



# JAMMU AND KASHMIR PUBLIC SERVICE COMMISSION

RESHAM GHAR COLONY, BAKSHI NAGAR, JAMMU - 180016

Website: <http://jkpsc.nic.in>

Jammu: 0191-2566533

**Subject: Written Examination for filling up of Gazetted Vacancies in various Govt. Medical Colleges in Health and Medical Education Department, 2025- Provisional Answer Key(s).**

**Notification No. PSC/Exam/S/2025/40**

**Dated: 07.10.2025**

In pursuance of Rule 10 (c) of the Jammu & Kashmir Public Service Commission (Conduct of Examination) Rules, 2022, as amended upto date, the Provisional Answer Key(s) of Question Papers pertaining to the Written Examination for post(s) of **Assistant Professor in the disciplines of Anesthesiology, General Medicine and General Surgery in Health and Medical Education Department, held on 07.10.2025 (Afternoon Session)**, are hereby notified for seeking objections from candidates.

## **Provisional Answer Key** **(Anesthesiology)**

Test Booklet Question No. (Series A)	
Q1	B
Q2	C
Q3	D
Q4	B
Q5	C
Q6	A
Q7	B
Q8	A
Q9	A
Q10	C
Q11	B

Test Booklet Question No. (Series A)	
Q12	B
Q13	C
Q14	A
Q15	B
Q16	A
Q17	D
Q18	D
Q19	C
Q20	C
Q21	A
Q22	A

Test Booklet Question No. (Series A)	
Q23	A
Q24	B
Q25	A
Q26	D
Q27	B
Q28	D
Q29	C
Q30	C
Q31	C
Q32	A
Q33	D



Test Booklet Question No. (Series A)	
Q34	B
Q35	B
Q36	D
Q37	B
Q38	B
Q39	A
Q40	B
Q41	C
Q42	C
Q43	D
Q44	A
Q45	D
Q46	C
Q47	A
Q48	B
Q49	D
Q50	A
Q51	B
Q52	B
Q53	C
Q54	B
Q55	C
Q56	A

Test Booklet Question No. (Series A)	
Q57	A
Q58	B
Q59	D
Q60	B
Q61	C
Q62	B
Q63	D
Q64	B
Q65	C
Q66	A
Q67	A
Q68	D
Q69	C
Q70	C
Q71	A
Q72	D
Q73	A
Q74	A
Q75	A
Q76	C
Q77	C
Q78	D
Q79	D

Test Booklet Question No. (Series A)	
Q80	D
Q81	A
Q82	A
Q83	A
Q84	C
Q85	C
Q86	A
Q87	D
Q88	B
Q89	A
Q90	B
Q91	A
Q92	C
Q93	A
Q94	A
Q95	D
Q96	B
Q97	A
Q98	A
Q99	C
Q100	A



**Provisional Answer Key**  
**(General Medicine)**

Test Booklet Question No. (Series A)	
Q1	C
Q2	B
Q3	C
Q4	B
Q5	B
Q6	C
Q7	A
Q8	C
Q9	C
Q10	B
Q11	D
Q12	B
Q13	C
Q14	B
Q15	B
Q16	C
Q17	C
Q18	B
Q19	B
Q20	C
Q21	C
Q22	B
Q23	D
Q24	C
Q25	C
Q26	B
Q27	B
Q28	C
Q29	C
Q30	C
Q31	B
Q32	D
Q33	C
Q34	B

Test Booklet Question No. (Series A)	
Q35	D
Q36	C
Q37	C
Q38	C
Q39	B
Q40	B
Q41	C
Q42	C
Q43	C
Q44	C
Q45	B
Q46	C
Q47	D
Q48	C
Q49	C
Q50	B
Q51	C
Q52	B
Q53	B
Q54	B
Q55	C
Q56	B
Q57	C
Q58	C
Q59	D
Q60	B
Q61	B
Q62	C
Q63	C
Q64	D
Q65	D
Q66	B
Q67	C
Q68	B

Test Booklet Question No. (Series A)	
Q69	C
Q70	B
Q71	B
Q72	C
Q73	C
Q74	C
Q75	C
Q76	B
Q77	B
Q78	C
Q79	C
Q80	B
Q81	C
Q82	B
Q83	D
Q84	C
Q85	C
Q86	B
Q87	D
Q88	C
Q89	C
Q90	B
Q91	C
Q92	C
Q93	B
Q94	B
Q95	B
Q96	C
Q97	C
Q98	C
Q99	C
Q100	C



**Provisional Answer Key**  
**(General Surgery)**

Test Booklet Question No. (Series A)	
Q1	A
Q2	D
Q3	C
Q4	C
Q5	B
Q6	D
Q7	C
Q8	D
Q9	A
Q10	C
Q11	A
Q12	B
Q13	C
Q14	C
Q15	C
Q16	A
Q17	C
Q18	B
Q19	C
Q20	B
Q21	B
Q22	B
Q23	B
Q24	C
Q25	A
Q26	A
Q27	A
Q28	D
Q29	A
Q30	C
Q31	C
Q32	C
Q33	D
Q34	A

Test Booklet Question No. (Series A)	
Q35	B
Q36	C
Q37	C
Q38	B
Q39	B
Q40	C
Q41	A
Q42	B
Q43	D
Q44	A
Q45	B
Q46	B
Q47	D
Q48	A
Q49	D
Q50	C
Q51	C
Q52	C
Q53	C
Q54	C
Q55	A
Q56	C
Q57	A
Q58	A
Q59	B
Q60	C
Q61	D
Q62	C
Q63	C
Q64	C
Q65	B
Q66	B
Q67	A
Q68	D

Test Booklet Question No. (Series A)	
Q69	A
Q70	A
Q71	D
Q72	A
Q73	C
Q74	B
Q75	C
Q76	B
Q77	D
Q78	D
Q79	B
Q80	B
Q81	C
Q82	C
Q83	C
Q84	C
Q85	D
Q86	C
Q87	C
Q88	C
Q89	A
Q90	A
Q91	D
Q92	C
Q93	A
Q94	C
Q95	A
Q96	D
Q97	C
Q98	B
Q99	C
Q100	B

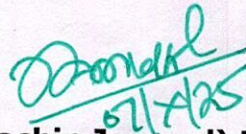


The candidates are advised to refer to **Question Booklet (Series A)** to match the corresponding question(s) in their respective Question Booklet Series and if any candidate feels that the key to any of the question(s) is/are wrong, he/she may represent on prescribed format/proforma annexed as **Annexure-A** along with the documentary proof/evidence (**hard copies only**) and fee of Rs.500/- per question in the form of Demand Draft drawn in favour of **COE, J&K PSC** (refundable in case of genuine/correct representation) to the Controller of Examinations, Jammu & Kashmir Public Service Commission, from Wednesday i.e. 08.10.2025 to 10.10.2025. **The candidates are further advised to clearly mention the question(s) objected to with reference to its serial number as it appears in the Question Booklet of Series A of the provisional answer key(s).**

Any objection/application not accompanied by the requisite Demand Draft of Rs.500/- as prescribed, shall not be considered/entertained under any circumstances. Candidates are, in their own interest, advised to adhere to these instructions and not submit any objection unaccompanied by the Demand Draft as required under extant rules. The Commission shall not entertain any such representation(s) after the expiry of the stipulated period i.e. after 10.10.2025 (Friday), 05.00 pm.

Further, objection(s) submitted in any other mode will not be entertained.

The provisional answer key(s) are also available on the website of the Commission <http://www.jkpsc.nic.in>.

  
(Sachin Jamwal) JKAS

Controller of Examinations

J&K Public Service Commission

No. PSC/Ex-Secy/2025/26

Dated: 07.10.2025

Copy to the: -

1. Director, Information and Public Relations, J&K for publication of the notice in all leading newspapers published from Jammu/Srinagar.
2. P.S. to Hon'ble Chairman, J&K Public Service Commission for information of the Hon'ble Chairman.
3. P.S. to Hon'ble Member, Shri \_\_\_\_\_ for information of the Hon'ble Member.
4. P. A. to Secretary, J&K Public Service Commission for information of the Secretary.
5. Main file/Stock file/Notice Board.



**Annexure-A**

**Representation regarding objection(s) to any Question/Answer pertaining to the Written Examination conducted for the posts of Assistant Professor in the disciplines of Anesthesiology, General Medicine and General Surgery in Health and Medical Education Department held on 07.10.2025**

**(NOTE: USE SEPARATE FORMS FOR SEPARATE QUESTIONS)**

**Discipline:** \_\_\_\_\_

**Name of the Applicant:** \_\_\_\_\_

**Roll No. :** \_\_\_\_\_

**Correspondence Address :** \_\_\_\_\_

**Contact/Mobile No. :** \_\_\_\_\_

**Date of Application:** \_\_\_\_\_ .10.2025

**Demand Draft Details:** No. \_\_\_\_\_ Date \_\_\_\_\_ Amount \_\_\_\_\_

**Candidates Account No.(16 digit) & IFSC Code :** \_\_\_\_\_

Question No. in Series A	Details of the Objection	Resource Material (copy to be enclosed)	Details of the Website (if any)
<b><u>Correct Answer/Option as per candidate :</u></b>			

**Signature of the Candidate**

**Note : Application for each question/answer shall be made on separate page in the given format, otherwise the first question entered in the format shall only be considered.**



DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. **330741**

Test Booklet Series

TEST BOOKLET  
HEALTH & MEDICAL EDUCATION DEPARTMENT  
ASSISTANT PROFESSOR - ANESTHESIOLOGY  
WRITTEN TEST - 2025  
(23)

A

Time Allowed: Two Hours

Maximum Marks: 100

**INSTRUCTIONS**

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside.  
**DO NOT write anything else** on the Test Booklet.
4. This Test booklet contains **100** items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer /Response Sheet provided. See directions in the Response Sheet.
6. All items carry equal marks.
7. Before you proceed to mark in the Answer /Response Sheet, the response to various items in the Test Booklet, you have to fill in some particulars in the Answer /Response Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer /Response Sheet**. You are permitted to take away with you the Test Booklet and **Candidate's Copy of the Response Sheet**.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. While writing Centre, Subject and Roll No. on the top of the Answer Sheet/Response Sheet in appropriate boxes use **"ONLY BALL POINT PEN"**.
11. **Penalty for wrong answers:**  
**THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).**
  - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **(0.25)** of the marks assigned to that question will be deducted as penalty.
  - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above for that question.
  - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO



1. A patient with a history of uncontrolled hypertension, diabetes, and angina, who is to undergo a laparoscopic cholecystectomy, will be classified as an
  - A) ASA PS II
  - B) ASA PS III
  - C) ASA PS IV
  - D) ASA PS V
  
2. In preoperative assessment of patients, physical activity is graded in terms of metabolic equivalents (METs). The value that corresponds to oxygen consumption of 1 MET in an adult is
  - A) 2 mL/kg/min
  - B) 7 mL/kg/min
  - C) 3.5 mL/kg/min
  - D) 5.5 mL/kg/min
  
3. You have administered a patient 1.2 mg/kg of rocuronium to do an intubation. You are unable to intubate or ventilate the patient and decide to reverse the patient's paralysis with Sugammadex. The dosage you would use is
  - A) 2 mg/kg
  - B) 4 mg/kg
  - C) 8 mg/kg
  - D) 16 mg/kg
  
4. A patient with hypertrophic obstructive cardiomyopathy (HOCM) presents with dyspnea and angina on exertion. Which of the following is the best agent to treat these symptoms?
  - A) Hydrochlorothiazide
  - B) Metoprolol
  - C) Morphine
  - D) Nitroglycerin
  
5. You are performing an interscalene brachial plexus block on an awake 40-year-old patient who is healthy with no significant medical history. Soon after injecting 20 mL of 0.25% bupivacaine the patient becomes agitated, has a seizure, and loses consciousness. Your first step in management is
  - A) Administer intralipid
  - B) Administer midazolam or propofol to control the seizure
  - C) Establish airway and give 100% O<sub>2</sub> via a face mask
  - D) Administer epinephrine



6. All of the following surgeries are associated with an increased risk of postoperative nausea and vomiting, EXCEPT
- A) Shoulder arthroscopy
  - B) Laparoscopic surgery
  - C) Strabismus repair
  - D) Tympanoplasty
7. During normal laminar flow, resistance is dependent on which character of oxygen?
- A) density
  - B) viscosity
  - C) molecular weight
  - D) temperature
8. The greatest source for contamination of the Operating room atmosphere is leakage of volatile anesthetics
- A) Around the anesthesia mask
  - B) At the vaporizer
  - C) At the rotameter
  - D) At the CO<sub>2</sub> absorber
9. The fundamental difference between micro shock and macro shock is related to
- A) location of shock
  - B) duration
  - C) Voltage
  - D) Lethality
10. The pressure gauge on a E size cylinder compressed gas cylinder containing oxygen reads 1600 psi. How long could oxygen be delivered from this cylinder at a rate 2L/min?
- A) 90
  - B) 140
  - C) 280
  - D) 320
11. When the pressure gauge of an E- type compressing gas cylinder containing N<sub>2</sub>O begins to fall from its previous constant pressure of 750 psi, approximately how many litres gas will remain in the cylinder?
- A) 200 L
  - B) 400 L
  - C) 600 L
  - D) Cannot be calculated



12. The device on the anesthesia machine which that mostly reliably detect delivery of hypoxic gas mixture
- A) Fail - safe valve
  - B) O<sub>2</sub> Analyzer
  - C) Second stage oxygen -pressure regulator
  - D) Proportion limiting control system
13. Each of the following is not an advantage of calcium hydroxide lime over soda lime
- A) Compound A is not formed
  - B) CO is not formed
  - C) More absorptive capacity per 100gm of granule
  - D) It doesn't contain NaOH or KOH
14. A major difference between the adult and neonatal airway is that the
- A) Neonate's larynx is located more cephalad
  - B) Neonate's epiglottis is thin and small
  - C) Narrowest segment of a neonate's upper airway occurs at the level of the vocal cords
  - D) Neonate is at lower risk of post-extubation stridor compared to adult
15. One of the following statements regarding the innervation of airway structures is most correct
- A) The afferent limb of the gag reflex is primarily carried by fibers of the recurrent laryngeal nerve
  - B) Trigeminal nerve block would facilitate awake nasotracheal intubation
  - C) The superior surface of the epiglottis is primarily innervated by the glossopharyngeal nerve
  - D) Tactile sensation from the posterior one-third of the tongue is carried by the hypoglossal nerve



