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 (3rd Cycle) Placed in 'A' Category by MHRD (GoI)

MBBS PHASE – II
(CBME)
DEGREE EXAMINATION – FEBRUARY 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 50-year-old lady complains of feelings of sadness, hopelessness and worthlessness. On examination all systems are normal and routine investigations do not reveal any abnormality. She is diagnosed to be having unipolar depression. a) Mention the various classes of drugs effective in the above condition with relevant examples in each class. b) Write the differences between selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants. (TCAs) c. Mention the uses and adverse effects of SSRIs. (3+3+4)
3. A 70 years old male smoker, known case of hypertension, diabetes gets admitted in emergency. The patient developed symptoms such as crushing pain in chest, profuse sweating while he was climbing upstairs. He was given "drug A" sublingually and the symptoms were relieved within 5 minutes. a) Identify drug A. b) Discuss the mechanism of action, uses and adverse effects of drug A. (1+3+4+2)

SHORT ESSAY QUESTIONS: 9 X 5 = 45

4. Define the term Biotransformation. Discuss phase I Biotransformation reactions.
5. Define the term teratogenicity and its effect on various stages of development with suitable examples.
6. Enumerate Atropine substitutes. Discuss their uses with the rationale for the same.
7. Explain with reasoning the therapeutic uses of beta blockers.
8. Describe the sites of action of ocular hypotensive drugs with suitable diagram of aqueous humour dynamics.
9. 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. a. What is the diagnosis? b. Discuss in detail the management of the above condition. (1+5)
10. A 32-year old hypertensive woman came to OPD with 8 weeks of amenorrhoea and was tested positive for pregnancy. a) Enumerate antihypertensives which should be avoided in this case with explanation of the specific effect of them during pregnancy. b) Enumerate antihypertensives safe during pregnancy. (3+2)
11. A 71-year-old woman who underwent hip replacement was discharged from the hospital with an appropriate post discharge therapy that included daily subcutaneous injection of regular heparin. Compare and contrast heparin with low molecular weight heparin. Mention the antagonist for heparin overdose. (4+1)
12. Classify Hypolipidaemic agents. Write mechanism of action and uses of Statins.

SHORT ANSWER QUESTIONS: 5 X 3 = 15

13. Mention three reasons as to why morphine is contraindicated in head injury patients.
14. A 45-year-old lady complains of difficulty in falling asleep over the past one month. The history does not reveal any underlying cause for the insomnia. General and systemic examination is normal. Routine investigations are normal. a) Name the non-benzodiazepine hypnotics (Z drugs). b)Mention the advantages of non-benzodiazepine hypnotics (Z drugs) over benzodiazepines.
15. Name three antihypertensive drugs used in treatment of hypertensive emergency.
16. Enumerate Oral Iron preparations and their adverse effects.
17. A 55-year-old male patient presented to the emergency with head injury following which he developed severe headache, blurred vision, vomiting and altered consciousness. a) What are the symptoms suggestive of? (1m) b) Which class of diuretics are preferred and why? (2 m)

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Accredited A+ Grade by NAAC (3rd Cycle) **Placed in 'A' Category by MHRD (GoI)**

MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, (CBME) February 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. Majority of drugs cross biological membranes primarily by:
   (A) Passive diffusion (B) Facilitated diffusion
   (C) Active transport (D) Pinocytosis

2. 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

3. The most commonly occurring conjugation reaction for drugs and their metabolites is
   (A) Glucuronidation (B) Acetylation
   (C) Methylation (D) Glutathione conjugation

4. The anticholinesterase used in the management of Belladonna poisoning is
   (A) Neostigmine (B) Physostigmine
   (C) Phyridostigmine (D) Rivastigmine

5. The mydriatic anticholinergic with quickest and briefest action and preferred for fundoscopy is
   (A) Atropine (B) Cyclopentolate
   (C) Homatropine (D) Tropicamide

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

7. Additive depression of Sinus node and A-V node conduction is seen when propranolol is combined with
   (A) Nifedipine (B) Enalapril
   (C) Losartan (D) Verapamil

8. The antiepileptic drug which does not produce enzyme induction is
   (A) Phenobarbitone (B) Sodium valproate
   (C) Phenytoin (D) Primidone

