

MIZORAM PUBLIC SERVICE COMMISSION

**TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF
GRADE-II OF MIZORAM HEALTH SERVICE (SPECIALIST SUB-CADRE)
UNDER HEALTH & FAMILY WELFARE DEPARTMENT,
GOVERNMENT OF MIZORAM. OCTOBER, 2022**

**PAPER - II (TECHNICAL)
GENERAL SURGERY DEPARTMENT**

Time Allowed : 3 hours

Full Marks : 200

All questions carry equal marks of 2 each.

Attempt all questions.

1. Reactionary bleeding occurs-
 - (a) At the time of surgery
 - (b) Within 24 hours of surgery
 - (c) Within 1 week of surgery
 - (d) Within 1 month of surgery
2. When a blood transfusion reaction is suspected, you should-
 - (a) Finish transfusion of the present blood bag, then investigate
 - (b) Immediately stop the transfusion and check the bag label
 - (c) Give a diuretic and continue the transfusion
 - (d) Wait for 30 minutes, then resume the transfusion
3. Following massive transfusion, the following biochemical changes can occur, EXCEPT-
 - (a) Hyperkalaemia
 - (b) Hypocalcaemia
 - (c) Alkalosis
 - (d) Hyperphosphatemia
4. The formula for calculation of maintenance fluid requirements by weight-
 - (a) Parkland Formula
 - (b) Glasgow Coma Scale
 - (c) Kelly's Scoring
 - (d) Holliday-Segar Formula
5. Which biochemical marker is used to assess the nutritional status-
 - (a) Hemoglobin
 - (b) Globulin
 - (c) Albumin
 - (d) Bilirubin
6. All of the following are true of preoperative patient preparation EXCEPT-
 - (a) It includes a thorough history taking and medical examination.
 - (b) The patient's medical state is NOT optimized
 - (c) It is to anticipate and plan for management of perioperative problems.
 - (d) It involves taking informed consent.
7. Different phases of Perioperative care include all of the followings EXCEPT-
 - (a) Postoperative care
 - (b) Palliative care
 - (c) Preoperative care
 - (d) Follow-up care
8. The proposed system for looking at Chest X-rays involves all of the followings EXCEPT-
 - (a) Airways
 - (b) Bone structure
 - (c) Cardiac size
 - (d) Esophagus

9. Which of the following statement regarding pre-operative investigation is FALSE-
- (a) Chest x-ray is routinely requested in all patients over 60 years old
 - (b) A ventricular Ejection fraction of less than 35 percent indicates a high risk of cardiac complications
 - (c) A body mass index (BMI) between 20-25 is associated with significant hospital mortality
 - (d) ECG is usually required in patients above 65 years
10. Liver function tests includes all of the following EXCEPT-
- (a) Serum Bilirubin
 - (b) Serum Creatinine
 - (c) Serum Albumin
 - (d) Serum Alkaline phosphatase
11. C-Reactive Protein (CRP) is an indicator of-
- (a) Pyrexia
 - (b) Analgesia
 - (c) Inflammation
 - (d) Myalgia
12. Which of the following is not part of the anaesthetic triad used during surgery-
- (a) Unconsciousness
 - (b) Pain relief
 - (c) Amnesia
 - (d) Muscle relaxation
13. Which of the following statement with regard to diathermy is FALSE-
- (a) Shave the patient's hair over the site for the diathermy plate the day before the operation
 - (b) Ensure good contact between the patient and the plate
 - (c) Check the plate if the patient is moved during surgery
 - (d) Make sure that the patient is not touching any earthed metal objects
14. Which of the following statements regarding use of a tourniquet is FALSE-
- (a) The theatre charge nurse has overall responsibility in its use
 - (b) Distal neurovascular status must be checked before and after its use
 - (c) The tourniquet must be placed snugly enough so as not to slide during the operation
 - (d) Always note the time of inflation and deflation
15. In a transfer and patient set-up on the operating table, which of the following statements is/are TRUE-
- (a) Although the operating table is padded, make sure that pressure areas have additional padding
 - (b) Limbs not involved in surgery should be especially protected to prevent nerve damage
 - (c) Eyelids should be taped to protect the corneas
 - (d) All of the above
16. In scrubbing, which of the following statements is FALSE-
- (a) If the surgeon has a suspected infected lesion, it is sprayed with iodine and covered with a sterile dressing before gloving
 - (b) The first scrub of the day should take about 5 min from start to drying
 - (c) A sterile scrubbing brush and nail cleaner are used for 1-2 min at the first scrub provided the surgeon stays within the theatre suite in between cases
 - (d) After applying disinfectant, the arms are washed from distal to proximal with hands up and elbows flexed
17. In skin preparation prior to operation, which of the following statements is/are true-
- (a) In preparing open wounds, aqueous solutions are used
 - (b) For intact skin, alcohol-based solutions may be used
 - (c) Prepare the skin from the incision site outwards
 - (d) All of the above

