# RPSC
# Asst. Prof.

## Previous Year Paper
## (General Medicine)
## 03 Jul, 2025

Asstt Professor Comp. Exam-2024
(Med. Edu. Deptt.)

7/7/2025

# MPA-25

792949

प्रश्न–पुस्तिका संख्या व बारकोड /
Question Booklet No. & Barcode

इस प्रश्न-पुस्तिका को तब तक न खोलें जब तक कहा न जाए। Do not open this Question Booklet until you are asked to do so.

पुस्तिका में पृष्ठों की संख्या : 24
Number of Pages in Booklet : 24
पुस्तिका में प्रश्नों की संख्या : 150
No. of Questions in Booklet : 150

**Paper Code : 70**

**Sub : General Medicine**

Exam Date 3/7/2025

**समय : 02:30 घण्टे + 10 मिनट अतिरिक्त***
**Time : 02:30 Hours + 10 Minutes Extra***

**अधिकतम अंक : 150**
**Maximum Marks : 150**

प्रश्न–पुस्तिका के पेपर की सील/पॉलिथीन बैग को खोलने पर प्रश्न–पत्र हल करने से पूर्व परीक्षार्थी यह सुनिश्चित कर लें कि :

- प्रश्न–पुस्तिका संख्या तथा ओ.एम.आर. उत्तर–पत्रक पर अंकित बारकोड संख्या समान हैं।
- प्रश्न–पुस्तिका एवं ओ.एम.आर. उत्तर–पत्रक के सभी पृष्ठ व सभी प्रश्न सही मुद्रित हैं। समस्त प्रश्न, जैसा कि ऊपर वर्णित है, उपलब्ध हैं तथा कोई भी पृष्ठ कम नहीं है / मुद्रण त्रुटि नहीं है।

किसी भी प्रकार की विसंगति या दोषपूर्ण होने पर परीक्षार्थी वीक्षक से दूसरा प्रश्न–पत्र प्राप्त कर लें। यह सुनिश्चित करने की जिम्मेदारी अभ्यर्थी की होगी। परीक्षा प्रारम्भ होने के 5 मिनट पश्चात् ऐसे किसी दावे/आपत्ति पर कोई विचार नहीं किया जायेगा।

On opening the paper seal/polythene bag of the Question Booklet before attempting the question paper, the candidate should ensure that :

- Question Booklet Number and Barcode Number of OMR Answer Sheet are same.
- All pages & Questions of Question Booklet and OMR Answer Sheet are properly printed. All questions as mentioned above are available and no page is missing/misprinted.

If there is any discrepancy/defect, candidate must obtain another Question Booklet from Invigilator. Candidate himself shall be responsible for ensuring this. No claim/objection in this regard will be entertained after five minutes of start of examination.

## परीक्षार्थियों के लिए निर्देश

1. प्रत्येक प्रश्न के लिये एक विकल्प भरना अनिवार्य है।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का मात्र एक ही उत्तर दीजिए। एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
4. OMR उत्तर-पत्रक इस प्रश्न-पुस्तिका के अन्दर रखा है। जब आपको प्रश्न-पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्रक निकाल कर ध्यान से केवल नीले बॉल पॉइंट पेन से विवरण भरें।
5. कृपया अपना रोल नम्बर ओ.एम.आर. उत्तर-पत्रक पर सावधानीपूर्वक सही भरें। गलत रोल नम्बर भरने पर परीक्षार्थी स्वयं उत्तरदायी होगा।
6. ओ.एम.आर. उत्तर-पत्रक में करेक्शन पेन/व्हाईटनर/सफेदा का उपयोग निषिद्ध है।
7. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है।
8. प्रत्येक प्रश्न के पाँच विकल्प दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4, 5 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले (बबल) को उत्तर-पत्रक पर नीले बॉल पॉइंट पेन से गहरा करना है।
9. यदि आप प्रश्न का उत्तर नहीं देना चाहते हैं तो उत्तर-पत्रक में पाँचवें (5) विकल्प को गहरा करें। यदि पाँच में से कोई भी गोला गहरा नहीं किया जाता है, तो ऐसे प्रश्न के लिये प्रश्न अंक का 1/3 भाग काटा जायेगा।
10.* प्रश्न-पत्र हल करने के उपरांत अभ्यर्थी अनिवार्य रूप से ओ.एम.आर. उत्तर-पत्रक जाँच लें कि समस्त प्रश्नों के लिये एक विकल्प (गोला) भर दिया गया है। इसके लिये ही निर्धारित समय से 10 मिनट का अतिरिक्त समय दिया गया है।
11. यदि अभ्यर्थी 10% से अधिक प्रश्नों में पाँच विकल्पों में से कोई भी विकल्प अंकित नहीं करता है तो उसको अयोग्य माना जायेगा।
12. मोबाइल फोन अथवा अन्य किसी इलेक्ट्रोनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए राजस्थान सार्वजनिक परीक्षा (भर्ती में अनुचित साधनों की रोकथाम अध्युपाय) अधिनियम, 2022 तथा अन्य प्रभावी कानून एवं आयोग के नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

