KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
[Declared as Deemed-to-be University u/s 3 & 12B of the UGC Act, 1956]
Accredited A + Grade by NAAC (3rd Cycle) **Placed in 'A' Category by MoE (GoI)**

MBBS PHASE – II
(CBME)
DEGREE EXAMINATION – APRIL 2024

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

PHARMACOLOGY
PAPER – I

Q.P. Code: A007

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. **20 X 1 = 20**

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

2. A 24-years-old farm worker is rushed to a nearby emergency department after an accidental exposure to pesticides. (3+3+4)
   a) What clinical presentation can be expected in this case and explain reasons for the same?
   b) What supportive measures are essential at admission?
   c) Mention the specific drugs used in this condition with the rationale for the same.
3. A 75years old male patient admitted for pulmonary edema was given drug X via intravenous route. After few days he developed muscle weakness and cramps. Blood investigations revealed serum potassium of 2mEq/L suggestive of hypokalemia. (1+7+2)
   a) Which class of drugs does "drug X" belong to?
   b) Discuss the mechanism of action, uses and adverse effects of "drug X".
   c) How can hypokalemia be prevented?

SHORT ESSAY QUESTIONS: **9 X 5 = 45**

4. Discuss the various sources of drugs with suitable examples.
5. Discuss different types of receptor antagonism with suitable examples.
6. Enumerate the class of drugs used in acute congestive glaucoma . Discuss their mechanism of action in glaucoma.
7. A 25-year-old woman, who is a known case of Grand mal epilepsy has been brought to the emergency department with continuous seizures without regaining of consciousness in between the seizure episodes. There is a history of poor compliance to antiepileptic drug therapy. (1+4)
   a) What is the diagnosis?
   b) Discuss in detail the management of the above condition.
8. Mention the differences between Tricylic antidepressants (TCAs) and Selective serotonin reuptake inhibitors (SSRIs).
9. Discuss the general principles in the drug therapy of Parkinsonism.
10. A 56 year old female patient presented to casualty with sudden onset left sided chest pain radiating to left arm. ECG revealed acute anterior wall myocardial infarction. Mention three classes of drugs used in treatment of acute MI with suitable examples and explain the rationale for their use in MI patient. (2+3)
11. A 34-year-old man admitted to the emergency department with a presumptive diagnosis of pulmonary thromboembolism was started on treatment that included a drug that acts by accelerating the binding between antithrombin III and clotting factor proteases. Name the drug which has such mechanism of action. Compare and contrast this drug with Warfarin. (1+4=5)
12. Enumerate plasma expanders. Mention properties of ideal plasma expanders & its indications.

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

13. Define drug tolerance. Give two examples.
14. Write **three** uses of ethyl alcohol.
15. Name any **three** extrapyramidal syndromes induced by typical antipsychotics.
16. Explain the rationale for use of thiopentone sodium in the induction of anaesthesia.
17. Name **three** Parenteral Iron preparations and write their **three** indications.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, (CBME) April 2024**	**Max. Marks:**	**20 Marks**
Subject :	**Pharmacology Paper-I, QP Code: A007**	**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. Transdermal drug delivery systems offer the following advantages **EXCEPT**
   (A) Produce high peak plasma concentration of the drug
   (B) Uniform plasma concentration of the drug
   (C) Less interindividual variations in the achieved plasma drug concentration
   (D) Avoid hepatic first-pass metabolism of the drug

2. Alkalinization of urine hastens the excretion of
   (A) Weakly basic drugs (B) Weakly acidic drugs
   (C) Strong electrolytes (D) Nonpolar drugs

3. Marked redistribution is a feature of
   (A) Highly lipid soluble drugs (B) Poorly lipid soluble drugs
   (C) Depot preparations (D) Highly plasma protein bound drugs

4. The loading dose of a drug is governed by its
   (A) Renal clearance (B) Plasma half life
   (C) Volume of distribution (D) Elimination rate constant

5. Lipid insoluble quaternary ammonium anticholinesterases have predominant action on
   (A) Central nervous system (B) Cardiovascular system
   (C) Smooth muscles (D) Skeletal muscles

6. Anticholinergics preferred in pre-anaesthetic medication is
   (A) Benzhexol (B) Clidinium
   (C) Gycopyrrolate (D) Oxyphenonium

7. Which is **NOT** a cardioselective beta 1 blocker?
   (A) Metoprolol (B) Atenolol
   (C) Acebutolol (D) Sotalol

8. Adrenergic preferred in partial and complete heart block is
   (A) Adrenaline (B) Dopamine
   (C) Dobutamine (D) Isoprenaline

9. The drug of choice for trigeminal neuralgia is
   (A) Phenobarbitone (B) Valproic acid
   (C) Clonazepam (D) Carbamazepine

