

# MIZORAM PUBLIC SERVICE COMMISSION

## TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF GRADE-III OF MIZORAM HEALTH SERVICE UNDER GDMO SUB-CADRE UNDER HEALTH & FAMILY WELFARE DEPARTMENT, GOVERNMENT OF MIZORAM. MARCH, 2021

### TECHNICAL SUBJECT PAPER - I

Time Allowed : 2 hours

Full Marks : 200

*All questions carry equal marks of 2 each.*

*Attempt all questions.*

- All of the following are causes of iron deficiency anaemia except:
  - Chronic renal failure
  - Celiac sprue
  - Hookworms
  - Carcinoma colon
- Leucocyte alkaline phosphatase is increased in all except:
  - Polycythemia vera
  - CML
  - Myelofibrosis
  - Myeloid Metaplasia
- A 60yr old man is complaining of progressive weakness first starting in left arm, then left leg, then right leg and right arm for the period of 2 years. He has recent incontinence of urine. Examination of the nervous system shows:

Muscle tone –increased in both upper and lower limb  
Muscle power- diminished in both upper and lower limb  
Reflexes – biceps absent on both sites, triceps-exaggerated  
Both knees and ankles –exaggerated  
Planter –extensor on both sites

Which following diagnosis is Least likely?
  - Cervical myelopathy
  - Motor neuron disease
  - Multiple sclerosis
  - Chronic inflammatory demyelinating polyneuropathy
- A female patient with active Rheumatoid arthritis became pregnant. Which amongst the following is relatively safe during pregnancy?
  - Azathioprine
  - Leflunamide
  - Methotrexate
  - Cyclophosphamide
- A young female patient with joint pain and other symptoms suggestive of SLE was sent for ANA test and was positive. Which immunofluorescence pattern is most suggestive of SLE?
  - Speckled pattern
  - Nucleolar pattern
  - Cytoplasmic pattern
  - RIM pattern
- Cryoprecipitate contains all except:
  - Factor VIII
  - Factor IX
  - Fibrinogen
  - VWF

7. Ramkumar a 70 yr old hypertensive male was admitted in the intensive care unit with transmural anterolateral myocardial infarction. His condition was stable till 5<sup>th</sup> day of admission, when he developed a pericardial friction rub and pleuritic chest pain which persisted despite narcotic and steroid therapy. On the 7<sup>th</sup> morning he suddenly developed marked hypotension. On examination there was marked distension of the jugular veins, accompanied with electromechanical dissociation. Most likely the patient had developed:
- (a) Severe Mitral regurgitation
  - (b) Ventricular septal rupture
  - (c) Right ventricular infarction
  - (d) External cardiac rupture
8. Beck's triad of cardiac tamponade includes all except:
- (a) Hypotension
  - (b) Raised JVP
  - (c) Muffled heart sounds
  - (d) Tachycardia
9. Which of the following conditions may lead to exudative pleural effusion?
- (a) Cirrhosis
  - (b) Nephrotic syndrome
  - (c) Congestive Heart failure
  - (d) Bronchogenic Carcinoma
10. Tuberculous pleural effusion is characterised by all of the following except:
- (a) Increased in Adenosine deaminase
  - (b) Hemorrhagic effusions
  - (c) Increased in mesothelial cells
  - (d) Pleural fluid LDH more than 60 % that of serum LDH
11. While inserting a central venous catheter, a patient develops respiratory distress.
- (a) Hemothorax
  - (b) Pneumothorax
  - (c) Pleural effusion
  - (d) Hypovolemia
12. Presence of which of the following in the urine is diagnostic of glomerular injury?
- (a) Bright red cells
  - (b) 20% dysmorphic RBCS
  - (c) 100 RBC per high power field
  - (d) Beta 2 micro globulin
13. Central nervous manifestation in chronic renal failure are result of all of the following except:
- (a) Hyperosmolality
  - (b) Hypocalcemia
  - (c) Acidosis
  - (d) Hyponatraemia
14. A man named Mawia has been admitted for Dialysis. He has a serum K<sup>+</sup> of 7.6 meq/L. Which is the fastest way to reduce hyperkalemia?
- (a) Iv glucose + insulin
  - (b) Kayexalate enema
  - (c) Iv calcium gluconate
  - (d) Iv NaHCO<sub>3</sub>
15. A young patient came with history anasarca and frothy urine. After thorough history taking and multiple investigations were done and renal biopsy was advised by the nephrologist. All the following are indications of Renal biopsy except
- (a) Adult nephrotic syndrome
  - (b) SLE with RBC cast with macroalbuminuria
  - (c) Chronic HTN with decreased in kidney size and decreased renal cortex size
  - (d) Unexplained renal failure creatinine 2mg/dl with rbc cast and 2+ albumin
16. Osborn j waves is seen in:
- (a) Hypothermia
  - (b) Hyperkalemia
  - (c) Hypocalcemia
  - (d) Hypokalaemia

