



JEPAS(PG)-2020

Subject: M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

Duration: 90 minutes

Full Marks: 100

Instructions

1. All questions are of objective type having four answer options for each. Only one option is correct. Correct answer will carry full marks 1. In case of incorrect answer or any combination of more than one answer, $\frac{1}{4}$ mark will be deducted.
2. Questions must be answered on OMR sheet by darkening the appropriate bubble marked A, B, C, or D.
3. Use only **Black/Blue ball point pen** to mark the answer by complete filling up of the respective bubbles.
4. Mark the answers only in the space provided. Do not make any stray mark on the OMR.
5. Write your roll number carefully in the specified locations of the **OMR**. Also fill appropriate bubbles.
6. Write your name (in block letter), name of the examination centre and put your full signature in appropriate boxes in the OMR.
7. The OMR is liable to become invalid if there is any mistake in filling the correct bubbles for roll number or if there is any discrepancy in the name/ signature of the candidate, name of the examination centre. The OMR may also become invalid due to folding or putting stray marks on it or any damage to it. The consequence of such invalidation due to incorrect marking or careless handling by the candidate will be sole responsibility of candidate.
8. Candidates are not allowed to carry any written or printed material, calculator, docu-pen, log table, wristwatch, any communication device like mobile phones etc. inside the examination hall. Any candidate found with such items will be **reported against** & his/her candidature will be summarily cancelled.
9. Rough work must be done on the question paper itself. Additional blank pages are given in the question paper for rough work.
10. Hand over the OMR to the invigilator before leaving the Examination Hall.

- 1) Reservoir, for rat fleas, known to be a
- Bat
 - Rat
 - Human
 - Pig
- 2) Active immunity may be gain by
- Natural infections
 - Vaccination
 - Toxoids
 - All of those
- 3) Tetanus is characterized by strong muscle spasms commonly called as
- Lockjaw
 - Trismus
 - Both A & B
 - None of these
- 4) An immunoglobulin is:
- Carbohydrate
 - Fatty acid
 - Glycoprotein
 - Protein
- 5) Entry portal for 'influenza' virus is
- Skin
 - Respiratory tract
 - Gastrointestinal tract
 - Mouth
- 6) Phase of bacterial growth in which bacterial parent cell does not divide but metabolic activity is vigorous, named as:
- Log phase.
 - Lag phase.
 - Stationary phase.
 - Death phase.
- 7) Chocolat agar is an example of a pure enriched medium used for culturing:
- Streptococci.
 - Hemophili.
 - Enterococci.
 - Fungi.
- 8) Coagulase enzyme is produced by
- Staphylococcus aureus
 - Yersinia pestis
 - Both A & B
 - None of these
- 9) In viruses nucleic acid is surrounded by protein coat called
- Outer membrane.
 - Capsid.
 - Cell wall.
 - Capsomere.
- 10) Bacterial spores are
- Weakly acid fast
 - Strongly acid fast
 - Alcohol fast
 - Non acid fast

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

- 11) Study of 'parasites' is known as**
- Virology
 - Parasitology
 - Bacteriology
 - Biology
- 12) A small pieces of DNA that move repeatedly between plasmid DNA and chromosomal DNA**
- DNA fragment.
 - Capsules.
 - Plasmids.
 - Transposons.
- 13) The following are lipolytic hormones, except:**
- Glucagon.
 - Cortisol.
 - Epinephrine.
 - Insulin.
- 14) 'Cryptococcal meningitis' is caused by:**
- Cryptosporidium
 - Cryptococcus neoformans.
 - Diplococcus.
 - Dimorphs.
- 15) Lactobacilli are predominant normal flora of**
- Skin flora.
 - Oral.
 - Skin.
 - Vagina.
- 16) Aminoglycoside antibiotics such as gentamicin**
- Act on the bacterial cell wall
 - are active against staphylococci
 - Are effective in the treatment of anaerobic myositis.
 - Gram- negative antibacterial medications that inhibit protein synthesis.
- 17) Which of the statements regarding gram staining is wrong?**
- Mycobacterium tuberculosis stains blue because of thick lipid layer.
 - Streptococcus pyogens stains blue because of thick peptidoglycan layer.
 - Escherichia coli stains pink because of thin peptidoglycan layer.
 - Mycoplasma pneumoniae is not visible in the Gram's stain because it has no cell wall.
- 18) In hospitals, surgical instruments and plastics are sterilised with**
- Ethylene oxide
 - Iodine
 - Tincture
 - Chlorine
- 19) What is the temperature of autoclave at 15lb of pressure?**
- 123°C.
 - 100°C.
 - 121°C
 - 140°C.
- 20) Bacillus is causative agent for**
- Typhoid
 - Pncumonia
 - Anthrax
 - Cellulitis