16. You are caring for an 18-year-old female trauma patient who was emergently transported to the operating room for control of massive bleeding. Due to the acuteness of the patient's bleeding, there was no time for blood typing and she has received 1 units of O-negative packed red blood cells. The blood bank notifies you that the patient's blood type is A-positive. If the patient requires further transfusion, which of the following should be administered?
- A) A-positive RBCs
  - B) A-negative RBCs
  - C) O-negative RBCs
  - D) RhoGAM
17. Types of autologous blood transfusion include all of the following, EXCEPT
- A) Predeposited donation
  - B) Intraoperative blood salvage
  - C) Normovolemic hemodilution
  - D) Donor-directed transfusion
18. All of the following qualities are advantages of crystalloid solutions, EXCEPT
- A) Nontoxic
  - B) Reaction-free
  - C) Relatively inexpensive
  - D) Have the ability to remain in the intravascular space for a relatively long amount of time
19. All of the following are signs of dehydration, EXCEPT
- A) Progressive metabolic acidosis
  - B) Urinary specific gravity  $> 1.010$
  - C) Urine osmolality  $< 300$  mOsm/kg
  - D) Urine sodium  $< 10$  mEq/L
20. All of the following fluids are generally considered to be isotonic, EXCEPT
- A) Lactated Ringer
  - B) Normal saline
  - C) D5 normal saline
  - D) D5 1/4 normal saline



21. Capnography can help detect all of the following, EXCEPT
- A) Endobronchial intubation
  - B) Esophageal intubation
  - C) Bronchospasm
  - D) Pulmonary embolism
22. Which of the following increases amplitude in SSEP
- A) Ketamine
  - B) Hypercarbia
  - C) Cooling the patient
  - D) Hemodilution
23. A sudden loss in somatosensory-evoked potentials (SSEPs) would cause you to be worried about
- A) Vascular compromise
  - B) Hyperthermia
  - C) An insufficient depth of anesthesia
  - D) Increased blood pressure
24. When evaluating flow at a specific point during echocardiography, you would use
- A) Continuous-wave Doppler
  - B) Pulse-wave Doppler
  - C) Color Doppler
  - D) Pulse-wave or continuous-wave Doppler
25. A patient with methemoglobinemia will have a pulse oximetry reading that
- A) Converges around a saturation of 85%
  - B) Converges around a saturation of 65%
  - C) Converges around a saturation of 45%
  - D) Varies widely
26. To help encourage universal quality and safety practices, the ASA has adopted and mandates the use of all the following monitors during general anesthesia, EXCEPT
- A) An oxygen analyzer
  - B) Capnography
  - C) Continuous visual display of an ECG
  - D) A peripheral nerve stimulator
27. Lead II of an ECG is represented by placing the
- A) Positive electrode on the right arm and the negative electrode on the left leg
  - B) Negative electrode on the right arm and the positive electrode on the left leg
  - C) Positive electrode on the right arm and the negative electrode on the left arm
  - D) Negative electrode on the right arm and the positive electrode on the left arm



28. While taking care of a patient, you notice that the arterial monitor transducer has slipped off its stand and is hanging approximately 30 cm lower than where it was originally levelled. This would correspond to a blood pressure reading that is
- A) 30 mm Hg lower than the actual pressure
  - B) 30 mm Hg higher than the actual pressure
  - C) 22 mm Hg lower than the actual pressure
  - D) 22 mm Hg higher than the actual pressure
29. An important consideration in using the subclavian approach for central venous access includes the
- A) Ease of compressibility if a hematoma or laceration develops
  - B) Lower risk of pneumothorax when compared to internal jugular approach
  - C) Ability of the vessel to remain patent in the setting of hypovolemia
  - D) Increased risk of damaging the brachial plexus when compared to internal jugular approach
30. While monitoring a patient for return of neuromuscular function after using rocuronium, you notice the patient has regained four twitches using train of four stimulations. With four twitches on train of four stimulations, the patient may still have blockage of acetylcholine receptors of up to
- A) 25%
  - B) 50%
  - C) 75%
  - D) 90%
31. While performing an axillary brachial plexus block, all of the following nerves are spared, EXCEPT
- A) Musculocutaneous nerve
  - B) Ulnar nerve
  - C) Intercostobrachial (T2)
  - D) Medial cutaneous nerve
32. Contraindications to safely perform peripheral regional anesthesia include all of the following, EXCEPT
- A) Patients who may not provide absolute cooperation during nerve block placement (mental retardation) without administration of sedation
  - B) Patient refusal
  - C) Severe coagulopathy while anticipating a deep nerve plexus blockade
  - D) Evidence of infection at injection site



33. Which of the following nerves is typically spared during performance of an interscalene brachial plexus block?
- A) Median
  - B) Axillary
  - C) Musculocutaneous
  - D) Ulnar
34. The following local anesthetic medication is associated with the highest risk for cardiovascular collapse in the event of Local Anesthetic Systemic Toxicity (LAST)?
- A) Lidocaine
  - B) Bupivacaine
  - C) Ropivacaine
  - D) Mepivacaine
35. The most appropriate nerve block for pain management in a patient scheduled for a total hip replacement is
- A) Femoral nerve block
  - B) Lumbar plexus block
  - C) Femoral and obturator nerve block
  - D) Femoral and lateral femoral cutaneous nerve block
36. A patient is to undergo surgery to create an arteriovenous fistula for hemodialysis on the antecubital area of the right upper extremity. You perform a right supraclavicular block uneventfully using 20 mL 0.5% ropivacaine. The patient has a medical history significant for hypertension and end-stage renal disease. Three days following the surgery, the patient complains that she has no sensation from the right elbow to the tips of all her fingers, but she can move all of her fingers normally. The most likely etiology is
- A) Neurotoxicity of the trunks/divisions of the brachial plexus secondary to the ropivacaine
  - B) Nerve injury secondary to the regional block needle used
  - C) Prolonged effect of the local anesthetic secondary to the patient's renal failure
  - D) Possible surgery-related injury at the elbow that may warrant an electrophysiology study



37. Which of the following approaches to blockade of the brachial plexus is associated with the highest incidence of a pneumothorax?
- A) Interscalene and axillary approaches
  - B) Supraclavicular and interscalene approaches
  - C) Infraclavicular and axillary approaches
  - D) Axillary and interscalene approaches
38. All of the following medication adjuvants can be used in combination with local anesthetic solutions during performance of a peripheral nerve blockade to extend the duration/effectiveness of nerve blockade, EXCEPT
- A) Epinephrine
  - B) Ketamine
  - C) Dexamethasone
  - D) Clonidine
39. The foot is supplied mainly by which of the following nerve(s)?
- A) Sciatic nerve
  - B) Obturator and tibial nerves
  - C) Femoral and lateral femoral cutaneous nerves
  - D) Saphenous and common peroneal nerves
40. The most incorrect statement regarding Transversus Abdominis Plane (TAP) block is
- A) TAP blocks can provide analgesia following hernia repair surgeries
  - B) TAP blocks can often alleviate both somatic and visceral pain
  - C) One potential complication includes liver injury
  - D) Unilateral TAP blocks never cross over the midline
41. A spinal neuraxial anesthetic was given 20 minutes earlier to a 28-year-old G3P2 parturient scheduled for repeat cesarean section. Alcohol swab exam revealed that she has lost temperature sensation up to T2 level. At what level do you anticipate the block will reach to provide adequate pain control?
- A) T6
  - B) T3
  - C) T4
  - D) T5



42. Factors that can affect the level of an epidural anesthetic include
- A) Patient weight, amount of local anesthetic injected, patient position
  - B) Patient weight, patient age, method of injection
  - C) Patient age, amount of local anesthetic injected, patient position
  - D) Patient weight, patient age, amount of local anesthetic injected
43. Acute Respiratory Distress Syndrome (ARDS) patients' plateau pressures should be maintained at or below
- A) 50 cm H<sub>2</sub>O
  - B) 60 cm H<sub>2</sub>O
  - C) 40 cm H<sub>2</sub>O
  - D) 30 cm H<sub>2</sub>O
44. Weaning from mechanical ventilation is expedited by
- A) Daily spontaneous breathing trials
  - B) Synchronized Intermittent Mandatory Ventilation (SIMV)
  - C) Administration of bronchodilating medications around the clock
  - D) Daily bronchoscopy
45. An ICU patient with severe Acute Respiratory Distress Syndrome (ARDS) remains dyssynchronous with the ventilator despite administration of high-dose propofol and fentanyl infusions and changes in the mode of ventilation. The patient's gas exchange has deteriorated over the course of the day, and hypotension requiring vasopressor support has developed in the setting of increasing the propofol dose. The next best step is to
- A) Increase propofol
  - B) Change to pressure-support ventilation
  - C) Aggressively give diuretic to the patient
  - D) Administer a nondepolarizing neuromuscular-blocking agent
46. A patient with a chronic obstructive pulmonary disease exacerbation has an initial Arterial Blood Gas (ABG) with pH = 7.05, PCO<sub>2</sub> = 95 mm Hg, and PO<sub>2</sub> = 54 mm Hg on 6 L of oxygen via nasal cannula. The patient is awake, alert, and in moderate respiratory distress with significant wheezing. Bronchodilators and Continuous Positive Airway Pressure (CPAP) 10 cm H<sub>2</sub>O via face mask with FIO<sub>2</sub> of 50% are initiated. One hour later, the ABG is pH = 7.10, PCO<sub>2</sub> = 90 mm Hg, and PO<sub>2</sub> = 92 mm Hg. The patient remains awake and alert and is now in less distress. most appropriate next step in the management is
- A) Increasing the FIO<sub>2</sub>
  - B) Increasing CPAP to 15 cm H<sub>2</sub>O
  - C) Changing the mode to bi-level positive airway pressure (BiPAP)
  - D) Stopping CPAP and delivering oxygen via high-flow nasal cannula



47. A 80-year-old male is presented to the operating room for surgical repair of a right femoral neck fracture. His medical history is significant for chronic obstructive pulmonary disease (60 pack year smoking history) and is prescribed 4 L/min of continuous home oxygen. which of the following has the least beneficial value to assess the respiratory risk for this patient?
- A) Pulmonary function tests
  - B) Exercise tolerance
  - C) 6 min walk test
  - D) Arterial blood gas
48. The nerve block is needed to block obliterate gag reflex pressure to the posterior portion of the tongue during an awake fiberoptic intubation is the
- A) Recurrent laryngeal nerve
  - B) Glossopharyngeal nerve
  - C) Superior laryngeal nerve
  - D) Inferior laryngeal nerve
49. The primary aim of using succinylcholine for anesthesia for Electroconvulsive Therapy (ECT) is to
- A) Prevent loss of airway
  - B) Control excessive seizure activity
  - C) Control cardiovascular sympathetic discharge
  - D) Prevent musculoskeletal injuries
50. The most frequent cause of delayed emergence in the postanesthesia care unit is
- A) Residual anesthetic agents
  - B) Hypoventilation
  - C) Hypotension
  - D) Hypothermia
51. The most common cause of postanesthesia care unit (PACU)-related malpractice claims is
- A) Undertreated pain
  - B) Critical respiratory incidents
  - C) Nerve injury from regional blocks
  - D) Cardiovascular events
52. The dose of depolarizing muscle relaxants in a neonate is
- A) Decreased as compared to children
  - B) Increased as compared to children
  - C) Same as children
  - D) Cannot be predicted



53. Perioperative management of a child with a femur fracture and sickle cell disease includes all of the following, EXCEPT
- A) Hydration
  - B) Treat infections
  - C) Transfuse to hemoglobin of 14 mg/dL
  - D) Avoid metabolic acidosis
54. The most consistent sign of intravascular injection following caudal epidural with 0.25% bupivacaine with 1:200,000 epinephrine is
- A) Tachycardia
  - B) ST segment changes
  - C) Bradycardia
  - D) Hypertension
55. The most effective method for maintaining normothermia in an operating room is
- A) Warm humidified gases
  - B) Warm intravenous fluids
  - C) Warming blankets
  - D) Increasing the room temperature
56. The most important measure to avoid subglottic edema in children is
- A) Use of an appropriate-size endotracheal tube
  - B) Lubricating the endotracheal tube prior to intubation
  - C) Administering intravenous lidocaine for all intubations
  - D) Administering intravenous steroids for all intubations
57. Compared to adults, oxygen desaturation is more frequent in pediatric population because of
- A) Lower Functional Residual Capacity (FRC) in children
  - B) Higher oxygen consumption in adult
  - C) Lower heart rate in adults
  - D) Lower functional residual capacity in adults



58. A 5-year-old otherwise-healthy child is undergoing strabismus surgery with a Laryngeal Mask Airway (LMA) in place. Thirty minutes into the procedure, his heart rate is 60 bpm, blood pressure is 90/60 mm Hg, and the pulse oximeter reads 98%. The next step in management should be
- A) Replace the LMA with an endotracheal tube
  - B) Inform surgeon, administer atropine
  - C) Nothing, this is normal for this child
  - D) Increase the  $\text{FIO}_2$  to 1.0
59. A 2-year-old is scheduled for elective tonsillectomy and adenoidectomy. Which of the following is least likely to increase the risk of perioperative adverse respiratory events
- A) Presence of fever
  - B) Presence of Wet cough with sputum
  - C) Abnormal lung sounds
  - D) History of upper respiratory infection 4 weeks ago
60. The mechanisms of depression of cardiac contractility by volatile anaesthetics include all the following, EXCEPT
- A) They decrease the entry of calcium into cells during depolarization
  - B) They affect only L-type calcium channels
  - C) They alter kinetics of calcium release
  - D) They decrease the sensitivity of contractile proteins to calcium
61. Which of the following drugs can be given during anesthesia of a patient with Wolff-Parkinson-White (WPW) syndrome?
- A) Ketamine
  - B) Pancuronium
  - C) Succinylcholine
  - D) Digitalis
62. During total cardiopulmonary bypass, metabolic acidosis and decreasing mixed venous oxygen saturation are noted. The most likely cause is
- A) Hypothermia
  - B) Hypoperfusion
  - C) Rewarming
  - D) Light anesthesia