9. The effect of Thiopentone on the CNS is quickly terminated because of
   (A) Rapid metabolism in the CNS (B) Quick first-pass elimination
   (C) Redistribution (D) Rapid metabolism in systemic circulation

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

11. The following drug is effective in chlorpromazine induced parkinsonism
    (A) Trihexyphenidyl (B) Selegiline
    (C) Bromocriptine (D) Levodopa + Carbidopa

12. Foetus of a pregnant woman on lithium should be monitored for
    (A) Neural tube defects (B) Cardiac defects
    (C) Urogenital defects (D) Facial defects

13. A patient has an episode of hematemesis following streptokinase infused for the treatment of deep vein thrombosis. Which of the following drugs would be most effective in controlling the bleeding episode
(A) Vitamin K
(B) Noradrenaline
(C) Epsilon aminocaproic acid
(D) Rutin

14. Aspirin prolongs bleeding time by inhibiting the synthesis of
(A) Clotting factors in liver
(B) Prostacyclin in vascular endothelium
(C) Cyclic AMP in platelets
(D) Thromboxane A2 in platelets

15. Select the hypocholesterolemic drug which interferes with intestinal absorption of bile salts and cholesterol, and secondarily increases cholesterol turnover in the liver
(A) Gemfibrozil
(B) Cholestyramine
(C) Lovastatin
(D) Bezafibrate

16. Calcium channel blockers are used in follwing conditions EXCEPT
(A) Angina
(B) Arrhythmia
(C) Congestive heart failure
(D) Hypertension

17. All of the following drugs are useful for long-term treatment of congestive heart failure **EXCEPT**
(A) Carvediolol
(B) Ramipril
(C) Dobutamine
(D) Spironolactone

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

19. Filgrastim is _____.
(A) Granulocyte-colony stimulating factor
(B) Granulocyte-monocyte-colony stimulating factor
(C) GnRH analogue
(D) T-cell stimulating factor

20. A 50-year-old man has a history of frequent episodes of renal colic with high calcium renal stones. The most useful diuretic in the treatment of recurrent calcium stones is
(A) Spironolactone
(B) Furosemide
(C) Hydrochlorthiazide
(D) Acetazolamide

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MBBS PHASE – II
DEGREE EXAMINATION – FEBRUARY 2024

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

PHARMACOLOGY
PAPER – I

Q.P. Code: 1006

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. Classify antiepileptic drugs. Explain the mechanism of action, uses and adverse effects of sodium valproate. (3+2+3+2)
3. Classify antianginal drugs. Enumerate the mechanism of action, uses and adverse effects of Nitrates. Add a note on nitrate tolerance. (3+3+2+1+1)

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

4. Discuss the various types of combined effect of drugs with suitable examples.
5. Enumerate Atropine substitutes. Discuss their uses with the rationale for the same.
6. Enumerate centrally acting skeletal muscle relaxants. Discuss their uses and adverse effects.
7. Discuss Indications and contraindications of morphine.
8. Discuss the uses and adverse effects of benzodiazepines.
9. Discuss uses and adverse effects Thiazide Diuretics.
10. Enumerate advantages of low molecular weight heparins over conventional heparin.
11. Discuss Uses and adverse effects of plasma expanders with example.

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

12. Explain the term bioavailability with suitable examples of various routes.
13. Mention the rationale for the use of adrenaline in anaphylactic shock.
14. Enumerate three peripherally acting skeletal muscle relaxants. Write their three uses.
15. Write three advantages of combining levodopa with carbidopa.
16. Write the rationale for combining Furosemide with Spironolactone.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, February 2024**	**Max. Marks:**	**25 Marks**
Subject :	**Pharmacology Paper-I, QP Code: 1006**	**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 'orphan drug' is
   (A) A very cheap drug
   (B) A drug which has no therapeutic use
   (C) A drug needed for treatment or prevention of a rare disease
   (D) A drug which acts on Orphanin receptors .

