

Madhya Pradesh Medical Science University, Jabalpur  
MBBS 2<sup>nd</sup> Professional Examination October-2020

Paper Code:- 20AM0000100381

Subject:-Microbiology

Paper :-I

Time : 3:00 Hours

Maximum Marks : 40

Instructions:

- All questions are compulsory
- Draw diagrams wherever necessary
- Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- MCQ has to be answered in theory answer book
- Please write MCQ answer neatly and in serial order with black or blue pen in brackets for example:- 1. (a) 2. (b)
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Q.1 Total MCQs : 16

- Best chemical disinfectant to disinfect stethoscope is  
a. Ethylene oxide                      b. Isopropyl alcohol                      c. Steam plasma sterilization                      d. Halogenated compounds
- Bacitracin sensitivity test is done to identify which of the following groups of *Streptococci*?  
a. A                      b. C                      c. D                      d. B
- Botulism is most commonly due to:  
a. Meat                      b. Canned vegetables                      c. Egg                      d. Milk
- Fish tank granuloma is caused by:  
a. *M. gordonae*                      b. *M. scrofulaceum*                      c. *M. fortuitum*                      d. *M. marinum*
- Invasive infections are caused by all except:  
a. *V. cholerae*                      b. *Shigella* spp.                      c. *Campylobacter jejuni*                      d. *Yersinia enterocolitica*
- All of the following statements are true regarding endotoxins except:  
a. Lipopolysaccharide                      b. Poorly antigenic                      c. Neutralized by specific antibodies                      d. Heat stable
- MRSA is mediated due to:  
a. Chromosome                      b. Transposons                      c. Plasmid                      d. All of the above
- Congenital syphilis can be best diagnosed by:  
a. TPI                      b. IgM FTA - ABS                      c. IgG FTA - ABS                      d. VDRL
- Bacillary angiomatosis is caused by:  
a. *Bartonella quintana*                      b. *Bartonella bacilliformis*                      c. *Bartonella henselae*                      d. *Rickettsia typhi*
- Triple Sugar Iron test detects all of the following properties except:  
a. H<sub>2</sub>S                      b. Gas                      c. Sugar fermentation                      d. Citrate utilization
- Multiple drug resistance is spread by:  
a. Conjugation                      b. Mutation                      c. Transformation                      d. Transduction
- Castaneda method of blood culture is usually used for diagnosis of:  
a. Toxic shock syndrome                      b. Brucellosis                      c. Lobar pneumonia                      d. Relapsing fever
- Most common cause of diarrhea in children of developing country is:  
a. EHEC                      b. EIEC                      c. EPEC                      d. ETEC
- Which of the following is microaerophilic?  
a. *Campylobacter*                      b. *Bacterioides*                      c. *Pseudomonas*                      d. *Vibrio*
- Recommended transport medium for stool specimen suspected to contain enteric pathogen is:  
a. Stuart's medium                      b. Arnie's medium                      c. Pike's medium                      d. Buffered glycerol saline medium
- Which organism is responsible for causing severe purulent neonatal conjunctivitis?  
a. *Streptococcus pyogenes*                      b. *Neisseria gonorrhoeae*                      c. *Chlamydia trachomatis*                      d. *Staphylococcus aureus*

16 X 1/2 = 8

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**Q.2 Long Answer Question**

2 X 5 = 10

- a. Classify Mycobacteria. Describe in brief about laboratory diagnosis of pulmonary tuberculosis. Add a note on recent advances in laboratory diagnosis.
- b. Name two organisms causing sore throat and discuss in detail about the laboratory diagnosis of diphtheria.

**Q.3 Short Answer Question**

4 X 3 = 12

- a. Mechanisms of microbial pathogenicity.
- b. Laboratory diagnosis of *Salmonella Typhi*.
- c. Anaerobic culture methods.
- d. Bacterial Flagella.

**Q.4 Very Short Answer Question**

10 X 1 = 10

- a. Enumerate two zoonotic bacterial diseases.
- b. What is Satellitism? Name the organism producing it.
- c. Enumerate two capsulated bacteria.
- d. What is Target hemolysis? Mention the organism producing it.
- e. Mention the temperature and holding period during Inspissation.
- f. Enumerate two tests used for determining efficacy of disinfectants.
- g. Mention two contributions of Robert Koch.
- h. Enumerate two organisms causing urinary tract infection.
- i. Enumerate two organisms causing atypical pneumonia.
- j. Mention two standard tests for syphilis.