18. FALSE regarding Day or ambulatory surgery-
- (a) Being used more and more commonly even for major operations
 - (b) Pre-operative assessment of social, medical and surgical needs is important
 - (c) Anaesthesia needs to be modified for rapid recovery
 - (d) Post-operative analgesia not required
19. Not included for pre-operative check-list before operation-
- (a) Patient's name
 - (b) Consent-mark side
 - (c) All investigations available
 - (d) Social status
20. According to the American Society of Anaesthesiologists (ASA) score, ASA Class II score is-
- (a) A normal healthy patient
 - (b) A patient with severe systemic disease that limits functional activity
 - (c) A patient with mild systemic disease that does not limit functional activity
 - (d) A patient with severe systemic disease that poses a constant threat to life
21. What is the general recommendation regarding the waiting time for performing elective surgery after an attack of Myocardial infarction-
- (a) After 2 weeks
 - (b) After 4 to 6 weeks
 - (c) After 2 months
 - (d) After 6 months
22. Gas gangrene is caused by-
- (a) Clostridium perfringens
 - (b) Clostridium botulinum
 - (c) Clostridium difficile
 - (d) Clostridium tetani
23. Which of the following is false regarding surgical incisions through infected or contaminated tissues-
- (a) When possible, tissue or pus for culture should be taken before antibiotic cover is started
 - (b) The choice of antibiotics is empirical until sensitivities are available
 - (c) Wounds are best managed by primary closure
 - (d) Wounds are best managed by delayed primary or secondary closure
24. All are commonly used antiseptics in general surgical practice, EXCEPT-
- (a) Chlorhexidine
 - (b) Povidone-iodine
 - (c) Cetrimide (Savlon)
 - (d) Hydrogen peroxide
25. Which of the following statement is INCORRECT-
- (a) Wound closure can be temporary or permanent; the latter can be primary or secondary.
 - (b) Critical factors in making this decision are the patient's condition, the clinical setting, the area of the body involved, the condition of the wound itself, and the disease process that led to surgical intervention.
 - (c) In general, clean, non-contaminated wounds with healthy local tissue conditions are best closed by Secondary closure
 - (d) Heavily contaminated abdominal wounds are best served by fascial closure alone
26. Most common abdominal organ injured in blunt trauma abdomen is-
- (a) Spleen
 - (b) Liver
 - (c) Pancreas
 - (d) Stomach
27. Thanga is brought to the emergency as a case of road traffic accident. He is hypotensive. Most likely ruptured organ is-
- (a) Spleen
 - (b) Mesentery
 - (c) Kidney
 - (d) Rectum