## INSTRUCTIONS FOR CANDIDATES

1. **It is mandatory to fill one option for each question.**
2. All questions carry equal marks.
3. Only one answer is to be given for each question. If more than one answers are marked, it would be treated as wrong answer.
4. The **OMR** Answer Sheet is inside this Question Booklet. When you are directed to open the Question Booklet, take out the Answer Sheet and fill in the particulars carefully with **Blue Ball Point Pen** only.
5. Please correctly fill your Roll Number in **OMR** Answer Sheet. Candidates will themselves be responsible for filling wrong Roll No.
6. **Use of Correction Pen/Whitener in the OMR Answer Sheet is strictly forbidden.**
7. **1/3 part of the mark(s) of each question will be deducted for each wrong answer.** A wrong answer means an incorrect answer or more than one answers for any question.
8. **Each question has five options marked as 1, 2, 3, 4, 5. You have to darken only one circle (bubble) indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.**
9. **If you are not attempting a question then you have to darken the circle '5'. If none of the five circles is darkened, one third (1/3) part of the marks of question shall be deducted.**
10.* **After solving question paper, candidate must ascertain that he/she has darkened one of the circles (bubbles) for each of the questions. Extra time of 10 minutes beyond scheduled time, is provided for this.**
11. **A candidate who has not darkened any of the five circles in more than 10% questions shall be disqualified.**
12. **Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt with as per rules.**

**Warning :** If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would be liable to be prosecuted under **Rajasthan Public Examination (Measures for Prevention of Unfair means in Recruitment) Act, 2022 & any other laws applicable and Commission's Rules-Regulations.** Commission may also debar him/her permanently from all future examinations.

उत्तर–पत्रक में दो प्रतियाँ हैं – मूल प्रति और कार्बन प्रति। परीक्षा समाप्ति पर परीक्षा कक्ष छोड़ने से पूर्व परीक्षार्थी उत्तर–पत्रक की दोनों प्रतियाँ वीक्षक को सौंपेंगे, परीक्षार्थी स्वयं कार्बन प्रति अलग नहीं करें। वीक्षक उत्तर–पत्रक की मूल प्रति को अपने पास जमा कर, कार्बन प्रति को मूल प्रति से कट लाइन से मोड़ कर सावधानीपूर्वक अलग कर परीक्षार्थी को सौंपेंगे, जिसे परीक्षार्थी अपने साथ ले जायेंगे। परीक्षार्थी को उत्तर–पत्रक की कार्बन प्रति चयन प्रक्रिया पूर्ण होने तक सुरक्षित रखनी होगी एवं आयोग द्वारा माँगे जाने पर प्रस्तुत करनी होगी।

1. Which of the following is NOT a recommendation for implementing person-centered care in complex geriatric patients according to the "Choosing Wisely" guidelines ?
   (1) Avoid using medications other than metformin to achieve HbAlc <7.5% in most older adults.
   (2) Routinely prescribe lipid-lowering medications regardless of life expectancy.
   (3) Don't use antipsychotics as the first choice to treat behavioural symptoms of dementia.
   (4) Don't recommend hospital-level care for a frail elder unless aligned with their goals of care.
   (5) Question not attempted

2. Which of the following statements is NOT true regarding the pharmacologic therapy of diabetes in older adults ?
   (1) SGLT-2 inhibitors are known for their renal protective effects and have a low risk of hypoglycemia.
   (2) Metformin is contraindicated in patients with an eGFR <30 mL/min/1.73 $m^2$ or those with significant heart failure.
   (3) Sulfonylureas such as glyburide are preferred due to their longer duration of action.
   (4) DPP-4 inhibitors have minimal hypoglycemia risk but may be limited by high cost.
   (5) Question not attempted