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**Madhya Pradesh Medical Science University, Jabalpur**  
**MBBS Second Professional Examination September 2019**

**Paper Code:-19BM0000100381**  
**Microbiology Paper -I**

**Time : 3 :00Hours**

**Maximum Marks : 40**

**Instructions:**

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**Q. 1 Total MCQs : 16**

**16 X ½ = 8**

- Cytotoxic drugs should be placed in which container ?  
a. Yellow                      b. Grey                      c. Red                      d. White
- The generation time for E. coli is -  
a. 20 minutes                      b. 30 minutes                      c. 40 minutes                      d. 50 minutes
- Temperature range for Pasteurization of milk is -  
a. 60 – 70° C                      b. 70 - 80° C                      c. 80 - 90° C                      d. 90 - 100° C
- When a parasite is growing & multiplying in or on a host is said to have -  
a. Pathogenicity                      b. A vector                      c. An infection                      d. A symptom
- The molecular basis for the effect of Cholera toxin on duodenal mucosal cell is -  
a. Activation of adenylatecyclase                      b. Inactivation of a G<sub>1</sub> protein                      c. Increased activity of potassium pump                      d. Increased generation of cyclic adenosine mono phosphate (cAMP)
- Which of the following condition is nonsuppurative sequelae of Streptococcus pyogenes infections ?  
a. Acute rheumatic fever                      b. Acute glomerulonephritis                      c. Erythmanodosum                      d. All of these
- Which of the following is generally not considered a potential agent of Bioterrorism & Biologic Warfare ?  
a. Yersinia pestis                      b. Bacillus anthracis                      c. Streptococcus pyogenes                      d. Botulinum toxin
- Throat culture is not useful to diagnose -  
a. Streptococcal sore throat                      b. Diphtheria                      c. Thrush                      d. Pneumonia
- Which of the following bacteria, causing sexually transmitted disease, cannot be grown on artificial media ?  
a. Neisseria gonorrhoea                      b. Chlamydia trachomatis                      c. Treponema pallidum                      d. Treponema pallidum & Chlamydia trachomatis
- Chocolate agar is an example of a pure enriched medium used for culturing -  
a. Streptococci                      b. Haemophilus                      c. Enterococci                      d. Salmonella
- Which of the following is the commonest species of Salmonella for causing zoonotic disease ?  
a. S. indiana                      b. S. newport                      c. S. typhimurium                      d. S. enteritidis
- Which of the following properties is / are seen in the member of family Enterobacteriaceae?  
a. They are catalase positive                      b. They are oxidase negative                      c. They ferment glucose                      d. They reduce nitrate to nitrite

- 13 Transmission of Bubonic Plague is by -  
 a. Rat flea                      b. Inhalation                      c. Ingestion                      d. All of these
- 14 The enrichment medium for the isolation of Shigella is -  
 a. Alkalline peptone              b. Tetrathionate broth              c. Selenite F broth              d. None of these  
 water
- 15 McFadyean's reaction is employed for presumptive diagnosis of -  
 a. Anthrax                      b. Tetanus                      c. Typhoid                      d. All of these
- 16 Tumbling motility is present in -  
 a. Listeria                      b. E. colli                      c. Salmonella                      d. Klebsilla

2 X 5 = 10

**Q. 2 Long Answer Question**

- a. Discuss the Morphology & Pathogenecity of Mycobacterium tuberculosis. Add a note on Laboratory diagnosis of Pulmonary Tuberculosis.
- b. Discuss the Morphology, Culture characteristics & laboratory diagnosis of Salmonella typhi.

4 X 3 = 12

**Q. 3 Short Answer Question**

- a. Enumerate various methods of gene transfer. Discuss any one of them in detail.
- b. Write down the toxins & enzymes of Staphylococcus aureus.
- c. Describe in brief the VDRL TEST
- d. Segregation of biomedical waste.

10 X 1 = 10

**Q.4 Very Short Answer Question**

- a. Name any two natural water bacteria.
- b. Name any two modes of transmission of Nosocomial pathogens.
- c. Enumerate any four causative bacteria of Meningitis.
- d. Enumerate the methods of demonstration of Capsule.
- e. Enumerate the nonsporing anaerobic gram negative bacilli.
- f. Name the causative bacteria of food poisoning.
- g. Name any two virulence factors of Pneumococcus.
- h. Give examples of zoonotic disease.
- i. Enumerate pigments produced by pseudomonas species.
- j. Name two chemicals used in Cold sterilization.