63. During cardiopulmonary bypass (CPB), the nasopharyngeal temperature is 28°C, the hematocrit is 20%, the temperature corrected PaCO<sub>2</sub> is 50 mm Hg, and the uncorrected PaCO<sub>2</sub> is 60 mm Hg. The most appropriate management is to
- A) Administer additional opioid
  - B) Administer packed red blood cells to increase hematocrit to 25%
  - C) Further decrease the patient's temperature
  - D) Increase fresh-gas flow to the oxygenator
64. Two days after coronary artery bypass grafting, a 62-year-old man remains sedated, endotracheally intubated, and mechanically ventilated. Over the next 3 hours, PaO<sub>2</sub> decreases from 90 to 70 mm Hg at an FIO<sub>2</sub> of 0.7, peak inspiratory pressure measured proximally in the ventilator circuit increases from 40 to 66 cm H<sub>2</sub>O, and plateau pressure remains unchanged at 30 cm H<sub>2</sub>O. Which of the following is the most likely cause of these changes?
- A) Adult Respiratory Distress Syndrome (ARDS)
  - B) Bronchial mucus plugging
  - C) Left-ventricular failure
  - D) Tension pneumothorax
65. Which of the following is not a part of the "STOP BANG" screening questionnaire for Obstructive Sleep Apnea (OSA)?
- A) Snoring
  - B) Observed apnea
  - C) Exercise tolerance
  - D) High blood pressure
66. Complications associated with mediastinoscopy include all the following, EXCEPT
- A) Vagally mediated reflex bradycardia
  - B) Cerebral ischemia
  - C) Pneumothorax
  - D) Thoracic duct injury
67. The first step recommended to improve oxygenation if a patient is exhibiting drop in oxygen saturation during one-lung ventilation is
- A) Apply Continuous Positive-Airway Pressure (CPAP) to the collapsed lung
  - B) Apply Positive End-Expiratory Pressure (PEEP) to the dependent lung
  - C) Periodic inflation of the collapsed lung
  - D) Continuous inflation of oxygen into collapsed lung



68. Which of the following statements is not true regarding "lower lung syndrome"?
- A) It is caused by excessive fluid administration in a lateral decubitus position
  - B) It increases intrapulmonary shunting
  - C) It is gravity-dependent transudation of fluid into the dependent lung
  - D) It is due to volutrauma caused during one-lung ventilation
69. Which of the following is most likely to be associated with maximum increase in intracranial pressure (ICP) is
- A) Hypercarbia with  $\text{PaCO}_2$  of 50 mm Hg
  - B) Ventilation with positive end-expiratory pressure (PEEP) of 5 cm  $\text{H}_2\text{O}$
  - C) Bucking and coughing on endotracheal tube
  - D) Increased central venous pressure to 14 mm Hg
70. A patient is undergoing craniotomy for subdural hematoma. During the procedure, the surgeon requests lowering the intracranial pressure. All the following can be used, EXCEPT
- A) Mannitol
  - B) Hyperventilation
  - C) Steroids
  - D) Furosemide
71. Therapy for cerebral vasospasm includes
- A) Hypertension, hypervolemia, hemodilution
  - B) Normotension, euvolemia, hypocarbia
  - C) Hypotension, hypovolemia, hypocarbia
  - D) Hypertension, hypervolemia, hypocarbia
72. Intraoperative anesthetic management of a patient undergoing cerebral aneurysm repair includes all, EXCEPT
- A) Maintenance of hypotension
  - B) Mannitol for facilitating surgical exposure
  - C) Maintaining mild hypothermia
  - D) Patient remaining intubated for 24 hours postoperatively



73. A patient with spinal injury, sustained 2 hours ago, comes to the OR for exploratory laparotomy. Anaesthetic management of the patient includes which of the following?
- A) Rapid-sequence induction with succinylcholine
  - B) Hypothermia for better neurologic outcome
  - C) Managing autonomic hyperreflexia
  - D) Avoiding corticosteroids
74. A 65-year-old male is undergoing surgery for medulloblastoma in the posterior fossa of brain. Approximately 1 hour into surgery you notice arrhythmias on the monitors. The first step will be
- A) Inform the surgeon and transiently stop the surgery
  - B) Give  $\beta$ -blockers
  - C) Administer lidocaine
  - D) Give 100% oxygen
75. Signs of air embolism in a patient include all, EXCEPT
- A) Hypertension
  - B) Heart murmur
  - C) Arrhythmia
  - D) Decreased  $\text{EtCO}_2$
76. A 16-year-old patient with acute lysergic acid diethylamide (LSD) intoxication and head injury comes to emergency room. All the following can be used in anesthetic management, EXCEPT
- A) Propofol
  - B) Succinylcholine
  - C) Ketamine
  - D) Phenylephrine



77. The surgeon is performing a right total knee arthroplasty under a combined spinal- epidural anesthetic. The surgical team is providing you with information that within the next 15 minutes they plan to place bone cement (polymethylmethacrylate) to anchor the prosthesis. The most likely clinical side effect that may occur is
- A) Hypertension
  - B) Increased work of breathing and hypercapnia
  - C) Cardiac arrhythmias
  - D) Decreased pulmonary shunt
78. Which of the following is correct regarding neuraxial anesthesia in patient receiving enoxaparin for deep-vein thrombosis prophylaxis for knee arthroplasty
- A) Neuraxial anesthesia increases thromboembolic complications
  - B) Neuraxial anesthesia increases blood loss
  - C) we should stop enoxaparin 24 hours for prophylactic dose
  - D) we should stop enoxaparin 12 hours for prophylactic dose
79. A 76-year-old female is to undergo a right femoral neck fracture repair. You perform a spinal anesthetic using 1.5 mL 0.5% bupivacaine mixed with 100 µg of preservative-free morphine. How long should the patient be monitored for postoperative apnea/hypoventilation secondary to the intrathecal morphine administration?
- A) 3 days
  - B) 48 hours
  - C) 12 hours
  - D) 24 hours
80. The most incorrect statement regarding postoperative vision loss (POVL) that may occur during prone positioning in spine surgery patients is
- A) Ischemic optic neuropathy accounts for the highest incidence of POVL
  - B) Ischemic optic neuropathy is associated with decreased ocular perfusion pressure
  - C) Prone positioning, greater than 1 L intraoperative blood loss, and surgery lasting greater than 6 hours represent the highest risk
  - D) POVL due to Central Retinal Artery Occlusion (CRAO) tends to be bilateral



81. During rapid-sequence induction of anesthesia for emergent laparotomy to explore multiple stab wounds, a 45-year-old man vomits a large quantity of undigested food particles. During intubation of the trachea, food particles are noted near the cords. After instituting ventilation with 100% oxygen, the most appropriate next step in this patient's management is
- A) Place patient in Trendelenburg position
  - B) Ventilate with positive end-expiratory pressure of 15 cm H<sub>2</sub>O
  - C) Administer corticosteroids
  - D) Administer antibiotics
82. During laparotomy, a patient has required infusion of 4 L of lactated Ringer's and 4 U of packed red blood cells (pRBCs). As the fifth unit of pRBCs begins infusing, patient has sudden onset of tachycardia and hypotension. Within a few minutes, Foley bag reveals dark urine. The most likely cause of unexplained oozing is
- A) Hemolytic transfusion reaction
  - B) Leukoagglutinin reaction
  - C) Dilutional thrombocytopenia
  - D) Dilutional coagulopathy
83. A healthy 38-year-old female patient is undergoing repair of a large ventral hernia under intrathecal anesthesia. A T2 sensory level is obtained with hyperbaric bupivacaine prior to incision. Which of the following statements is incorrect
- A) Effective cough will be preserved
  - B) The cardioaccelerator nerves are blocked in this patient
  - C) Examination of the biceps would reveal full strength bilaterally
  - D) Bupivacaine binds to the intracellular portion of sodium channels
84. Extracorporeal shock wave lithotripsy therapy proceeds with the shock wave synchronized with what ECG phase of the cardiac cycle?
- A) The P wave
  - B) The Q wave
  - C) The R wave
  - D) The S wave



85. A 33-year-old otherwise-healthy female suffering from moderately severe abdominal pain of unclear etiology is set to undergo an exploratory laparoscopy. The abdominal cavity is insufflated using carbon dioxide ( $\text{CO}_2$ ). All of the following are correct statements regarding pathophysiologic changes associated with creation of the pneumoperitoneum, EXCEPT
- A) Increased risk of reflux and aspiration
  - B) Decreased venous return
  - C) Decreased Systemic Vascular Resistance (SVR)
  - D) Increased intrathoracic pressures
86. A 38-year-old woman is set to undergo extracorporeal shock wave lithotripsy to disintegrate a painful stone trapped in her upper ureter. The patient is requesting an epidural anesthetic and is choosing to be otherwise awake and cooperative with her positioning and procedure. The step of the epidural placement that should be *avoided* in this patient is
- A) Loss of resistance to air
  - B) Loss of resistance to hanging drop
  - C) Test dose injection
  - D) Bolus dose of local anesthetics
87. A 67-year-old patient with chronic renal failure presents for hip arthroscopy to address and treat his labral tears and associated hip pain. The best option for opioid therapy in this patient is
- A) Meperidine
  - B) Codeine
  - C) Dextropropoxyphene
  - D) Fentanyl
88. A 10-year-old girl with hoarseness presents for laser microsurgery to address laryngeal papillomas. She is otherwise healthy. The surgeon is requesting a General Endotracheal Anesthetic (GETA). The gas mixture least likely to support combustion is
- A) Oxygen 35%, air 65%
  - B) Oxygen 30%, helium 70%
  - C) Oxygen 20%, nitrous oxide ( $\text{N}_2\text{O}$ ) 80%
  - D) Oxygen 30%, nitrogen ( $\text{N}_2$ ) 70%



89. A 35-year-old male with a toxic multinodular goiter presents for thyroidectomy with radical neck dissection. He denies any other significant medical history. Review of systems reveals orthopnea and dysphagia with a recent change in the caliber of his voice. To attenuate risk of a "cannot ventilate, cannot intubate" scenario, an awake airway intubation is discussed. The neural structure that does not need to be blocked in order to provide adequate airway analgesia for a nasal intubation is
- A) Hypoglossal nerve
  - B) Sphenopalatine ganglion
  - C) Superior laryngeal nerve
  - D) Recurrent laryngeal nerve
90. If bilateral recurrent laryngeal nerves were unintentionally severed, the likely finding on direct laryngoscopy would be
- A) Paralysis of the cricothyroid muscles
  - B) Intermediate position of the cords
  - C) Midline, closed position of the cords
  - D) Pure adductor vocal cord paralysis
91. At the conclusion of a complicated 4-hour resection of total thyroidectomy, the patient is extubated and brought to the recovery room. One hour after extubation, the patient complains of dyspnea with stridorous respiration. Initial steps include all of the following, EXCEPT
- A) Intravenous administration of calcium
  - B) Nebulized racemic epinephrine
  - C) Inspection of the surgical site
  - D) Direct laryngoscopy
92. A 65-year-old male requires transoral laser microsurgery to address his laryngeal webs. His medical history reveals remote tobacco smoking and recreational drug use in college. Minimizing airway fire hazards associated with laser surgery can be accomplished by use of all of the following, EXCEPT
- A) Intermittent mode laser emissions
  - B) An air/oxygen anesthetic technique
  - C) A polyvinylchloride (PVC) endotracheal tube
  - D) Saline-soaked sponges over exposed tissues



93. A 27-year-old male arrives to the operating room with laryngotracheal injuries stemming from a motorcycle collision. He presents with hoarseness and dyspnea while sitting, but is unable to lie flat due to worsening dyspnea. He is unable to swallow, and is drooling/spitting moderately blood-stained sputum. His anterior neck is diffusely swollen and exquisitely tender with notable subcutaneous emphysema. Oxygen saturation is 100% with supplemental oxygen via face mask. Review of imaging reveals a thyroid cartilage fracture horizontally and crossing the midline. The most appropriate approach to his airway management is
- A) Tracheostomy
  - B) Laryngeal mask airway
  - C) Nasotracheal intubation
  - D) Cricothyroidotomy
94. By the third trimester of pregnancy, cardiac output increases to nearly 50% due to which of these alterations?
- A) Increase in stroke volume and increase in heart rate
  - B) Decrease in stroke volume and increase in heart rate
  - C) Increase in stroke volume and decrease in heart rate
  - D) Decrease in stroke volume and decrease in heart rate
95. After 18 hours of labouring and adherence to a strict nonpharmacologic natural birth plan, the patient experiences late decelerations and foetal distress, requiring emergent caesarean section. To minimize the risk of aspiration and resultant pneumonitis.
- A) Place patient in left-uterine displacement
  - B) Give oxygen
  - C) Give metoclopramide to reverse opioid-induced gastric hypomotility
  - D) Give a nonparticulate antacid to decrease the pH of the gastric fluid
96. A 24-year-old G<sub>4</sub>P<sub>2</sub> parturient is undergoing a general anesthetic for emergency cesarean section due to uterine rupture. All these findings would suggest an Amniotic Fluid Embolism (AFE), EXCEPT
- A) Seizures
  - B) Increased maternal pH
  - C) Bleeding diathesis
  - D) Altered mental status



97. Following a 0.6 mg/kg intravenous dose of rocuronium to facilitate rapid-sequence induction in a parturient requiring surgical delivery, one would expect
- A) Minimal placental transfer of rocuronium to the newborn
  - B) Shorter duration of relaxation with concurrent magnesium administration
  - C) Unsuitable intubating conditions as recommended doses are 1.5 mg/kg
  - D) Use of rocuronium has been shown to affect Apgar scores and fetal muscle tone
98. You are about to anesthetize a 55-year-old man who is undergoing liver resection for removal of metastatic carcinoid tumor. The drug of choice to treat intraoperative hypotension is
- A) Octreotide
  - B) Dopamine
  - C) epinephrine
  - D) norepinephrine
99. All the statements regarding consent is true EXCEPT
- A) Blanket consent is legally invalid,
  - B) Proxy consent to be valid in law, The person herself is not in a position to give consent (minor, unconscious, insane or intoxicated) and
  - C) Proxy consent is not valid for Medical or surgical intervention, which is urgently needed to save lives.
  - D) Opt-out consent is applied in certain scenarios such as donation programs
100. What is true about Confounders?
- A) They affect both study variable as well as outcome
  - B) Their effect cannot be reduced by proper study design and through stratified analysis
  - C) They affect only variable
  - D) They affect only outcome
-



DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. **330813**

Test Booklet Series

TEST BOOKLET  
HEALTH & MEDICAL EDUCATION DEPARTMENT  
ASSISTANT PROFESSOR - GENERAL MEDICINE

**A**

Written Test - 2025  
(24)

Time Allowed: Two Hours

Maximum Marks: 100

**INSTRUCTIONS**

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside.  
*DO NOT write anything else on the Test Booklet.*
4. This Test booklet contains **100** items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer /Response Sheet provided. See directions in the Response Sheet.
6. *All* items carry equal marks.
7. Before you proceed to mark in the Answer /Response Sheet, the response to various items in the Test Booklet, you have to fill in some particulars in the Answer /Response Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer /Response Sheet**. You are permitted to take away with you the Test Booklet and **Candidate's Copy of the Response Sheet**.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. While writing Centre, Subject and Roll No. on the top of the Answer Sheet/Response Sheet in appropriate boxes use **"ONLY BALL POINT PEN"**.
11. **Penalty for wrong answers:**  
**THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).**
  - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **(0.25)** of the marks assigned to that question will be deducted as penalty.
  - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above for that question.
  - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO



1. Which of the following combinations correctly matches severe community-acquired pneumonia criteria with its respective classification and clinical implication?
  - A)  $\text{PaO}_2 / \text{FiO}_2 \leq 250$ , Septic shock requiring vasopressors - both are minor criteria requiring only supportive care
  - B) Multilobar infiltrates, Uremia ( $\text{BUN} \geq 20 \text{ mg/dL}$ ), Hypothermia ( $<36^\circ\text{C}$ ) - all are major criteria requiring ICU
  - C) Respiratory failure needing invasive ventilation - major criterion indicating severe pneumonia
  - D) Leukopenia ( $\text{WBC} < 4000/\mu\text{L}$ ), Platelets  $< 100,000/\mu\text{L}$ , Hypotension needing vasopressors - all are minor criteria
  
2. A 72-year-old male develops signs of Infective Endocarditis (IE) 5 weeks after undergoing prosthetic aortic valve replacement. Blood cultures grow methicillin-resistant coagulase-negative staphylococci (MR-CoNS). Which of the following statements best explains the likely source and etiology of his infection?
  - A) This is most likely late PVE, caused by organisms similar to native valve endocarditis.
  - B) The timing suggests early PVE, likely due to intraoperative or nosocomial contamination.
  - C) CoNS are rarely methicillin-resistant in prosthetic valve infections.
  - D) The clinical presentation suggests a TAVR-specific etiology, with *Pseudomonas* as the most common cause.
  