2. Bioavailability of drug refers to
   (A) Percentage of administered dose that reaches systemic circulation in the unchanged form
   (B) Ratio of oral to parenteral dose
   (C) Ratio of orally administered drug to that excreted in the faeces
   (D) Ratio of drug excreted unchanged in urine to that excreted as metabolites

3. A prodrug is
   (A) The prototype member of a class of drugs
   (B) The oldest member of a class of drugs
   (C) An inactive drug that is transformed in the body to an active metabolite
   (D) A drug that is stored in body tissues and is then gradually released in the circulation

4. Fixed dose combination formulations are not necessarily appropriate for
   (A) Drugs administered in standard doses
   (B) Drugs acting by the same mechanism
   (C) Antitubercular drugs
   (D) Antihypertensive drugs

5. Therapeutic drug monitoring is essential for drugs with
   (A) Low LD 50
   (B) High ED 50
   (C) Low therapeutic index
   (D) High therapeutic index

6. The reversible anticholinesterase which belongs to acridine group is
   (A) Physostigmine
   (B) Donepezil
   (C) Edrophonium
   (D) Tacrine

7. Short acting mydriatic used in fundoscopy is
   (A) Atropine
   (B) Homatropine
   (C) Cyclopentolate
   (D) Tropicamide

8. The anticholinergics preferred prophylactically for motion sickness is
   (A) Atropine
   (B) Hyoscine
   (C) Homatropine
   (D) Pirenzepine

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

10. Phenylephrine instilled in the eye produces
    (A) Mydriasis but no cycloplegia
    (B) Cycloplegia but no mydriasis
    (C) Both mydriasis and cycloplegia
    (D) Neither mydriasis nor cycloplegia

11. The muscle relaxant that is used to control spasticity associated with upper motor neurone paralysis is
    (A) Baclofen
    (B) Mivacurium
    (C) Rocuronium
    (D) Succinylcholine

12. Choose the local anaesthetic that is specifically used to produce corneal anaesthesia for tonometry
    (A) Benoxinate
    (B) Oxethazaine
    (C) Ropivacaine
    (D) Tetracaine

13. Disulfiram and Acamprosate are used for
    (A) Alcohol abstinence
    (B) Cocaine abuse
    (C) Opium poisoning
    (D) Atropine over dose

14. All are indications for Phenytoin sodium **EXCEPT**
    (A) Grand-mal epilepsy
    (B) Cardiac arrhythmias
    (C) Local anaesthesia
    (D) Trigeminal neuralgia

15. The general anaesthetic used by inhalation is,
    (A) Propofol
    (B) Midazolam
    (C) Halothane
    (D) Thiopentone

16. Drug induced Parkinsonism is best treated with,
    (A) Entacapone
    (B) Benzhexol
    (C) Levodopa
    (D) Bromocryptine

17. Select the psychotropic drug having a narrow safety margin
    (A) Chlorpromazine
    (B) Buspirone
    (C) Lithium carbonate
    (D) Fluoxetine

18. Cough due to ACE inhibitors is because
    (A) ACE Inhibitors breaks down bradykinin
    (B) Angiotensin 1 is a powerful bronchoconstrictor
    (C) ACE inhibitors cause the accumulation of bradykinin
    (D) Angiotensin 1 is a powerful Vasoconstrictor

19. Following are the adverse effects associated with the use of nitroglycerine except
    (A) Headache
    (B) Flushing
    (C) Bradycardia
    (D) Methemoglobinemia

20. The current therapeutic indication of acetazolamide is
    (A) Congestive heart failure
    (B) Renal insufficiency
    (C) Cirrhosis of liver
    (D) Glaucoma

21. Select the diuretic that can cause gynaecomastia, hirsutism and menstrual disturbance as a side effect on long-term use
    (A) Amiloride
    (B) Spironolactone
    (C) Metolazone
    (D) Acetazolamide

22. Desmopressin is a drug of choice in
    (A) Neurogenic diabetes insipidus
    (B) Nephrogenic diabetes insipidus
    (C) Diabetes mellitus
    (D) Hypovolemic shock

23. The side effect which primarily limits acceptability of oral iron therapy is
    (A) Epigastric pain and bowel upset
    (B) Black stools
    (C) Staining of teeth
    (D) Metallic taste

24. Select the fibrinolytic drug that is antigenic in nature
    (A) Streptokinase
    (B) Urokinase
    (C) Alteplase
    (D) Tenecteplase