28. Commonly injured in blunt abdominal injury is-
- (a) Mid ileum
 - (b) Proximal jejunum
 - (c) Distal ileum
 - (d) Mid jejunum
29. A patient died after a blunt trauma to chest. Most common cause of death in blunt trauma to chest is-
- (a) Esophageal rupture
 - (b) Trachea-bronchial rupture
 - (c) Pulmonary laceration
 - (d) Pneumothorax
30. Preferred incision for abdominal exploration in blunt trauma abdomen is-
- (a) Always midline incision
 - (b) Depending upon the organ
 - (c) Transverse incision
 - (d) Paramedian
31. A 40 year old male brought to the emergency room with a stab injury to the chest. On examination patient is found to be hemodynamically stable. The neck veins are engorged and the heart sounds are muffled. The following statements are true for this patient EXCEPT-
- (a) Cardiac tamponade is likely to be present
 - (b) Immediate emergency room thoracotomy should be done
 - (c) Echocardiogram should be done to confirm pericardial blood
 - (d) The entry wound should be sealed with an occlusive dressing
32. A 30 year old female comes with hypovolemic shock after blunt trauma of the abdomen. An emergency ultrasound of abdomen shows splenic tear. Which of the following is to be done-
- (a) CECT of the abdomen
 - (b) Diagnostic lavage of peritoneal cavity before proceeding
 - (c) Monitor patient to assess for progression
 - (d) Immediate surgery
33. A 27 year old patient presented with left sided abdominal pain 6 hours after road traffic accident. He was hemodynamically stable and FAST positive. CT scan showed grade III splenic injury. What will be the appropriate treatment?-
- (a) Splenectomy
 - (b) Splenorrhaphy
 - (c) Splenic artery embolization
 - (d) Conservative management
34. Management of grade III splenic trauma in a stable child-
- (a) Embolization
 - (b) Conservative
 - (c) Partial splenectomy
 - (d) Total splenectomy
35. A patient is brought to the emergency as a case of head injury, following a head on collision road traffic accident. His BP is 90/60 mmHg. Tachycardia is present. Most likely diagnosis is-
- (a) EDH
 - (b) SDH
 - (c) Intracranial hemorrhage
 - (d) Intraabdominal bleed
36. All are true about Flail chest, EXCEPT-
- (a) Fracture of at least 3 ribs
 - (b) If overlapping of fractured ribs with severe displacement is seen then patients are treated surgically with open reduction and fixation
 - (c) $PaO_2 < 40$ with $FiO_2 > 60$ treated with intubation and PEEP
 - (d) Paradoxical movement may not be seen in conscious patients
37. A patient is brought to casualty with severe hypotension following a road traffic accident. The external injury is evident. The cause of hypotension is-
- (a) Fracture rib
 - (b) Intrathoracic and abdominal bleed
 - (c) Iatrogenic shock
 - (d) Intracranial bleed

38. After 4 weeks of head trauma, patient presents with features of irritability and altered sensorium. Commonest cause will be-
- (a) Chronic subdural hematoma
 - (b) Extradural hematoma
 - (c) Intraparenchymal bleed
 - (d) Electrolyte imbalance
39. A patient presents in emergency with a cervical spine fracture. First thing to do is-
- (a) Locate the fracture by shifting the patient side to side
 - (b) X-ray of spine
 - (c) Clear the airway and intubate him
 - (d) Immobilize the cervical spine
40. After head injury, biconvex, lenticular shape hematoma in CT scan is characteristic of which of the following-
- (a) Extradural hemorrhage
 - (b) Subdural hemorrhage
 - (c) Intracerebral hematoma
 - (d) Diffuse axonal injury
41. Which of the following is commonest source of Extradural hemorrhage-
- (a) Middle meningeal artery
 - (b) Subdural venous sinus
 - (c) Charcot's artery
 - (d) Middle cerebral artery
42. Management for CSF rhinorrhea is-
- (a) Plain x-ray and packing of nose
 - (b) Nasal packing only
 - (c) Antibiotics and observation
 - (d) Immediate surgery
43. Limb salvage can be done in all EXCEPT-
- (a) Nerve injury
 - (b) Vascular injury
 - (c) Bone injury
 - (d) Muscle injury
44. After rupture of middle meningeal artery bleeding occurs in which region-
- (a) Subdural bleed
 - (b) Extradural bleed
 - (c) Intracerebral bleed
 - (d) Subarachnoid bleed
45. First step taken in case of multiple injuries of face & neck-
- (a) Blood transfusion
 - (b) IV fluids
 - (c) Reconstruction
 - (d) Maintenance of airway
46. Treatment of acutely developing massive left sided hemothorax in a young male after an accident is-
- (a) Strapping of chest
 - (b) Tube thoracostomy
 - (c) Endotracheal intubation + IPPV + pleural fluid aspiration
 - (d) Conservative, wait and watch
47. Investigation of choice for blunt trauma abdomen in unstable patient-
- (a) X-ray abdomen
 - (b) USG
 - (c) Diagnostic peritoneal lavage (DPL)
 - (d) CT scan
48. In traumatic injury to common femoral vein and external femoral artery, which among the following should be done-
- (a) Ligation of both artery & vein
 - (b) Repair of both artery & vein
 - (c) Below knee amputation
 - (d) Repair of artery and contralateral sympathectomy