3. What is the "glass cliff" phenomenon in the context of women in medical leadership ?
   (1) Women are often given leadership roles only in times of crisis, making them more likely to fail.
   (2) Women voluntarily leave leadership roles due to personal commitments.
   (3) Women face lower salary negotiations than their male counterparts in leadership.
   (4) Women receive less mentorship compared to men in leadership roles.
   (5) Question not attempted

4. Which of the following is the most effective first-line treatment for Generalized Anxiety Disorder (GAD) in adolescents ?
   (1) Psychoanalytic therapy
   (2) Cognitive-behavioural therapy
   (3) Electroconvulsive therapy
   (4) Antipsychotic medication.
   (5) Question not attempted

5. Which of the following is NOT recommended in the non-pharmacologic management of insomnia in older adults ?
   (1) Avoiding caffeine, alcohol and cigarettes after lunch
   (2) Taking long daytime naps to compensate for poor nighttime sleep
   (3) Spending time outdoors in the late afternoon or early evening without sunglasses
   (4) Getting up at the same time each morning even after poor sleep
   (5) Question not attempted

6. At what vertical distance above the sternal angle is jugular venous pressure considered abnormal when the patient is at a 30° elevation ?
(1) >2.5 cm (2) >3.5 cm
(3) >4.5 cm (4) >5.5 cm
(5) Question not attempted

7. A 30-year-old female is seen in the clinic before undergoing an esophageal dilation for a stricture. Four months back she had her Patent Ductus Arteriosus repaired. She takes no medications and is allergic to penicillin. Her physician should recommend which of the following ?
(1) Clarithromycin 500 mg PO 1 h before the procedure
(2) Clindamycin 450 mg PO 1 h before the procedure
(3) The procedure is low-risk, and therefore no prophylaxis is indicated.
(4) Her valvular lesion is low-risk, and therefore no prophylaxis is indicated.
(5) Question not attempted

8. Which of the following conditions is NOT a cause of ST-segment elevation on ECG ?
(1) Acute myocardial infarction
(2) Takotsubo syndrome
(3) Left ventricular hypertrophy
(4) Interstitial lung disease
(5) Question not attempted

9. Which of the following is NOT a recommended indication for permanent pacing in sinus node dysfunction (SND) ?
(1) Symptomatic sinus bradycardia due to essential medication with no alternative.
(2) Tachy-brady syndrome with bradycardia-related symptoms.
(3) Asymptomatic sinus bradycardia with normal daily function.
(4) Symptomatic chronotropic incompetence.
(5) Question not attempted

10. Which of the following is not true ?
(1) Troponin C is a critical protein in cardiac muscle.
(2) Potassium is the ion that activates skeletal and cardiac muscle contraction.
(3) The mechanism of cardiac muscle contraction involves shortening of the sarcomeres.
(4) Thick and thin filaments are present in cardiac, skeletal and smooth muscle sarcomeres.
(5) Question not attempted

11. A 65-year-old man has palpitations. He has a broad complex tachycardia on the ECG. In a broad complex tachycardia, which of the following would be the strongest indication towards a diagnosis of VT ?
(1) Discordant QRS complexes in the chest leads.
(2) Extreme right axis deviation.
(3) Trifascicular block on ECG.
(4) Cannon a waves.
(5) Question not attempted

12. A 75-year-old female has become progressively more breathless. On examination she has a displaced cardiac apex and a third heart sound. Chest X-Ray confirms cardiomegaly. An echocardiogram shows Left ventricle size of 6.5 cm and LV ejection fraction of 25%. She is on Frusemide, Perindopril and Spironolactone. Which of the following drugs should be added to her current therapy ?
(1) Diltiazem (2) Digoxin
(3) Atorvastatin (4) Bisoprolol
(5) Question not attempted

13. A 65-year-old lady has recently had a cholecystectomy 2 days ago. She is now very breathless, has central pleuritic chest pain and feels dizzy. She is only able to say a few words and looks pale. Examination reveals a sinus tachycardia and flow murmur across the aortic area. Her blood pressure is 85/50 mmHg, $O_2$ saturations are 85% on 6 litres of $O_2$. ECG shows non-specific T wave abnormalities. What should be the next management step ?
(1) CT pulmonary angiogram
(2) Intravenous heparin
(3) Coronary angiogram
(4) Thrombolysis with Tenecteplase
(5) Question not attempted