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

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MBBS PHASE – II
(CBME)
DEGREE EXAMINATION – FEBRUARY 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. A 5 year old male child was having hemoglobin of 6.8g/dl along with Splenomegaly and history of regular blood transfusions. (1+4+5)
   a) What is the Clinical diagnosis?
   b) Discuss the etiopathogenesis of the above condition.
   c) List the Clinical features and Laboratory findings in the above condition.
3. Define neoplasia. Discuss the role of oncogenes in carcinogenesis. (2+8)

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

4. Discuss the mechanism of apoptosis with examples.
5. Write the differentiating features between Dry and Wet gangrene.
6. Discuss the cellular events in inflammation.
7. Discuss the steps of fracture healing.
8. Describe the etiopathogenesis of Type IV hypersensitivity reaction with examples.
9. Describe the clinical features and chromosomal abnormalities of Klinefelter syndrome. (3+2)
10. Define shock. Discuss the pathogenesis of septic shock. (1+4)
11. Describe the pathogenesis of disorders caused by obesity.
12. Describe the types of urinary casts and conditions in which they are present.

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

13. Name the etiology and different forms of Plague.
14. Enumerate types of infarction with examples.
15. Write the Peripheral smear findings in chronic myeloid leukaemia.
16. Enlist any six paraneoplastic syndromes.
17. Enumerate 6 causes of lymphadenopathy.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, (CBME) February 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.
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1. Increase in number of cells leading to increase in size of organ is known as
   (A) Hyperplasia (B) Hypoplasia
   (C) Hypertrophy (D) Anaplasia

2. Brown atrophy of liver is due to deposition of
   (A) Hemosiderin (B) Lipofuschin
   (C) Melanin (D) Bilirubin

3. Pathogenesis of increased vascular permeability is due to
   (A) Histamine (B) Interleukin
   (C) Tumour Necrosis factor (D) All of the above

4. A 18 year old male presented with cervical lymphadenopathy since 3 months along with history of fever and loss of weight. Biopsy of the lymph node showed a neoplastic lesion comprising of neoplastic giant cells along with reactive lymphocytes, plasma cells macrophages and granulocytes. Following is the correct statement with respect to this condition
   (A) Non contiguous spread (B) Extranodal presentation rare
   (C) Extranodal presentation common (D) Waldeyer ring and mesenteric nodes commonly involved

5. Watson – Schwortz test is done to detect
   (A) Bile pigment (B) Bile salts
   (C) Porphobilinogen (D) Urobilinogen

6. Histamine is stored in the granules of all the cells except
   (A) Mast cells (B) Basophils
   (C) Platelets (D) Neutrophils

7. Following tumours spread through haematogenous route EXCEPT
   (A) Bronchogenic Carcinoma (B) Follicular Ca thyroid
   (C) Renal cell carcinoma (D) Fibrosarcoma

8. HCG is a specific tumour marker for
   (A) Carcinoma Stomach (B) Choriocarcinoma
   (C) Prostate Carcinoma (D) Thyroid Carcinoma

9. A permanent change in DNA is known as
   (A) Insertion (B) Mutation
   (C) Mendelian disorder (D) Translocation

10. Type I Hypersensitivity reaction is mediated by
    (A) IgG antibody (B) IgM antibody
    (C) IgE antibody (D) IgA antibody

11. AIDS affects primarily
    (A) CD4 T cells
    (B) CD8 T Cells
    (C) Natural killer cells
    (D) Plasma

12. Oedema is characteristically dependent in
    (A) Nephrotic oedema
    (B) Cardiac oedema
    (C) Pulmonary oedema
    (D) Nephritic oedema

13. Release of lipopolysaccharides in the body leads to
    (A) Cardiogenic shock
    (B) Septic shock
    (C) Hypovolemic shock
    (D) Neurogenic shock

14. The best noninvasive test for Iron stores is
    (A) Serum Iron level
    (B) Serum Ferritin
    (C) Bone marrow Iron
    (D) Hemoglobin

15. Massive Blood transfusion results in all, Except
    (A) Air Embolism
    (B) Citrate toxicity
    (C) Thrombocytosis
    (D) DIC