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

21) Mordant used in grams staining is

- a) Crystal violet
- b) Iodine
- c) Saffranin
- d) All of these

22) Entry for papillomavirus is

- a) Gastrointestinal tract
- b) Skin
- c) Genital tract
- d) Respiratory

23) If an antibodies injects in humanbody for protection against foreign agent, resulting immunity is:

- a) Active immunity
- b) Passive immunity
- c) Defence mechanism
- d) Drug therapy

24) The constituent unit of inulin is;

- a) Glucose.
- b) Fructose.
- c) Mannose.
- d) Galactose.

25) 'Flagellum' is made up of

- a) Sugars.
- b) Lipids.
- c) Polysaccharides.
- d) Proteins.

26) E. coli can ferment

- a) Maltose
- b) Sucrose
- c) Lactose
- d) Galactose

27) Optochin is usec to test:

- a) Lactose fermentation.
- b) Motility.
- c) Glucose fermentation.
- d) Antibiotic susceptibility.

28) Conjugation process of bacteria done by

- a) Cell Wall.
- b) Flazella.
- c) Spore.
- d) Pilli.

29) An epitope is:

- a) A B- cell.
- b) A haptan
- c) An antibody
- d) The antigen determinant site.

30) 'Meningitis' is a disease of brain which is caused by

- a) Haemophilus influenzae
- b) Neisseria meningitidis
- c) Meningococcus
- d) All of above

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

31) The specific gravity of urine normally ranges from:

- a) 0.900- 0.999
- b) 1.003- 1.030
- c) 1.000- 1.001
- d) 1,101-1,120

32) Poliovirus enter body via

- a) Gastrointestinal tract.
- b) Respiratory tract.
- c) Respiratory tract.
- d) Through water.

33) 'Corynebacterium' is non spore forming rod that causes

- a) Diphtheria
- b) Pneumonia
- c) Syphilis
- d) UTI's

34) Non hemolysed serum sample to be collected:

- a) Centrifugation after clot retraction.
- b) Well mixed the blood sample with EDTA.
- c) Centrifuge tubes to be washed with deionized water.
- d) Venipuncture to be done by a fine needle lesser than 24 G.

35) 'Dengue' virus is member of a family, called

- a) Parvovirus
- b) Flaviviruses
- c) Picornavirus
- d) Hepadnavirus

36) Mode of transmission for Wuchereria is:

- a) Black fly bite
- b) Deer fly bite
- c) Flees
- d) Mosquito bite

37) The antistreptolysin O titre is raised in infections caused by:

- a) Streptococcus sanguis.
- b) Streptococcus pneumonia.
- c) Streptococcus pyogenes.
- d) Streptococcus bovis.

38) Other name for normal flora organisms is

- a) Commensals
- b) Residents
- c) Members
- d) Mutualists

39) Iodine is stored in:

- a) Thyroid gland as thyroglobulin.
- b) Liver.
- c) Intestine.
- d) Skin.

40) The optically inactive amino acid is:

- a) Glycine.
- b) Serine.
- c) Threonine.
- d) Valine.

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

41) Tetanus toxoid

- a) need not be given for superficial wounds.
- b) is given three times to babies as a component of triple vaccine
- c) Confers passive immunity.
- d) Should be avoided in the immunocompromised person

42) Pneumonia bronchiolitis in infants is caused by

- a) Parainfluenza viruses
- b) Respiratory syncytial virus
- c) Papillomaviruses
- d) Adenoviruses

43) High TSH level in serum may indicate:

- a) Hypothyroidism.
- b) Hyperthyroidism.
- c) Hypoplastic anemia.
- d) Chronic obstructive pulmonary disease.

44) The stain used to demonstrate fungus

- a) Albert
- b) Nigrosin
- c) Lactophenol cotton blue
- d) None of these

45) A bactericidal agent called Vancomycin is effective against certain

- a) Gram-positive bacteria
- b) Gram-negative bacteria
- c) Aerobic bacteria
- d) Anaerobic bacteria

46) Respiratory tract is portal of entry for

- a) Adeno virus
- b) Mumps virus
- c) Measles virus
- d) All of above

47) Acute pancreatitis is diagnosed by elevation of which enzyme in blood?

- a) Alkaline phosphatase.
- b) Acid phosphatase.
- c) Alanine transaminase.
- d) Amylase.