17. Types of sensation lost on same side in brown sequard syndrome is:
- (a) Pain
  - (b) Touch
  - (c) Propioception
  - (d) Temperature
18. Hot cross bun sign on Brain MRI is seen in:
- (a) Spinocerebellar Ataxia
  - (b) Supranuclear palsy
  - (c) Wilsons disease
  - (d) Multiple system atrophy
19. Which of the following is used in refractory precursor B-cel ALL?
- (a) Pembrolizumab
  - (b) Tocilizumab
  - (c) Binatumomab
  - (d) Vornistat
20. All of the following statements regarding HbA1c are correct, except:
- (a) Gives an estimate of the blood glucose for last 6-10 weeks
  - (b) Formed by enzymatic glycation of haemoglobin
  - (c) Used for diagnosis of diabetes
  - (d) In diabetes mellitus the value is >6.5%
21. A 77yr old male patients on Warfarin is presenting with intracranial hemorrhage and INR is 3-5. What is the next best step?
- (a) EACA
  - (b) Cryoprecipitate
  - (c) Fresh frozen plasma
  - (d) Platelet concentrate
22. According to AHA, BP should be lowered in acute ischaemic stroke patient when BP is:
- (a) >220/120
  - (b) >220/110
  - (c) >200/120
  - (d) >190/100
23. Which of the following treatment modality is used for small cell carcinoma of lung?
- (a) Lobectomy
  - (b) Pneumonectomy
  - (c) Chemotherapy+ Radiotherapy
  - (d) Pneumonectomy followed by chemotherapy
24. A 55years old male presents with tachypnoea and mental confusion Blood glucose 350mg/dl.pH 7.20. Which is the most likely acid base disorder?
- (a) Metabolic alkalosis
  - (b) Respiratory acidosis
  - (c) Respiratory alkalosis
  - (d) Metabolic acidosis
25. Patient has fatigue and not gaining weight, body is warm 0/E the patient has staring looks and B/L proptosis. Investigation will most likely show:
- (a) Low TSH and High T3/T4
  - (b) High TSH and High T3
  - (c) High TSH low free T3
  - (d) Normal TSH and High T3
26. Which is not a feature of ACTH deficiency?
- (a) Hyperpigmentation
  - (b) Weight loss
  - (c) Hyponatraemia
  - (d) Hypoglycemia
27. Test to differentiate between organic and functional bowel disorder is:
- (a) Fecal calprotectin
  - (b) Stool occult blood
  - (c) Fecal elastase
  - (d) 72hours fecal fat estimation
28. As per the NCEP-ATP III, which is not included in metabolic syndrome?
- (a) Hypertriglyceridemia
  - (b) High LDL
  - (c) Central Obesity
  - (d) Hypertension