16. Selenium acts as
    (A) Vitamin
    (B) Co-factor Enzyme
    (C) Haemolytic factor
    (D) Antioxidant with vitamin E

17. Gauchers cells
    (A) Have Vacuolated cytoplasm
    (B) Have Crumpled tissue paper appearance
    (C) Are positive for fat stains
    (D) Are associated with spingomyelinase deficiency

18. Heavy proteinuria is characterized by loss of protein
    (A) > 3 to 4 G / day
    (B) > 2 to 3 G / day
    (C) 1 to 2 G / day
    (D) 0.5 to 1 G / day

19. Presence of needle shaped strongly birefriengant crystals in synovial fluid indicates
    (A) Gouty arthritis
    (B) Osteoarthritis
    (C) Rhematoid arthritis
    (D) Suppurative arthritis

20. Sezary syndrome is
    (A) Convoluted T cell tumor
    (B) Tumouroblastic T cell sarcoma
    (C) Cutaneous T cell lymphoma of NHL
    (D) Histiocytic NHL

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MBBS PHASE – II
DEGREE EXAMINATION – FEBRUARY 2024

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

PATHOLOGY
PAPER – I

Q.P. Code: 1008

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 and classify anaemias. Discuss the laboratory diagnosis of megaloblastic anaemia. (2+3+5=10)
3. Describe the steps in healing by first intention. List out 6 factors influencing tissue repair. (7+ 3 = 10)

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

4. Enumerate the special stains to demonstrate amyloid.
5. Describe the laboratory diagnosis of AIDS.
6. Discuss the FAB classification of leukaemia.
7. Discuss the importance of blood grouping and cross matching.
8. Discuss the tests for detection and causes of Proteinuria.
9. Enumerate the differences between dry and wet gangrene.
10. Discuss the various steps involved in phagocytosis.
11. Define Paraneoplastic syndrome with Examples. (2+3)

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

12. Describe the Peripheral blood smear findings in Iron deficiency anaemia with the diagram.
13. Explain stages of ESR.
14. Name the six Liver function tests.
15. Mention six causes of fatty liver.
16. Nuclear changes in apoptosis.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, February 2024**	**Max. Marks:**	**25 Marks**
Subject :	**Pathology Paper-I, QP Code: 1008**	**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. The cells continue to multiply throughout life are
   (A) Labile cells (B) Stable cells
   (C) Permanent cells (D) Any of the above

2. Brown atrophy of liver is due to deposition of
   (A) Hemosiderin (B) Lipofuschin
   (C) Melanin (D) D. Bilirubin

3. Pathogenesis of edema includes all of the following EXCEPT
   (A) Increased hydrostatic pressure (B) Reduced Oncotic pressure
   (C) Decreased hydrostatic pressure (D) Lymphatic obstruction

4. Heart failure cells are seen in
   (A) Myocardial infarction (B) Chronic passive congestion of lungs
   (C) Pulmonary edema (D) Chronic passive congestion of liver

5. The aberration in Philadelphia chromosome
   (A) t (8:21) (B) t (9:22)
   (C) t (15:17) (D) t (14:14)

6. Class I Histocompatibility antigens of HLA are located on
   (A) Monocytes (B) All Nucleated cells
   (C) T-Lymphocytes (D) NK Cells

7. Loss of fat, muscle wasting's, atrophy of most organs seen in
   (A) Marasmus (B) Kwashiorkar
   (C) Scurvy (D) Beri-Beri

8. Pernicious Anaemia is
   (A) Genetic disorder (B) Hypersensitity reaction
   (C) Neoplastic disorder (D) Autoimmune disorder

9. Advantage of FNAC procedure
   (A) Requires no anaesthesia (B) Rapid results
   (C) Low cost (D) All of the above

10. Oliguria is the excretion of urine less than
    (A) 100 ml / day (B) 500 ml / day
    (C) 200 ml / day (D) 50 ml / day

11. In sickle cell anaemia there is
    (A) Substitution of glutamine for valine (B) Substitution of valine for glutamine
    (C) Substitution of alanine for glutamic acid (D) Substitution of aspartate for valine