10. Which of the following general anaesthetics has **poor** muscle relaxant action?
    (A) Ether (B) Nitrous oxide
    (C) Halothane (D) Isoflurane

11. Indicate the opioid analgesic that is used as transdermal patch for chronic and cancer pain
    (A) Morphine (B) Pentazocine
    (C) Fentanyl (D) Tramadol

12. Which of the following compounds acts as a benzodiazepine antagonist?
    (A) Flumazenil (B) Naloxone
    (C) Furazolidone (D) Naltrexone

13. Indications for the use of antiplatelet drugs include the following **EXCEPT**
    (A) Secondary prophylaxis of myocardial infarction
    (B) Unstable angina pectoris
    (C) Disseminated intravascular coagulation
    (D) Stroke prevention in patients with transient ischaemic attacks

14. The **rare** but characteristic adverse effect of HMGCoA reductase inhibitors is
    (A) Onycholysis
    (B) Myopathy
    (C) Alopecia
    (D) Oculomucocutaneous syndrome

15. ACE inhibitors are **contraindicated** in the following condition
    (A) Diabetes mellitus
    (B) Hypertension in old age groups
    (C) Scleroderma
    (D) Bilateral renal artery stenosis

16. Select the drug which can markedly potentiate the vasodilator action of organic nitrates
    (A) Propranolol
    (B) Fluoxetine
    (C) Hydrochlorothiazide
    (D) Sildenafil

17. The following drug is preferred for termination as well as prophylaxis of paroxysmal supraventricular tachycardia
    (A) Digoxin
    (B) Verapamil
    (C) Propranolol
    (D) Quinidine

18. Choose the most suitable antihypertensive drug for a 45-year-old male who is a company executive who has a travelling job. His blood pressure is 160/100 mm Hg, and he is a diabetic controlled with glibenclamide 5 mg twice a day
    (A) Propranolol
    (B) Enalapril
    (C) Clonidine
    (D) Hydrochlorothiazide

19. Rebound hypertension on sudden stoppage of medication is most likely to occur with
    (A) Hydrochlorothiazide
    (B) Prazosin
    (C) Clonidine
    (D) Lisinopril

20. In cirrhotic ascites, which diuretic is preferred?
    (A) Acetazolamide
    (B) Spironolactone
    (C) Furosemide
    (D) Any of the above

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MBBS PHASE – II
(CBME)
DEGREE EXAMINATION – APRIL 2024

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

PATHOLOGY
PAPER – I

Q.P. Code: A009

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. **20 X 1 = 20**

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

2. Define amyloidosis. Discuss its pathogenesis. Add a note on amyloidosis of spleen.
3. Define thrombosis. Discuss its etiopathogenesis and add a note on fate of thrombus. (2+5+3)

SHORT ESSAY QUESTIONS: **9 X 5 = 45**

4. Define necrosis. Discuss the pathology of coagulative necrosis with examples. (1+4=5)
5. Classify granulomas.
6. Discuss the steps of skin wound healing by secondary intention.
7. Discuss mechanism of Transplant Rejection.
8. Enumerate the applications of Karyotyping.
9. Describe the gross and microscopy of Chronic Venous Congestion Liver.
10. Discuss the pathogenesis of renal edema.
11. Describe the peripheral blood findings in Chronic Myeloid Leukemia.
12. Describe the mechanism of viral carcinogenesis by DNA viruses.

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

13. List **six** differences between apoptosis and necrosis.
14. Enumerate **three** factors affecting healing process.
15. Enumerate **three** causes of Secondary Immunodefficiency.
16. Mention **three** examples of Type III hypersensitivity reaction.
17. Write the peripheral smear findings in Iron deficiency anaemia.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, (CBME) April 2024**	**Max. Marks:**	**20 Marks**
Subject :	**Pathology Paper-I, QP Code: A009**	**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. Chemically diagnostic useful laboratory sign of cell injury is
   (A) Increased Creatinine Kinase (Muscle cell injury) (B) Reduced Transaminase levels
   (C) LDH is normal (D) Serum creatinine is zero

2. Lipofucsin pigment is seen in
   (A) Hypertrophy (B) Atrophy
   (C) Hypoplasia (D) Hyperplasia

3. The macrophage in brain is
   (A) Schwann cell (B) Oligodendrocyte
   (C) Astrocyte (D) Microglia

4. Tennis-racket fungus is seen in
   (A) Histoplasma (B) Coccidiodomycosis
   (C) Blastomycosis (D) Cryptococosis

5. Following are the cell-derived chemical mediators **EXCEPT**
   (A) Cytokines (B) Fibrinolytic System
   (C) Platelet activating factor (D) Vasoactive amines

6. Ghon's complex is pathognomonic of
   (A) Progressive primary tuberculosis (B) Miliary tuberculosis
   (C) Primary tuberculosis (D) Secondary tuberculosis

