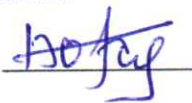


**МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ  
КЫРГЫЗСКОЙ РЕСПУБЛИКИ  
ОШСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ  
МЕЖДУНАРОДНЫЙ МЕДИЦИНСКИЙ ФАКУЛЬТЕТ  
Кафедра клинических дисциплин 3**

**РАССМОТРЕНО**

на заседании кафедры КД 3  
Прот. № \_\_\_ от \_\_\_\_\_ 2024г.  
Зав.каф., к.м.н., доцент  
Б.О.Абдурахманов 

**УТВЕРЖДАЮ** 


Председатель УМС ММФ,  
Башиева А.М.  
“ \_\_\_ ” \_\_\_\_\_ 2024г.

**ФОНД ТЕСТОВЫХ ЗАДАНИЙ  
Для итогового контроля по дисциплине  
“Фтизиатрия”  
На 2023-2024 учебный год  
Направление: 560001-лечебное дело (GM)  
Курс– 5, семестр- 10**

Наименование дисциплины	Всего	Кредит	Аудиторные занятия (60)		СРС
			Лекции	Практические	
Фтизиатрия	120	4	24	36	60
Количество тестовых вопросов	265				

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Г.Ош. 2024г.

## ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ БАНКА ТЕСТОВЫХ ЗАДАНИЙ

кафедры « Клинических дисциплин 3 »

от « \_\_\_ » \_\_\_\_\_ 202\_ г.

на разработанные тестовые задания по дисциплине  
« Физиология »  
наименование дисциплины

/указать должность, ученую степень, Ф.И.О. автора (авторов)/

Тестовые задания проверены членом экспертной группы тестологов

Барбошев Ч. И.

/указать должность, ученую степень, Ф.И.О./

### Направления проведения оценки структуры и содержания тестового задания

№	Направление экспертизы	Оценка экспертов	
		Соответствует ✓	Не соответствует
1	Соответствие задания программам и стандартам обучения	Соответствует ✓	Не соответствует
2	Включение в тесты только наиболее важных, базовых знаний	Соответствует ✓	Не соответствует
3	Ясность смысла тестовой ситуации и представления ТЗ	ясно ✓	Не ясно
4	Правильность ответа на вопрос ТЗ	Соответствует ✓	Не соответствует
5	Значимость содержания тестового задания (0-сомнительный, 1-допустимый, 2-важный, 3-существенный)	<u>3</u> балл(ов)	
6	Соответствие необходимому числу заданий по каждому разделу дисциплины исходя из его важности и числа часов, отведенных на его изучение в программе.	Соответствует ✓	Не соответствует

Членом экспертной группы выявлены следующие недостатки в тестовом задании не выявлены. недостатки в ТЗ.

Членом экспертной группы внесены следующие исправления (корректировки) в тестовое задание не внесены исправлений в ТЗ.

На основании представления тестовых заданий автором (авторами) и проведенной проверки сделала следующее заключение:

1) Содержание тестовых заданий соответствует (не соответствует) содержанию УМКД (нужное подчеркнуть)

2) Представленные тестовые задания в следующем объеме 265 вопросов: соответствуют (не соответствуют) требованиям, предъявляемым к количеству, уровням сложности и формам заданий для составления тестов. (нужное подчеркнуть)

Тестолог Барбошев Ч. И. Ч.И.Барбошев / \_\_\_\_\_ /  
подпись дата

Ознакомлен зав. кафедрой Абдурахманов Б.О. \_\_\_\_\_ / \_\_\_\_\_ /  
подпись дата

PHTHISIOLOGY – EXAM TEST QUESTIONS – 2023

*(Created by Stalbek Aiylichiev, MPH)*

- 1. How did the most eminent Greek physician, Clarissimus Galen (131-201 CE), describe ‘phthisis’?**
  - a) It is an ulceration of the lungs, chest, or throat, accompanied by coughs, low fever, and wasting away of the body because of pus
  - b) It is an infectious disease of the lung caused by Mycobacterium Tuberculosis
  - c) It is an infectious disease caused by Non-tuberculosis Mycobacteria and associated with malnutrition
  - d) It is a chronic disease characterized by productive cough for more than two weeks, fever, weight loss, and night sweats
  
- 2. What stages of pulmonary tuberculosis were determined by the English physician Richard Morton (1637-1698)?**
  - a) Transmission, latent infection, and active tuberculosis
  - b) Inflammation (tubercle formation), ulceration, and phthisis
  - c) Latent infection, inflammation, and ulceration
  - d) Ulceration, phthisis, and death
  
- 3. When and by whom was the TB causative agent discovered?**
  - a) In 1884 by F. Leffler
  - b) In 1926 by E. Marey
  - c) In 1882 by R. Koch
  - d) In 1896 by E. Van Ermengem
  
- 4. Who discovered tuberculin?**
  - a) Vaxman
  - b) Calmete
  - c) Geren
  - d) R. Koch
  
- 5. What factors could contribute to the rapid transmission of tuberculosis infection among the population during the "Great White Plague" in Europe (XVII-XVIII centuries)?**
  - a) High population density and poor sanitation in cities
  - b) High prevalence of HIV infection
  - c) High prevalence of non-communicable diseases
  - d) Lack of effective anti-TB treatment
  
- 6. What treatment approach was used for tuberculosis before the era of chemotherapy?**
  - a) Physiotherapy and symptomatic therapy
  - b) Exposure to fresh air and good nutrition in sanatoria
  - c) Only surgical interventions
  - d) Social isolation
  
- 7. Which of the following drugs was first used to treat tuberculosis?**
  - a) Streptomycin
  - b) Isoniazid
  - c) Rifampicin
  - d) Ethambutol

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- 8. Which of the following indicators characterise the TB infection reservoir?**
- a) Prevalence
  - b) Incidence
  - c) Contamination
  - d) Mortality
- 9. Which of the following indicators of tuberculosis is determined in tuberculin diagnostics?**
- a) Prevalence
  - b) Incidence
  - c) Infection
  - d) Mortality
- 10. Which of the following defines the incidence of tuberculosis?**
- a) Number of new TB patients per 100 000 population within one year
  - b) Number of active TB patients per 100 000 population within one year
  - c) Number of new patients, patients with exacerbations and relapses per 100 000 population within one year
  - d) Number of all persons registered in TB dispensary (clinic) by the end of the year
- 11. Which of the following is the definition of tuberculosis mortality?**
- a) Number of all death cases because of TB per 100 000 population within one year
  - b) Number of death cases with respect to the number of patients that are registered in TB dispensary
  - c) Number of death cases that are registered in TB dispensary, in relation to the whole contingent of TB dispensary
  - d) Number of TB patients' death from all the causes per 1000 population
- 12. Which of the following diseases can have a significant impact on the TB epidemic?**
- a) HIV-infection
  - b) Malaria
  - c) Viral hepatitis C
  - d) Ebola virus
- 13. Which of the following cases may pose the greatest epidemiological threat to others?**
- a) TB patients whose Smear++ and Culture-
  - b) TB patients whose Smear- and Culture-
  - c) TB patients whose Smear+ and Culture-
  - d) TB patients whose Smear+ and Culture+
- 14. Which of the following factors is a major risk factor for TB?**
- a) Age
  - b) Malaria
  - c) Heart failure
  - d) Untreated/previously not well treated TB
- 15. Which of the following forms of tuberculosis can pose the greatest epidemiological threat?**
- a) Pulmonary fibrous-cavernous tuberculosis
  - b) TB of intra-thoracic lymph nodes
  - c) TB meningitis
  - d) TB spondylitis

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- 16. What is the optimal temperature regime for active reproduction of *M. tuberculosis*?**
- a) 42-45°C
  - b) 20-25°C
  - c) 36-37°C
  - d) 50-55°C
- 17. How long can *M. tuberculosis* remain alive in dry sputum?**
- a) 2 years
  - b) 2 hours
  - c) 2 days
  - d) 2 months
- 18. Which type of mycobacteria frequently causes TB disease in human body?**
- a) *M. Bovis*
  - b) *M. tuberculosis*
  - c) *M. africanum*
  - d) *M. Kansasi*
- 19. What substances characterize the acid resistance of *M. tuberculosis*?**
- a) Mitochondria
  - b) Ribonucleic acid
  - c) Proteins
  - d) Peptidoglycans, arabinogalactan, and mycolic acid
- 20. Which of the following infections is a typical mycobacterium?**
- a) *M. africanus*
  - b) *M. bovis*
  - c) *M. kansasii*
  - d) *M. xenopi*
- 21. What type of infection is *M. tuberculosis*?**
- a) An aerobic infection
  - b) An anaerobic infection
  - c) A gram-negative infection
  - d) A viral infection
- 22. Which of the following types of TB disease is caused by *M. tuberculosis*? (choose one best answer)**
- a) Drug-susceptible TB
  - b) MDR TB
  - c) XDR TB
  - d) All the above are correct
- 23. What is endogenous reinfection?**
- a) Activation of latent TB infection in the organism
  - b) Activation of latent TB infection because of new infection in the organism
  - c) Appearance of TB infection foci in internal organs because of new infection transmission from outside
  - d) Transmission of infection to non-infected organism