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**Madhya Pradesh Medical Science University, Jabalpur**  
**MBBS 2<sup>nd</sup> Professional Examination November-2019**

**Paper Code:-19BM0000100381**

**Microbiology Paper -I**

Time : 3 :00Hours

Maximum Marks : 40

Instructions:

- All questions are compulsory
- Draw diagrams wherever necessary
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**Q. 1 Total MCQs : 16**

**16 X ½ = 8**

- All of the following are acid fast, except :-  
a. Mycobacterium    b. Nocardia    c. Cryptosporidium    d. Legionella pneumophila
- Unaided human eye has a resolution power of:-  
a. 0.2mm    b. 0.2µm    c. 0.2nm    d. 0.5nm
- Which of the following is most resistant to sterilisation?  
a. Tubercle bacilli    b. Virus    c. Spores    d. Prions
- All of the following pathogenic bacteria fulfill Koch's postulates except:-  
a. Treponema pallidum    b. Yersinia pestis    c. Bacillus anthracis    d. Helicobacter pylori
- Transmission of the portion of DNA from one bacterium to another by bacteriophage is known as:-  
a. Transformation    b. Transduction    c. Conjugation    d. Lysogenic Conversion
- Which of the following toxin is responsible for the staphylococcal scalded skin syndrome?  
a. Enterotoxin    b. Leucocidin    c. Hemolysin    d. Exfoliative toxin
- Sensitivity to bacitracin can be used to identify :-  
a. Streptococcus pyogenes    b. Streptococcus agalactiae    c. Streptococcus mitis    d. Streptococcus equisimilis
- Transport media used for gonococci is :  
a. Stuart's medium    b. Pike's medium    c. VR medium    d. Cary Blair medium
- Site of action of tetanus toxin :  
a. Presynaptic terminal of spinal cord    b. Postsynaptic terminal of spinal cord    c. Neuromuscular Junction    d. Muscle Fibers
- Fried egg colonies are produced by :  
a. Bacillus cereus    b. Neisseria subflava    c. Haemophilus influenzae    d. Mycoplasma pneumoniae
- Lugol's iodine is used to stain the inclusion body of :  
a. Chlamydia trachomatis    b. Chlamydophila psittaci    c. Chlamydophila pneumoniae    d. None of the above
- Who discovered Mycobacterium leprae ?  
a. Robert Koch    b. Hansen    c. Kitasato    d. Louis Pasteur
- The causative agent of Lyme disease is :  
a. Borrelia recurrentis    b. B. duttoni    c. B. vincentii    d. B. burgdorferi
- Traveller's diarrhoea is caused by :  
a. ETEC    b. EHEC    c. EPEC    d. EIEC

15 Plague is transmitted by :

a. Rat flea                      b. Soft tick

c. Hard tick

d. Louse

16 An organism grown on nutrient agar shows green colored colonies. The organism is most likely .

a. Staphylococcus      b. E. Coli

c. Pseudomonas

d. Peptostreptococcus

2 X 5 = 10

**Q.2 Long Answer Question**

- a. Write in detail about pathogenesis & laboratory diagnosis of enteric fever.
- b. Describe pathogenesis & laboratory diagnosis of pulmonary tuberculosis.

4 X 3 = 12

**Q.3 Short Answer Question**

- a. Laboratory diagnosis of cholera.
- b. Biomedical waste management.
- c. Standard tests of syphilis.
- d. Describe genetic mechanism of drug resistance.

**Q.4 Very Short Answer Question**

10X 1 = 10

- a. Most common bacteria causing community acquired Urinary Tract Infection.
- b. Name two anaerobic culture methods.
- c. Write two test for demonstration of diphtheria toxin.
- d. Which Shigella species causes most severe type of dysentery?
- e. Draw bacterial growth curve.
- f. Write two differences between Exotoxins & Endotoxins.
- g. Write two selective culture media.
- h. Write two methods of antibiotic susceptibility testing methods.
- i. Significant bacteriuria.
- j. Write two methods of sterilisation control.