14. What is a primary clinical goal in the management of Acute Decompensated Heart Failure (ADHF) ?
(1) Goal-directed decongestion to relieve symptoms
(2) Immediate use of high-dose beta-blockers
(3) Early implantation of cardiac defibrillators
(4) Routine use of mechanical assist devices
(5) Question not attempted

15. Which of the following lung function values is typically elevated in severe emphysema ?
(1) DLCO (2) TLC
(3) FEV1 (4) FVC
(5) Question not attempted

16. Which of the following is not a goal of asthma therapy ?
(1) Reduction in night time awakenings to $\leq$2 times/month.
(2) Optimization of lung function.
(3) Complete elimination of all asthma symptoms.
(4) No more than 1 exacerbation per year.
(5) Question not attempted

17. According to GOLD criteria, a patient with $FEV_1/FVC < 0.7$ and $FEV_1$ 45% of predicted is classified under which stage of COPD ?
(1) Severe (Stage III)
(2) Mild (Stage I)
(3) Moderate (Stage II)
(4) Very severe (Stage IV)
(5) Question not attempted

18. Which of the following is true about Acute Eosinophilic Pneumonia ?
(1) Bronchoalveolar lavage eosinophilia >15%.
(2) It is highly responsive to corticosteroids.
(3) It is often associated with peripheral eosinophilia upon presentation.
(4) It relapses after discontinuation of corticosteroids.
(5) Question not attempted

19. A 45-year-old woman with HIV is admitted to the intensive care unit with pneumonia secondary to Pneumocystis *jiroveci*. She requires mechanical ventilatory support.
The ventilator settings are : PC mode, inspiratory pressure 30 cm $H_2O$, $FiO_2$ 1.0 and PEEP 10 cm $H_2O$. An arterial blood gas measured on these settings shows : pH 7.32, $PaCO_2$ 46 mmHg and $PaO_2$ 62 mmHg.
All of the following are important supportive measures for this patient, except
(1) Frequent ventilator circuit changes
(2) Gastric acid suppression
(3) Nutritional support
(4) Prophylaxis against deep venous thrombosis
(5) Question not attempted

20. Night terrors are most likely to occur
(1) Stage 1
(2) Stage 2
(3) Stage 3/4 (Slow-wave sleep)
(4) Rapid-Eye-Movement (REM) sleep
(5) Question not attempted

21. Swyer-James-Macleod syndrome is characterised by :
(1) Treatment by immunosuppressants.
(2) Dramatic response to Antibiotics.
(3) Unilateral lucency of entire lung with contralateral lung being normal.
(4) All of these
(5) Question not attempted

22. All of the following statements regarding lung abscesses are true, except :
(1) Posterior upper lobes and superior lower lobes are the most common locations of primary lung abscesses.
(2) Primary lung abscesses are often caused by anaerobic bacteria.
(3) Primary lung abscesses can be treated with IV ampicillin-sulbactam.
(4) Surgical intervention should be considered for lung abscesses with cavity sizes >2 cm.
(5) Question not attempted

23. A 61-year-old male former smoker (40 pack-years) complains of dyspnea and cough. Pulmonary function testing shows normal spirometry and lung volumes; there is an isolated reduction in diffusing capacity (Dlco). The most useful next test is :
(1) Echocardiography
(2) Right-sided heart catheterization
(3) High-resolution computed tomography of the chest
(4) Maximal respiratory pressures
(5) Question not attempted

24. The concept of "less is more" or "less is better" in the critical care holds for :
(1) Tidal volume ventilation for patients with ARDS.
(2) Oxygen saturation targets for general ICU patients.
(3) Hemoglobin levels for general ICU patients.
(4) All of these
(5) Question not attempted

25. Which of the following is not a diagnostic feature of ICU delirium ?
(1) Acute onset or fluctuation in mental status
(2) Inattention
(3) Visual hallucinations
(4) Altered level of consciousness
(5) Question not attempted

26. Which of the following best describes the mechanism of Type III respiratory failure following general anesthesia ?
(1) Impaired central respiratory drive due to opioids.
(2) Reduced surfactant production leading to alveolar rupture.
(3) Hypersensitivity pneumonitis from surgical exposure.
(4) Decreased functional residual capacity causing dependent lung collapse.
(5) Question not attempted