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**24. What is exogenous reinfection?**

- a) Activation of latent TB infection in the organism
- b) Appearance of TB infection locus in internal organs because of infection transmission to the organism from outside
- c) Activation of latent TB infection locus because of new infection in the organism
- d) Appearance of TB infection lesions in the organism because of lymphogenous dissemination

**25. Which organ is most often affected in tuberculosis? (choose one best answer)**

- a) Bone
- b) Lungs
- c) Kidneys
- d) Brain

**26. What is the most common way tuberculosis transmission from a sick person to a healthy person?**

- a) Alimentary
- b) Aerogenous
- c) Parenteral
- d) Sexual contact

**27. In which of the following cases can tuberculosis be transmitted from a sick person to a healthy person?**

- a) Blood transfusion
- b) Handshaking
- c) Coughing, sneezing, spitting and singing
- d) All the above

**28. Which of the following factors has the greatest positive effect on the growth rate of M. tuberculosis in the human body?**

- a) Nutritional status of the infected with M. tuberculosis person
- b) Age of the infected with M. tuberculosis person
- c) Carbon dioxide concentration
- d) Oxygen concentration

**29. Which of the following is the most important source of tuberculosis infection?**

- a) Patient's sputum
- b) Milk from sick animals
- c) The remains of the patient's food
- d) Dishes used by the patient

**30. Which of the following can increase the sensitivity of the human body to tuberculosis infection?**

- a) Smoking
- b) Malnutrition
- c) Alcohol addiction
- d) All the above

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- 31. Which of the following diseases can increase the risk of activation of tuberculosis infection in the human body?**
- a) Silicosis
  - b) Acute diarrhoea
  - c) Dermatitis
  - d) Rhinitis
- 32. What do lab technicians check in a sputum smear to detect *M. tuberculosis*? (choose one best answer)**
- a) White-blood cells
  - b) Fast-moving bacilli
  - c) Drug-resistant bacilli
  - d) Acid-fast bacilli
- 33. Which of the following pulmonary TB forms is considered as timely detected?**
- a) Focal TB in infiltrative phase
  - b) Disseminated TB
  - c) TB lung cirrhosis
  - d) Caseous TB
- 34. What is the optimal growth period for *M. tuberculosis* culture on solid Lowenstein-Jensen medium?**
- a) 2.5- 3 months
  - b) 2-3 days
  - c) 2-3 weeks
  - d) 1 month
- 35. What is the name of the most used culture medium for the diagnosis of *M. tuberculosis*?**
- a) Lowenstein-Jensen
  - b) Gelberg
  - c) Leffler
  - d) Kitta-Taroci
- 36. What should be examined for *M. tuberculosis* on WHO recommendations for suspected pulmonary TB?**
- a) Urine
  - b) Cerebro-spinal fluid
  - c) Sputum
  - d) Pleural fluid
- 37. What is the bacteriological method of sputum examination for tuberculosis used for?**
- a) To detect drug resistance of *M. tuberculosis*
  - b) To detect drug intolerance
  - c) To detect of *M. tuberculosis* pathogenicity
  - d) All the above
- 38. Which of the following methods is phenotypic investigation of sputum?**
- a) GeneXpert
  - b) Culture

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- c) Hain test
- d) Microscopy

**39. Which of the following methods is a genotypic investigation of sputum?**

- a) X-ray
- b) Microscopy
- c) Culture
- d) Line-probe assay

**40. Which of the following sputum investigation is a rapid diagnostic method?**

- a) MGIT for culture
- b) GeneXpert MTB/RIF
- c) Lowenstein-Jensen for culture
- d) IGRA test

**41. To which anti-TB drug GeneXpert MTB/RIF detects resistance?**

- a) Isoniazid
- b) Rifampicin
- c) Ethambutol
- d) Pyrazinamide

**42. To which anti-TB drugs the first-line line-probe assay detects resistance?**

- a) Isoniazid and Streptomycin
- b) Isoniazid and Pyrazinamide
- c) Isoniazid and Rifampicin
- d) To all first-line TB drugs

**43. What is tuberculin diagnostic?**

- a) Detection of TB infection
- b) Confirmation of TB process activity
- c) Detection of residual changes after TB infection
- d) Diagnostic of chronic obstructive pulmonary diseases

**44. In what form of TB on X-Ray hologram, the shadow of the lung root is extended, its shape and structure are broken?**

- a) TB of intra-thoracic lymph nodes
- b) Infiltrative TB
- c) TB intoxication
- d) Disseminated TB

**45. Which method is more efficient to clarify the etiology of pleurisy?**

- a) Thoracoscopy with biopsy of the pleura
- b) Computed tomography
- c) Bronchoscopy with biopsy of the pleura
- d) Ultrasound

**46. What if the median turn-around time of Smear (+) case in culture solid medium?**

- a) Around 16 days
- b) Around 8 days



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- c) Around 2 hours
- d) Around 30 days

**47. What is the median turn-around time of Smear (-) case in culture solid medium?**

- a) Around 29 days
- b) Around 16 days
- c) Around 2 hours
- d) Around 8 days

**48. What is the median turn-around time of Smear (+) case in culture liquid medium?**

- a) 8 days
- b) 16 days
- c) 29 days
- d) 1 month

**49. What is the median turn-around time of Smear (-) case in culture liquid medium?**

- a) 16 days
- b) 8 days
- c) 29 days
- d) 2 hours

**50. What is the x-ray picture of pulmonary tuberculoma?**

- a) Round shade syndrome
- b) Shadowing in the lung
- c) ring-shaped shade in lung
- d) Enlightenment syndrome

**51. When teaching a patient to produce a sputum specimen, instruct the patient in all the following, except:**

- a) Rinse mouth with water to reduce sample contamination from normal oral flora
- b) Collect the specimen just before going to sleep at night
- c) Cough gently and expectorate into the sputum container
- d) Bring the specimen up from their lungs (not throat) after a deep cough

**52. Which of these TB tests is approved by the WHO and recommended as an initial diagnostic test in individuals suspected of multidrug resistant or HIV-associated TB?**

- a) TB skin test
- b) Lateral flow urine lipoarabinomannan assay
- c) GeneXpert MTB/RIF
- d) Culture

**53. Which of the following technologies is the most appropriate for a point-of-care testing program where treatment decisions can be made in a single visit?**

- a) GeneXpert MTB/RIF
- b) Hain test
- c) Culture
- d) All the above

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- 54. What is the sensitivity and specificity of symptomatic TB screening in people living with HIV?**
- a) 80% and 50%
  - b) 100% and 80%
  - c) 90% and 70%
  - d) 50% and 100%
- 55. What is the most common aim of symptomatic TB screening?**
- a) Detection of latent TB infection
  - b) Detection of active TB disease
  - c) Detection of TB contacts
  - d) All the above
- 56. What is the main purpose of tomography in a comprehensive X-ray examination of patients with pulmonary tuberculosis?**
- a) Determining the location of the lesion
  - b) Determining the size of the revealed shadows
  - c) Identification of areas of destruction in the lungs
  - d) Determining the intensity of the revealed shadows
- 57. Which of the following is the most reliable method for diagnosing pulmonary tuberculosis?**
- a) X-ray of the respiratory system
  - b) Microscopy of sputum to detect *M. tuberculosis*
  - c) Tuberculin skin test
  - d) Complete blood count
- 58. Which of the following is the most informative laboratory test that helps to clarify the aetiology of peripheral lymphadenitis?**
- a) Radiological
  - b) Bacteriological
  - c) Immunological
  - d) Histological (biopsy)
- 59. What method of examining a patient in most cases is more reliable for the timely diagnosis of miliary tuberculosis?**
- a) Complete blood count
  - b) Mantoux test
  - c) Bronchoscopy
  - d) Repeated chest X-rays in 3 projections 2 weeks after the onset of the disease
- 60. What can be found on x-ray with miliary pulmonary tuberculosis?**
- a) Multiple low-intensity foci of various sizes in both lungs, in places merging with each other into foci with enlightenment
  - b) Multiple low-intensity small foci of "millet" character in all pulmonary areas of both lungs, pulmonary pattern is not determined
  - c) In the middle and lower parts of both lungs, multiple large focal shadows of significant intensity with clear contours are determined
  - d) In the upper parts of both lungs against the background of moderate pneumofibrosis, focal shadows of varying intensity are determined