3. A 64-year-old woman develops watery diarrhea (6-7 unformed stools/day) on hospital day 5. She is afebrile and hemodynamically stable. There is no recent travel or antibiotic change. The clinician suspects *Clostridioides difficile* infection (CDI). Which of the following is the most appropriate initial diagnostic approach?
  - A) Flexible sigmoidoscopy to visualize pseudomembranes
  - B) Stool culture followed by toxin neutralization assay
  - C) Nucleic acid amplification testing (NAAT) or toxin assay on stool
  - D) Colonoscopy to exclude ischemic colitis
  
4. Which of the following combinations does NOT satisfy the biochemical criteria for cardiac cachexia?
  - A) CRP 6.2 mg/L, IL-6 5.0 pg/mL, Hb 11.8 g/dL
  - B) Hb 11.5 g/dL, Albumin 3.1 g/dL, CRP 4.2 mg/L
  - C) Albumin 3.0 g/dL, CRP 5.8 mg/L, Hb 11.0 g/dL
  - D) IL-6 5.5 pg/mL, CRP 6.0 mg/L, Albumin 3.1 g/dL



5. Which of the following microscopic findings and genetic mutations are most characteristic of hypertrophic cardiomyopathy?
- A) Parallel myocyte alignment and MYL2 mutation
  - B) Myocyte disarray with MYH7 or MYBPC3 mutation
  - C) Endocardial fibroelastosis with PRKAG2 mutation
  - D) Eosinophilic infiltration with mutation in desmin gene
6. A 25-year-old soldier develops pinpoint pupils, muscle fasciculations, difficulty breathing, and copious secretions shortly after exposure to an unknown gas during a combat drill. Which of the following agents is the most likely cause?
- A) Phosgene
  - B) Sulfur mustard
  - C) Sarin
  - D) Hydrogen cyanide
7. A 45-year-old man with long-standing asthma has poor symptom control despite high-dose ICS. He has a peripheral eosinophil count of 650 cells/ $\mu$ L and total serum IgE of 1300 IU/mL. What is the most appropriate next diagnostic consideration?
- A) Consider anti-IgE therapy and test for ABPA
  - B) Decrease steroid dose and start antihistamines
  - C) Diagnose eosinophilic granulomatosis with polyangiitis
  - D) No further workup is necessary
8. A 49-year-old man presents with daytime fatigue, poor concentration, and his partner reports snoring and gasping during sleep. He denies any other medical conditions. A polysomnography reveals an Apnea-Hypopnea Index (AHI) of 7 events/hour, with each event lasting  $\geq 10$  seconds and associated with  $\geq 3\%$  oxygen desaturation or arousal. Which of the following best supports the diagnosis of Obstructive Sleep Apnea (OSA) in this patient?
- A) The patient lacks significant comorbidities; AHI of 7 is insufficient for diagnosis
  - B) An AHI  $\geq 15/h$  is mandatory to diagnose OSA regardless of symptoms
  - C) The patient meets diagnostic criteria due to symptoms and AHI  $> 5$
  - D) OSA cannot be diagnosed unless AHI exceeds 10/h with  $\geq 4\%$  desaturation
9. A 48-year-old male presents with acute onset dyspnea following pancreatitis. On day 2 of admission, he develops hypoxemia requiring mechanical ventilation. His  $\text{PaO}_2$  is 80 mmHg while receiving  $\text{FiO}_2$  0.8. Chest radiograph shows bilateral pulmonary infiltrates, and echocardiography shows normal left ventricular function. What is the correct classification of this patient's ARDS severity?
- A) Mild ARDS
  - B) Moderate ARDS
  - C) Severe ARDS
  - D) Cardiogenic pulmonary edema, not ARDS



10. Which of the following accurately describes the correct stage of cardiogenic shock according to the SCAI classification?
- A) **Stage - A:** Persistent hypotension (SBP <90 mmHg), elevated lactate, cold extremities, oliguria; MCS under consideration.
  - B) **Stage - B:** Relative hypotension (SBP 90-100 mmHg) or new tachycardia, no hypoperfusion; high clinical suspicion of impending shock.
  - C) **Stage - C:** Asymptomatic with stable vitals; multiple risk factors but no current hypoperfusion or hypotension.
  - D) **Stage - E:** Mild hypotension responsive to fluids; normal mentation; no vasopressor or mechanical support needed.
11. Which of the following best explains why the outer medulla of the kidney is particularly susceptible to ischemic injury?
- A) It has the highest perfusion of all renal regions and low metabolic demand
  - B) It contains the S1 segment of the proximal tubule which functions anaerobically
  - C) It has a dense capillary plexus that permits high oxygen delivery but poor solute clearance
  - D) It has low oxygen tension, high metabolic activity, and poor vascular architecture
12. A 65-year-old diabetic man has a GFR of 38 mL/min/1.73 m<sup>2</sup> and a urine albumin-to-creatinine ratio of 80 mg/g. According to KDIGO 2012, what is his CKD risk category?
- A) Mildly decreased GFR with moderately increased albuminuria - moderate risk
  - B) Moderately to severely decreased GFR with moderately increased albuminuria - high risk
  - C) Severely decreased GFR with normal albuminuria - high risk
  - D) Kidney failure with severely increased albuminuria - very high risk
13. Which of the following statements about adynamic bone disease in CKD is most accurate?
- A) It is associated with high PTH and high turnover
  - B) It presents with high osteoid volume and active remodeling
  - C) It is common in older adults and diabetics and worsened by calcium-based phosphate binders
  - D) It commonly leads to brown tumors and marrow hyperplasia
14. Which of the following gene mutations is most commonly associated with Autosomal Dominant Polycystic Kidney Disease (ADPKD)?
- A) PKHD1
  - B) PKD1
  - C) VHL
  - D) TSC1



15. 42-year-old man with ulcerative colitis undergoes colonoscopy, which reveals continuous inflammation extending from the rectum up to the splenic flexure. According to the Montreal classification, which of the following best describes the extent of his disease?
- A) E1: Ulcerative proctitis
  - B) E2: Left-sided UC (distal UC)
  - C) E3: Extensive UC (pancolitis)
  - D) E0: Clinical remission
16. Which of the following is classified as a Category A bioterrorism agent by the CDC?
- A) *Salmonella enterica*
  - B) *Brucella melitensis*
  - C) *Clostridium botulinum* toxin
  - D) *Coxiella burnetii*
17. Which of the following correctly matches the drug with its current status or observed effect in NAFLD or NASH?
- A) Metformin - Recommended for histologic improvement in pediatric NASH
  - B) Rosiglitazone - Effective in reducing fibrosis and long-term cardiovascular risk
  - C) Pioglitazone - Improved NASH resolution but associated with weight gain
  - D) Liraglutide - FDA-approved for NASH treatment in diabetic patients
18. A 68-year-old man presents with obstructive jaundice. Imaging shows diffuse pancreatic enlargement. Lab work reveals elevated serum IgG4 levels. A pancreatic biopsy shows storiform fibrosis and obliterative phlebitis. Which of the following additional findings is most likely in this patient?
- A) Granulocytic Epithelial Lesions (GELs) and scant IgG4 tissue staining
  - B) Other organ involvement and abundant IgG4+ plasma cells
  - C) Predominantly female sex and onset in the fifth decade
  - D) High relapse risk but poor steroid response
19. Which of the following best defines the *Low-Level Disease Activity State (LLDAS)* in the management of systemic lupus erythematosus (SLE)?
- A) SLEDAI-2K score  $\leq 6$ , no new symptoms, prednisone  $\leq 10$  mg/day, and stable hydroxychloroquine dose
  - B) SLEDAI-2K score  $\leq 4$ , no new disease activity, physician global assessment  $\leq 1$ , prednisone  $\leq 7.5$  mg/day, and stable well-tolerated antimalarials/immunosuppressives
  - C) Patient-reported improvement in symptoms, SLEDAI-2K  $\leq 5$ , prednisone  $\leq 15$  mg/day, and low complement levels
  - D) Complete absence of symptoms, prednisone dose of any level, and high titers of anti-dsDNA antibodies.



20. A 30-year-old man presents with a 6-month history of recurrent oral and genital ulcers, intermittent joint pain in the knees and ankles, and recent onset of blurry vision with pain and redness in both eyes. Examination reveals multiple healing aphthous ulcers in the buccal mucosa, a scar on the scrotum, and erythematous papules on the lower legs. A pathergy test is positive.
- Which of the following is the most specific clinical manifestation for diagnosing Behçet syndrome?
- A) Recurrent oral ulcers
  - B) Positive pathergy reaction
  - C) Genital ulcers with scarring
  - D) Bilateral anterior uveitis
21. A 42-year-old man with chronic plaque psoriasis presents with joint pain involving his distal interphalangeal (DIP) joints and lower back stiffness. On examination, you find dactylitis and enthesitis over the Achilles tendon. MRI shows sacroiliitis and anterior vertebral hyperostosis.
- Which of the following radiographic or serologic findings would most strongly support a diagnosis of Psoriatic Arthritis over Rheumatoid Arthritis or Ankylosing Spondylitis?
- A) Symmetric marginal syndesmophytes along the vertebrae
  - B) Positive HLA-B27 and high-titer rheumatoid factor
  - C) Pencil-in-cup deformity and ray pattern of joint involvement
  - D) ANA positivity and elevated uric acid
22. A 55-year-old man with recurrent gout flares and visible subcutaneous tophi is started on allopurinol 100 mg/day. He has stage 3 chronic kidney disease with an eGFR of 38 mL/min. On day 4 of therapy, he develops a painful erythematous rash with blistering over the trunk. Genetic testing reveals HLA-B\*5801 positivity.
- Which of the following is the most appropriate next step in this patient's management?
- A) Continue allopurinol but reduce the dose to 50 mg/day
  - B) Immediately stop allopurinol and switch to febuxostat
  - C) Start probenecid with colchicine prophylaxis
  - D) Administer a course of corticosteroids and rechallenge with allopurinol
23. A 58-year-old man presents with progressive gait instability and frequent falls over the past year. His spouse notes that he has no resting tremor and that his symptoms began with difficulty in walking and slurred speech. Examination shows poor postural reflexes, early falls, and a lack of significant asymmetry in motor findings. MRI brain is unremarkable. He was started on levodopa but showed minimal improvement.
- A) Idiopathic Parkinson's Disease
  - B) Drug-induced parkinsonism
  - C) Atypical parkinsonism
  - D) Multiple System Atrophy - cerebellar subtype (MSA-c)



24. Which of the following features is most characteristic of Paroxysmal Hemicrania and not typically seen in Cluster Headache?
- A) Male predominance
  - B) Excruciating orbital pain
  - C) Response to Indomethacin
  - D) Association with alcohol trigger
25. What is the recommended dose of IVIg in the treatment of GBS?
- A) 1 g/kg over 2 days
  - B) 0.5 g/kg for 3 day
  - C) 2 g/kg divided over 5 days
  - D) 4 g/kg divided over 10 days
26. Which of the following is the most characteristic initial manifestation of ALS?
- A) Progressive bilateral sensory loss
  - B) Asymmetric distal limb weakness
  - C) Spasticity of the axial muscles
  - D) Sudden loss of vision
27. For diagnosing chronic subarachnoid hemorrhage, which imaging modality is preferred?
- A) CT scan
  - B) MRI with Susceptibility-Weighted Imaging (SWI)
  - C) MR angiography
  - D) CT angiography
28. Which of the following features is most characteristic of Mesial Temporal Lobe Epilepsy Syndrome (MTLE)?
- A) Generalized tonic-clonic seizures with normal interictal EEG
  - B) Sudden bilateral posturing with no postictal disorientation
  - C) Aura, complex automatisms, and unilateral anterior temporal spikes on EEG
  - D) Absence seizures with symmetrical EEG discharges
29. Which of the following is most appropriate for managing psychosis in a patient with Huntington's disease?
- A) Phenytoin
  - B) Levodopa
  - C) Clozapine
  - D) Tetrabenazine



