) Pyrimidine (B) Purine
   (C) Alanine (D) Phenylalanine

4. Manifestation of Vitamin A deficiency is
   (A) Painful joints (B) Night blindness
   (C) Loss of hair (D) Thickening of long bones

5. Vitamin deficiency which develops in people eating only maize as staple diet is:
   (A) Riboflavin (B) Cobalamin
   (C) Niacin (D) Thiamine

6. Vitamin involved in one–carbon metabolism is:
   (A) Folic acid (B) Thiamine
   (C) Pyridoxine (D) Niacin

7. Beriberi is caused by a deficiency of:
   (A) Thiamine (B) Thymine
   (C) Threonine (D) Tyrosine

8. Important buffer in extracellular fluid is
   (A) Hemoglobin (B) Bicarbonate
   (C) Protein (D) Phosphate

9. The predominant cation of the extracellular fluid (ECF) is :
   (A) Na^+ (B) K^+
   (C) Ca^{++} (D) Mg^{++}

10. Factors favoring calcium absorption includes all except
    (A) Low gastric pH (B) Lysine
    (C) Oxalates (D) Vitamin D

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