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- 61. What is the X-ray outcome of pathomorphological changes in miliary pulmonary tuberculosis in the case of timely diagnosis and long-term intensive chemotherapy?**
- a) Partial resorption and consolidation of foci
  - b) Complete resorption of foci without visible residual changes
  - c) The formation of multiple small calcifications
  - d) The formation of diffuse pneumosclerosis with the inclusion of dense focal shadows
- 62. What is the most important diagnostic test for tuberculous meningitis?**
- a) Meningeal syndrome
  - b) X-ray evidence of pulmonary tuberculosis
  - c) High pressure of cerebrospinal fluid
  - d) Mental confusion
- 63. What is the main laboratory exam in the diagnosis of tuberculous meningitis?**
- a) Lumbar puncture with laboratory examination of cerebrospinal fluid, including M. tuberculosis
  - b) Clinical with the study of the characteristics of the course of the disease
  - c) Multiple sputum tests for M. tuberculosis
  - d) Data of neurological status
- 64. Which type of radiant energy can kill M. Tuberculosis in one hour?**
- a) Ultraviolet solar radiation
  - b) Infrared solar radiation
  - c) Constant and variable magnetic field
  - d) Radioactive radiation
- 65. What determines the probability of M. tuberculosis transmission?** (choose one best answer)
- a) Susceptibility (immune status) of the exposed individual
  - b) Infectiousness of the person with TB
  - c) Proximity, frequency, and duration of exposure
  - d) All the above are correct
- 66. Which of the following environmental factors do not increase the probability that M. tuberculosis will be transmitted?** (choose one best answer)
- a) Exposure in small enclosed spaces
  - b) Inadequate local or general ventilation that results in insufficient dilution or removal of infectious droplet nuclei
  - c) Improper specimen handling procedures that generate infectious droplet nuclei
  - d) Negative pressure in an infectious TB patient's room
- 67. Which of the following respiratory protection measures reduces the risk for exposure to TB disease?** (choose one best answer)
- a) Implementing a respiratory-protection program
  - b) Training health-care workers on respiratory protection
  - c) Educating patients on respiratory hygiene and the importance of cough etiquette
  - d) All are correct

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- 68. Which of the following statements about respiratory protection is true?** (choose one best answer)
- a) Respirators are designed to protect health-care workers and other individuals from inhaling droplet nuclei
  - b) Surgical masks are designed to reduce the number of droplets being exhaled into the air by persons with infectious TB disease
  - c) Health-care workers can wear surgical masks for protection against droplet nuclei, and persons with infectious TB disease can wear respirators to prevent the spread of TB
  - d) Only a and b are correct
- 69. Which of the following activities should hospitals carry out to prevent the further spread of infection?** (choose one best answer)
- a) Develop a written policy and plan for prevention of the nosocomial transmission of TB disease in their facility
  - b) Develop TB infection control policies to ensure that patients suspected of having infectious TB disease are isolated in all rooms
  - c) Report any patient with a suspected or confirmed diagnosis of TB disease to their state and local public health agency promptly
  - d) All are correct
- 70. Which of the following areas in health facilities has limited risk of TB infection transmission?**
- a) Waiting area
  - b) Smear Positive Unit
  - c) Waste management area
  - d) Kitchen
- 71. Which of the following areas in health facilities has limited risk of TB infection transmission?**
- a) Children department
  - b) Diagnosis department
  - c) Radiology
  - d) Kitchen
- 72. Which of the following areas in health facilities has lowest risk of TB infection transmission?**
- a) Waiting area
  - b) Sputum collection area
  - c) Children department
  - d) Administration
- 73. Which of the following areas in health facilities has lowest risk of TB infection transmission?**
- a) Waiting area
  - b) Sputum collection area
  - c) Children department
  - d) Kitchen

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- 74. Which of the following areas in health facilities has highest risk of TB infection transmission?**
- a) Waiting area
  - b) Waste management area
  - c) Children department
  - d) Kitchen
- 75. Which of the following areas in health facilities has highest risk of TB infection transmission?**
- a) Administration
  - b) Smear reception and reading area
  - c) Children department
  - d) Radiology
- 76. In which of the following cases TB patients are less infectious?**
- a) Coughing at the diagnostic stage
  - b) Has a smear positive result
  - c) Receiving an ineffective treatment
  - d) Two weeks under DOT
- 77. Patients can be considered non-infectious if they meet all the following criteria, except:**
- a) Two weeks under DOT
  - b) Not receiving any treatment
  - c) Clinical improvement during treatment
  - d) 3 times smear negative results
- 78. Administrative TB infection control measures include all the followings, except:**
- a) Health facility risk assessment
  - b) Development of a TB infection control plan
  - c) Staff, patient, and visitor education
  - d) Natural ventilation
- 79. Which of the following measures is included in the environmental level of a TB infection control?**
- a) Health facility risk assessment
  - b) Natural ventilation
  - c) Wearing a respirator
  - d) All the above
- 80. What is true about respirators?**
- a) Respirators have large pores and do not have an airtight seal to around the edge, permitting inflow of droplet nuclei
  - b) Respirators rely on an airtight seal and have tiny pores which block droplet nuclei
  - c) Patients with active tuberculosis are advised to wear a respirator to protect themselves from re-infection
  - d) Persons with latent tuberculosis infection are advised to wear a respirator to protect themselves from re-infection

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- 81. Which of the following specialists should actively identify patients with presumptive tuberculosis?**
- a) Therapists
  - b) Paediatricians
  - c) Phthisiatricians
  - d) All medical specialists
- 82. What is multidrug resistant TB?**
- a) No resistance to any first-line anti-TB drugs
  - b) Resistance to more than one first-line anti-TB drug other than isoniazid and rifampicin
  - c) Resistance to at least isoniazid and rifampicin
  - d) Resistance to one first-line anti-TB drug
- 83. Which auscultatory sound indicates to the big cavity in lungs with TB?**
- a) Amphoric breath sounds
  - b) Diminished breath sounds
  - c) Dry rales
  - d) Crepitation
- 84. What are the main causes of pulmonary fibrous-cavernous TB?**
- a) Irregular, irrational treatment of previous clinical forms
  - b) Genetic factor
  - c) Aged patient
  - d) Male
- 85. What is the frequent complication of intra-thoracic lymph nodes TB?**
- a) Bronchial compression, their sequence and disorder of conduction in them
  - b) Heamatogenous dissemination
  - c) Milliary TB
  - d) TB meningitis
- 86. What is the frequent complication of the primary TB complex?**
- a) Exudative pleurisy
  - b) Pulmonary bleeding
  - c) Pleural empyema
  - d) Pulmonary cavern
- 87. Which of the following infiltrates is more severe (infiltrative TB)?**
- a) Caseous pneumonia
  - b) Rounded infiltrate
  - c) Pericissuritis
  - d) Cloudy infiltrate
- 88. What are the common forms of primary tuberculosis?**
- a) Primary TB complex
  - b) TB of peripheral lymph nodes
  - c) TB of mesenterial lymph nodes
  - d) TB of intra-thoracic lymph nodes

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**89. What is mono-drug resistant TB?**

- a) Resistance to at least isoniazid and rifampicin
- b) Resistance to more than one first-line anti-TB drug other than isoniazid and rifampicin
- c) Resistance to one first-line anti-TB drug
- d) MDR plus resistance to at least one of the fluoroquinolones, and at least one of three injectable second-line drugs

**90. What is poly-drug resistant TB?**

- a) Resistance to more than one first-line anti-TB drugs other than isoniazid and rifampicin
- b) Resistance to one first-line anti-TB drug
- c) Resistance to at least isoniazid and rifampicin, the two most potent anti-TB drugs
- d) No resistance to any first-line anti-TB drugs