12. ABO blood group was first described by
    (A) Landsteiner (B) Lorries
    (C) Mack (D) Smith

13. Stain for peripheral smear was developed by
    (A) Romanowsky
    (B) Gram
    (C) Ehrlich
    (D) Hansen

14. Intracellular calcification begins at
    (A) Golgi bodies
    (B) Mitochondria
    (C) Endoplasmic reticulum
    (D) Intracellular vacuole

15. Deposits of amyloid on whole organ can be diagnosed by staining the cut surface with
    (A) Iodine & dilute sulphuric acid
    (B) TTC
    (C) Congo red
    (D) PAS

16. A clean incised wound heals by
    (A) Primary intention
    (B) Secondary intention
    (C) Excessive scarring
    (D) Excessive contraction

17. Mallory Hyaline is seen in
    (A) Alcoholic liver disease
    (B) Chloroform poisoning
    (C) Phosphorous poisoning
    (D) Lead poisoning

18. Specific gravity of urine can be measured by
    (A) Refractometer
    (B) Reagent strips
    (C) Urinometer
    (D) All of the Above

19. Homogentisic oxidase is absent in
    (A) Alkaputnuria
    (B) Glycogen storage disease
    (C) Goucher's disease
    (D) Melanosis coli

20. Following are causes of haemolytic anaemias EXCEPT
    (A) Deficiency of Vittamin B 12
    (B) Hereditary abnormal HB
    (C) Hereditary abnormal shape of RBCs
    (D) Red cell enzyme defects

21. Which of the following statements about metaplasia is FALSE
    (A) It is reversible
    (B) In squamous metaplasia the columnar cell changes to a squamous cell
    (C) It is not a precancerous condition
    (D) Barrett oseophagus is squamous to columnar metaplasia

22. Which of the following features differentiates invasive carcinoma from carcinoma in situ
    (A) Anaplasia
    (B) Number of mitoses
    (C) Basement membrane invasion
    (D) Pleomorphism

23. The most important indicator of malignancy is
    (A) Increased mitotic activity
    (B) Infiltrative borders
    (C) Metastasis
    (D) Necrosis

24. The single most common target for genetic alteration in human tumours is
    (A) p53
    (B) EWS gene
    (C) N-myc gene
    (D) C-myc gene

25. Megakaryocytic hyperplasia with non-functioning megakaryocytes is the characteristic finding in
    (A) Aplastic anaemia
    (B) Thrombotic thrombocytopenic purpura
    (C) Idiopathic thrombocytopenic purpura
    (D) Essential thrombocythaemia

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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 (3rd Cycle) **Placed in 'A' Category by MHRD (GoI)**

MBBS PHASE – II
(CBME)
DEGREE EXAMINATION – FEBRUARY 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 thirty two years woman presented with weakness and anorexia of three weeks duration. She had no history of any intravenous drug abuse or receiving blood transfusions. Her eye examination revealed icteric sclera. Her hepatitis test profile revealed IgM HAV Antibody negative, HBV surface antigen Positive, HBV core antibody positive, and HBV Surface antibody negative. (1+2+5+2=10)
   a) What is your presumptive diagnosis?
   b) Write the modes of transmission of this disease
   c) Describe the structure of the virus and its pathogenesis.
   d) Write any two preventive and control measures for this disease.

3. A 27 year old male was admitted with h/o fever for six months, contact with multiple sex partners; loss of appetite, persistent diarrhea, O/E generalized lymphadenopathy was present. (1+4+5=10)
   a) What is the probable diagnosis?
   b) Discuss the pathogenesis of this condition.
   c) Explain in detail about the laboratory diagnosis of this condition.

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

4. Describe the laboratory diagnosis of Malaria.
5. Write a note on Heard immunity.
6. Write a note on Type I hypersensitivity reaction.
7. Write a note on Bacterial flagella with different types and examples for the same.
8. What is MRSA? Discuss the drug resistance in Staphylococcus aureus.
9. Discuss in detail diarrhogenic Escherichia coli.
10. Write a short note on cutaneous filariasis
11. Describe the pathogenesis and life cycle of Ascaris lumbricoides.
12. Compare and contrast the gross and microscopic appearance of stools in Amoebic and Bacillary Dysentery.