27. High-flow nasal cannula can provide short-term or outcome benefits in all of the following conditions except which one ?
(1) Poor tolerance of face mask oxygen
(2) Post-extubation period in low-risk patients
(3) Hypoxemic respiratory failure due to pneumonia
(4) Exacerbation of COPD
(5) Question not attempted

28. An 84-year-old female nursing home resident is brought to the emergency department due to lethargy. At the nursing home, she was found to have a blood pressure of 85/60 mmHg, heart rate 101 beats/min, temperature 37.8 °C. Laboratory data are obtained: sodium 137 meq/L, potassium 2.8 meq/L, $HCO_3$-8 meq/L, chloride 117 meq/L, BUN 17 mg/dL, creatinine 0.9 mg/dL. An arterial blood gas shows $PaO_2$ 80 mmHg, $PCO_2$ 24 mmHg, pH 7.29. Her urine analysis is clear and has a pH of 4.5. What is the acid-base disorder ?
(1) Anion-gap metabolic acidosis
(2) Non-anion-gap metabolic acidosis
(3) Non-anion-gap metabolic acidosis and respiratory alkalosis
(4) Respiratory acidosis
(5) Question not attempted

29. A patient presents to the emergency department in coma (intact brain stem findings and posturing only to noxious stimuli). Vital signs are normal. The CT scan is normal. Arterial blood gases show a metabolic acidosis. Lactate and glucose levels are normal, as are measures of renal function. What additional laboratory test is needed ?
(1) Serum anion and osmolar gap
(2) Serum ammonia level
(3) Serum thyroid level
(4) Serum cortisone level
(5) Question not attempted

30. Which of the following is the recommended target blood glucose range (in mg/dL) for most critically ill patients ?
(1) 100-140 (2) 140-180
(3) 160-200 (4) 180-220
(5) Question not attempted

31. In patients with intracranial hypertension, which of the following interventions is most effective in rapidly lowering intracranial pressure ?
(1) Administration of hypertonic saline.
(2) Administration of Glucocorticoids
(3) Trendelenburg position.
(4) Hyperventilation.
(5) Question not attempted

32. Which of the following is the most potent stimulus for hypothalamic production of arginine vasopressin ?
(1) Hypertonicity
(2) Hyperkalemia
(3) Hypokalemia
(4) Hypotonicity
(5) Question not attempted

33. A 45-year-old male with a diagnosis of ESRD secondary to diabetes mellitus is being treated with peritoneal dialysis. This is being carried out as a Continuous Ambulatory Peritoneal Dialysis (CAPD). He undergoes four 2-L exchanges per day and has been doing so for approximately 4 years. Complications of peritoneal dialysis include which of the following ?
(1) Hypotension after drainage of dialysate
(2) Hypoalbuminemia
(3) Hypercholesterolemia
(4) Hypoglycemia
(5) Question not attempted

34. A 50-year-old man is admitted with shortness of breath, 1 week of hemoptysis and mild swelling of his lower extremities. He also notes a 1-month history of myalgia and arthralgia, partially relieved by ibuprofen, which he takes twice daily. On examination, his blood pressure is 150/90 mmHg, he is afebrile and his lung examination shows bibasilar crackles. Laboratory tests reveal mild leukocytosis with a neutrophilic preponderance and hemoglobin of 11.2 g/dL. His urine shows 2+ protein, many RBCs and a few RBC casts. His creatinine is 2.4 mg/dL. His chest radiograph is notable for bilateral diffuse infiltrates, which worsen in the next 24 hours. Serologic tests are pending. Your management at this point would include :

(1) Continue observation until serologic tests are available

(2) Arrange for an urgent renal biopsy

(3) Choice 2 + intravenous steroids

(4) Choice 2 + intravenous steroids + plasmapheresis

(5) Question not attempted

35. A 32-year-old patient presents to your clinic complaining of right-sided flank pain and dark urine. He states that these symptoms began about a month ago. He denies any burning on urination and has had no fevers. He has not suffered any trauma and has not been sexually active recently. On review of systems he reports early satiety and describes a burning sensation in his chest when he lies down. An ultrasound of his right flank is performed and reveals >20 cysts of varying sizes in his right kidney. Which of the following statements is true ?

(1) Adult-onset polycystic kidney disease (PCKD) will lead to end-stage renal disease in 100% of patients by age 70.

(2) Aortic stenosis is present in 25% of patient with PCKD.

(3) 40% of patients with PCKD will have hepatic cysts by age 60.