**91. What is extensively drug resistant TB?**

- a) Resistance to more than one first-line anti-TB drug other than isoniazid and rifampicin
- b) Resistance to at least isoniazid and rifampicin, the two most potent anti-TB drugs
- c) Resistance to rifampicin detected using phenotypic or genotypic methods, with or without resistance to other anti-TB drugs
- d) MDR plus resistance to at least one of the fluoroquinolones, and either to Bedaquiline or Linezolid

**92. What is primary resistance in tuberculosis?**

- a) It is TB, which refers to patients infected with *M. tuberculosis* that is resistant to anti-TB drugs from the outset, prior to anti-TB treatment
- b) Drug resistance among previously treated TB patients refers to the presence of drug-resistant *M. tuberculosis* in patients who have been treated with anti-TB drugs for 1 month or more
- c) Resistance amplification of *M. tuberculosis* infection to all first-line TB drugs
- d) Resistance amplification of *M. tuberculosis* infection to all second-line TB drugs

**93. Initial treatment failure:**

- a) Refers to a patient who, while on treatment for the first time with a Rifampicin-containing regimen, is smear-positive at 5 months or later during the course of treatment
- b) Refers to a patient who, while on the retreatment regimen with first-line drugs, is still smear-positive at the end of the retreatment regimen
- c) Is one where a previously treated patient who was declared cured or completed treatment becomes sputum smear-positive again
- d) Refers to a case where a patient who had been on treatment for 1 month or longer returns to the health service sputum smear-positive after having interrupted treatment for 2 or more months

**94. Retreatment failure:**

- a) Refers to a patient who, while on the retreatment regimen with first-line drugs, is still smear-positive at the end of the retreatment regimen
- b) Refers to a patient who, while on treatment for the first time with a Rifampicin-containing regimen, is smear-positive at 5 months or later during the course of treatment
- c) Is one where a previously treated patient who was declared cured or completed treatment becomes sputum smear-positive again
- d) Refers to a case where a patient who had been on treatment for 1 month or longer returns to the health service sputum smear-positive after having interrupted treatment for 2 or more months

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**95. A relapse case:**

- a) Is one where a previously treated patient who was declared cured or completed treatment becomes sputum smear-positive again
- b) Refers to a patient who, while on the retreatment regimen with first-line drugs, is still smear-positive at the end of the retreatment regimen
- c) Refers to a patient who, while on treatment for the first time with an Rifampicin-containing regimen, is smear- positive at 5 months or later during the course of treatment
- d) Refers to a case where a patient who had been on treatment for 1 month or longer returns to the health service sputum smear-positive after having interrupted treatment for 2 or more months

**96. Treatment after lost to follow up:**

- a) Refers to a case where a patient who had been on treatment for 1 month or longer returns to the health service sputum smear-positive after having interrupted treatment for 2 or more months
- b) Is one where a previously treated patient who was declared cured or completed treatment becomes sputum smear-positive again
- c) Refers to a patient who, while on the retreatment regimen with first-line drugs, is still smear-positive at the end of the retreatment regimen
- d) Refers to a patient who, while on treatment for the first time with an Rifampicin-containing regimen, is smear- positive at 5 months or later during the course of treatment

**97. Which of the following cases is pulmonary TB?**

- a) Caseous pneumonia
- b) MDR TB spondylitis
- c) PDR TB meningitis
- d) DS TB lymphadenitis

**98. What is the most frequent favourable outcome of subacute disseminated pulmonary tuberculosis?**

- a) Dense locus and fibrosis
- b) Total resolution
- c) Pneumosclerosis
- d) Tuberculoma

**99. What is the most favourable outcome of primary TB complex?**

- a) Ghon's focus
- b) Atelectasis
- c) Pleuropneumofibrosis
- d) Primary tuberculoma

**100. What is the most common site for extrapulmonary TB?**

- a) Liver
- b) Skin
- c) Kidney
- d) Adrenal gland



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- 101. Miliary tuberculosis refers to an infection affecting the:**
- Skin
  - Testes
  - Gastro-intestinal tract
  - Entire body
- 102. In what form of pulmonary tuberculosis are extrapulmonary localizations of tuberculosis more common?**
- Focal
  - Disseminated
  - Tuberculoma
  - Cavernous
- 103. Which of the following is more presumptive symptom of tuberculosis?**
- Sweating
  - Fatigue
  - Loss of appetite
  - Night subfebrile fever for more than three weeks
- 104. Which of the following is more presumptive symptom of tuberculosis?**
- Chills
  - Weakness
  - A mild persistent cough for more than three weeks
  - The release of a large amount of sputum when coughing during the day
- 105. What complication can most often be observed with tuberculosis of the intrathoracic lymph nodes in children?**
- Pulmonary bleeding
  - Cavity formation
  - Atelectasis
  - Pulmonary heart failure
- 106. What groups of peripheral lymph nodes are most often affected in children and adolescents with tuberculosis?**
- Subclavian
  - Inguinal
  - Cervical
  - Cubital
- 107. What is the potential complication of peripheral lymph node tuberculosis?**
- Fistula
  - Phlegmon
  - Bleeding
  - Sepsis
- 108. Differential diagnosis of primary tuberculosis complex in children and adolescents should most often be carried out with:**
- Sarcoidosis of the intrathoracic lymph nodes and lungs
  - Neoplasm

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- c) Nonspecific pneumonia
- d) Lymphogranulomatosis

**109. Focal pulmonary tuberculosis with a progressive course most often becomes:**

- a) Disseminated tuberculosis
- b) Tuberculomas
- c) Cirrhotic tuberculosis
- d) Infiltrative tuberculosis

**110. Focal pulmonary tuberculosis is most often differentiated with:**

- a) Peripheral cancer
- b) Eosinophilic pneumonia
- c) Bacterial focal pneumonia
- d) A benign tumour

**111. The general status of a patient with caseous pneumonia is usually:**

- a) Mild
- b) Moderate
- c) Severe, with significant intoxication
- d) Relatively satisfactory, slight weakness, sweating

**112. What are the auscultatory signs of caseous pneumonia?**

- a) Single dry rales over the affected area of the lung
- b) Single dry and fine bubbly wet rales
- c) Profuse catarrhal changes in the projection of lung damage
- d) Vesicular respiration without catarrhal phenomena

**113. What is the most informative in the differential diagnosis of caseous pneumonia with lobar pneumonia?**

- a) Medical history and physical examination data
- b) Bronchoscopy data
- c) Sputum test for *M. tuberculosis*
- d) X-ray data

**114. Pulmonary tuberculoma is most often formed from:**

- a) Disseminated tuberculosis
- b) Focal tuberculosis
- c) Infiltrative tuberculosis
- d) Cavernous tuberculosis

**115. Which clinical form of tuberculosis may often lead to cavernous tuberculosis?**

- a) Focal tuberculosis
- b) Infiltrative tuberculosis
- c) Fibro-cavernous tuberculosis
- d) Disseminated pulmonary tuberculosis

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- 116. What clinical form can develop cavernous pulmonary tuberculosis with the progression of the process?**
- Primary tuberculosis complex
  - Miliary tuberculosis
  - Disseminated tuberculosis
  - Tuberculoma
- 117. What is the X-ray differential diagnostic sign of the tuberculous cavity:**
- A significant amount of liquid in the cavity
  - A reaction in the surrounding tissue in the form of the appearance of polymorphic focal shadows
  - An increase in the root of the lung due to reactive adenitis
  - A wide and uneven pericavitary zone of inflammation
- 118. Which of the following is not characteristic clinical sign for a tuberculous cavity?**
- Cough
  - Sputum of a mucopurulent nature in the amount of 30-60 ml per day
  - Purulent sputum up to 200-300 ml
  - Haemoptysis
- 119. What is the main reason of the rapid increase in the size of the cavity and the simultaneous thinning of its walls in cavernous pulmonary tuberculosis?**
- Progression of the tuberculous process
  - The formation of a broncho-pleural fistula
  - Violation of the drainage function of the bronchus
  - Cleansing the cavity from the caseous-necrotic layer
- 120. With the progression of what clinical form of pulmonary tuberculosis fibro- cavernous tuberculosis develops?**
- Disseminated tuberculosis
  - Cavernous tuberculosis
  - Tuberculoma
  - Infiltrative tuberculosis
- 121. What are the X-ray signs characteristic of fibrous-cavernous pulmonary tuberculosis?**
- A cavity of irregular shape, with uneven outlines, with the presence of a perifocal reaction
  - Thin-walled cavity without liquid level
  - A cavity with an uneven wall thickness, the inner wall is uneven, a reaction from the side of the lung root is expressed
  - A cavity with thick fibrous walls, the lung is reduced in volume, there are foci of dropouts in the surrounding lung tissue
- 122. Cirrhotic tuberculosis develops most often from a clinical form of pulmonary tuberculosis called:**
- Infiltrative tuberculosis
  - Cavernous tuberculosis
  - Fibrous-cavernous
  - Tuberculoma