29. A 20yr old male presented with chronic constipation, headache and palpitations. On examination he had marfanoid habitus, neuromas of tongue, medullated corneal nerve fibers and nodule of 2×2 cm size in the left lobe of thyroid gland. This patient is a case of:
- (a) Sporadic medullary carcinoma of thyroid      (b) Familial medullary carcinoma of thyroid  
(c) MEN IIA      (d) MEN IIB
30. Which of the following statements is true about SIADH?
- (a) Hypovolemic hyponatraemia      (b) Euvolemic hyponatraemia  
(c) Hypervolemic hyponatraemia      (d) Hypervolemic hypernatraemia
31. Osteoporosis is seen in all except:
- (a) Thyrotoxicosis      (b) Rheumatoid arthritis  
(c) Hypoparathyroidism      (d) Steroid therapy
32. A baby girl presents with bilateral inguinal masses, thought to be hernias but are found to be testes in the inguinal canals. Which karyotype would you expect to find in the child?
- (a) 46,XX      (b) 46,XY  
(c) 47,XXY      (d) 47,XYY
33. Which one of the following is autosomal dominant disorder?
- (a) Cystic fibrosis      (b) Hereditary spherocytosis  
(c) Sickle cell anaemia      (d) G-6-PD deficiency
34. Father has a blood group B; Mother has AB; Children are not likely to have the following blood group:
- (a) O      (b) B  
(c) A      (d) AB
35. A 40yr old man presented with repeated episodes of bronchospasm and hemoptysis. Chest X ray revealed perihilar bronchiectasis. The most likely diagnosis is:
- (a) Sarcoidosis      (b) Idiopathic pulmonary fibrosis  
(c) Extrinsic allergic alveolitis      (d) Bronchopulmonary aspergilosis
36. Commonest type of renal stone seen in cases of UTI is:
- (a) Oxalate      (b) Triple phosphate  
(c) Urate      (d) Cysteine
37. A 8yr old boy presents to the casualty with diarrhoea, followed by decreased urine output. Blood examination shows thrombocytes 80,000/cm<sup>3</sup>. Diagnosis is:
- (a) Hemolytic uremic syndrome      (b) Disseminated intravascular coagulation  
(c) Haemophilia      (d) Idiopathic thrombocytopenic purpura
38. A 30 yr old man with history of substance abuse presented with history of fever, nausea and jaundice of 5 days duration. The biochemical test revealed a bilirubin of 6.7 mg/dl (conjugated 5.0mg/dl) with SGOT/SGPT (AST/ALT) of 1230/900IU/ml. The serological test showed presence of HbsAg, IgM Anti-HBc and Hbe Ag. The most likely diagnosis is?
- (a) Chronic hepatitis B infection with high infectivity  
(b) Acute hepatitis B infection with high infectivity  
(c) Chronic hepatitis B infection with low infectivity  
(d) Acute hepatitis B infection with low infectivity

39. Which of the following is not a precipitating factor for Hepatic encephalopathy in Chronic liver disease?
- (a) Hypokalemia (b) Hyponatraemia  
(c) Hypoxia (d) Metabolic acidosis
40. A 60 yr old woman with diabetes present with painless, swollen right ankle joint. Radiographs of the ankle show destroyed joint with large number of loose bodies. The most probable diagnosis is:
- (a) Charcot's joint (b) Clutton's joint  
(c) Osteoarthritis (d) Rheumatoid arthritis
41. A 29 yr old person is known diabetic on oral hypoglycaemic agents since 3yrs. He has lost weight and never had DKA. His grandfather is diabetic but his father is non diabetic. Which is the likely diagnosis?
- (a) MODY (b) DM Type 2  
(c) DM Type 1 (d) Pancreatic diabetes
42. Most common cause of Adrenal insufficiency in India is:
- (a) Autoimmune (b) Surgery  
(c) Steroid withdrawal (d) Tuberculosis
43. A child presents with recurrent episodes of gross hematuria for 2 yrs he is likely to have:
- (a) IgA nephropathy (b) Wilms tumour  
(c) Henoch schlein purpura (d) Neuroblastoma
44. All are ECG changes in hypokalaemia except:
- (a) U wave (b) ST segment sagging  
(c) T wave flattening or inversion (d) QT prolongation
45. The marker for B lymphocyte is:
- (a) CD19 (b) CD68  
(c) CD34 (d) CD4
46. The total score in Glasgow coma scale of a conscious patient is:
- (a) 8 (b) 3  
(c) 15 (d) 10
47. A 45 yr old woman presenting with a history of diplopia and dysphagia and worsening as the day progress, can be diagnosed to have:
- (a) Thyrotoxicosis (b) Myasthenia gravis  
(c) Muscular dystrophy (d) Brain tumour
48. Increased amylase may be seen in all of the following except:
- (a) Pancreatic pseudocyst (b) Appendicitis  
(c) Perforated peptic ulcer (d) Ruptured ectopic pregnancy
49. The following types of glomerulonephritis should not be treated with prednisolone?
- (a) Minimal change disease (b) Membranous nephropathy  
(c) Membranoproliferative (d) Post streptococcal
50. Obstructive sleep apnoea may result in all of the following except:
- (a) Systemic hypertension (b) Pulmonary hypertension  
(c) Cardiac arrhythmias (d) Duodenal ulcers