48) Causative agent for 'ringworm' is:

- a) Epidermatophyton.
- b) Tinea nigra.
- c) Mycetoma.
- d) Histoplasma.

49) Listeria and haemophilus are causative agents for

- a) Plague.
- b) Meningitis.
- c) Anthrax.
- d) Leprosy.

50) Cell wall composed of peptidoglycan in all bacteria except

- a) Mycoplasma.
- b) E. coli.
- c) Mycobacterium tuberculosis.
- d) Corynebacterium diphtheriae.

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

51) Pernicious anaemia is caused by:

- a) Low intake of vitamin B1.
- b) Low intake of Vitamin D.
- c) Absence of IF in the gastric juice.
- d) Over production of extrinsic factor.

52) In malaria, the form of plasmodia that is transmitted from mosquito to human is the:

- a) Sporozoite.
- b) Gametocyte.
- c) Merozoite.
- d) Hypnozoite.

53) Which bacteria is responsible for producing acidic PH in adult Vagina?

- a) Lactobacillus.
- b) Bacteroides species.
- c) Diphtheroides.
- d) Ganderella veginatis.

54) Neisseria gonorrhoeae, Treponema pallidum and chlamydia trachomatis are isolated from the

- a) Urine culture
- b) Genital tract culture
- c) Sputum culture
- d) Stool culture

55) One of the following is cardioprotective fatty acid:

- a) Palmitoleic acid.
- b) Stearic acid.
- c) Elaidic acid.
- d) Linoleic acid.

56) During starvation, all the following substances are increased in blood or tissues, except:

- a) Ketone bodies.
- b) Epinephrine.
- c) Glycogen.
- d) Glucagon.

57) Indol test positivity is indicated by presence of:

- a) A red ring.
- b) Colour change to yellow.
- c) Colour change to blue.
- d) Increased turbidity.

58) Portal of entry for 'clostridium tetani' is

- a) Nose
- b) Wound
- c) Lesions
- d) Mouth

59) Brain gets its nutrients after few days of starvation from:

- a) Ketone bodies.
- b) Fatty acid.
- c) Glucose.
- d) Glycogen.

60) Pleomorphic is term used particularly for bacteria, having

- a) One shape
- b) Rods.
- c) Spirals.
- d) Variable shape

61) Which immunoglobulin is the least prevalent?

- a) IgA
- b) IgD
- c) IgE
- d) IgM

62) Each of the following parasite is transmitted by mosquitoes except:

- a) Leishmania donovani.
- b) Wucheria bancrofti.
- c) Plasmodium vivax.
- d) Plasmodium falciparum.

63) Viral 'gastroenteritis' in young children is caused by:

- a) Echovirus
- b) Rotavirus
- c) Coxsackie virus
- d) Rhinovirus

64) Horizontal transfer is

- a) Direct transfer.
- b) Person to person transfer.
- c) Mother to offspring transfer.
- d) Indirect Transfer.

65) Portal of entry for 'H. influenzae' is

- a) Genital tract.
- b) Upper respiratory tract.
- c) Skin.
- d) Mouth.

66) Pharyngitis is mostly diagnosed by

- a) Blood cultures
- b) Throat swab cultures
- c) Sputum cultures
- d) Stool cultures

67) Rounded head of ' tapeworm' is called:

- a) Proglottids
- b) Scolex
- c) Neck
- d) Joint

68) Arrangement of cocci in pair is termed as

- a) Diplococcus.
- b) Monococcus.
- c) Staphylococcus.
- d) Rods.

69) HSV-1 stands for

- a) Human immuno virus
- b) Acquired immunodeficiency syndrome
- c) Herpes simplex virus type I
- d) Herpesvirus

70) Hyperglycaemia occurs in all , except:

- a) Cushing syndrome.
- b) Diabetes mellitus.
- c) Acromegaly.
- d) Addison's disease.

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

71) Which of the following enzyme is used to distinguish between different types of *Staphylococcus* isolates?

- a) Proteases
- b) Lipase
- c) Hyaluronidase
- d) Coagulase

72) A genus, named as *coccidioides immitis*, responsible in causing a disease, called:

- a) Coccidioidomycosis.
- b) Histoplasmosis.
- c) Candidiasis.
- d) Aspergillosis.

73) Other name for beta lactamases is

- a) Penicillinases
- b) *Klebsiella pneumoniae*
- c) *Pseudomonas aeruginosa*
- d) Catalyses

74) Rabies virus is an important human pathogen belongs to class

- a) Rhabdoviruses.
- b) Paramyxoviruses.
- c) Coronaviruses.
- d) Arenaviruses.