7. If mast cells are identified in a tissue biopsy from an inflammatory process , which type of immune reaction is most likely to occur
   (A) Type I hypersensitivity (B) Type II hypersensitivity
   (C) Type III hypersensitivity (D) Type IV hypersensitivity

8. Following are the examples of malignant connective tissue tumours **EXCEPT**
   (A) Chondrosarcoma (B) Liposarcoma
   (C) Rhabdomyosarcoma (D) Teratoma

9. Myofibroblasts are seen in
   (A) Muscle Septae (B) Wound margin
   (C) Normal Connective tissue (D) Wall of Blood vessels

10. In Marfan's Syndrome the ratio of upper to lower segment of body is
    (A) Normal (B) Lower
    (C) Higher (D) Any of the above

11. Most **Common** Mendelian disorder is
    (A) Cystic fibrosis
    (B) Colonic polyposis
    (C) Familial hypercholesterolaemia
    (D) Neurofibromatosis

12. Facial puffiness is an early manifestation of
    (A) Cardiac disease
    (B) Hepatic disease
    (C) Renal disease
    (D) Nutritional

13. A patient with signs of pulmonary insufficiency, thrombocytopenia, Petechae in conjunctiva with a history of fracture of femur should be suspected for
    (A) Systemic embolism
    (B) Pulmonary embolism
    (C) Fat embolism
    (D) Air embolism

14. Chloroma is a tumour of
    (A) Soft Tissue
    (B) Bone
    (C) Haematopoietic tissue
    (D) Skeletal muscle

15. Autophagic vacuoles are increased in
    (A) Hyperplasia
    (B) Atrophy
    (C) Metaplasia
    (D) Hypertrophy

16. Vinyl chloride is a carcinogenic agent involved in the pathogenesis of
    (A) Angiosarcomas
    (B) Leukemias
    (C) Prostatic carcinomas
    (D) Mesotheliomas

17. Thiamine defficiency is associated with following **EXCEPT**
    (A) Alcoholism
    (B) Causes cardiac failure
    (C) Causes subacute combined degeneration of spinal cord
    (D) Produce confusion and amnesia

18. Following laboratory findings, suggest tuberculous meningitis **EXCEPT**
    (A) 100 to 600 neutrophils
    (B) 50 to 300 mg proteins
    (C) < 50>5/ML
    (D) >20/ML

19. Edema due to reduced plasma oncotic pressure is seen in
    (A) Increased hydrostatic pressure
    (B) Protein losing glomerulopathy
    (C) Neurohumoral dysregulation
    (D) Post irradiation

20. Shock is characterised by all the features **EXCEPT**
    (A)) Paradoxical embolus
    (B) Reduced effective circulating blood volume
    (C) Hypertension
    (D) Cellular hypoxia

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MBBS PHASE – II
(CBME)
DEGREE EXAMINATION – APRIL 2024

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

MICROBIOLOGY
PAPER – I

Q.P. Code: A011

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

Question Number **Marks**

1. M.C.Q. **20 X 1 = 20**

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

2. A 30-year-old male was admitted five days after a crush injury to his left leg following a Road Traffic Accident. He was treated by a local quack. Examination of the wound showed it to be heavily contaminated with soil, local muscles were crashed with edema, pain at the site and crepitus was felt on palpitation. (2+3+5)
    a. What is the probable clinical diagnosis? Write the likely causative organisms in this case.
    b. Describe the etiopathogenesis of this condition.
    c. Describe its laboratory diagnosis.
3. An eight year old child presented with fever since 10 days. As per the clinical evaluation, you have diagnosed him as a case of Typhoid fever (4+1+5)
    a. How are you going to distinguish the microbes causing fever?
    b. Which investigation is preferred for this patient and why?

SHORT ESSAY QUESTIONS: **9 X 5 = 45**

4. Enumerate antigen presenting cells. Describe the antigen presenting mechanism of viral particles.
5. Enumerate anaerobic transport media. Discuss the steps of sample collection for anaerobic culture.
6. An elderly male is found to have less hemoglobin for his age. The blood smear showed hypochromic microcytic anemia. On urine microscopy, pus cells more than 10 / HPF, RBCs present, eggs large (110-170 5m long by 40-70 5m wide) and bear a conspicuous terminal spine. a) What is the probable parasite responsible for anemia? b) Describe the life cycle of the parasite.
7. Write the differences between innate and acquired immunity.
8. Write a note on Type III hypersensitivity reaction.
9. Write a note on Rota viral diarrhea.
10. Write a short note on Cutaneous Leishmaniasis.
11. Define Sterilization. Discuss the working principle and uses of Autoclave.
12. Discuss the laboratory diagnosis of intestinal Amoebiasis.