49. A patient after sustaining RTA, developed # left shaft of femur with guarding & rigidity in the abdomen. Following measures to be done EXCEPT-
- (a) X-ray of left lower limb and USG abdomen
 - (b) Start IV fluid, Ryle's tube and catheterization
 - (c) Stabilize the #, monitor the patient and do surgery if necessary later on
 - (d) Grouping and cross matching of two units of blood
50. A patient with sudden headache, vomiting and unconsciousness, diagnosis is-
- (a) Subarachnoid hemorrhage
 - (b) Intracerebral hemorrhage
 - (c) Subdural hemorrhage
 - (d) Extradural hemorrhage
51. Best prognostic factor for head injury is-
- (a) Glasgow coma scale
 - (b) Age
 - (c) Mode of injury
 - (d) CT Scan
52. Which of the following statements related to gastric injury is not true-
- (a) Mostly related to penetrating trauma
 - (b) Treatment is simple debridement and suturing
 - (c) Blood in stomach is always related to gastric injury
 - (d) Heals well and fast
53. Hypotension in acute spinal injury is due to-
- (a) Loss of sympathetic tone
 - (b) Loss of parasympathetic tone
 - (c) Orthostatic hypotension
 - (d) Vasovagal attack
54. A man comes to emergency with stab injury to left flank. He has stable vitals. What would be the next step in management?-
- (a) CECT
 - (b) Diagnostic peritoneal lavage
 - (c) Laparotomy
 - (d) Laparoscopy
55. A young patient presents with a massive injury to proximal duodenum, head of pancreas and distal common bile duct. The procedure of choice in this patient should be-
- (a) Roux-en-Y anastomosis
 - (b) Pancreaticoduodenectomy (Whipple's operation)
 - (c) Lateral tube jejunostomy
 - (d) Retrograde jejunostomy
56. True about Aortic transection-
- (a) Most commonly due to deceleration injury
 - (b) Aortography gold standard
 - (c) Surgery definitive treatment
 - (d) All of the above
57. True about blunt abdominal trauma with splenic rupture-
- (a) Kehr's sign-discoloration around umbilicus
 - (b) Spleen is most common organ to be involved
 - (c) Splenectomy is treatment of choice for splenic rupture
 - (d) Cullen's sign negative
58. Blunt injury abdomen, patient was hemodynamically stable, next investigation-
- (a) X-ray abdomen
 - (b) Barium swallow
 - (c) FAST
 - (d) DPL