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

13. Give examples of normal flora in <u>three</u> different anatomical sites of human body.
14. Name four serotypes of Shigella.
15. Draw neat labeled diagram of secretory IgA.
16. List three Non-Blood culture tests used for the diagnosis of Infective Endocarditis.
17. Write the type, constitution and uses of MMR vaccine.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II (CBME), February 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. Culture media used for diagnosis of EHEC 0157:H7 is
   (A) 07 culture (B) Sorbitol Mac Conkey media
   (C) XLD agar (D) Deoxycholate media

2. Which of the following is known as Jewesh house wives disease
   (A) Ascariasis (B) Paragonimiasis
   (C) Strongyloidiasis (D) Diphylobothriasis

3. Which of the following parasitic eggs is bile stained and operculated?
   (A) A.duodenale (B) N.americans
   (C) S.stercoralis (D) Latum

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

5. Biochemical basis for Cholera Red reaction is
   (A) Formation of nitrasoindole (B) Agglutination with chick RBCs
   (C) Action of oxidase enzyme (D) Sensitivity to phage V

6. The fungi frequently responsible for athletes foot (tinea pedis) is
   (A) T.rubrum (B) T.mentagrophytes
   (C) E.floccosum (D) All of the above

7. Asteroid bodies are seen in
   (A) Sporotrichosis (B) Candidiasis
   (C) Histoplasmosis (D) Chromoblastomycosis

8. Which of the following statements about congenital rubella syndrome is correct?
   (A) Following vaccination, seroconversion in 40 % recipient (B) Congenital abnormalities occur when a non-immune pregnant woman is infected in any time during pregnancy
   (C) Deafness is common defect associated with congenital syndrome (D) Only rare strains of rubella virus are teratogenic

9. All of the following statement are true for poxvirus EXCEPT
   (A) It is a large brick shaped virus (B) The genome consist of large ds linear DNA
   (C) Replication cycle of the virus occurs in nucleus of the host cell (D) It is large enough to be seen under Microscope

10. 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

11. Which of the following is DNA virus
    (A) Herpes virus (B) Measels
    (C) Rubella (D) Inflenza virus

12. Which of the following microorganisms causes scarlet fever?
    (A) Streptococcus pyogens
    (B) Pseudomonas aeruginosa
    (C) Staphylococcus aureus
    (D) Propionibacterium

13. Cell-mediated immunity is by virtue of
    (A) NK Cell
    (B) Eosinophil
    (C) Cytotoxic T cells
    (D) All of the above

14. Perforins are produced by
    (A) Plasma cells
    (B) Suppressor T cells
    (C) Cytotoxic T cells
    (D) Memory helper T cells

15. A severely Immuno compromised patient can receive the following vaccines EXCEPT
    (A) DPT
    (B) MMR
    (C) Salk Polio vaccine
    (D) Hepatitis B

16. A child stung by a bee experiences respiratory distress within minutes and lapses into unconsciousness. This reaction is probably mediated by
    (A) IgE antibody
    (B) IgG antibody
    (C) IgM antibody
    (D) IgA antibody

17. Name which Bacterial structure is involved in respiration
    (A) Ribosome
    (B) Pilli
    (C) Mesosome
    (D) Flagella

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

19. Choose which media is used to grow the fastidious nutritionally exacting Streptococcus bacteria
    (A) Selenite F broth
    (B) MacConkey agar
    (C) Peptone water
    (D) Chocolate agar

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

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MBBS PHASE – II
DEGREE EXAMINATION – FEBRUARY 2024

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

MICROBIOLOGY
PAPER – I

Q.P. Code: 1010

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. **25 X 1 = 25**

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

2. Define and classify hypersensitivity reactions. Describe the mechanism of Type I hypersensitivity reactions. (2+3+5=10)
3. Name the organisms causing Urinary tract infections (UTI). Define Significant bacteriuria and discuss the laboratory diagnosis of UTI. (3+2+5)

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

4. Compare Gram positive and Gram Negative Cell walls.
5. Explain Bacterial Growth curve.
6. Describe Acute phase proteins.
7. Classify of streptococci.
8. Discuss the pathogenicity of V. cholera.
9. Explain Satellitism.
10. Discuss the specific (treponemal) tests for the diagnosis of Syphilis.
11. Describe Laboratory diagnosis of Diphtheria.