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- 123. Most common residual lung changes after cured tuberculosis:**
- a) Emphysema
  - b) Cirrhosis
  - c) Fibrous-focal changes
  - d) Fibrosis
- 124. What clinical form of pulmonary tuberculosis is characterized by a latent and mild symptom course?**
- a) Exudative pleurisy
  - b) Miliary tuberculosis
  - c) Tuberculoma
  - d) Infiltrative tuberculosis
- 125. In which of the following cases tuberculin skin test can be used?**
- a) Detection of active TB process
  - b) To detect M. Tuberculosis infection of organism
  - c) For patients with pulmonary TB
  - d) For patients with extra-pulmonary TB
- 126. Which statement about the difference between LTBI and TB disease is true?**  
(choose one best answer)
- a) Tubercle bacilli are in the body only with LTBI
  - b) Tubercle bacilli are in the body only with TB disease
  - c) Persons with LTBI cannot spread TB bacteria to others
  - d) Sputum smears and cultures are positive with LTBI but not with TB disease
- 127. After TB has been transmitted, how long does it take for the body's immune system to be able to react to tuberculin?** (choose one best answer)
- a) 48 to 72 hours
  - b) 7 to 10 days
  - c) 2 to 8 weeks
  - d) 6 months or more
- 128. Which of the following treatment options for Latent tuberculosis infection is mostly used in practice?**
- a) 6-months Isoniazid
  - b) 6-months Isoniazid plus Rifampicin
  - c) 9-months Isoniazid plus Rifampicin
  - d) 12-months Isoniazid
- 129. After how many hours the tuberculin skin test is assessed?**
- a) 12
  - b) 24
  - c) 48
  - d) 72

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- 130. When the result of the intradermal tuberculin skin test in HIV-infected child can be interpreted as a positive?**
- a) Less than 5mm
  - b) More than 5mm
  - c) More than 10mm
  - d) More than 17mm
- 131. Which dose of BCG is used for vaccination and revaccination?**
- a) 0.05mg
  - b) 0.01mg
  - c) 0.005mg
  - d) 0.0005mg
- 132. What is the frequent BCG vaccination and revaccination complication?**
- a) Scrofuloderma
  - b) Bronchioadenitis
  - c) Regional lymphadenitis
  - d) Necrotic-suppurative reaction of the skin
- 133. What is the complete contraindication of BCG revaccination?**
- a) TB infection
  - b) Post vaccine allergy
  - c) Quincke's oedema
  - d) Allergic dermatitis
- 134. During the asymptomatic phase, the only evidence of infection with TB may be:**
- a) Dry cough and fever
  - b) Chest pain and dyspnea
  - c) Cervical node enlargement
  - d) Skin-test reactivity to tuberculin
- 135. What percentage of people with latent tuberculosis infection may develop active tuberculosis disease globally?**
- a) 1% - 2%
  - b) 5% - 10%
  - c) 25% - 30%
  - d) 80% - 90%
- 136. Groups at high risk of contracting TB that should be screened include all, except:**
- a) HIV-infected persons
  - b) Injecting drug users
  - c) Persons with healthy immune systems
  - d) Close contacts of persons with active, infectious TB
- 137. What is true about latent TB infection?**
- a) May require respiratory isolation
  - b) Radiography may reveal abnormalities
  - c) Does not require respiratory isolation
  - d) Needs treatment for TB disease

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- 138. What is true about TB disease?**
- a) Has a large amount of active TB bacteria in his/her body
  - b) Has a small amount of TB bacteria in his/her body that are alive, but inactive
  - c) Should consider treatment for LTBI to prevent TB disease
  - d) Not a TB case
- 139. Which of the following cases is a candidate for the treatment of latent TB infection?**
- a) A 4-year-old child who was in close contact with a DS-TB patient
  - b) Patients with DR-TB disease
  - c) HIV-infected patients with active TB disease
  - d) Patient with confirmed DS-TB
- 140. What is the activity of tuberculin in a volume of 0.1 ml when setting the Mantoux test in children and adolescents?**
- a) 1TU
  - b) 2TU
  - c) 5TU
  - d) 10TU
- 141. What method of administration of tuberculin is generally accepted in mass tuberculin diagnostics?**
- a) Cutaneous
  - b) Intradermal
  - c) Subcutaneous
  - d) Intravenous
- 142. What method of administering the BCG vaccine is generally accepted for vaccination and revaccination of children and adolescents?**
- a) Oral
  - b) Cutaneous
  - c) Intradermal
  - d) Subcutaneous
- 143. What should be included when educating a patient about TB treatment?**  
(choose one best answer)
- a) How to take the medication
  - b) Adverse reactions to the medications
  - c) Consequences of not taking the medication correctly and TB infection control measures
  - d) All are correct
- 144. In which form of TB process glucocorticoids are indicated?**
- a) Caseous pneumonia
  - b) Focal TB
  - c) Tuberculoma
  - d) TB meningitis
- 145. Which of the following first-line anti-TB drug has a bacteriostatic activity?**
- a) Rifabutin
  - b) Rifampicin

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- c) Isoniazid
- d) Ethambutol

**146. Which drug can cause orange-red discoloration of body fluids?**

- a) Isoniazid
- b) Rifampicin
- c) Ethambutol
- d) Pyrazinamide

**147. What is the main administration route of first-line anti-TB drugs?**

- a) Subcutaneous
- b) Intravenous
- c) Intramuscular
- d) Oral

**148. What is the main adverse effect of Ethambutol?**

- a) Hepatic disorders
- b) Gynecomastia
- c) Retrobulbar optic neuritis
- d) QT-prolongation

**149. Which of the following treatment regimens is used for new detected patients with drug-sensitive pulmonary tuberculosis?**

- a) 2HR/4HRZE
- b) 2HRE/4RE
- c) 4HRZE/2HR
- d) 2HRZE/4HR

**150. The aims of DS-TB treatment are the followings, except:**

- a) To cure the patient and restore quality of life and productivity
- b) To reduce transmission of TB to others
- c) To prevent the development and transmission of drug resistance
- d) To prevent activation of latent TB infection

**151. What is true about single TB drugs in the treatment of TB disease?**

- a) Less pills in the regimen compared to fixed-dose combinations
- b) Better tolerated than the combined drugs
- c) Easier to manage adverse drug reactions without stopping all drugs in the regimen
- d) All the above

**152. What is true about combined TB drugs?**

- a) All drugs must be stopped in case of severe adverse drug reactions
- b) More pills in the treatment regimen compared to single drugs
- c) Poorly tolerated than the single drugs
- d) All the above

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- 153. Which of the following better explains the [2HRZE/4(HR)<sub>3</sub>] TB treatment regimen?**
- a) A daily intensive phase for two months followed by three times weekly continuation phase for four months
  - b) Twice weekly intensive phase followed by four times weekly continuation phase
  - c) Two tablets of HRZE, followed by 4 tablets of HR for 3 months
  - d) All the above are correct
- 154. Simultaneous initiation of antiretroviral and anti-tuberculosis treatment can lead to:**
- a) A weakened body immune response to these infections
  - b) Immune reconstitution inflammatory syndrome
  - c) A development of other opportunistic infections
  - d) All the above
- 155. Which drug is used to prevent Pneumocystis pneumonia in patients with HIV/TB coinfection?**
- a) Azithromycin
  - b) Isoniazid
  - c) Co-trimoxazole
  - d) Fluconazole
- 156. Flu syndrome (fever, chills, malaise, headache, bone pain) during DS-TB treatment can result from:**
- a) Treatment interruption
  - b) Intermittent dosing of rifampicin
  - c) Inadequate treatment regimen
  - d) All the above
- 157. What two anti-TB drugs cannot be used simultaneously when treating a patient?**
- a) Isoniazid + ethambutol
  - b) Rifampicin + rifabutin
  - c) Ethambutol + pyrazinamide
  - d) Streptomycin + rifampicin
- 158. With what concomitant diseases in a patient with tuberculosis rifampicin should be prescribed with caution?**
- a) With hypertension
  - b) With hepatitis
  - c) With colitis
  - d) With angina
- 159. At what clinical form and phase of the TB process can artificial pneumothorax be applied for therapeutic purposes?**
- a) Focal TB in the infiltration phase
  - b) Cavernous TB
  - c) Tuberculoma in the phase of decay
  - d) Fibrous-cavernous TB in the phase of infiltration and sowing