51. WHO definition of Low-birthweight (LBW) newborn?  
(a) <2000g (b) <1500g  
(c) <2500g (d) <2250g
52. Preterm and post-term neonate are respectively:  
(a) Born at <36 weeks and <42 weeks gestation (b) Born at <37 weeks and >42 weeks gestation  
(c) Born at <37 weeks and >40 week gestations (d) Born at <35 weeks and >40 weeks gestation
53. Preterm babies are at increased risk of:  
(a) Hypoglycemia (b) Hyaline Membrane Disease(HMD)  
(c) Hyperbilirubinemia (d) All of the above
54. Apgar Score assessment includes all, EXCEPT:  
(a) Heart Rate (b) Colour  
(c) Respiratory Rate (d) Muscle tone
55. All are true about delayed umbilical cord clamping in newborn, EXCEPT:  
(a) Not earlier than 1 minute after birth  
(b) Decreases the risk of anemia in infant  
(c) Increases iron reserves upto 6 months after birth  
(d) May increase the risk of PPH in some mothers
56. According to Baby Friendly Hospital Initiative(BFHI), breastfeeding to a newborn baby should be initiated:  
(a) Within 2 hours of birth (b) Within 1 hour of birth  
(c) Only when the baby has hunger cry (d) After the baby is taken out of the labour room
57. Exclusive breastfeeding is at least till:  
(a) 4 months (b) 6 months  
(c) 8 months (d) 10 months
58. All are signs of good attachment of breastfeeding, EXCEPT:  
(a) Chin touching breast (b) Mouth wide open  
(c) Upper lip turned outwards (d) More areola visible above than below
59. In a newborn presenting with jaundice, suspected of hyperbilirubinaemia, we should examine:  
(a) Total and direct bilirubin (b) Total bilirubin  
(c) Direct bilirubin (d) Conjugated bilirubin
60. Neonatal jaundice may be considered pathological in all, EXCEPT :  
(a) Appearance of jaundice within 24 hours of life  
(b) Presence of clinical jaundice beyond 2 weeks of age  
(c) Clay coloured stool  
(d) Rate of rise in total serum bilirubin (TSB) is <5mg/dl per 24 hr
61. A baby is born through meconium stained liquor. The following are taken into account in terming baby vigorous EXCEPT:  
(a) Tone (b) Colour  
(c) Heart Rate (d) Respiration
62. FALSE about Kangaroo mother care:  
(a) Skin-to-skin contact on the mother's chest (b) Other family members cannot carry out KMC  
(c) Applicable to both preterm & term infants (d) Decreases incidence of neonatal sepsis