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

13. Give examples of normal flora based on anatomical site.
14. Give **three** examples for autoimmune disorders.
15. List **three** etiological agents of community onset endocarditis.
16. Write the differences between gram-positive and gram-negative organism cell wall with neat labeled diagram
17. Enumerate parasitic causes of skin and soft tissue infections.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II (CBME), April 2024**	**Max. Marks:**	**25 Marks**
Subject :	**Microbiology Paper-I, QP Code: A011**	**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. Which of the following is known as Jewesh house wives disease
   (A) Ascariasis (B) Paragonimiasis
   (C) Strongyloides (D) Diphyllobothriasis

2. Select the eggs that are non-bile stained from the below list
   (A) Diphyllobothrium latum (B) Ascaris lumbricoides
   (C) Ancylostoma duodenale (D) Trichuris trichura

3. Salmonella typhi carriers harbor the organisms in
   (A) Blood (B) Kidney
   (C) Gall bladder (D) Spleen

4. All of the following Vibrio species are halophilic **EXCEPT**
   (A) Vibrio cholerae (B) Vibrio parahaemolyticus
   (C) Vibrio alginolyticus (D) Vibrio vulnificus

5. Germ tube test is diagnostic for
   (A) Candida glabrata (B) Candida albicans
   (C) Cryptococcus (D) Coccidioides immitis

6. Classical triad of Congenital Rubella Syndrome includes
   (A) Fever, Encephalopathy, Vesicular lesions (B) Cataract, Deafness, Patent Ductus Arteriosus
   (C) Deafness, Meningitis, Fever (D) Fever, Rash, Asthma

7. Which of the following is a DNA virus?
   (A) Herpes virus (B) Measles virus
   (C) Rubella virus (D) Influenza virus

8. Suitable site of biopsy for diagnosis of Trichinellosis is
   (A) Diaphragm (B) Pectoralis major
   (C) Deltoid muscle (D) Intercostal muscles

9. An adult male consumed semi-cooked egg for his dinner. Next day morning he developed severe vomiting and dysentery. His stool sample grew NLF colonies on MacConkey's medium and showed acid butt /alkaline slant with plenty of H_2S gas on TSI medium. What is the likely causative agent involved?
   (A) Salmonella typhimurium (B) Salmonella sonnei
   (C) Salmonella typhi (D) Salmonella paratyphi A

10. Name the cells producing Perforins.
    (A) Plasma cells (B) Suppressor T cells
    (C) Cytotoxic T cells (D) Memory helper T cells

11. Select the patient mentioned below who **SHOULD NOT** receive live vaccines
    (A) Patients suffering from hay fever (B) Patients who have received a stem cell transplant.
    (C) A patient on Antitubercular drugs (D) Patients with Wiskott-Aldrich syndrome

12. Identify the characteristic feature of Anaerobic bacteria
    (A) Foul smelling discharge
    (B) Fail to grow in aerobic media
    (C) Gas in tissue
    (D) All of the above

13. Person is having Immunity right from the birth. Choose which of the following about this immunity is **wrong**?
    (A) Immune response occurs in minutes
    (B) Non-specific
    (C) 1st line of defence
    (D) Need prior contact with the antigen

14. Choose which of the following is an example of Antibody Dependent Cellular Dysfunction (ADCD)?
    (A) Grave's disease
    (B) Haemolytic anemia
    (C) Transfusion reaction
    (D) Pemphigus vulgaris

15. Gram stain from the throat sample is performed. Cuniform arrangement of gram positive bacilli is seen. Identify the organism
    (A) Staphylococcus
    (B) Streptococcus
    (C) Corynebacterium diphtheriae
    (D) Bacillus anthracis

16. Choose which of the following cocci-arrangement is **wrong**?
    (A) Tetrad - Micrococcus
    (B) Cluster - Streptococcus
    (C) Pair - Gonococcus
    (D) Cluster - Staphylococcus

17. Identify the agar concentration required to prepare nutrient agar
    (A) 2%
    (B) 6%
    (C) 0.25%
    (D) 0.50%

18. Name the most common route of spread of Hepatitis E
    (A) Sexual
    (B) Feco-oral
    (C) Blood transfusion
    (D) Intravenous injection

19. Choose the mechanism of anemia which is induced by Schistosoma hematobium infection
    (A) Reduced absorption of Iron
    (B) Acute blood loss in intestine
    (C) Extra corporal chronic blood loss
    (D) Increased depletion of Vitamin B_{12}

20. Following are the biological indicators used to check the effectiveness of sterilization **EXCEPT**
    (A) Geobacillus stearothermophilus-steam sterilizer
    (B) Bacillus atrophaeus-dry heat sterilizer
    (C) Geobacillus stearothermophilus-Gas plasma sterilizer
    (D) Bacillus atrophaeus-liquid acetic acid sterilizer

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