(4) PCKD is inherited as an autosomal recessive trait in adults.

(5) Question not attempted

36. Which of the following glomerular diseases is most commonly associated with ANCA-positive vasculitis and rapidly progressive glomerulonephritis (RPGN) ?

(1) Goodpasture syndrome

(2) Poststreptococcal glomerulonephritis

(3) Microscopic polyangiitis

(4) Cryoglobulinemia

(5) Question not attempted

37. A patient has a GFR of 38 mL /min /1.73 $m^2$ and a urinary albumin excretion of 350 mg/g. According to KDIGO 2012 guidelines, which CKD risk category does this patient fall under ?
(1) G3b A2 – moderately to severely decreased GFR, moderate albuminuria.
(2) G4 A2 – severely decreased GFR, moderate albuminuria.
(3) G3b A3 – moderately to severely decreased GFR, severe albuminuria.
(4) G3a A3 – mildly to moderately decreased GFR, severe albuminuria.
(5) Question not attempted

38. Which of the following interventions has been shown to reduce intradialytic hypotension and improve hemodynamic stability during hemodialysis, especially in patients with autonomic dysfunction or rapid fluid shifts ?
(1) Sodium modeling and dialysate cooling
(2) Administration of high-calcium dialysate and warm saline
(3) Rapid ultrafiltration at the end of dialysis
(4) Routine midodrine for all dialysis patients
(5) Question not attempted

39. Which of the following is a commonly used immunosuppressive drug to prevent rejection after renal transplantation ?
(1) Methotrexate (2) Prednisone
(3) Vancomycin (4) Metformin
(5) Question not attempted

40. Which of the following is considered a non-invasive method for colorectal cancer screening ?
(1) Colonoscopy
(2) Sigmoidoscopy
(3) CT colonography
(4) Fecal Immunochemical Test (FIT)
(5) Question not attempted

41. What is the initial oral fluconazole dose recommended for the treatment of Candida esophagitis ?
(1) 100 mg once daily
(2) 400 mg once daily on day 1, then 200 mg daily
(3) 200 mg once daily
(4) 800 mg daily throughout
(5) Question not attempted

42. Which of the following is NOT an appropriate indication to obtain a fasting serum gastrin level ?
(1) Recurrent ulcers resistant to therapy in the absence of NSAID use or H. pylori.
(2) Unexplained steatorrhea with basal hyperchlorhydria.
(3) Hypercalcemia and family history of pituitary tumor.
(4) Single gastric ulcer with confirmed H. pylori.
(5) Question not attempted

43. Which of the following best reflects the evidence on the association between appendectomy and ulcerative colitis ?
(1) There is good evidence that appendectomy is associated with a reduced incidence of ulcerative colitis.
(2) There is good evidence that there is no association between appendectomy and ulcerative colitis.
(3) There is good evidence that appendectomy is associated with an increased incidence of ulcerative colitis.
(4) None of these
(5) Question not attempted

44. A 55-year-old male with a history of diabetes presents to your office with complaints of generalized weakness, weight loss, nonspecific diffuse abdominal pain and erectile dysfunction. The examination is significant for hepatomegaly without tenderness, testicular atrophy and gynecomastia. Skin examination shows a diffuse slate-gray hue slightly more pronounced on the face and neck. Joint examination shows mild swelling of the second and third metacarpophalangeal joints on the right hand. What is the recommended test for diagnosis ?
(1) Liver biopsy
(2) Serum iron studies, including transferrin saturation
(3) Urinary iron quantification in 24-h collection
(4) Genetic screen for HFE gene mutation (C282Y and H63D)
(5) Question not attempted

45. All of the following necessitate sending bacterial stool cultures in patients with diarrhoea for 2 days severe enough to keep them home from work except -
(1) Febrile Elderly
(2) Bloody stools
(3) Dehydration
(4) Recent lung transplantation
(5) Question not attempted

46. Which of the following markers is most useful for distinguishing between Inflammatory Bowel Disease (IBD) and Irritable Bowel Syndrome (IBS) ?
(1) C-reactive protein (CRP)
(2) Calprotectin
(3) Lactoferrin
(4) Anti-Saccharomyces Cerevisiae Antibodies (ASCA)
(5) Question not attempted