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**Madhya Pradesh Medical Science University, Jabalpur**  
**MBBS Second Professional Examination September 2019**

**Paper Code:-19BM0000100382**

**Microbiology Paper -II**

**Time : 3 :00Hours**

**Maximum Marks : 40**

**Instructions:**

- a) All questions are compulsory
- b) Draw diagrams wherever necessary
- c) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- d) MCQ has to be answered in theory answer book
- e) Please write MCQ answer neatly and in serial order with black or blue pen in brackets for example:- 1. (a) 2. (b)
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**Q.1 Total MCQs : 16**

**16 X ½ = 8**

- 1 Infection with dermatophytes is most often associated with -  
a. Intravenous drug abuse      b. Inhalation of the organism from contaminated bird faeces      c. Adherence of the organism to perspiration moist skin      d. Feed oral transmission
- 2 Which of the following substances will not stimulate an immune response unless they are bound to a larger molecule -  
a. Antigen      b. Virus      c. Hapten      d. Antibody
- 3 Which of the following is not a RNA virus -  
a. Retrovirus      b. Enterovirus      c. Rhabdovirus      d. Adenovirus
- 4 Each of the following statements causing Ascaris lumbricoids is correct, Except -  
a. Ascaris lumbricoids is one of the largest nematod      b. It can cause Pneumonia      c. Both Dogs & Cats are intermediate host of Ascaris lumbricoids      d. It is transmitted by ingestion of eggs
- 5 A finding of large multinucleated clumps of cells in the bronchial secretions of a 2 years old girl with acute bronchopneumonia suggests that this infection is caused by -  
a. Bordetella pertusis      b. Epstein barr virus      c. Mycoplasma hominis      d. Respiratory syncytial virus (RSV)
- 6 Each of the following parasite is transmitted by mosquitoes, Except -  
a. Leishmania donovani      b. Wuchereria bancrofti      c. Plasmodium vivax      d. Plasmodium falciparum
- 7 Each of the following statements concerning Hookworm infection is correct, Except -  
a. It can cause Pneumonia      b. It is acquired by human when filariform larva penetrate the skin      c. It is caused by necator americanus      d. It can be diagnose by finding the trophozoit in the stool
- 8 A girl who pricked her finger while pruning some rose bushes develops a local pustule that progresses to an ulcer. Several nodules then develop along the local lymphatic drainage. The most likely agent is -  
a. Aspergillus fumigatus      b. Sporothrix schenckii      c. Cryptococcus neoformans      d. Candida albicans
- 9 Naturally acquired active immunity could be most likely acquired through which of the following process -  
a. Vaccination      b. Drinking colostrum      c. Natural birth      d. Infection with disease causing organism followed by recovery
- 10 In agglutination the antigen is a -----, In precipitation reaction the antigen is a -----  
a. Whole cell / Soluble molecule      b. Soluble molecule / Whole cell      c. Bacterium / Virus      d. Protein / Carbohydrate
- 11 MHC class II is a cell surface molecule present on -  
a. B cell      b. All nucleated cell      c. APC      d. T cell

12 How is Dengue fever transmitted ?

- a. Bite of an infected male anopheles mosquito      b. Bite of an infected male aedes mosquito      c. Bite of an infected female anopheles mosquito      d. Bite of an infected female aedes mosquito

13 The human virus that has been associated with Burkett's lymphoma (a malignant tumour of the jaw) is

- a. Cytomegalovirus      b. Human Papilloma virus      c. Reovirus      d. Epstein barr virus

14 Which of the following gastroenteritis viruses can spread by air ?

- a. Sapovirus      b. Rotavirus      c. Norovirus      d. Astrovirus

15 Each of the following statement concerning Trichomonas vaginalis is correct, Except -

- a. It is transmitted sexually      b. It can be diagnosed by visualizing the trophozoites      c. It can be treated effectively with Metronidazole      d. It causes bloody diarrhoea

16 Rheumatoid arthritis is an ----- disease that affects the -----

- a. Allergic / Cartilage .      b. Autoimmune / Nerve      c. Immunodeficiency / Muscles      d. Autoimmune / joint

### Q.2 Long Answer Question

2 X 5 = 10

- a. Classify different Hepatitis viruses. Write Laboratory diagnosis & Prophylaxis of infection caused by Hepatitis B virus.
- b. Describe the Morphology, Life cycle & Laboratory diagnosis of Echinococcus granulosus.