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- 160. In what clinical form and phase of the TB process is it possible to use pneumoperitoneum for therapeutic purposes?**
- With unilateral focal TB in the phase of infiltration
  - With subacute disseminated pulmonary TB in the phase of infiltration and decay, complicated by haemoptysis
  - With a cloudy infiltrate without disintegration in the right upper lobe
  - With fibrous-cavernous TB of the upper lobe of the right lung
- 161. Indications for performing lung resection in tuberculosis:**
- Infiltrative tuberculosis of the second segment of the right lung in the phase of disintegration and seeding
  - Subacute disseminated tuberculosis of the upper lobes of both lungs in the phase of infiltration and decay
  - Cirrhotic tuberculosis of the upper lobe of the right lung
  - Large tuberculoma of the first segment of the right lung in the phase of decay
- 162. What route of administration of anti-tuberculosis drugs is preferable in the treatment of patients with tuberculous meningitis?**
- Endolumbar
  - Oral
  - Inhalation
  - Intravenous and intramuscular
- 163. The most typical outcome of tuberculoma after chemotherapy according to X-ray data:**
- Complete resorption
  - The formation of a few fibrous foci
  - The formation of a stellate scar
  - Keeping the focus of shading without dynamics
- 164. Mutation in KatG will lead to resistance of:**
- Rifampicin
  - Ethambutol
  - Isoniazid
  - Pyrazinamide
- 165. Because of which gene mutation Isoniazid can have cross resistance with Ethionamide?**
- katG
  - inhA
  - rpoB
  - gyrA
- 166. Resistance to Rifampicin is associated with mutation in:**
- rpoB
  - inhA
  - gyrA
  - katG

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**167. Mutations in pncA are associated with:**

- a) Pyrazinamide resistance
- b) Isoniazid resistance
- c) Rifampicin resistance
- d) Ethambutol resistance

**168. Mutations in embB are associated with:**

- a) Isoniazid resistance
- b) Rifampicin resistance
- c) Pyrazinamide resistance
- d) Ethambutol resistance

**169. Mutation of gyrA is associated with:**

- a) Fluoroquinolone resistance
- b) Pyrazinamide resistance
- c) Rifampicin resistance
- d) Aminoglycosides resistance

**170. Which of the following cases has no high-risk for multi-drug resistant tuberculosis?**

- a) Treatment completed after 6 months with FLDs
- b) Failure of FLD retreatment TB cases
- c) New TB patients living in contact with already known MDR-TB cases
- d) Relapse and return after default cases

**171. Drug resistance in a patient with newly diagnosed TB disease may be suspected on the basis of which of the following? (choose one best answer)**

- a) Time spent in a region in which drug resistance is common
- b) Contact with a known drug-resistant case
- c) Previous TB treatment
- d) All are correct

**172. Which of the following cases can cause amplification of TB resistance to anti-TB drugs?**

- a) Appropriate treatment regimens
- b) Use of lower-than-recommended dosage
- c) Good drug quality
- d) Well adherence to treatment

**173. To which anti-TB drug M. bovis is naturally resistant?**

- a) Isoniazid
- b) Pyrazinamide
- c) Rifampicin
- d) Ethambutol

**174. Which first-line anti-TB drug may cause peripheral neuropathy?**

- a) Cycloserine
- b) Rifampicin
- c) Isoniazid
- d) Kanamycin

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- 175. Mutation of what gene indicates resistance to low doses of Isoniazid?**
- a) katG
  - b) inhA
  - c) rpoB
  - d) gyrA
- 176. In which of the following cases Rifampicin can be used as a main drug?**
- a) Polydrug-resistant TB, with sensitivity to Rifampicin
  - b) Rifampicin-resistant TB
  - c) Multidrug-resistant TB
  - d) Extensively drug-resistant TB
- 177. Which of the following second-line anti-TB drugs has bacteriostatic activity?**
- a) Levofloxacin
  - b) Bedaquiline
  - c) Cycloserine
  - d) Moxifloxacin
- 178. Which of the second-line anti-TB drugs can cause hypersensitivity reactions?**
- a) All drugs
  - b) Linezolid
  - c) Levofloxacin
  - d) Para-aminosalicylic acid
- 179. Which drug is highly teratogenic and should not be used during pregnancy?**  
(choose one best answer)
- a) Isoniazid
  - b) Rifampin
  - c) Ethambutol
  - d) Streptomycin
- 180. Which drug is used to prevent peripheral neuropathy in TB treatment?**
- a) Vitamin K
  - b) Vitamin B6
  - c) Vitamin C
  - d) Vitamin D
- 181. Existing of which drugs in the TB treatment regimen requires providing of Ishihara's test?**
- a) Isoniazid and Rifampicin
  - b) Pyrazinamide and Clofazimine
  - c) Kanamycin and Moxifloxacin
  - d) Ethambutol and Linezolid
- 182. Which of the following groups of anti-TB drugs can cause tendinitis?**
- a) Second-line injectable drugs
  - b) Second-line oral bacteriostatic drugs
  - c) Fluoroquinolones
  - d) First line bacteriocidal drugs

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- 183. Which of the following second-line anti-TB drugs can cause gynecomastia?**
- a) Cycloserine
  - b) Levofloxacin
  - c) Rifampicin
  - d) Ethionamide
- 184. Electrolyte loss during TB treatment can be caused by:**
- a) Fluoroquinolones
  - b) Aminoglycosides
  - c) Second-line oral bacteriostatic
  - d) First-line bacteriostatic
- 185. Fungal infection during TB treatment can be caused by:**
- a) Oral bacteriostatics
  - b) Polypeptides
  - c) Aminoglycosides
  - d) Fluoroquinolones
- 186. Which of the following tests can diagnose drug-resistant tuberculosis?**
- a) Culture and drug susceptibility testing
  - b) Line-probe assay
  - c) GeneXpert MTB/RIF
  - d) All the above
- 187. Which of the following can be considered as a culture conversion as an anti-TB treatment result?**
- a) 2 sets of consecutive negative smears
  - b) 2 sets of consecutive negative cultures
  - c) 1 set of negative smears followed by 1 set of negative cultures
  - d) All the above
- 188. Which of the following statements about drug-resistant tuberculosis in children is correct?**
- a) DR-TB is easier to diagnose in children than in adults
  - b) Treatment of DR-TB in children requires at least 6 effective drugs
  - c) Based on the index case, empirical treatment can be initiated
  - d) It is usually transmitted at school
- 189. M. tuberculosis resistance can be of the following types, except:**
- a) Natural resistance
  - b) Primary resistance
  - c) Acquired resistance
  - d) Tertiary resistance
- 190. What is the percentage of cross-resistance between isoniazid and ethionamide due to the inhA mutation?**
- a) Up to 20%
  - b) Up to 40%
  - c) Up to 70%

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- d) Up to 100%

**191. Which of the following statements about the eis mutation is correct?**

- a) eis mutation does not cause amikacin resistance
- b) eis mutation cause amikacin resistance
- c) eis mutation causes cross-resistance between capreomycin and amikacin
- d) All the above

**192. Clofazimine may have cross-resistance with:**

- a) Linezolid
- b) Bedaquiline
- c) Isoniazid
- d) Rifampicin

**193. Levofloxacin may have cross-resistance with:**

- a) Isoniazid
- b) Pyrazinamide
- c) Ethambutol
- d) Moxifloxacin

**194. Treatment option for isoniazid-resistant DR-TB (+/- streptomycin):**

- a) 2HREZ/4HR
- b) 6RZE(+/-Lfx)
- c) 6LfxKmCsEto
- d) All the above can be used

**195. Treatment option for isoniazid- and ethambutol-resistant DR-TB (+/- streptomycin):**

- a) 2HREZ/4HR
- b) 6RZE(+/-Mfx)
- c) 9RZLfx
- d) All the above can be used

**196. In the first phase of management for nausea/vomiting, it is necessary:**

- a) To administer anti-emetics
- b) To adjust drug administration without lowering the doses of anti-TB drugs
- c) Reduce the dose or temporarily stop the drug that causes nausea/vomiting
- d) All the above