75) Sex pilus is also named as

- a) Plasmid.
- b) Vector.
- c) Transposons.
- d) Conjugation tube.

76) Which of the following fields is concerned with the study fungi?

- a) Bacteriology.
- b) Physiology.
- c) Virology.
- d) Mycology.

77) Lowenstein- Jensen medium is used for culturing:

- a) Enterobacteria.
- b) Tuberculosis.
- c) Salmonella.
- d) G+ bacteria.

78) Acute phase reactant protein is:

- a) C-reactive protein.
- b) HDL.
- c) Ceruloplasmin.
- d) Haptoglobin.

79) To calculate creatinine clearance, all the following data are required, except:

- a) Plasma creatinine level.
- b) Patients height & weight.
- c) Daily urine output.
- d) Specific gravity of urine.

80) Many bacteria secretes a polysaccharide coating called

- a) Cell wall.
- b) Cell coat.
- c) Cell membrane.
- d) Glycocalyx.

81) HDL is synthesized and secreted from:

- a) Liver.
- b) Kidney.
- c) Muscle.
- d) Pancreas.

82) Catalase test is used for:

- a) Diagnostic of G+ cocci
- b) Diagnostics of G+ rods
- c) Uses hydrogen peroxide
- d) All of these.

83) A nucleoside consists of:

- a) Nitrogenous base.
- b) Purine or pyrimidine base+ sugar.
- c) Purine or pyrimidine base+ phosphorous.
- d) Purine + pyrimidine base+ sugar+ phosphorous.

84) Gram staining was developed by

- a) Louis Pasteur
- b) Robert Koch
- c) Christian Gram
- d) Gerald Gram

85) A gene, that may cause of initiation of cancer growth, is known as:

- a) Hepatitis causing gene.
- b) Mutated gene.
- c) Oncogene.
- d) Carcinogen.

86) Rounded head of 'tapeworm' is called

- a) Proglottids.
- b) Scolex.
- c) Neck.
- d) Joint.

87) Which haemoglobin derivative is normally found in blood?

- a) Deoxyhaemoglobin.
- b) Sulhaemoglobin.
- c) Acid hematin.
- d) Cyanmethemoglobin.

88) Bacterial cell wall mainly composed by

- a) Peptidoglycan
- b) Lipids
- c) Protein
- d) Vitamin

89) The secretory antibody is

- a) IgM
- b) IgG
- c) IgE
- d) IgA

90) Insulin is a Protein hormone related to:

- a) Beta cells of Langerhans in pancreas.
- b) Consist of 51 amino acid.
- c) Hypoglycemic hormone.
- d) All are correct.

M. Sc in Medical Laboratory Technology (M. Sc MLT)-2020

- 91) 'Staphylococcus aureus' is mostly isolated from**
- a) Urine culture
 - b) Blood culture
 - c) Sputum culture
 - d) Throat culture
- 92) Gluconeogenesis is mainly taken place:**
- a) Brain.
 - b) Liver.
 - c) RBC.
 - d) Muscle.
- 93) Role of sodium fluoride is Sugar viral:**
- a) Coagulant.
 - b) Anticoagulant.
 - c) Glycolytic agent.
 - d) Antiglycolytic agent.
- 94) DTP vaccine for the prevention infections protects against:**
- a) Mumps virus.
 - b) Bordetella pertussis.
 - c) Measels virus.
 - d) Rubella virus.
- 95) The extracellular cation present in maximum concentration is:**
- a) Potassium.
 - b) Magnesium.
 - c) Sodium.
 - d) Calcium.
- 96) Vibrio cholera enter in body via 'gastrointestinal' tract and causes**
- a) Cholera
 - b) Fever
 - c) Measles
 - d) Mumps
- 97) Klebsilla, E.coli, Enterobacters and pseudomonas are causative agent for**
- a) Cancer
 - b) Urinary tract infections
 - c) Anthrax
 - d) Peritonitis
- 98) Attenuation means**
- a) Killing of the bacteria (microorganism)
 - b) Inactivation of bacteria
 - c) More activating the bacteria
 - d) Both a and b
- 99) The average pH of Urine is:**
- a) 7.0
 - b) 6.0
 - c) 8.0
 - d) 0.0
- 100) Which of the following agent is used to prevent Malaria?**
- a) Mebendazole.
 - b) Chloroquine.
 - c) Inactivated vaccine.
 - d) Zinc table.