### Q.3 Short Answer Question

4 X 3 = 12

- a. Write in short about Laboratory diagnosis of Amoebic infection.
- b. Classify Candida species. Write a note on Candidiasis.
- c. Short note on Prophylaxis against Poliomyelitis.
- d. Principle & Application of ELISA in clinical microbiology.

### Q.4 Very Short Answer Question

10 X 1 = 10

- a. Make a well labelled diagram to show structure of Giardia lamblia.
- b. Enumerate complication of Falciparum malaria.
- c. What factors help in eradication of small pox ?
- d. What is inclusion bodies ? Give any 2 examples.
- e. Enumerate the diseases caused by Cytomegalovirus.
- f. Enumerate the viruses which produce eye infections.
- g. Name 4 intestinal Nematodes.
- h. What is the difference between aerial & vegetative hyphae.
- i. Draw a well labeled diagram of Ig G immunoglobulin.
- j. Name the causative organism of Chicago disease & Farmer's Lung disease.



- 14 Mucoid colony resembling those of *Staphylococcus* is  
 a. *Candida albicans*                      b. *Cryptococcus neoformans*                      c. *Trichophyton*                      d. *Microsporum*
- 15 Which of the following helminths is called guinea worm  
 a. *Dracunculus medinensis*                      b. *Wuchereria bancrofti*                      c. *Brugia malayi*                      d. *Hymenolepis nana*
- 16 Sporozoite has special affinity in anopheles for  
 a. Salivary glands                      b. Stomach                      c. Intestine                      d. All of the above

**Q. 2 Long Answer Question**

- a. Enumerate the fungi causing superficial mycoses. Describe Lab Diagnosis of Dermatophytosis. 2 X 5 = 10
- b. Enumerate intestinal nematodes. Describe morphology, life cycle and pathogenicity of *Trichuris* *Trichura*. Describe in brief the lab. diagnosis of disease produced by it. 4 X 3 = 12

**Q. 3 Short Answer Question**

- a. Morphology and pathogenicity of *Cryptococcus neoformans*.
- b. Herpes Zoster virus.
- c. Difference between T and B cells
- d. Morphology and pathogenesis of Rabies virus.

**Q. 4 Very Short Answer Question**

10 X 1 = 10

- a. Write lattice hypothesis.
- b. Write principle and name types of immunofluorescence.
- c. Mention two characteristics of Killed vaccine.
- d. Define Eumycetoma. Mention two common etiological agent.
- e. What is 'id' reaction? How it is diagnosed.
- f. Draw well labelled diagram of *Mucor*.
- g. Mention two characters of viruses.
- h. Define Haemagglutination and elution.
- i. Enumerate two pathogenic lesions in classical filariasis.
- j. Enumerate two characters of egg of hookworm.

**Madhya Pradesh Medical Science University, Jabalpur**  
**Paper Code:- 18AM0000100381**  
**MBBS 2<sup>nd</sup> Professional Examination 2018 (Winter Session)**  
**Subject-Microbiology Paper- I**

Instructions:

All questions are compulsory

- 1) MCQ question paper should be conducted and completed in first 30 min.
- 2) Fill (dark) the appropriate empty circle against the question number once only.
- 3) Use blue/black ball point pen only.
- 4) Each MCQ carries half mark.
- 5) Students will not be allotted mark if he/she overwrites/ strikes or put white ink on the cross once marked on MCQ