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

12. List three uses of ELISA.
13. Define transport media. Give four Examples.
14. Describe the structure & functions of IgG.
15. Describe Swimming pool granuloma.
16. Explain antibiotic associated diarrhoea.

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MULTIPLE CHOICE QUESTIONS

Course:	**MBBS Phase-II, February 2024**	**Max. Marks:**	**25 Marks**
Subject :	**Microbiology Paper-I, QP Code: 1010**	**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. Pathogen Not satisfying Koch's postulate is
   (A) B. anthracis (B) M. tuberculosis
   (C) Cl. tetani (D) M.leprae

2. Tubercle bacillus was discovered by
   (A) Hansen (B) Loeffler
   (C) Robert Koch (D) Bruce

3. Chinese letter arrangement is characteristic of
   (A) Mycobacterium tuberculosis (B) Bacillus anthracis
   (C) Corynebacterium diphtheriae (D) Clostridium tetani

4. Generation time of E. coli is
   (A) 20 minutes (B) 20 hours
   (C) 20 days (D) 20 sec

5. Hot air oven is used to sterilize
   (A) Pharmaceutical powders (B) Oils
   (C) Culture media (D) Soiled dressings

6. Autoclave is used to sterilize
   (A) Pharmaceutical powders (B) Disposable syringe
   (C) Endoscopes (D) Gowns

7. Guanine always binds to
   (A) Thymine (B) Cytosine
   (C) Adenine (D) None of the above

8. ASLO is an example of
   (A) Precipitation test (B) Neutralization test
   (C) Agglutination Test (D) Heamagglutination

9. Type of immunity induced by vaccines is
   (A) Active natural (B) Active artificial
   (C) Passive natural (D) Passive artificial

10. Which Immunoglobulin is found in milk
    (A) IgG (B) IgM
    (C) IgA (D) IgD

11. ELISA is used for the detection of
    (A) Antigen (B) Antibody
    (C) Complement (D) All of the above

12. In respiratory & GIT infection, the most affected immunoglobulin is
    (A) IgA (B) IgG
    (C) IgM (D) IgD

13. Staphylococcus aureus shows following type of arrangement
    (A) Clusters (B) Chains
    (C) Chinese letters (D) Bamboo stick

14. Shape of Gonococcus is described as
    (A) Lanceolate (B) Spherical
    (C) Kidney shaped (D) Safety pin

15. Gall bladder acts as a reservoir for
    (A) Yersinia (B) Shigella
    (C) Salmonella (D) Pasteurella

16. In quantitative urine cultures, what should be the number of bacteria per ml to represent significant bacteriuria?
    (A) 10,000 (B) 100,000
    (C) 1,00, 00,000 (D) 1,000,000

17. Enteric fever is caused by
    (A) Salmonella Typhi (B) Salmonella Paratyphi B
    (C) Salmonella Paratyphi A (D) All of the above

18. The cardinal clinical feature of brucellosis is
    (A) Cough with expectoration (B) Vomiting and diarrhea
    (C) Burning micturition (D) Intermittent fever

19. Helicobacter pylori causes
    (A) Gastritis (B) Tonsillitis
    (C) Urethritis (D) Otitis media

20. Milk ring test is used in the diagnosis of
    (A) Brucellosis (B) Q fever
    (C) Bovine tuberculosis (D) Salmonellosis

21. Medusa head appearance of colony is seen in
    (A) Proteus vulgaris (B) Proteus mirabilis
    (C) Bacillus subtilis (D) Bacillus anthracis

22. Yaws is caused by
    (A) T. pertenue (B) T.pallidum
    (C) H. ducreyi (D) T.cerateum

23. Plague is transmitted to man by
    (A) Mite (B) Sandfly
    (C) Rat flea (D) Hard tick

24. Whooping caugh is caused by
    (A) Cardiobacterium homins (B) Bordetella pertussis
    (C) Francisella tularensis (D) Yersinia pseudotuberculosis

25. All of the following are zoonotic diseases EXCEPT
    (A) Pertussis (B) Brucellosis
    (C) Plague (D) Tularemia

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