30. Which CSF finding best supports the diagnosis of multiple sclerosis?
- A) Pleocytosis of 150 cells/ $\mu$ L
  - B) Polymorphonuclear predominance
  - C) Oligoclonal bands not seen in paired serum
  - D) Total protein >100 mg/dL
31. A 62-year-old man presents with sudden, severe, stabbing pain localized to the right side of his throat, sometimes radiating to the right ear, triggered by swallowing. Neurological examination is unremarkable, but during one episode in clinic, the patient developed transient bradycardia. MRI rules out space-occupying lesions. Which of the following is the most likely diagnosis?
- A) Trigeminal neuralgia
  - B) Glossopharyngeal neuralgia
  - C) Vestibular neuritis
  - D) Eagle syndrome
32. A 28-year-old woman presents with burning pain and tingling in her feet, along with cramping in the calves. She follows an extremely restrictive diet devoid of meat and grains. On examination, there is distal sensory loss in a stocking-glove distribution. Which of the following statements is most accurate regarding her likely condition?
- A) The diagnosis is confirmed by measuring serum and urine thiamine levels.
  - B) Neurologic symptoms are typically the earliest manifestations in wet beriberi.
  - C) Nerve conduction studies reveal demyelinating polyneuropathy.
  - D) Intravenous thiamine therapy is indicated and may halt disease progression.
33. Which of the following statements regarding the laboratory and genetic features of myotonic dystrophy is most accurate?
- A) Muscle biopsy typically shows necrotizing myopathy with perifascicular atrophy in DM1 and DM2
  - B) DM2 is caused by an unstable expansion of a CTG trinucleotide repeat in the CNBP gene
  - C) The characteristic toxic gain of function in DM1 and DM2 is due to mutant RNA sequestering RNA-binding proteins
  - D) Serum creatine kinase levels are markedly elevated in both DM1 and DM2 due to severe rhabdomyolysis
34. In adults, advanced HIV disease is defined as:
- A) CD4 count <350 cells/mm<sup>3</sup>
  - B) CD4 count <200 cells/mm<sup>3</sup> or WHO Stage 3 or 4 disease
  - C) CD4 count <100 cells/mm<sup>3</sup>
  - D) WHO Stage 2 or 3 disease



35. A 60-year-old farmer from West Bengal presents with gradually worsening numbness and tingling in the lower limbs over the past 8 months, along with patchy hyperpigmentation and hyperkeratosis on his palms and soles. He reports drinking water from a deep tubewell for the last 10 years. Which of the following is *least likely* associated with his condition?
- A) Peripheral neuropathy
  - B) Hepatic angiosarcoma
  - C) Squamous cell carcinoma of skin
  - D) Thyroid papillary carcinoma
36. A 42-year-old male working in a fluorescent bulb manufacturing unit presents with progressive tremors, irritability, memory decline, and sleep disturbances over the past 6 months. On examination, he is anxious and exhibits a fine intention tremor. Neurobehavioral testing shows decreased motor speed and visuospatial coordination. What is the most likely diagnosis?
- A) Chronic lead poisoning
  - B) Organic arsenic exposure
  - C) Chronic elemental mercury vapor exposure
  - D) Manganese toxicity
37. A 34-year-old man is brought to the emergency room after ingesting an unknown liquid from a car radiator. Over the last 6 hours, he has developed confusion, ataxia, and vomiting. Labs reveal an increased serum osmolal gap but normal anion gap. Urinalysis shows envelope-shaped crystals. What is the most likely cause of his symptoms?
- A) Methanol poisoning
  - B) Isopropanol ingestion
  - C) Ethylene glycol toxicity
  - D) Acute salicylate poisoning
38. A 29-year-old man presents 8 hours after ingesting an unknown number of extended-release lithium tablets during a suicide attempt. He is vomiting, confused, and mildly tachycardic. Lithium level is 3.8 mEq/L. He has preserved renal function. Which of the following is the most appropriate next step?
- A) Gastric lavage and activated charcoal
  - B) Start corticosteroids and monitor sodium
  - C) Initiate whole-bowel irrigation and IV fluid
  - D) Observe for 24 hours; repeat lithium levels later



39. A 26-year-old male farmer is brought to the emergency department 2 hours after being bitten on the leg by a snake while working in the fields. He reports nausea, vomiting, and numbness around his mouth. On examination, he has bilateral ptosis and difficulty swallowing. Vitals are stable. Which snake is most likely responsible for his presentation?
- A) *Daboia russelii*
  - B) *Bungarus caeruleus*
  - C) *Echis carinatus*
  - D) *Bothrops atrox*
40. A 14-year-old child from rural Rajasthan is brought to the ED 3 hours after a suspected scorpion sting. He is extremely agitated, flailing his limbs, and has muscle twitching with hypersalivation. Vitals show tachycardia and hypertension. What is the most appropriate initial pharmacologic intervention?
- A) Administer IV hydrocortisone and diphenhydramine
  - B) Begin IV infusion of midazolam
  - C) Start IV atropine immediately
  - D) Apply hot compress and observe
41. A 35-year-old man with a history of High Altitude Pulmonary Edema on prior expeditions plans to trek to 4,500 m over 3 days. His physician recommends prophylactic medication due to his high susceptibility. Which of the following drugs has shown the greatest reduction in HAPE incidence based on clinical studies?
- A) Tadalafil 10 mg daily
  - B) Salmeterol inhalation twice daily
  - C) Dexamethasone 8 mg twice daily
  - D) Acetazolamide 250 mg twice daily
42. A 60-year-old homeless man is found unresponsive in winter. He has been exposed for more than 10 hours. On arrival, he is bradycardic and cold to touch. Core temperature is 29°C. Which of the following interventions is contraindicated at this stage?
- A) Forced-air warming to the trunk
  - B) Heated humidified oxygen via mask
  - C) Application of heat to extremities
  - D) Countercurrent-warmed IV fluids



43. A 68-year-old smoker presents with a cough and left-sided chest pain. CT chest reveals a 4.8 cm left upper lobe mass abutting the visceral pleura but not invading the chest wall. No nodal enlargement or distant metastasis is seen. Based on the 8<sup>th</sup> edition TNM classification, what is the correct T stage of this tumor?
- A) T1c
  - B) T2a
  - C) T2b
  - D) T3
44. A 58-year-old postmenopausal woman with ER-positive, HER2-negative metastatic breast cancer has progression after prior treatment with tamoxifen. Her tumor sequencing shows a PIK3CA mutation. Which of the following is the most appropriate next-line targeted therapy?
- A) Ribociclib
  - B) Everolimus
  - C) Alpelisib
  - D) Fulvestrant
45. A 64-year-old male undergoes resection for intrahepatic cholangiocarcinoma. Pathology reveals a 6.2 cm solitary tumor with microscopic vascular invasion, no peritoneal perforation, and no nodal involvement. Margins are negative, and no distant metastases are found. Based on the AJCC 8<sup>th</sup> edition TNM staging, what is the correct pathologic stage grouping?
- A) Stage IB
  - B) Stage II
  - C) Stage IIIA
  - D) Stage IIIB
46. A 32-year-old African-origin male with sickle cell trait presents with gross hematuria and a large right renal mass. Biopsy reveals a reticular and cribriform pattern with focal sarcomatoid change. Cytogenetic analysis shows 22q loss and 8q gain, with loss of SMARCB1 protein on IHC. Which renal tumor subtype best fits this description?
- A) Papillary RCC
  - B) Clear cell RCC
  - C) Renal medullary carcinoma
  - D) Chromophobe RCC
47. Which of the following cancers is correctly matched with its point value on the Khorana Risk Score for predicting VTE in ambulatory cancer patients?
- A) Pancreatic cancer - 1 point
  - B) Prostate cancer - 1 point
  - C) Lung cancer - 2 points
  - D) Stomach cancer - 2 points



48. Which of the following hemoglobin fraction profiles is most consistent with  $\beta$  - thalassemia trait?
- HbA: 0%, HbF: 95%, HbA2: 4%
  - HbA: 60%, HbF: 30%, HbA2: 5%
  - HbA: 94%, HbF: 2%, HbA2: 5%
  - HbA: 70%, HbF: 12%, HbA2: 2%
49. Which of the following statements about Pure Red Cell Aplasia (PRCA) is most accurate?
- PRCA associated with thymoma is typically due to parvovirus B19 infection
  - PRCA is commonly induced by EPO when given intravenously rather than subcutaneously
  - PRCA may be caused by 5q deletion syndrome as part of myelodysplasia
  - Giant normoblasts in the bone marrow exclude parvovirus B19 infection
50. Which of the following combinations correctly meets the WHO 2022 criteria for MDS with excess blasts-1 (MDS-EB-1)?
- Bone marrow blasts 7%, Auer rods absent, peripheral blasts 6%
  - Bone marrow blasts 6%, peripheral blasts 3%, no Auer rods
  - Bone marrow blasts 4%, ring sideroblasts 20%, del(5q) cytogenetics
  - Bone marrow blasts 10%, peripheral blasts 2%, Auer rods present
51. Which of the following findings is most consistent with Gaisböck syndrome (spurious erythrocytosis)?
- Hemoglobin 21 g/dL, splenomegaly, JAK2 mutation positive, normal plasma volume
  - Hematocrit 54%, low erythropoietin, raised red cell mass, JAK2 mutation negative
  - Hemoglobin 18.5 g/dL, hemoconcentration, normal red cell mass, reduced plasma volume
  - Hemoglobin 19 g/dL, normal oxygen saturation, raised erythropoietin, renal mass on imaging
52. Which of the following molecular findings is most commonly associated with Primary Myelofibrosis (PMF)?
- BCR-ABL1 fusion transcript
  - CALR exon 9 frameshift mutation
  - JAK2 exon 12 mutation
  - KIT D816V point mutation
53. As per the National Guidelines for Management of DR-TB (2024), which of the following patients is eligible for the BPaLM regimen?
- A 13-year-old male with pulmonary MDR-TB and no prior treatment
  - A 17-year-old female with MDR-TB and no FQ resistance
  - A 30-year-old pregnant woman with smear-positive MDR-TB
  - A 45-year-old man with QTcF of 470 ms after electrolyte correction



54. A 27-year-old female with MDR/RR-TB started on BPaLM presents with progressive paresthesia in both feet and a 12% drop in hemoglobin at week 8 of therapy. Despite a 1-week drug holiday and dose reduction, she is unable to tolerate Linezolid. What should be the next best step according to the National Guidelines for Management of DR-TB 2024?
- A) Continue treatment with reduced Lzd and complete 26 weeks
  - B) Switch to longer oral M/XDR-TB regimen and declare treatment failed
  - C) Stop Pa, continue B and Mfx, and extend to 39 weeks
  - D) Continue Lzd at 300 mg and add erythropoietin
55. Which of the following best explains the immunologic initiation of antiphospholipid antibody (aPL) production in APS?
- A) Spontaneous T-cell clonal expansion against native phospholipids in genetically predisposed individuals
  - B) Direct viral mimicry of platelet phospholipids leading to cross-reactive antibodies
  - C) Apoptotic endothelial cell exposure of phospholipids bound to  $\beta 2$ -glycoprotein I, forming neoantigens
  - D) Excessive synthesis of  $\beta 2$  GPI by hepatocytes triggers antibody response in inflammatory states
56. Which of the following findings best characterizes Cogan's syndrome?
- A) Uveitis, retinitis pigmentosa, and peripheral neuropathy
  - B) Interstitial keratitis, sensorineural hearing loss, and aortitis
  - C) Episcleritis, vertigo, and mitral valve prolapse
  - D) Scleritis, tinnitus, and pulmonary fibrosis
57. Which of the following statements regarding pituitary apoplexy is most accurate?
- A) Sheehan's syndrome is due to hemorrhage into a preexisting pituitary adenoma during pregnancy
  - B) Pituitary apoplexy presents with hypertension, unilateral vision loss, and brisk reflexes
  - C) Urgent surgical decompression is indicated in patients with progressive ophthalmoplegia or visual impairment
  - D) High-dose glucocorticoids are contraindicated in patients without visual symptoms or altered



58. A 17-year-old girl presents with 4 years of progressive hirsutism, irregular menses, and mild acne. She has normal breast development and no clitoromegaly. Her serum 17-hydroxyprogesterone is modestly elevated. Genetic testing reveals a mild mutation in CYP21A2. Which of the following is the most likely diagnosis?
- A) Classic CAH with salt-wasting crisis
  - B) Simple virilizing CAH
  - C) Nonclassic CAH
  - D) 11 $\beta$ -hydroxylase deficiency
59. A 38-year-old woman presents with recurrent nephrolithiasis due to primary hyperparathyroidism, and MRI reveals a prolactin-secreting pituitary adenoma. Family history includes testicular cancer in a brother and a cervical neuroendocrine tumor in a cousin. Genetic testing reveals a mutation in CDKN1B. Which MEN syndrome is most likely?
- A) MEN 1
  - B) MEN 2A
  - C) MEN 2B
  - D) MEN 4
60. A 26-year-old woman presents with vitiligo, hypogonadism, and a 3-month history of fatigue and postural dizziness. Labs reveal hyponatremia, hyperkalemia, and elevated ACTH, consistent with primary adrenal insufficiency. Which of the following findings would most likely be present or develop in this patient?
- A) Hypoparathyroidism and mucocutaneous candidiasis
  - B) Type 1 diabetes and autoimmune thyroid disease
  - C) Ectodermal dysplasia and malabsorption syndrome
  - D) Anti-Pit-1 autoantibodies with adult-onset CPHD
61. Which of the following microorganisms is the natural source of the parent compound of Orlistat used as anti-obesity medication?
- A) *Streptomyces coelicolor*
  - B) *Streptomyces toxytricini*
  - C) *Streptomyces clavuligerus*
  - D) *Streptomyces fradiae*



62. Which of the following statements is TRUE regarding insulin physiology and signaling?
- A) Nearly 95% of insulin secreted by the pancreas is metabolized by the liver before reaching systemic circulation
  - B) The PI-3-kinase pathway plays a key role in insulin-mediated protein degradation.
  - C) Insulin stimulates translocation of GLUT4 to the cell membrane via activation of the PI-3-kinase signaling pathway.
  - D) The portal-to-peripheral insulin gradient is typically 1:2 due to hepatic clearance.
63. Which of the following statements regarding magnesium physiology is most accurate?
- A) Approximately 50% of filtered magnesium is reabsorbed in the proximal tubule.
  - B) Magnesium absorption is predominantly passive and occurs in the duodenum.
  - C) Claudin gene family proteins are essential for magnesium reabsorption in the thick ascending limb.
  - D) A serum magnesium level of 1.0 mmol/L implies adequate total body stores, given that most magnesium resides in the extracellular fluid.
64. According to the WHO operational definition, which of the following T-scores is diagnostic of osteoporosis?
- A) -1.0
  - B) -1.9
  - C) -2.4
  - D) -2.5
65. Which of the following statements regarding circulating thyroid hormones is correct?
- A)  $T_4$  has a shorter serum half-life than  $T_3$
  - B)  $T_3$  is produced almost entirely by the thyroid gland
  - C)  $T_4$  has greater receptor affinity than  $T_3$
  - D)  $T_3$  has a higher fraction in the unbound (free) form compared to  $T_4$
66. Which of the following MPS disorders is X-linked, shows retinal degeneration without corneal clouding, and is caused by a deficiency of iduronate sulfatase?
- A) MPS I H (Hurler syndrome)
  - B) MPS II (Hunter syndrome)
  - C) MPS III A (Sanfilippo A)
  - D) MPS IV A (Morquio syndrome)