**Time : 30 Minutes**

**Maximum Marks : 8**  
**16 X ½ = 8**

**Q. 1**

**Total MCQs : 16**

- 1 Following pathogen does not satisfy Koch's postulates  
 a. Bacillus anthracis      b. Mycobacterium tuberculosis      c. Clostridium tetani      d. Lepra bacilli
- 2 ENT is seen in :-  
 a. Lepromatous leprosy      b. Tuberculoid leprosy      c. Indeterminate leprosy      d. Pure neuritic leprosy
- 3 Stalactite growth in ghee broth is due to :  
 a. H. influenzae      b. Corynebacterium diphtheriae      c. Y. pestis      d. T. pallidum
- 4 Which of the following is the mechanism of action of diphtheria toxin?  
 a. Forms pores in red blood cells causing hemolysis      b. Degrades lecithin in eukaryotic cell membranes      c. Causes release of tumor necrosis factor      d. Inhibits elongation factor 2
- 5 Which of the following is an enrichment media  
 a. Nutrient broth      b. Tetrathionate broth      c. Stuart medium      d. Thayer Martin medium
- 6 Which of the following is most likely to be associated with the formation of a bacterial biofilms?  
 a. Airway colonization in a cystic fibrosis patient with a mucoid (Alginate-producing) strain of pseudomonas aeruginosa      b. Urinary tract infection with Escherichia coli      c. Meningitis with Neisseria meningitides      d. Tetanus
- 7 Commensal flora is commonly found in the :-  
 a. Liver      b. Urethra      c. Kidneys      d. Salivary glands
- 8 A farmer presents to the emergency department with painful regional lymphadenopathy, history of fever and flu like symptoms. Clinical examination reveals an ulcer in leg. Which of the following stains should be used to detect suspected bipolar stained organisms  
 a. Albert stain      b. Wayson's stain      c. Ziehl Neelsen stain      d. Mc Faydean's stain
- 9 Silver impregnation method is used for demonstration of :  
 a. Spirochaetes      b. Vibrio cholerae      c. salmonella      d. Shigella
- 10 A 4 year old boy develops bloody diarrhea. Hemorrhagic colitis due to Escherichia coli O157:H7 is suspected. What medium should be inoculated to help the laboratory staff make the diagnosis of this infection?  
 a. Blood agar      b. Sorbitol MacConkey agar      c. Hektoen enteric agar      d. CIN (ceftriaxone, irgasan, novobiocin) agar
- 11 Scrub typhus is transmitted by :  
 a. Reduvid bug      b. Ticks      c. Enteric pathogens      d. Trombiculid mite larva
- 12 Vibrio parahaemolyticus food poisoning is caused by ingestion of :-  
 a. Eggs & Poultry products      b. Catfish, shellfish      c. Raw vegetables      d. Milk products
- 13 Which is true of enterobacteriaceae:-  
 a. All are oxidase negative      b. Nitrate reduction negative      c. Glucose not fermented by all      d. Motile by polar flagellum
- 14 Chancroid is caused by :

- h.
- 15 a. H. ducreyi                      b. T. pallidum                      c. Gonococcus                      d. HSV  
 BCYE medium is used to culture
- 16 a. Mycoplasma                      b. T. pallidum                      c. H. pylori                      d. Legionella  
 A 37 year old woman with a history of urinary tract infections comes to the emergency department with burning on urination along with frequency and urgency. She says her urine smells like ammonia. The cause of her urinary tract infection is likely to be :-
- a. Enterobacter aerogenes                      b. Proteus mirabilis                      c. Citrobacter freundii                      d. Escherichia coli

**Madhya Pradesh Medical Science University, Jabalpur**  
**Paper Code:- 18AM0000100381**  
**MBBS 2nd Professional Examination 2018 (Winter Session)**  
**Subject: Microbiology**  
**Paper-I**

**Instructions:**

- 1) All questions are compulsory
- 2) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 3) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper. otherwise the question shall not be valued
- 4) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

**Time : 2.30 Hours**

**Maximum Marks : 32**

**2 X 5 = 10**

**Q. 2. Long Answer Question**

- a. Discuss the morphology, cultural characteristics and pathogenicity of Vibrio cholerae. Add a note on laboratory diagnosis of cholera.
- b. Discuss the morphology, transmission and pathogenicity of clostridium tetani. Add a note on prevention of tetanus.

**4 X 3 = 12**

**Q3 Short Answer Question**

- a. Pathogenicity of Chlamydia trachomatis
- b. Helicobacter pylori
- c. Nongonococcal urethritis
- d. Diarrhoeagenic E.coli

**Q4 Very Short Answer Question**

**10X 1 = 10**

- a. Enumerate complications of diphtheria
- b. Enumerate the disease caused by Staphylococcus aureus
- c. Enumerate  $\alpha$  haemolytic streptococci and diseases caused by them
- d. Enumerate important biochemical characters of Streptococcus pneumoniae
- e. Classify atypical mycobacteria
- f. Tyndallisation
- g. Make a well labeled diagram to show structure of bacterial cell
- h. Enumerate causative agents of non venereal syphilis
- i. Enumerate 3 important transport media with their uses.
- j. Important differences between exotoxins and endotoxins