59. A lady presented in the emergency department with a stab injury to the left side of the abdomen. She was hemodynamically stable and a contrast enhanced CT scan revealed a laceration in spleen. Laparoscopy was planned. The patient's pO₂ suddenly dropped as soon as the pneumoperitoneum was created. What is the most likely cause-
- (a) Inferior vena cava compression (b) Injury to the left lobe of the diaphragm
(c) Injury to the colon (d) Gaseous embolism through splenic vessels
60. Mangled Extremity Severity Score (MESS) includes all of the following EXCEPT-
- (a) Shock (b) Ischaemia
(c) Neurogenic injury (d) Energy of injury
61. Aims of abbreviated laparotomy-
- (a) Decreased chance of infection (b) Early ambulation
(c) Early wound healing (d) Hemostasis
62. Aim of damage control laparotomy are all, EXCEPT-
- (a) Arrest hemorrhage (b) Prevent coagulopathy
(c) Control contamination (d) Provide fascial closure
63. True about intra-abdominal compartment syndrome-
- (a) Intra-abdominal pressure >15 cm H₂O (b) Pneumoperitoneum can produce it
(c) Increased renal flow (d) Increased venous return
64. True about abdominal compartment syndrome, EXCEPT-
- (a) Decreased cardiac output
(b) Decreased pulmonary capillary wedge pressure
(c) Decreased venous return
(d) Decreased systemic vascular resistance
65. During reconstruction of an amputated limb which of the following is done first?-
- (a) Arterial repair (b) Venous repair
(c) Fixation of the bone (d) Nerve anastomoses
66. Treatment of choice for stab injury caecum-
- (a) Caecostomy (b) Ileo-transverse anastomoses
(c) Transverse colostomy (d) Sigmoid colostomy
67. Which one of the following veins should be avoided for intravenous infusion in the management of abdominal trauma-
- (a) Cubital (b) Cephalic
(c) Long saphenous (d) External jugular
68. Seat belt causes injury to-
- (a) Duodenum (b) Head injury due to wind screen
(c) Thorax (d) All
69. A 17 year old boy is admitted to the hospital after a road traffic accident. Per abdomen examination is normal. After adequate resuscitation, his pulse rate is 80/min and BP is 110/70 mmHg. Abdominal CT reveals 1 cm deep laceration in the left lobe of the liver extending from the dome more than half way through the parenchyma. Appropriate management at this time would be-
- (a) Conservative treatment
(b) Abdominal exploration and packing of hepatic wounds
(c) Abdominal exploration and ligation of left hepatic artery
(d) Left hepatectomy

70. Base of the skull fracture presents with involvement of the petrous temporal bone, which of the following important sign is seen-
- (a) Subconjunctival hematoma
 - (b) CSF rhonorrhoea
 - (c) Racoon's eyes
 - (d) Battle sign
71. Abdominal compartment syndrome is characterized by the following EXCEPT-
- (a) Hypercarbia and respiratory acidosis
 - (b) Hypoxia due to increased peak inspiratory pressure
 - (c) Hypotension due to decrease in venous return
 - (d) Oliguria due to ureter obstruction
72. What is the investigation of choice in a patient with blunt trauma abdomen with hematuria-
- (a) USG of the abdomen
 - (b) CECT
 - (c) IVP
 - (d) Retrograde urogram
73. All of the following are true about chest trauma EXCEPT-
- (a) ECG done in cases associated with sternal fracture
 - (b) Under water seal drainage if associated with pneumothorax
 - (c) X-ray chest investigation of choice
 - (d) Urgent surgery needed in all cases
74. In severe injury, first to be maintained is-
- (a) Hypotension
 - (b) Dehydration
 - (c) Airway
 - (d) Cardiac status
75. Early stage of trauma is characterized by-
- (a) Catabolism
 - (b) Anabolism
 - (c) Glycogenesis
 - (d) Lipogenesis
76. A 24-year old man falls on the ground when he is struck in the right temple by a baseball. While being driven to the hospital, he lapses into coma. He is unresponsive with the dilated right pupil when he reaches the emergency department. The most important step in initial management is-
- (a) Craniotomy
 - (b) CT scan of the head
 - (c) X-ray of the skull and cervical spine
 - (d) Doppler ultrasound examination of the neck
77. In skull fracture, the condition in which an operation is not done immediately is-
- (a) Depressed fracture
 - (b) Compound fracture
 - (c) CSF leak
 - (d) Increased size of head
78. Lucid interval is seen in-
- (a) Extra dural hemorrhage
 - (b) Intra-parenchymal hemorrhage
 - (c) Intra cerebral hemorrhage
 - (d) Subarachnoid hemorrhage
79. The most important clinical finding in a case of head injury is-
- (a) Pupillary dilatation
 - (b) Level of consciousness
 - (c) Focal neurological deficit
 - (d) Fracture skull
80. Immediate surgery is indicated in-
- (a) Extradural hemorrhage
 - (b) Diffuse axonal injury
 - (c) Intracerebral hemorrhage
 - (d) Brain laceration
81. Most common cause of sub-dural hemorrhage-
- (a) Middle meningeal artery tear
 - (b) Rupture of superior cerebral vein
 - (c) Internal carotid artery tear
 - (d) None of the above