67. Which of the following disorders is caused by a defect in homogentisic acid oxidase and typically presents with ochronosis, arthritis, and cardiac valve involvement?
- A) Tyrosinemia type III
  - B) Hawkinsinuria
  - C) Alkaptonuria
  - D) DHPR deficiency
68. A 62-year-old diabetic male presents for routine follow-up. He has not received any pneumococcal vaccines previously. According to national adult immunization recommendations, which of the following is the correct pneumococcal vaccination strategy?
- A) Only a single dose of PPSV23 now, followed by PCV13 after 8 weeks
  - B) Administer PCV13 now, followed by PPSV23 after 1 year
  - C) PPSV23 now, with no need for further pneumococcal vaccination
  - D) Administer PCV13 and PPSV23 simultaneously at different sites
69. A 27-year-old healthcare worker receives a tetanus-prone wound in the emergency department. She received her last Td booster 5 years ago and has completed her childhood immunization schedule. Which of the following is the most appropriate next step?
- A) Administer Td booster and tetanus immunoglobulin
  - B) No further vaccination required
  - C) Administer Td booster only
  - D) Administer tetanus immunoglobulin only
70. Which of the following best captures the theoretical essence of the ANOVA technique?
- A) ANOVA tests whether individual data points deviate significantly from the mean.
  - B) ANOVA assesses whether the variation between group means is significantly greater than the variation within the groups.
  - C) ANOVA estimates population parameters based on assumptions of skewed distributions.
  - D) ANOVA determines the statistical significance of correlation between independent variables.
71. Which statement best distinguishes cancer cachexia from sarcopenia?
- A) Sarcopenia is driven by cytokine-mediated inflammation
  - B) Cachexia features catabolic metabolism driven by tumor burden
  - C) Sarcopenia occurs only in underweight individuals
  - D) Cachexia spares lean body mass



72. Which vector was used in the first successful gene therapy trial for ADA-deficient SCID?
- A) Lentivirus
  - B) Adenovirus
  - C) Retrovirus
  - D) Herpes simplex virus
73. Which DNA repair disorder is caused by RecQ3 mutation and presents with both immunodeficiency and a butterfly-shaped rash?
- A) Xeroderma pigmentosa
  - B) Ataxia-telangiectasia
  - C) Bloom syndrome
  - D) Cockayne syndrome
74. A clinician studying the factors that influence how long a patient remains free of *Helicobacter pylori* reinfection after initial therapy should use which statistical method?
- A) Linear regression
  - B) Logistic regression
  - C) Cox proportional-hazards regression
  - D) Kaplan-Meier estimation
75. A researcher wants to estimate obesity prevalence in a university with a heterogeneous population including students, faculty, and administrative staff. To ensure proportionate representation of each group in the sample, which sampling method should be used?
- A) Simple random sampling
  - B) Cluster sampling
  - C) Stratified random sampling
  - D) Systematic sampling
76. In a severely anemic patient, which of the following bone marrow findings would most suggest a diagnosis of ineffective erythropoiesis rather than acute myeloid leukemia?
- A) Accumulation of primitive cells with uniform small nuclei and scant cytoplasm
  - B) Presence of giant metamyelocytes and hyperpolyploid megakaryocytes
  - C) Increased number of blasts expressing CD34 and MPO
  - D) Hypocellular marrow with increased stromal fat content
77. Kidney biopsy is generally *not necessary* in which of the following scenarios?
- A) Suspected interstitial nephritis with rising creatinine
  - B) Type 1 diabetes for 20 years, retinopathy, nephrotic proteinuria
  - C) Hematuria and nephrotic proteinuria without diabetes
  - D) Rapidly declining GFR with systemic symptoms



78. Which of the following features is *least likely* to be seen in McCune-Albright syndrome (MAS)?
- A) Polyostotic fibrous dysplasia
  - B) Peripheral precocious puberty
  - C) Activating mutations of *FGFR 1* gene
  - D) Café au lait macule
79. Which of the following drugs used in Wilson's disease forms a stable tripartite complex with albumin and copper, thereby decreasing both copper absorption and circulating free copper?
- A) D-penicillamine
  - B) Trientine hydrochloride
  - C) Tetrathiomolybdate
  - D) Zinc acetate
80. Which of the following is considered the most effective first-line *preventive* treatment for chronic cluster headaches according to current evidence?
- A) Galcanezumab
  - B) Verapamil
  - C) Lithium
  - D) Prednisone
81. Which of the following statements regarding the treatment of Guillain-Barré Syndrome (GBS) is most accurate?
- A) Combination of IVIg and plasmapheresis offers superior outcomes compared to either alone
  - B) Glucocorticoids are effective as initial therapy in most GBS cases
  - C) Plasmapheresis reduces the need for mechanical ventilation and improves recovery
  - D) IVIg is contraindicated in cases that have reached the plateau phase
82. Which of the following statements is *true* regarding the treatment of lung abscess?
- A) Metronidazole alone is sufficient due to its anaerobic coverage
  - B) Abscesses larger than 6-8 cm may require percutaneous drainage
  - C) Defervescence typically occurs within 24 hours of starting antibiotics
  - D) Surgery is the first-line treatment in most cases



83. Which of the following features best differentiates a third cranial nerve palsy caused by an aneurysm at the junction of the posterior communicating and internal carotid arteries?
- A) Bilateral ptosis
  - B) Diplopia worse on lateral gaze
  - C) Pupil-sparing third nerve palsy
  - D) Third nerve palsy with ipsilateral pupillary dilation
84. What does the term "typical HUS" most specifically refer to?
- A) HUS associated with pregnancy and postpartum period
  - B) HUS caused by ADAMTS13 mutation
  - C) HUS associated with Shiga toxin from *E. coli*
  - D) HUS due to calcineurin inhibitor toxicity
85. A 68-year-old male smoker presents with progressive dyspnea and dry cough. Examination reveals bibasilar inspiratory crackles and digital clubbing. HRCT shows bilateral subpleural reticular changes and honeycombing in the lower posterior zones. Which of the following is the most likely diagnosis?
- A) Nonspecific interstitial pneumonia (NSIP)
  - B) Sarcoidosis
  - C) Idiopathic pulmonary fibrosis (IPF)
  - D) Respiratory bronchiolitis-associated ILD
86. Which of the following matches between antibiotic class and primary mechanism or epidemiological feature of resistance in *S. pneumoniae* is most correct?
- A)  $\beta$ -lactams - efflux via *mef* gene in 60% of cases
  - B) Macrolides - *ermB* gene-mediated methylation causes high-level resistance
  - C) Fluoroquinolones - resistance occurs via  $\beta$ -lactamase production
  - D) Doxycycline - resistance is common and rising above 60%
87. A 30-year-old nonsmoking female with intermittent wheezing and cough has normal spirometry and nonconfirmatory bronchodilator response. You suspect asthma based on clinical history. A methacholine challenge test is ordered. Which of the following findings would support the diagnosis of asthma?
- A)  $FEV_1$  falls by 20% after inhaling 1200  $\mu$ g methacholine
  - B)  $FEV_1$  increases by 10% after salbutamol administration
  - C)  $FEV_1$  falls by 15% after exercise testing
  - D)  $FEV_1$  falls by 20% after  $\leq 400$   $\mu$ g methacholine



88. A 54-year-old woman with newly diagnosed seropositive rheumatoid arthritis is started on methotrexate. Which of the following statements regarding the use of methotrexate is most accurate based on its safety profile and monitoring requirements?
- A) Methotrexate should be started at 100 mg daily to rapidly achieve symptom control, and no supplementation is required.
  - B) Methotrexate may cause irreversible retinal damage and requires annual optical coherence tomography.
  - C) Methotrexate is contraindicated in pregnancy, and patients must be monitored for hepatotoxicity.
  - D) Methotrexate can cause hemolytic anemia in G6PD-deficient individuals and requires routine G6PD testing before initiation.
89. A 72-year-old man with moderate Alzheimer's disease is already on rivastigmine. What is the most appropriate pharmacologic addition at this stage to help slow cognitive decline?
- A) Galantamine
  - B) Tacrine
  - C) Memantine
  - D) Pregabalin
90. A 32-year-old woman presents with palpitations and occasional chest discomfort. On auscultation, you hear a mid-systolic click followed by a late systolic murmur at the apex. The murmur becomes louder and starts earlier when she stands and becomes softer and delayed when she squats. Which of the following statements best explains this finding?
- A) The murmur represents aortic stenosis and behaves typically with standing
  - B) The murmur is due to mitral valve prolapse, exaggerated by reduced LV volume
  - C) This is likely tricuspid regurgitation, worsened by venous return during squatting
  - D) The changes with posture suggest a dynamic left ventricular outflow tract obstruction
91. A 58-year-old man with acute anterior MI develops complete heart block with a wide QRS escape rhythm at 30 bpm. Blood pressure is falling, and the patient is confused. Which of the following is the best next step?
- A) Administer atropine and observe
  - B) Begin high-dose beta-blocker to control infarct size
  - C) Immediate temporary transvenous pacing
  - D) Administer calcium gluconate and reassess in 1 hour



92. Which of the following antidepressants is least likely to cause erectile dysfunction and may be considered as a substitute for SSRIs in affected patients?
- A) Fluoxetine
  - B) Amitriptyline
  - C) Bupropion
  - D) Lithium
93. Which of the following syndromes is most likely if a patient presents with hypotonia in infancy, short stature, developmental delay, hypogonadotropic hypogonadism, and compulsive eating behavior?
- A) Cohen's syndrome
  - B) Prader-Willi syndrome
  - C) Alström syndrome
  - D) Bardet-Biedl syndrome
94. Which HIV drug is classified as a capsid inhibitor and is administered once every 6 months for maintenance?
- A) Enfuvirtide
  - B) Lenacapavir
  - C) Maraviroc
  - D) Fostemsavir
95. A patient presents with hallucinations 20 minutes after consuming wild mushrooms. Which of the following is the most likely toxin involved?
- A) Muscarine
  - B) Psilocybin
  - C) Ibotenic acid
  - D) Coprine
96. Which of the following aphasia types is characterized by preserved comprehension and fluency, but impaired repetition of spoken language and naming?
- A) Wernicke's aphasia
  - B) Broca's aphasia
  - C) Conduction aphasia
  - D) Global aphasia



97. Which of the following combinations fulfills the Jones criteria for initial diagnosis of acute rheumatic fever in a low-risk population with evidence of preceding Group A Streptococcal infection?
- A) Polyarthrititis, carditis
  - B) Chorea, subcutaneous nodules
  - C) Polyarthrititis, fever  $\geq 38.5^{\circ}\text{C}$ , and elevated ESR  $\geq 60$  mm/h
  - D) Polyarthralgia, fever  $\geq 38.5^{\circ}\text{C}$ , and elevated ESR  $\geq 60$  mm/h
98. Which of the following conditions is primarily associated with impaired T lymphocyte development and function?
- A) Common variable immunodeficiency (CVID)
  - B) X-linked agammaglobulinemia
  - C) Wiskott-Aldrich syndrome
  - D) IgA deficiency
99. Which of the following morphologic features is characterized by an encapsulated collection of fluid with a well-defined inflammatory wall and minimal or no necrosis, usually occurring >4 weeks after onset of interstitial pancreatitis?
- A) Acute necrotic collection
  - B) Acute pancreatic fluid collection
  - C) Pancreatic pseudocyst
  - D) Walled-off necrosis
100. Which of the following tissues is most sensitive to ionizing radiation?
- A) Muscle
  - B) Bone
  - C) Bone marrow
  - D) Cartilage



DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. **330881**

Test Booklet Series

**TEST BOOKLET**  
**HEALTH & MEDICAL EDUCATION DEPARTMENT**  
**ASSISTANT PROFESSOR - GENERAL SURGERY**  
**WRITTEN TEST - 2025**  
**(25)**

**A**

*Time Allowed : Two Hours*

*Maximum Marks : 100*

**INSTRUCTIONS**

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside.  
*DO NOT write anything else on the Test Booklet.*
4. This Test booklet contains **100** items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer /Response Sheet provided. See directions in the Response Sheet.
6. All items carry equal marks.
7. Before you proceed to mark in the Answer /Response Sheet, the response to various items in the Test Booklet, you have to fill in some particulars in the Answer /Response Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer /Response Sheet**. You are permitted to take away with you the Test Booklet and **Candidate's Copy of the Response Sheet**.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. While writing Centre, Subject and Roll No. on the top of the Answer Sheet/Response Sheet in appropriate boxes use **"ONLY BALL POINT PEN"**.
11. **Penalty for wrong answers:**  
**THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).**
  - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **(0.25)** of the marks assigned to that question will be deducted as penalty.
  - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above for that question.
  - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO



1. In initial response to injury or stress as per Ebb and flow hypothesis, what best describes ebb phases' physiological role
  - A) Conserve circulating volume and energy stores
  - B) Excessive catabolism for energy requirement
  - C) Anabolism for tissue repair
  - D) Mobilization of body energy stores
2. Which is not a part of 'sign in' in surgical safety checklist?
  - A) Surgical Site marked
  - B) Risk of blood loss
  - C) Risk of aspiration
  - D) Antibiotic prophylaxis given
3. What is the absorption rate of Poliglecaprone sutures?
  - A) it is non-absorbable
  - B) >21 days
  - C) 90-120 days
  - D) 150-180 days
4. Which of the following is **NOT** correct regarding RECIST criteria?
  - A) A 30% decrease in the sum of diameters of target lesions indicates Partial Response (PR)
  - B) A 20% increase in the sum of diameters of target lesions is required to define Progressive Disease (PD)
  - C) A 50% decrease in lesion size is necessary for complete response (CR).
  - D) Stable Disease (SD) includes changes in lesion size that do not meet criteria for PR or PD
5. A 42-year-old woman presents with a gradually enlarging thyroid swelling over the last 6 months. She has no compressive symptoms or signs of hyperthyroidism. Ultrasound of the neck reveals a 4.5 cm solid hypoechoic nodule in the right thyroid lobe. Fine Needle Aspiration Cytology (FNAC) is reported as Bethesda category IV. There is no cervical lymphadenopathy. What is the most appropriate next step in management?
  - A) Repeat FNAC in 6 months
  - B) Total thyroidectomy
  - C) Right Lobectomy
  - D) Radioactive iodine ablation
6. All of the following may be sacrificed during radical parotidectomy EXCEPT-
  - A) Facial nerve
  - B) Auriculotemporal nerve
  - C) Branches of External carotid artery
  - D) Internal jugular vein