**Madhya Pradesh Medical Science University, Jabalpur**

**MBBS 2<sup>nd</sup> Professional Examination 2018**

**Paper Code:- 18BM0000100381**

**Subject- Microbiology Paper -I**

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**Time : 30 Minutes**

**Maximum Marks : 8**

**16 X ½ = 8**

**Q. 1**

**Total MCQs : 16**

1. All of the following are components of the cell wall of Gram-Negative bacteria EXCEPT?  
a. Peptidoglycan                      b. Outer membrane                      c. Teichoic acid                      d. Lipopolysaccharide
2. Stuart's transport medium is used for the transport of specimens containing?  
a. Salmonellae                      b. Gonococci                      c. *Vibrio cholerae*                      d. Shigellae
3. Dienes phenomenon is seen in?  
a. Proteus                      b. Pseudomonas                      c. Providencia                      d. Shigellae
4. A farmer presents with features of high grade fever, painful lymphadenopathy, vomiting, diarrhea and hypotension. Which stain will help in the diagnosis?  
a. Ziehl-Neelsen stain                      b. Wayson's stain                      c. Kinyoun's stain                      d. Mucicarmine stain
5. Which of the following statement is true about haptens?  
a. It induces immune response                      b. It is a T independent antigen                      c. It needs carrier to induce immune response                      d. It has no association with MHC
6. Nagler reaction is example of?  
a. Precipitation                      b. CFT                      c. Agglutination                      d. Neutralization
7. The following methods of diagnosis utilize labeled antibodies EXCEPT?  
a. ELISA                      b. Radioimmunoassay                      c. Hemagglutination inhibition test                      d. Immunofluorescence
8. Autoimmunity can be caused due to all of the following EXCEPT?  
a. The presence of forbidden clones                      b. Expression of cryptic antigens                      c. Release of sequestered antigens                      d. Negative selection of T-cells in the thymus
9. CAMP test is useful in identification of?  
a. *S. pyogenes*                      b. *S. agalactiae*                      c. Viridans streptococci                      d. *S. pneumoniae*
10. A "Malignant pustule" is a term used for?  
a. An infected malignant melanoma                      b. A carbuncle                      c. Anthrax of the skin                      d. A rapidly spreading rodent ulcer
11. Site of action of tetanus toxin?  
a. Presynaptic terminal of spinal cord                      b. Postsynaptic terminal of spinal cord                      c. Neuromuscular Junction                      d. Muscle fibers
12. Fish tank granuloma is caused by?  
a. *M. kansasii*                      b. *M. fortuitum*                      c. *M. marinum*                      d. *M. ulcerans*
13. All of the following tests can differentiate between classical and E1 for biotypes of *V. cholerae* EXCEPT?  
a.  $\beta$  hemolysis on sheep blood agar                      b. Chick erythrocyte agglutination                      c. Polymyxin B (50IU)                      d. growth on TCBS agar
14. Cause of melioidosis is?  
a. *Burkholderia mallei*                      b. *Burkholderia pseudomallei*                      c. *Burkholderia cepacia*                      d. None
15. All of the following serological tests would be helpful in the diagnosis of chronic brucellosis EXCEPT?  
a. Standard agglutination test                      b. Mercaptoethanol test                      c. Complement fixation test                      d. ELISA detecting IgG
16. Which is not a property of *Mycoplasma*?  
a. Susceptibility to beta lactams                      b. Have both DNA and RNA                      c. Can grow in cell-free media                      d. Extracellular survival

**Madhya Pradesh Medical Science University, Jabalpur**  
**MBBS 2nd Professional Examination 2018**  
**Paper Code:- 18BM0000100381**  
**Subject: Microbiology Paper -I**

**Instructions:**

- 1) All questions are compulsory
- 2) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 3) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper. otherwise the question shall not be valued
- 4) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means

**Time : 2.30 Hours**

**Maximum Marks : 32**

**Q. 2. Long Answer Question**

**2 X 5 = 10**

- a. Enumerate the methods of gene transfer and discuss the mechanisms of drug resistance in bacteria.
- b. Classify Rickettsiaceae. Write in detail about pathogenesis and lab diagnosis of typhus fever.

**Q3 Short Answer Question**

**4 X 3 = 12**

- a. Type IV hypersensitivity.
- b. Hot air oven.
- c. Lepromin test.
- d. Monoclonal antibodies.