**197. In the second phase of management for nausea/vomiting, it is necessary:**

- a) To administer anti-emetics
- b) To adjust drug administration without lowering the doses of anti-TB drugs
- c) Reduce the dose or temporarily stop the drug that causes nausea/vomiting
- d) All the above

**198. In the third phase of management for nausea/vomiting, it is necessary:**

- a) To administer anti-emetics
- b) To adjust drug administration without lowering the doses of anti-TB drugs
- c) Reduce the dose or temporarily stop the drug that causes nausea/vomiting
- d) All the above

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- 199. Gastritis as an adverse event in the treatment of TB can be caused by the following drugs, except:**
- a) Cycloserine
  - b) Protionamide
  - c) P-aminosalicylic acid
  - d) Pyrazinamide
- 200. Diarrhoea as an adverse event in the treatment of TB can be caused by the following drugs, except:**
- a) Levofloxacin
  - b) Protionamide
  - c) P-aminosalicylic acid
  - d) Ethambutol
- 201. Arthralgia as an adverse event in the treatment of TB can be caused by the following drugs, except:**
- a) Levofloxacin
  - b) Pyrazinamide
  - c) P-aminosalicylic acid
  - d) Bedaquiline
- 202. Which of the following anti-TB drugs may cause seizure?**
- a) Cycloserine
  - b) Ethambutol
  - c) Pyrazinamide
  - d) P-aminosalicylic acid
- 203. Which of the following anti-TB drugs may cause gynecomastia?**
- a) Isoniazid
  - b) Rifampicin
  - c) Protionamide
  - d) All the above
- 204. Myelosuppression in the treatment of MDR-TB is mainly caused by:**
- a) Levofloxacin
  - b) Linezolid
  - c) Clofazimine
  - d) All the above
- 205. Which of the following cases of DR-TB is eligible for treatment with new anti-TB drugs?**
- a) Mono-drug resistant TB
  - b) Poly-drug resistant TB
  - c) Pre-XDR TB
  - d) All cases are eligible
- 206. Which of the following cases of DR-TB is eligible for treatment with BDQ?**
- a) Isoniazid-resistant TB
  - b) Isoniazid- and ethambutol-resistant TB

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- c) Isoniazid- and rifampicin-resistant TB
- d) All cases are eligible

**207. All the following indicate the advantages of short-course MDR-TB treatment regimens, except:**

- a) Cheaper treatment course
- b) Fewer tests required
- c) More drugs are required
- d) Outcomes better than standard (conventional) treatment

**208. Baseline investigations before starting treatment with new anti-TB drugs may include the followings, except:**

- a) Electrocardiography
- b) Lipase, ALAT, ASAT, Bilirubin, Creatinine
- c) Hb, platelets, red-blood cells, white-blood cells
- d) Gastric aspiration

**209. What are the treatment principles for the new anti-TB drugs? (choose one best answer)**

- a) Ahead of enrolment on MDR-TB treatment, all patients should receive appropriate counselling to enable informed and participatory decision-making
- b) Social support to enable adherence to treatment is very important to ensure a patient-centered approach to the delivery of care
- c) Active TB drug safety monitoring and management is essential for all patients enrolled on MDR-TB treatment
- d) All the above

**210. What combination of anti-TB drugs in the treatment regimen is unacceptable?**

- a) Streptomycin + kanamycin
- b) Rifampicin + isoniazid
- c) Isoniazid + ethambutol
- d) Ethambutol + pyrazinamide

**211. What combination of anti-TB drugs in the treatment regimen is unacceptable?**

- a) Levofloxacin + Bedaquiline + Linezolid + Clofazimine
- b) Isoniazid + Levofloxacin + Rifampicin + Pyrazinamide
- c) Isoniazid + Rifampicin + Pyrazinamide + Ethambutol
- d) Isoniazid + Rifampicin + Rifabutin + Bedaquiline

**212. Specify the main contraindication for the simultaneous use of streptomycin and amikacin.**

- a) The risk of optic neuritis increases
- b) The risk of myelosuppression increases
- c) Antagonistic interaction of these antibiotics
- d) The summation of the selective toxic effect of antibiotics

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- 213. If, when taking anti-tuberculosis drugs, the patient's only complaint is mild itching of the skin, it is necessary:**
- a) To stop all drugs
  - b) To prescribe hormonal drugs
  - c) To prescribe antihistamines
  - d) To prescribe vitamins
- 214. Which of the irreversible toxic effects can often occur in a patient receiving streptomycin?**
- a) Hearing loss
  - b) Joint pain
  - c) Bowel movements
  - d) Heart pain
- 215. Which of the following cases may require surgical treatment?**
- a) Cor pulmonale
  - b) Pulmonary bleeding
  - c) Heart failure because of severe TB clinical form
  - d) TB meningitis
- 216. Which of the following cases can be contraindication for surgical treatment?**
- a) Pneumofibrosis with hemoptysis
  - b) Spontaneous pneumothorax
  - c) Advanced pulmonary lesion with severe breathing dysfunction
  - d) Life-threatening TB complication or sequelae
- 217. Which of the following surgical method of treatment is used in pulmonary TB?**
- a) Thoracoplasty
  - b) Laparotomy
  - c) Stomach ectomy
  - d) Echinococcus-ectomy from the lung
- 218. The loss of 20-40% of blood during pulmonary hemorrhages is considered:**
- a) Clinically not serious
  - b) Sublethal
  - c) Critical
  - d) Fatal
- 219. The loss of more than 40% of blood during pulmonary hemorrhages is considered:**
- a) Clinically not serious
  - b) Sublethal
  - c) Critical
  - d) Fatal
- 220. The loss of 10-20% of blood during pulmonary hemorrhages is considered:**
- a) Clinically not serious
  - b) Sublethal
  - c) Critical
  - d) Fatal



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**221. What is true about hemoptysis?**

- a) It is characterized by the presence of veinlets, blood admixtures in sputum and saliva, separate blood spits
- b) It is considerably more pure blood is spat momentarily (over 10 ml), continually or with intervals
- c) It is characterized by the presence of blood admixtures in stool
- d) All the above are true

**222. Pulmonary bleeding is considered minor when lost:**

- a) Up to 100ml
- b) Up to 300ml
- c) Up to 500ml
- d) Over 500ml

**223. Pulmonary bleeding is considered moderate when lost:**

- a) Up to 100ml
- b) Up to 500ml
- c) Over 500ml
- d) All the above

**224. Pulmonary bleeding is considered profuse when lost:**

- a) Up to 100ml
- b) Up to 300ml
- c) Up to 500ml
- d) Over 500ml

**225. The principles of treatment for tuberculosis patients with pulmonary hemorrhage include the following, except for:**

- a) Preventing asphyxia
- b) Stopping hemorrhage
- c) Therapy of the main illness
- d) Antiaggregant therapy

**226. Differential diagnostics of spontaneous pneumothorax is performed with the following conditions, except:**

- a) Giant caverns
- b) Air cysts
- c) Big bullas
- d) Tuberculoma

**227. Acute cor pulmonale is defined as:**

- a) Hypertrophy and dilatation of pulmonary heart as a consequence of arterial hypertension in lesser circulation
- b) Hypotrophy and constriction of pulmonary heart as a consequence of arterial hypotension in lesser circulation
- c) Acute cardiac failure due to chronic pulmonary diseases
- d) All the above

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- 228. In an acute cor pulmonale, to prevent pulmonary embolism should be used:**
- a) Antipyretic
  - b) Antiaggregant
  - c) Antibiotic
  - d) All the above
- 229. At what phase of the tuberculous process in the lungs haemoptysis can most often be observed?**
- a) Decay
  - b) Infiltration
  - c) Resorption
  - d) Seals
- 230. Most common cause of death in spontaneous pneumothorax:**
- a) Pneumopleuritis
  - b) Pleuropulmonary shock
  - c) Respiratory failure
  - d) Pneumonia
- 231. What are the important considerations in suspending TB treatment and changing it to palliative care?**
- a) The patient's quality of life
  - b) The public health interests
  - c) The model of care available
  - d) All the above
- 232. What could be the reasons why TB or M/XDR-TB patients are not subject to further treatment of TB or M/XDR-TB? (choose one best answer)**
- a) Clinical condition of the patient
  - b) Lack of effective anti-TB drugs
  - c) The patient's refusal of treatment
  - d) All the above
- 233. What are the benefits for MDR-TB patients to receive palliative care? (choose one best answer)**
- a) Provides relief from respiratory distress, pain and other symptoms
  - b) Integrates the psychological and spiritual aspects of patient care
  - c) Offers a support system to help the family cope during the patient's illness and in their own bereavement
  - d) All the above
- 234. Which of the following is a mild pain management option?**
- a) Paracetamol 2 x 500mg every 4-6 hours
  - b) Codeine phosphate 30-60mg every 4 hours
  - c) Morphine sulphate 5-10mg every 4 hours, titrated to comfort
  - d) All the above