7. A 52-year-old postmenopausal woman presents with complaints of persistent back pain for the past two months. She has a history of left-sided breast carcinoma diagnosed 3 years ago, for which she underwent modified radical mastectomy followed by chemotherapy and radiotherapy. On examination, there is tenderness over the lower thoracic spine. Neurological exam is normal. A recent X-ray shows lytic lesions in the T9 and T10 vertebrae. Both Serum calcium and alkaline phosphatase are raised. What is the next best step in the management of this patient?
- A) Start high-dose corticosteroids immediately
  - B) Radiotherapy to spine
  - C) Bone scan and MRI spine
  - D) Start bisphosphonate therapy
8. Which of the following statements is **CORRECT** about Zollinger-Ellison Syndrome?
- A) It is most commonly caused by a non-functional pituitary adenoma
  - B) Gastrin levels are typically decreased in fasting state
  - C) The most common site of gastrinoma is the pancreas
  - D) It is associated with Multiple Endocrine Neoplasia type 1 (MEN1)
9. Which of the following Ankle-Brachial Pressure Index (ABPI) values is most consistent with Chronic Limb-Threatening Ischemia (CLTI)?
- A) 0.4
  - B) 0.6
  - C) 0.8
  - D) 1.3
10. After how many weeks is an Arterio-Venous fistula typically ready to be used for hemodialysis?
- A) 1 week
  - B) 2 weeks
  - C) 6 weeks
  - D) 12 weeks
11. A woman presents with numbness, tingling, and weakness in her right arm, especially when lifting it overhead. On examination, symptoms are reproduced when she turns her head to the right and extends her neck while taking a deep breath with her arm abducted and externally rotated. Which of the following tests is she most likely undergoing?
- A) Adson's test
  - B) Roos test
  - C) Wright's test
  - D) Costoclavicular maneuver



12. A 17-year-old girl presents with painless, progressive swelling of her left lower limb for the past 6 months. There is no history of trauma, infection, or surgery. On examination, there is non-pitting edema below the knee with a positive Stemmer's sign. No varicosities or signs of chronic venous insufficiency are seen. Which of the following is the most likely diagnosis?
- A) Post-thrombotic syndrome
  - B) Lymphedema praecox
  - C) Lymphedema tarda
  - D) Filariasis
13. A patient with strangulated incisional hernia undergoes emergency laparotomy. Which type of mesh is most appropriate for hernia repair in this contaminated setting?
- A) polypropylene mesh
  - B) Dual-layer composite mesh
  - C) Biologic mesh
  - D) Polyester mesh
14. Which of the following is not the part of the Amsterdam criteria used to identify families with Lynch syndrome?
- A) At least three relatives with colorectal cancer
  - B) One affected relative must be a first-degree relative of the other two
  - C) At least one relative should have Familial Adenomatous Polyposis (FAP)
  - D) At least two successive generations affected
15. Which of the following is not considered a suitable indication for ESWL in the management of renal stones?
- A) Stone sizes less than 2 cm in the renal pelvis
  - B) Radio-opaque stones
  - C) Stones located in the lower calyx with a narrow infundibulum
  - D) Patient with normal renal function and no bleeding disorders
16. Which type of short bowel syndrome is characterized by jejunal resection with an intact ileum and colon, usually leading to good adaptation?
- A) Type 1
  - B) Type 2
  - C) Type 3
  - D) Type 4



17. A 60-year-old man presents with right upper quadrant pain, fever, and leukocytosis. Ultrasound shows gallbladder wall thickening and pericholecystic fluid. His blood pressure is 84/60 mmHg, heart rate 120/min, and he has impaired renal function with creatinine of 2.2 mg/dL. According to the Tokyo Guidelines, what is the grade of his acute cholecystitis?
- A) Grade I
  - B) Grade II
  - C) Grade III
  - D) Grade IV
18. What is the most common cause of small bowel obstruction worldwide?
- A) Hernia
  - B) Adhesions
  - C) Intussusception
  - D) Volvulus
19. Which of the following is a characteristic feature of Solitary Rectal Ulcer Syndrome?
- A) Typically caused by infectious colitis
  - B) Presents with painless rectal bleeding and mucus discharge
  - C) Associated with mucosal prolapse and straining during defecation
  - D) Diagnosed primarily by colonoscopy showing multiple ulcers throughout the colon
20. Which imaging technology is required to visualize indocyanine green (ICG) fluorescence during surgery?



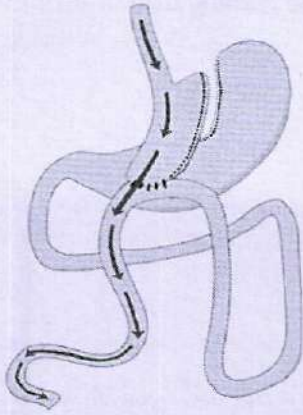
- A) Laparoscopic Ultrasonography
- B) Near-infrared (NIR) imaging system
- C) Conventional laparoscopy
- D) 3 - D Fluoroscopy



21. A 42-year-old premenopausal woman presents for routine breast cancer screening. She has no family history of cancer. A mammogram reveals 1.2 cm well-circumscribed, round mass in the upper outer quadrant of the right breast. The lesion shows homogeneous fat density, with no suspicious calcifications or architectural distortion. What is the most appropriate BIRADS score for this lesion?
- A) BIRADS 1
  - B) BIRADS 2
  - C) BIRADS 3
  - D) BIRADS 4
22. A 45-year-old woman presents with a 10-year history of gradually enlarging neck swelling recently associated with intermittent dysphagia to solids and orthopnea when lying flat. CT scan of neck shows a large retrosternal extension of the thyroid, displacing the trachea and esophagus. FNAC from the dominant nodule shows benign follicular hyperplasia. What is the best next step?
- A) Observation and serial ultrasound with TSH monitoring every 6-12 months
  - B) Total thyroidectomy
  - C) Radioiodine therapy
  - D) Partial thyroidectomy with frozen section
23. A 43-year-old woman undergoes laparoscopic cholecystectomy for biliary colic. Upon entering the abdomen, there are moderate adhesions from prior episodes of subclinical cholecystitis. The gall bladder is distended with mucocele. Calot's triangle is partially obscured with fat laden but cleared with minimal difficulty, and cystic structures are clearly visualized and clipped. What is most like grade of difficulty?
- A) Nassar Grade I
  - B) Nassar Grade II
  - C) Nassar Grade III
  - D) Nassar Grade IV
24. Which of the following is the standard initial treatment for T3N1M0 rectal cancer located in the mid-rectum (6-10 cm from anal verge)?
- A) Immediate low anterior resection
  - B) Adjuvant chemoradiotherapy after surgery
  - C) Radical neoadjuvant chemoradiotherapy followed by surgery
  - D) Abdominoperineal resection



25. Identify the procedure shown in the image-



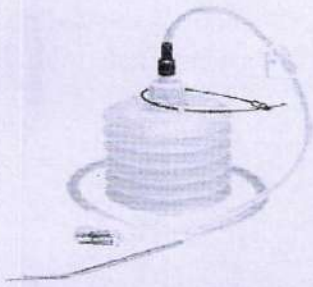
- A) One anastomosis gastric bypass
  - B) Bilopancreatic diversion with duodenal switch
  - C) Roux-en-Y gastric bypass
  - D) Vertical sleeve gastrectomy
26. A 40-year-old male presents with deep partial thickness burns involving the anterior trunk, entire right upper limb and anterior left leg. He weighs 80 kg and presents within 2 hours of injury. He is alert, with a heart rate of 115 bpm and blood pressure of 100/60 mmHg. What is estimated TBSA burned?
- A) 31.5%
  - B) 36%
  - C) 41.5%
  - D) 45%
27. A 38-year-old male is admitted to ICU after undergoing repair of a ruptured abdominal aortic aneurysm. On postoperative day 1, he becomes hypotensive (BP 82/48 mmHg), tachycardiac (HR 120 bpm), and oliguric. He is intubated and mechanically ventilated. Swan-Ganz catheterisation reveals: CVP- 16 mmHg, PCWP- 20 mmHg, CO- 3.1 L/min, SVR- 1900 dyn.s/cm<sup>5</sup>, and Lactate- 5.4 mmol/L. What is the most likely diagnosis?
- A) Hypovolemic shock
  - B) Septic shock
  - C) Cardiogenic shock
  - D) Abdominal compartment syndrome
28. Target sign may be seen on ultrasonography in all of the following EXCEPT
- A) Intussusception
  - B) Acute appendicitis
  - C) Pyloric stenosis
  - D) Artero-venous fistula



29. A 52-year-old woman presents with a firm, mobile lump in the upper outer quadrant of her right breast, measuring approximately  $4 \times 4$  cm. There is no skin dimpling or nipple discharge. On axillary examination, a palpable lymph node is felt by inserting fingers deep into the axilla with the patient's arm abducted, and the node is located posterior to the pectoralis minor muscle. Which group of lymph nodes is most likely involved based on this location?
- A) Apical group
  - B) Central group
  - C) Lateral group
  - D) Parasternal group
30. Which of the following initial management steps is appropriate for a patient with an open pneumothorax in the emergency setting?
- A) Insert an ICD
  - B) Seal the wound completely with an airtight dressing
  - C) Apply a 3-sided occlusive dressing over the chest wound
  - D) Immediate intubation and mechanical ventilation
31. Which imaging modality is most sensitive and specific for detecting ureteric stones?
- A) Plain abdominal X-ray
  - B) Ultrasonography
  - C) Non-contrast CT scan KUB
  - D) Intravenous pyelogram (IVP)
32. A 62-year-old male with a 40-pack-year smoking history presents with leg pain while walking that is relieved by rest. On examination, there are diminished dorsalis pedis pulses. Which of the following is the most appropriate non-invasive test used for screening?
- A) CT angiography
  - B) USG doppler
  - C) Ankle-Brachial Index
  - D) Digital Subtraction angiography
33. Which of the following is absorbable, synthetic and most suitable for subcuticular skin closure to minimize scarring?
- A) Silk
  - B) Polypropylene
  - C) Chromic catgut
  - D) Poliglecaprone

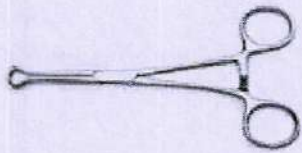


34. Identify the drain shown in the image:



- A) Closed suction drain
- B) Open suction drain
- C) Abdominal drain
- D) Corrugated drain

35. Identify the instrument shown in image:



- A) Kelley's forceps
- B) Babcock's forceps
- C) Allis forceps
- D) Desjardin's forceps

36. Hilton's method of abscess drainage is primarily used to:

- A) Excise the entire abscess cavity
- B) Aspiration of abscess fluid with a wide bore needle
- C) Drain deep abscesses near vital structures
- D) Drain superficial abscesses only

37. Which of the following is not a component of WHO surgical safety checklist?

- A) Sign in
- B) Sign out
- C) Time in
- D) Time out



38. In which operation theatre zone waiting area is located?
- A) Clean
  - B) Protective
  - C) Aseptic
  - D) Disposal
39. Apfel score is used to predict postoperative nausea and vomiting. Which of the following parameters is **NOT** included in calculating the score-
- A) History of motion sickness
  - B) Type of anesthesia used
  - C) Smoking status
  - D) Gender
40. A 45-year-old lady underwent total thyroidectomy 3 years ago for papillary carcinoma of thyroid with no uptake on postoperative radioactive iodine scan. During follow up visit, patient was found to have elevated thyroglobulin levels with no uptake noted in radioactive iodine scan. What is the next step in management
- A) Follow up after 3 months with thyroglobulin levels
  - B) Follow up after 3 months with radioactive iodine scan
  - C) PET-CT scan
  - D) Both (A) and (B)
41. Prior to radioactive iodine scan patients should be on low iodine diet for-
- A) 2 weeks
  - B) 4 weeks
  - C) 6 weeks
  - D) 8 weeks
42. MEN 4 syndrome is associated with pituitary, parathyroid, adrenal, renal and gonadal tumors. It occurs due to defective production of the following protein.
- A) CDKN1B
  - B) p27
  - C) MENIN
  - D) p57
43. Chemotherapy is effective in the following sarcomas EXCEPT.
- A) Ewings sarcoma
  - B) Rhabdomyosarcoma
  - C) Synovial sarcoma
  - D) Chondrosarcoma



44. In a workup of a patient who presents with metastatic nodes in neck with unknown primary immunohistochemistry markers are positive for GATA 3 and GDFP 15. The most probable site of primary is?
- A) Breast
  - B) Thyroid
  - C) Colon
  - D) Nasopharynx
45. CROSS regimen is the neoadjuvant chemoradiation regimen for which of the following cancers
- A) Gastric cancer
  - B) Esophageal cancer
  - C) Rectal cancer
  - D) Anal canal cancer
46. Teduglutide is a newer drug used in patients with short bowel syndrome it mimics which of the following substance
- A) GLP-1
  - B) GLP-2
  - C) GRF
  - D) VIP
47. D2 lymphadenectomy for colorectal cancer does **NOT** include which of the following nodal regions?
- A) Epicolic
  - B) Paracolic
  - C) Intermediate
  - D) Principal
48. WHO only recommends the following scolicial agent in patients who are planned for surgery for liver hydatid cyst-
- A) Hypertonic saline
  - B) Betadine
  - C) Cetrimide
  - D) Absolute alcohol