- 63.** Congenital cyanotic heart disease includes:
- (a) Patent Ductus Arteriosus
  - (b) Atrial Septal defect
  - (c) Tetralogy of Fallot
  - (d) Ventricular Septal Defect
- 64.** 'Coeur en Sabot' shape of the heart is seen in :
- (a) Tricuspid atresia
  - (b) VSD
  - (c) TGA
  - (d) TOF
- 65.** A child presenting with headache, dizziness, intermittent claudication, difference in upper limbs BP. The probable diagnosis is:
- (a) ASD
  - (b) PDA
  - (c) TOF
  - (d) COA
- 66.** Heart disease most commonly associated with Rubella:
- (a) PDA
  - (b) VSD
  - (c) ASD
  - (d) TOF
- 67.** Major manifestations of Rheumatic fever include all of the following, EXCEPT:
- (a) Arthralgia
  - (b) Carditis
  - (c) Chorea
  - (d) Erythema marginatum
- 68.** True about cow's milk, all EXCEPT:
- (a) Cow's milk contain 80% whey protein not casein
  - (b) Cow's milk has less carbohydrate than mothers milk
  - (c) Has more K and Na than infant formula
  - (d) Has more protein than breastmilk
- 69.** The protective effect of breastmilk are known to be associated with:
- (a) IgM antibodies
  - (b) Lysozyme
  - (c) Mast
  - (d) IgA antibodies
- 70.** Exclusive breastfeeding may be associated with all of the following except:
- (a) Evening colic
  - (b) Hemolysis due to vitamin K deficiency
  - (c) Golden color stool
  - (d) Prolongation of physiological jaundice
- 71.** Best indicator in growth monitoring of children:
- (a) weight
  - (b) Mid-arm circumference (MAC)
  - (c) rate of increase in height & weight
  - (d) head circumference
- 72.** Shakir tape is used for measuring which of the following?
- (a) Measurement of height
  - (b) Measurement of length of infant
  - (c) Measurement of mid arm circumference
  - (d) Measurement of skin pad thickness
- 73.** Severe Acute malnutrition is:
- (a) weight for age  $< -3SD$  of the median WHO growth reference
  - (b) height for age  $< -3SD$  of the median WHO growth reference
  - (c) weight for height  $< -3SD$  of the median WHO growth reference
  - (d) mid arm circumference  $< 12cm$
- 74.** Neural tube defects can be prevented by:
- (a) Pyridoxin
  - (b) Folic acid
  - (c) Thiamine
  - (d) Iron

75. Kwashiorkor is characterised by all features EXCEPT:
- (a) Baggy pant appearance
  - (b) Edema
  - (c) Flag sign hair changes
  - (d) Flaky paint dermatosis
76. A newborn born to infected Hepatitis B mothers is treated with:
- (a) HBV
  - (b) HBIG
  - (c) HBV + HBIG
  - (d) no specific treatment
77. Panel of tests under Neonatal sepsis screening includes all, EXCEPT:
- (a) C-Reactive protein
  - (b) Platelet counts
  - (c) Immature to total neutrophil count (I/T ratio)
  - (d) Absolute neutrophil count (ANC)
78. Which of the following is FALSE regarding categories of COVID-19 infection in children?
- (a) Mild infection include children with upper respiratory infection, mild GI symptoms with normal chest examination
  - (b) Moderate infection include signs and symptoms of pneumonia
  - (c) Most children have severe manifestation
  - (d) Severe infection include children with pneumonia with respiratory distress with hypoxaemia (spO<sub>2</sub><94%)
79. General danger signs in IMNCI includes all EXCEPT:
- (a) Refuses to drink or breastfeed
  - (b) Vomits everything
  - (c) Child is lethargic or unconscious
  - (d) Child had convulsion or is convulsing
80. All of the following are features of Down's syndrome EXCEPT:
- (a) Brushfield's spot in the iris
  - (b) Simian crease
  - (c) Clinodactyly
  - (d) Hypertonicity
81. All are suggestive of Possible Serious bacterial infection in a young infant, EXCEPT:
- (a) sunken fontanelle
  - (b) pus draining from ear
  - (c) hypothermia
  - (d) less than normal movement
82. About Plan B management of diarrhea, TRUE is:
- (a) Meant for severe dehydration
  - (b) Rehydration is given mainly through ORS
  - (c) Reassessment need not be done after rehydration
  - (d) Withhold breastfeeding as child has become very sick
83. Respiratory Distress Syndrome/ Hyaline Membrane disease is a condition commonly associated with:
- (a) prematurity
  - (b) postmaturity
  - (c) early onset sepsis
  - (d) meconium aspiration
84. Respiratory rate cut-offs for determining fast breathing in a 3 month old infant:
- (a) 60 breaths per minute or more
  - (b) 50 breaths per minute or more
  - (c) 40 breaths per minute or more
  - (d) 45 breaths per minute or more
85. IMNCI classification of Severe Pneumonia should include:
- (a) Fast breathing
  - (b) Fast breathing + chest indrawing
  - (c) Cough
  - (d) Excessive crying
86. Which of the following is a preventable cause of mental retardation:
- (a) Hypothyroidism
  - (b) Down's syndrome
  - (c) Cerebral palsy
  - (d) All of the above