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- 235. Which of the following is a moderate pain management option?**
- a) Paracetamol 2 x 500mg every 4-6 hours
  - b) Codeine phosphate 30-60mg every 4 hours
  - c) Morphine sulphate 5-10mg every 4 hours, titrated to comfort
  - d) All the above
- 236. Which of the following is a severe pain management option?**
- a) Paracetamol 2 x 500mg every 4-6 hours
  - b) Codeine phosphate 30-60mg every 4 hours
  - c) Morphine sulphate 5-10mg every 4 hours, titrated to comfort
  - d) All the above
- 237. Neuropathic pain is mainly managed by using of:**
- a) Acetaminophen and antibiotics
  - b) Pyridoxine and amitriptyline
  - c) Antibiotics and pyridoxine
  - d) Antibiotics and amitriptyline
- 238. What is true about nutritional support for TB patients receiving end-of-life care?**  
(choose one best answer)
- a) Small and frequent meals are often best for a person at the end of life
  - b) It should be accepted that the intake will reduce as the patient's condition deteriorates and during end-of-life care
  - c) Nausea and vomiting or any other conditions that interfere with nutritional support should be treated
  - d) All the above are correct
- 239. What measures should be taken in end-of-life care of a patient with TB?**
- a) Oral care
  - b) Prevention of bedsores
  - c) Prevention of muscle contractures
  - d) All the above
- 240. Which of the following treatment outcomes shows success rate?**
- a) Cured/Completed
  - b) Failure
  - c) Treatment interruption
  - d) Death
- 241. What is the definition of monitoring?**
- a) A process of continuously collecting information and acting on the implementation of activities in a program
  - b) A process of collecting information and taking action to determine if program aim (what the program expects to achieve) were met
  - c) A systematic and retrospective review of the management of a group (cohort) of patients
  - d) A process of measuring outputs, outcome, and impact

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**242. What are measured during monitoring?** (Choose one best answer)

- a) Inputs and process
- b) Inputs, process, and outputs
- c) Process and output
- d) Outputs, outcome, and impact

**243. What is the definition of evaluation?**

- a) A process of continuously collecting information and acting on the implementation of activities in a program
- b) A process of collecting information and taking action to determine if program aim (what the program expects to achieve) were met
- c) A systematic and retrospective review of the management of a group (cohort) of patients
- d) A process of measuring inputs, process, and outputs

**244. What are measured during evaluation?** (Choose one best answer)

- a) Process and outputs
- b) Process, outputs, and outcome
- c) Process, outputs, outcome, and impact
- d) Outcome and impact

**245. What is the rationale for TB monitoring and evaluation?**

- a) Essential learn lessons to clarify what works, what doesn't, in what circumstances
- b) Evidence bases for program management, future policymaking and program planning and management
- c) Supports accountability of organizations (government, NGO, aid agencies) to demonstrate results
- d) All the above

**246. Which of the following is an example of the 'input' of the TB Control Program?**

- a) Reduced stigma
- b) Case notification
- c) Adopted TB Policy
- d) Reduced TB morbidity

**247. Which of the following is an example of the 'process' of the TB Control Program?**

- a) TB training sessions
- b) TB care
- c) Treatment coverage
- d) Reduced TB mortality

**248. Which of the following is an example of the 'output' of the TB Control Program?**

- a) Availability of TB Policy
- b) Medical Supply
- c) Number of diagnostic tests per year
- d) Case detection rate

**249. Which of the following is an example of the 'outcome' of the TB Control Program?**

- a) Health Workforce
- b) Number of training sessions on TB

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- c) TB treatment success rate
- d) Reduced TB prevalence

**250. Which of the following is an example of the ‘impact’ of the TB Control Program?**

- a) Established TB Laboratory
- b) Number of diagnostic tests per year
- c) TB case notification rate
- d) Increased TB prevalence

**251. What is the definition of cohort review?**

- a) A process of continuously collecting information and acting on the implementation of activities in a program
- b) A process of collecting information and taking action to determine if program aim (what the program expects to achieve) were met
- c) A systematic and retrospective review of the management of a group (cohort) of patients
- d) A process of measuring inputs, process, and outputs

**252. Which of the following is true about a process evaluation?**

- a) It is used to measure the quality and integrity of program implementation and to assess coverage
- b) It measures program results and the effect on the target population
- c) It is a very specific type of evaluation design that determines how much of the observed change in outcomes can be attributed to specific program efforts
- d) All of them are correct

**253. Which of the following is true about an outcome evaluation?**

- a) It is used to measure the quality and integrity of program implementation and to assess coverage
- b) It measures program results and the effect on the target population
- c) is a very specific type of evaluation design that determines how much of the observed change in outcomes can be attributed to specific program efforts
- d) All of them are correct

**254. Which of the following is true about an impact evaluation?**

- a) It is used to measure the quality and integrity of program implementation and to assess coverage
- b) It measures program results and the effect on the target population
- c) It is a very specific type of evaluation design that determines how much of the observed change in outcomes can be attributed to specific program efforts
- d) All of them are correct

**255. Why are medical professional organizations critical partners in TB control efforts?**

(choose one best answer)

- a) They are involved with medical practice and research
- b) They provide TB education
- c) They provide support for adequate funding for TB control and research
- d) All are correct

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**256. When the DOTS Strategy by the WHO was launched?**

- a) In 1960s
- b) In 1970s
- c) In 1980s
- d) In 1990s

**257. Which of the following are the targets of the DOTS Strategy (1994-2000)?**

- a) Detection of 50% of new smear positive cases, and cure of 70% of the detected cases of TB by 2000
- b) Detection of 70% of new smear positive cases, and cure of 85% of the detected cases of TB by 2000
- c) By 2015, reduce TB prevalence and death rates by 50% relative to 1990
- d) 90% reduction in tuberculosis incidence rate (less than 10 tuberculosis cases per 100 000 population)

**258. The most effective method for monitoring the intake of anti-TB drugs by TB patients on an outpatient basis:**

- a) Monitoring the patient's medication every 5-7 days
- b) Control over the intake of anti-TB drugs by relatives
- c) Laboratory control for the presence of the drug or its metabolites in the urine
- d) Taking medications in front of a medical worker

**259. Which of the following is not an objective of the Stop TB Strategy (2006-2015)?**

- a) To achieve universal access to high-quality diagnosis and patient-centered treatment
- b) To reduce the suffering and socioeconomic burden associated with TB
- c) To protect poor and vulnerable populations from TB, TB/HIV and MDR-TB
- d) To scale up the BCG vaccination and re-vaccination worldwide

**260. Which of the following statements about the Stop TB strategy is correct?**

- a) The Stop TB Strategy is a logic continuation the END TB Strategy
- b) The Stop TB Strategy targets to detect 70% of new smear positive cases, and cure of 85% of the detected cases of TB by 2000
- c) Addressing TB/HIV, MDR-TB, and other challenges is one of the components of the Stop TB Strategy
- d) 95% reduction in tuberculosis deaths (compared with 2015) is one of the targets of the Stop TB Strategy

**261. Pillar 1 of the END TB Strategy is:**

- a) Bold policies and supportive systems
- b) Intensified research and innovation
- c) Integrated, patient-centred TB care and prevention
- d) All the above

**262. Pillar 2 of the END TB Strategy is:**

- a) Bold policies and supportive systems
- b) Intensified research and innovation
- c) Integrated, patient-centred TB care and prevention
- d) All the above

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**263. Pillar 3 of the END TB Strategy is:**

- a) Bold policies and supportive systems
- b) Intensified research and innovation
- c) Integrated, patient-centred TB care and prevention
- d) All the above

**264. Which of the following statements characterise the END TB Strategy?**

- a) The END TB Strategy focuses mainly on the management of TB and non-communicable diseases
- b) 'No affected families facing catastrophic costs due to tuberculosis' is one of the main targets of the END TB Strategy
- c) The END TB Strategy targets to end the TB epidemic by 2030
- d) All of them are correct