49. A patient with intermittent claudication and normal ABPI. What is the next step in management-
- A) Transcutaneous oxygen saturation
  - B) Plethysmography
  - C) Toe pressure measurement
  - D) Exercise ABPI
50. Which of the following is not a cause of intermittent biliary tract obstruction?
- A) Periapillary tumors
  - B) Duodenal diverticula
  - C) Carcinoma Gall bladder
  - D) Choledochal cyst
51. Which of the following statements is **NOT** true regarding nutritional support for patients suffering from surgical obstructive diseases?
- A) The most common and physiologic manner of nutritional support is oral diet
  - B) Enteral feeding access should be considered in case of inadequate oral intake
  - C) Routine parenteral nutrition has been found to be beneficial in the first 2 weeks postoperatively
  - D) Patients receiving parenteral nutrition should not be given excess calories of more than 30 kCal/kg/day
52. Which of the following is **NOT** a component of "4 pillars" of enhanced recovery after surgery (ERAS) protocol?
- A) Early postoperative feeding
  - B) Goal directed fluid therapy
  - C) Opioid analgesia
  - D) Early ambulation
53. The CHOCOLATE multicenter randomized control trial is related to which of the following procedures?
- A) Laparoscopic CBD exploration
  - B) Laparoscopic cholecystectomy in patients having asymptomatic gallstones
  - C) Percutaneous Cholecystostomy
  - D) Open vs. Laparoscopic cholecystectomy



54. Primary fuel for colonic mucosa is-
- A) Glucose
  - B) Lactate
  - C) Butyrate
  - D) Fats
55. Most common lymph node involved in carcinoma prostate is-
- A) Obturator
  - B) Iliac
  - C) Periprostatic
  - D) Perivesical
56. Which of the following is **NOT** an important prognostic factor in case of carcinoma thyroid
- A) Age
  - B) Completeness of resection
  - C) Multicentricity
  - D) Extra thyroid extension
57. A 48-year- old premenopausal lady presents with a 3 × 3 cm sized left breast lump. Histologically it is a triple negative invasive ductal carcinoma grade 3 tumor. On examination there is a single sub centimetric mobile soft ipsilateral axillary lymph node palpable. Ultrasonography shows no loss of fatty hilum. What is the next line of management for axilla?
- A) Sentinel Lymph Node Biopsy
  - B) Radiotherapy only
  - C) Axillary Lymph Node Dissection
  - D) Chemotherapy
58. A 50-year-old lady presents with a long-standing swelling of left cheek. Which is **NOT** a clinical feature of malignant conversion of salivary gland tumor?
- A) Pain
  - B) Facial nerve weakness
  - C) Rapid increase in size of swelling
  - D) Cervical lymph node enlargement
59. Landmark of Surgical anal canal extended from:
- A) Anal verge to dentate line
  - B) Anal verge to anorectal ring
  - C) Dentate line to anorectal ring
  - D) Anal verge to rectosigmoid junction



60. A 24-year-old woman has acute renal failure following postpartum hemorrhage. Laboratory studies showed serum glucose, 150 mg/dL; sodium, 135 mEq/L; potassium, 6.5 mEq/L; chloride, 105 mEq/L; and bicarbonate, 15 mEq/L. Which of the following treatment should be started-
- A) Decrease potassium chloride to 10 mEq/L
  - B) Intravenous 0.9% sodium chloride
  - C) 100 mL of 50% glucose water with 10 U insulin
  - D) Intravenous calcitonin
61. A 62-year-old woman presents to the ED with a 2-day history of severe left lower quadrant abdominal pain and is found to be febrile to 39°C. On physical examination her abdomen is rigid. Her WBC count is 21,000. On CT scan she was found to have diverticula and gross intra-abdominal free air and free fluid. She is taken to the operating room (OR) for an emergent exploratory laparotomy and she was found to have feculent material in the peritoneal cavity. What is her Hinchey stage?
- A) Stage I
  - B) Stage II
  - C) Stage III
  - D) Stage IV
62. A 43-year-old teacher underwent left parotidectomy. Upon awakening from surgery, paralysis of the left lower lip was observed. This complication was most likely due to injury to which of the following:
- A) Parotid duct
  - B) Facial nerve - temporal branch
  - C) Facial nerve - cervical branch
  - D) Facial nerve - main trunk
63. A 43-year-old man with chronic hepatitis and liver cirrhosis is admitted with upper GI bleeding. He has marked ascites and shows multiple telangiectasias, liver palmar erythema, and clubbing. A diagnosis of bleeding esophageal varices secondary to portal hypertension is made. Portal pressure is considered elevated when it is above which of the following?
- A) >5 mm Hg
  - B) 7-8mm Hg
  - C) 12-14 mm Hg
  - D) >30 mm Hg



64. Colicky pain is absent in the following types of intestinal obstruction:
- A) Strangulated hernia
  - B) Volvulus
  - C) Paralytic ileus
  - D) Intussusception
65. Which of the following arteries does supply to both small intestine and colon?
- A) Coeliac plexus
  - B) Superior mesenteric artery
  - C) Inferior mesenteric artery
  - D) Middle colic artery
66. Which of the following is **not** seen in Alport's syndrome?
- A) Proteinuria
  - B) Seizures
  - C) Haematuria
  - D) Deafness
67. Most common cause of sudden fall in urine out-put in the immediate post operative period after live related renal transplant is-
- A) Haemorrhagic shock
  - B) Acute rejection
  - C) Renal artery stenosis
  - D) Urinary leak
68. Which of the following qualities a suture material should have for vascular anastomosis-
- A) Absorbable and elastic
  - B) Absorbable and non-elastic
  - C) Non-absorbable and elastic
  - D) Non-absorbable and non-elastic
69. Which of the following specimen is best for bacterial culture of urine
- A) Midstream first morning specimen
  - B) After first voided urine specimen
  - C) Specimen from 24 hour collected urine
  - D) Any time Midstream urine specimen



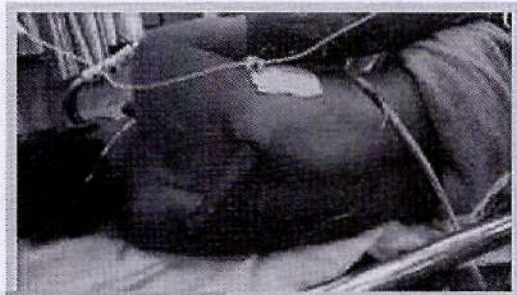
70. Which of the following is **not** an orthotopic transplant?
- A) Kidney
  - B) Liver
  - C) Heart
  - D) Cornea
71. Based on Parkland formula, what percent of the calculated IV fluid volume should be administered in the first 8 hours following burn?
- A) 10%
  - B) 25%
  - C) 33%
  - D) 50%
72. What percentage of formalin is used to preserve histopathology specimens?
- A) 10%
  - B) 20%
  - C) 30%
  - D) 40%
73. Which of the following investigations does not require overnight fasting?
- A) Ultra sound abdomen
  - B) CECT abdomen
  - C) Mammography
  - D) Barium meal
74. A 48-year-old female is receiving chemotherapy for breast carcinoma. She has been complaining of dysuria and frequency. Laboratory examination revealed microscopic hematuria. Which of the following agents most likely to cause for these signs and symptoms-
- A) Mitomycin
  - B) Cyclophosphamide
  - C) Paclitaxel
  - D) Tamoxifen
75. Massive blood transfusion can cause all of the following EXCEPT-
- A) Thrombocytopenia
  - B) Hypocalcemia
  - C) Hypokalemia
  - D) Dilution of clotting factors



76. Criteria for brain death include all EXCEPT:
- A) Absence of gag reflex
  - B) Cessation of circulation
  - C) Absence of spontaneous respiration
  - D) Absence of corneal reflex
77. Which of the following positions of the patient is not required during standard laparoscopic cholecystectomy-
- A) Head up
  - B) Right side up
  - C) Reverse trendelenberg
  - D) Left side up
78. Which of the following procedures is not considered for minimally invasive surgery-
- A) Extended thymectomy
  - B) Adrenalectomy
  - C) Donor nephrectomy
  - D) Modified Radical Mastectomy
79. Palmer's point was described as the area-
- A) in the right upper quadrant below the costal margin and in the midclavicular line
  - B) in the left upper quadrant below the costal margin and in the midclavicular line
  - C) in the left upper quadrant below the costal margin and in the anterior axillary line
  - D) in the right upper quadrant below the costal margin and in the anterior axillary line
80. Which of the following is **NOT correct** regarding laparoscopic cholecystectomy-
- A) Incidence of common bile duct injury is higher than open cholecystectomy
  - B) It should not be performed in suspected cases of carcinoma gall bladder
  - C) Laparoscopic cholecystectomy is considered gold standard of care for cholelithiasis
  - D) It can be combined with other intraabdominal procedures.



81. Which of the following is **NOT correct** regarding laparoscopic inguinal hernia repair-
- A) Both Transabdominal Preperitoneal (TAPP) and Totally Extra Peritoneal (TEP) repairs are considered standard of care.
  - B) It covers the entire myopectineal orifice of Fruchaud
  - C) In case of difficulty TEP can be converted to TAPP and vice versa
  - D) Both the techniques can be used to repair bilateral inguinal hernia.
82. Which of the following is **NOT** a life-threatening condition-
- A) Tension pneumothorax
  - B) Open pneumothorax
  - C) Occult pneumothorax
  - D) Simple pneumothorax
83. A 25-year-old man is brought to emergency department following a fight as shown in image below. Which of the following should **NOT** be done in emergency department?



- A) Primary survey
  - B) Intercostal tube insertion
  - C) Removal of impaled object
  - D) Resuscitative thoracotomy
84. Which of the following colour is **NOT** used in Trauma triage categories?
- A) Red
  - B) Black
  - C) White
  - D) Yellow



85. Which of the following **NOT correct** about FAST exam in a trauma patient?
- A) It is an adjunct to primary survey
  - B) It is point of care investigation
  - C) It is used to diagnose intraperitoneal free fluid
  - D) It should be done only once.
86. All of the following are indications for doing CT scan of head in a trauma patient EXCEPT-
- A) post-traumatic seizure
  - B) focal neurological deficit
  - C) 1 episode of vomiting
  - D) > 65 years old
87. Which of the following is not a Hard sign suggestive of vascular injury in a trauma patient?
- A) Absent pulses
  - B) Bruit or thrill
  - C) Non-expanding haematoma
  - D) Hypothermic limb
88. Which of the following has been added to Trauma Triad of death to make it Trauma Diamond of death?
- A) Acidosis
  - B) Hypothermia
  - C) Hypocalcaemia
  - D) Coagulopathy
89. Which of the following is **NOT correct** about Triage?
- A) It is a one-time process
  - B) It is used in case of mass casualty events
  - C) It is a process of prioritising patient's treatment
  - D) Different colour coding is used in Triage



90. A 30-year-old man is brought to the emergency department following motor vehicle crash. He is awake and complaining of chest pain. His heart rate is 80 per minute, blood pressure 110/60 mm of Hg and oxygen saturation is 96% on room air.

What should be the first step of management in this patient?

- A) Give him supplemental oxygen
- B) Get a chest x-ray done
- C) Give him I.V. analgesic
- D) Get ECG done

91. A 26-year-old lady is brought to a primary health center following a fall from 5 stairs. She is 36 weeks pregnant. Her vitals are heart rate 100 / min, blood pressure 110/ 76 mm of Hg, oxygen saturation is 97% on room air. She is complaining of pain in abdomen. What will you do next?

- A) Call obstetrician immediately
- B) Urgent ultrasound of the foetus
- C) Give analgesics and immediate transfer
- D) Primary survey and transfer

92. Which of the following is **NOT** considered part of damage control surgery?

- A) Perihepatic packing
- B) Splenectomy
- C) Resection and anastomosis of devitalised bowel
- D) Temporary abdominal closure

93. A 40-year-old man is brought to the emergency department following road traffic injury. He is fully conscious and his vitals are heart rate 80/min, blood pressure 116/78 mm of Hg, oxygen saturation 98 %. There is no external injury. FAST exam is positive in LUQ. What will you do next?

- A) Contrast enhanced CT scan of torso
- B) Diagnostic laparoscopy
- C) Diagnostic peritoneal lavage
- D) Exploratory laparotomy



94. Which of the following findings seen on CT scan can **NOT** be managed non-operatively in a hemodynamically stable trauma patient?
- A) Grade 4 splenic injury
  - B) Grade 3 pancreatic injury
  - C) Pneumoperitoneum
  - D) Grade 5 liver injury
95. In Sequential Organ Failure Assessment Scoring system, which of the following is not required to calculate SOFA score?
- A) Serum Lactate
  - B) Sr. Bilirubin
  - C) Platelet Count
  - D) Sr. Creatinine
96. Hour-1 bundle for management of sepsis and septic shock includes all the elements EXCEPT
- A) Measure lactate level
  - B) Start broad-spectrum antibiotic
  - C) Start vasopressor
  - D) Measure central venous pressure to maintain CVP 8-12 mm Hg
97. Which statement is true regarding antimicrobial therapy in sepsis?
- A) Daily assessment for de-escalation of antimicrobial therapy is necessary
  - B) Serum procalcitonin level can provide supportive data to clinical assessment for de-escalation of antimicrobial therapy.
  - C) Combination Antimicrobial treatment for at least 15 days is a must for most serious infections associated with sepsis and septic shock
  - D) Empiric antimicrobial therapy is narrowed once culture sensitivity result is available or adequate clinical improvement is noted.



98. During an emergency appendectomy, a surgical resident sustains an injury from a contaminated hollow-bore needle with spontaneous bleeding. Which one of the following blood borne organism is most likely to be transmitted, assuming that the patient was infected with all of them?
- A) HIV-1
  - B) HBV
  - C) HCV
  - D) HIV -II
99. Which of the following is optimum end point of fluid resuscitation?
- A) Cardiac Index  $> 3\text{L/min/m}^2$ , MAP  $\geq 90$ , Urine output  $> 0.5\text{ ml/kg/hr}$ , lactate  $< 1\text{mM/L}$ , INR  $< 1.5$
  - B) Cardiac Index  $> 5\text{L/min/m}^2$ , MAP  $\geq 65$ , Urine output  $> 0.3\text{ ml/kg/hr}$ , lactate  $< 1\text{mM/L}$ , INR  $< 2$
  - C) Cardiac Index  $> 3\text{L/min/m}^2$ , MAP  $\geq 65$ , Urine output  $> 0.5\text{ ml/kg/hr}$ , lactate  $< 2\text{mM/L}$ , INR  $< 1.5$
  - D) Cardiac Index  $> 5\text{L/min/m}^2$ , MAP  $\geq 95$ , Urine output  $> 0.3\text{ ml/kg/hr}$ , lactate  $< 2\text{mM/L}$ , INR  $< 2$
100. The sensitivity of a test is its:
- A) Ability to identify correctly "True Negatives"
  - B) Ability to identify correctly "True Positives"
  - C) A product of True positive and false Negative
  - D) A product of true negative and false positive
-