**Q4 Very Short Answer Question**

**10X 1 =10**

- a. Sattelitism.
- b. Name four bacterial zoonotic infections.
- c. Oxidase test.
- d. Koch's postulates.
- e. Name Three live bacterial vaccines.
- f. Diagram of Immunoglobulin.
- g. Name Three Heterophile Antigen – Antibody reaction.
- h. Name the HACEK group of bacteria.
- i. What is Bile solubility test? Describe its principle.
- j. Name four bacteria causing food poisoning.

**M-1210**

**Second M. B. B. S. (Professional) Examination,  
Feb.-March 2017**

**MICROBIOLOGY**

*Paper : Second*

*Time Allowed : Three hours*

*Maximum Marks : 40*

*Minimum Pass Marks : 20*

*Note : All questions are compulsory.*

1. Enumerate Pathogenic protozoal parasites. Describe the lesion caused by an Laboratory diagnosis of *Entamoeba histolytica*.

2. Classify Viruses. How can the viruses be isolated in the Laboratory?
3. Define agglutination reaction and discuss the principle and applications of agglutination reaction giving suitable examples.
4. Differentiate between :
  - (i) Active and Passive Immunity
  - (ii) Exotoxin and Endotoxin
5. Write short notes on :
  - (i) Inclusion Bodies
  - (ii) Parainfluenza viruses
  - (iii) Primary Syphilis

**M-1209**

**Second M. B. B. S. (Professional) Examination,  
February-March 2017**

**MICROBIOLOGY**

*Paper : First*

*Time Allowed : Three hours*

*Maximum Marks : 40*

*Minimum Pass Marks : 20*

*Note : All questions are compulsory.*

1. A 23 year old man is admitted to the hospital 5 days after a crush injury to his right leg following a road traffic accident. On examination the wound which was bandaged

with a soiled gauge, appeared to be heavily contaminated with soil, the local muscles appeared to have been crushed, there was edema and pain at the site and crepitus was felt on palpation. 1+2+4+3=10

- (i) What is the most probable diagnosis?
- (ii) Name the etiological agents causing this condition.
- (iii) Describe the laboratory diagnosis of this condition to find out the causative agent.
- (iv) Discuss the treatment given in this condition. Give reason.

2. Discuss briefly :

3×5=15

- (i) Bacterial cell
- (ii) Mutation
- (iii) Standard test for syphilis

3. Write short notes on :

4×2½=10

- (i) Staphylococcal Enterotoxin
- (ii) PCR
- (iii) Cholera toxin
- (iv) Soft chancre

4. Write down one sentence answer :  $5 \times \frac{1}{2} = 2\frac{1}{2}$

- (i) Definition of nosocomial infection
- (ii) Hansen's disease is name give to .....
- (iii) Definition of Generation time
- (iv) Definition of Transduction
- (v) Plague is transmitted by artheropod vector .....

5. Write True or False :  $5 \times \frac{1}{2} = 2\frac{1}{2}$

- (i) Louis Pasteur proposed the principle of fermentation for preservation of food.
- (ii) Battey bacillus is a common name given to mycobacterium intracellulare.
- (iii) Coagulase test is used to differentiate between staphylococcus from streptococcus.
- (iv) In Lepromatous leprosy lepromin test is positive.
- (v) Salmonella are motile except S. Typhi.

M-1210

Second M. B. B. S. (Professional) Examination,  
Feb.-March 2015

**MICROBIOLOGY**

*Paper : Second*

*Time Allowed : Three hours*

*Maximum Marks : 40*

*Minimum Pass Marks : 20*

*Note : Attempt all questions.*

1. Write about :

2×4

(i) Principle of Autoclave

(ii) Bacterial growth curve

M-1210

PTO

2. Write significance of :

- (i) Gram staining
- (ii) Negative staining

3. Enumerate different intestinal nematodes. Write the life cycle of *Ankylostoma duodenal* along with laboratory diagnosis.

8

4. Write short notes on :

4×2

- (i) Dermatophytes
- (ii) Mycetoma
- (iii) Candidiasis
- (iv) Mucormycosis

5. Differentiate following in tabular form :

4×2

- (i) Active and Passive Immunity
- (ii) Primary and Secondary immune response
- (iii) Immediate and delayed hypersensitivity
- (iv) VDRL and RPR Test