87. The most common cause of diarrhea in children:
- (a) Rotavirus
  - (b) Escherichiae coli
  - (c) Shigella
  - (d) Vibrio cholera
88. Covishield vaccine for COVID-19 is :
- (a) An RNA vaccine
  - (b) Non-replicating viral vector vaccine
  - (c) Inactivated vaccine
  - (d) Live attenuated vaccine
89. True about management of falciparum malaria with Artemisinin-based Combination therapy(ACT):
- (a) May be used in Chloroquine sensitive areas
  - (b) Artemisinin derivatives must be administered as monotherapy in uncomplicated malaria
  - (c) Can be safely given in all trimesters of pregnancy
  - (d) ACT-AL(Artemether+Lumefantrine) combination is used for falciparum malaria in NE States along with single dose of Primaquine
90. All related to Dengue infection EXCEPT:
- (a) Thrombocytosis
  - (b) Relative bradycardia
  - (c) Hypotension
  - (d) Break-bone fever
91. For stable neonates born to mothers with suspected/confirmed COVID, all the following statements are true EXCEPT:
- (a) Mothers should be encouraged to initiate or continue breastfeeding
  - (b) Rooming-in throughout the day and night and to practice skin-to-skin contact is encouraged
  - (c) Mother to wear mask during breastfeeding and while providing other care to the baby
  - (d) Baby should be given vitamin C drop for prevention of infection
92. Multisystem inflammatory syndromein children(MIS-C) is a rare but serious condition that has been temporally associated with:
- (a) Dengue
  - (b) Covid-19
  - (c) SLE (Systemic Lupus Erythematosus)
  - (d) Scrub typhus
93. Features of Severe COVID-19 in children:
- (a) MIS-C
  - (b) Septic shock
  - (c) ARDS
  - (d) All of the above
94. The osmolarity of the new WHO-ORS formula is:
- (a) 311mOsm/L
  - (b) 265 mOsm/L
  - (c) 245 mOsm/L
  - (d) 240mOsm/L
95. Birth dose vaccines according to NIS includes all EXCEPT:
- (a) RVV
  - (b) OPV
  - (c) BCG
  - (d) Hepatits B vaccine
96. Severe measles can be associated with deficiency of which vitamin:
- (a) Vitamin D
  - (b) Vitamin E
  - (c) Vitamin C
  - (d) Vitamin A
97. The most important indicator of effective ventilation when resuscitating a newborn baby is:
- (a) Chest rise
  - (b) Spontaneous respiratory efforts
  - (c) Rise in Heart Rate
  - (d) Improvement in tone & colour of the baby

- 98.** All can cause acute stridor in a child EXCEPT:
- (a) Infectious mononucleosis
  - (b) Croup
  - (c) Laryngomalacia
  - (d) Epiglottitis
- 99.** Koplik spots are pathognomonic of:
- (a) Measles
  - (b) Mumps
  - (c) Varicella
  - (d) Herpes Simplex stomatitis
- 100.** Essential for Nephrotic syndrome includes all EXCEPT:
- (a) proteinuria
  - (b) hematuria
  - (c) hypoalbuminemia
  - (d) hyperlipidemia

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