82. Mild head injury is having Glasgow coma scale of-
- (a) 3-5 (b) 5-8
(c) 8-10 (d) 10-15
83. Best treatment of subdural hematoma in a deteriorating patient-
- (a) By I.V Mannitol (b) Oxygenation
(c) Use of steroids (d) Surgical evacuation
84. Chronic subdural hematoma refers to collection present for a period of-
- (a) 7 days (b) 6 months
(c) 1 year (d) 21 days
85. In patient of head injuries with rapidly increasing intracranial tension without hematoma, the drug of choice for initial management would be-
- (a) Lasix (b) Steroids
(c) 20% Mannitol (d) Glycine
86. Mandible is commonly fractured-
- (a) At the neck of the condyle (b) Through the angle
(c) Through the canine fossa (d) At the middle
87. Best view for mandible is-
- (a) Antero-posterior (b) Lateral
(c) Oblique (d) Orthopantomogram
88. Which of the following disciplines contribute to health research?-
- (a) Bio-medical research (b) Biostatistics
(c) Social science research (d) All of the above
89. Which of the following best describes a study done in a laboratory setting using animals?-
- (a) Translational research (b) Bench-based research
(c) Theoretical research (d) Preventive research
90. Which of the following review is NOT essential before initiating a clinical trial?-
- (a) Scientific review (b) Peer review
(c) Regulatory review (d) Ethics review
91. While drafting a scientific manuscript, literature review is useful on the following section EXCEPT -
- (a) Introduction (b) Methods
(c) Results (d) Discussion
92. The organized collection of articles, abstracts, scientific proceedings, books, and citations used for the purpose of literature review, is known as-
- (a) Database (b) Data management
(c) Critical appraisal (d) Index
93. A measure that reflects severity of an acute infectious disease -
- (a) Case fatality ratio (b) Incidence rate
(c) Prevalence (d) Mortality rate
94. Select the correct statement among the following-
- (a) Prevalence of a disease will increase when it has a high cure rate
(b) Prevalence of a disease will decrease when it has a low case fatality ratio
(c) Prevalence of a disease will increase when it has a low cure rate
(d) Prevalence of a disease will increase when it is acute in nature

95. If a researcher wishes to estimate the incidence of Myocardial infarction cases among a group of women using oral contraceptive pills followed up for 10 years, the researcher has to carry out-
- (a) Case series
 - (b) Cohort study
 - (c) Cross sectional study
 - (d) Ecological study
96. All of the following statements regarding Clinical audit are true EXCEPT-
- (a) Clinical audit is a process used by clinicians who seek to improve patient care
 - (b) The process involves comparing aspects of care against explicit criteria
 - (c) Keeping track of personal outcome data and contributing to a clinical database
 - (d) Involves collecting data to test a hypothesis
97. When summarizing statistical data, the Mean is calculated by-
- (a) The value with the highest frequency observed
 - (b) The largest to the smallest value
 - (c) The result of dividing the total by the number of observations
 - (d) The middle value with equal numbers of observations above and below
98. When summarizing statistical data, the Mode is calculated by-
- (a) The value with the highest frequency observed
 - (b) The largest to the smallest value
 - (c) The result of dividing the total by the number of observations
 - (d) The middle value with equal numbers of observations above and below
99. A clinician comes across an unusual presentation of a particular surgical disorder. If the clinician describes this single case in detail and publishes the same in a journal, then it will be called-
- (a) Analytical study
 - (b) Case report
 - (c) Cross sectional survey
 - (d) Ecological study
100. Relative risk is-
- (a) Rate
 - (b) Ratio
 - (c) Proportion
 - (d) None of the above

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