47. A 50-year-lady has fatigue and pruritus. Laboratory tests show elevated alkaline phosphatase and positive antimitochondrial antibodies. Liver biopsy reveals lymphocytic infiltration of the bile ducts with granuloma formation. What is the most appropriate treatment ?
(1) Ursodeoxycholic acid
(2) Prednisolone
(3) Methotrexate
(4) Azathioprine
(5) Question not attempted

48. Which of the following is considered a major criterion for the immunologic pathogenesis of an autoimmune disease ?
(1) Presence of autoantibodies or self-reactive T cells.
(2) Beneficial effect of immunosuppressive therapy.
(3) Absence of infection or other obvious cause.
(4) Association with other autoimmune conditions.
(5) Question not attempted

49. Which of the following combinations fulfills both clinical and immunologic criteria for the classification of SLE under the SLICC criteria ?
(1) Malar rash, anti-HAV IgM and eosinophilia
(2) Oral ulcers, thrombocytopenia and ANA above reference
(3) Chronic discoid lupus, asthma and high serum IgA
(4) Fever, arthritis and elevated ESR
(5) Question not attempted

50. Which of the following statements about JAK inhibitors used in RA is correct ?
(1) Tofacitinib selectively inhibits only JAK2 and is free of infection risk.
(2) Baricitinib is a JAK1 and JAK2 inhibitor with minimal JAK3 activity.
(3) Upadacitinib targets JAK3 and is most associated with neutropenia.
(4) JAK inhibitors are only used in combination with TNF inhibitors.
(5) Question not attempted

51. Which of the following is a primary vasculitis syndrome ?
(1) Lupus vasculitis
(2) Hepatitis C virus-associated cryoglobulinemic vasculitis
(3) Eosinophilic granulomatosis with polyangiitis (Churg-Strauss)
(4) Cancer-associated vasculitis
(5) Question not attempted

52. A 33-year-old female with systemic lupus erythematosus has arthralgia involving her upper limbs. She also has a butterfly facial rash and a rash on the trunk. Urine dipstick shows no Proteinuria or Haematuria. Her renal function is normal. Which one of the following medications is most appropriate ?
(1) Methotrexate
(2) Prednisolone
(3) Azathioprine
(4) Hydroxychloroquine
(5) Question not attempted

53. Which of the following is false about Buckley-Job Syndrome ?
(1) It is an autosomal dominant defect.
(2) It resulting from mutations in the gene STAT6 encoding a transcription factor, signal transducer and activator of transcription 6.
(3) It is characterized by eczema, skin and lung abscesses, hyperextensible joints and recurrent bone fractures.
(4) There is no definitive treatment for this syndrome.
(5) Question not attempted

54. A 45-year-old man has had hives daily for 8 weeks. A combination of antihistamines (types 1 and 2) at high doses plus prednisone 20 mg daily controls the hives. What is the next step ?
(1) Perform extensive testing to discover the offending food.
(2) Continue prednisone after documenting a discussion of possible side-effects.
(3) Explain the importance of adherence to prescribed medications.
(4) Discuss adding the biologic drug omalizumab.
(5) Question not attempted

55. A patient with early rheumatoid arthritis is being considered for placement on a DMARD. All of the imaging studies below could assess the level of disease activity and response to therapy except:
(1) 18FDG scan
(2) Radiographs of the hands and wrists
(3) Gray scale ultrasound with power Doppler
(4) MRI with gadolinium
(5) Question not attempted

56. Which of the following is an example of endocrine hypofunction due to autoimmune causes ?
(1) Graves' disease
(2) MEN2
(3) Cushing's syndrome
(4) Hashimoto's thyroiditis
(5) Question not attempted

57. Which of the following medications has no role in the treatment of the thyrotoxic phase of subacute thyroiditis ?
(1) β-blockers
(2) NSAIDs
(3) Prednisone
(4) Antithyroid drugs (e.g., methimazole)
(5) Question not attempted

58. Which of the following is the preferred treatment for a man with severe male factor infertility (sperm count <10 million/mL, 10% motility) ?
(1) Expectant management only.
(2) Intrauterine insemination with clomiphene.
(3) IVF with Intracytoplasmic Sperm Injection (ICSI).
(4) Pulsatile GnRH therapy.
(5) Question not attempted

59. A 25-year-old male presents with true glandular breast enlargement >4 cm, breast tenderness and small testes. There is no history of drug use or liver disease. Hormonal evaluation shows :
- Normal testosterone (T)
- Increased estradiol ($E_2$)
- Altered $E_2$/T ratio

What is the most likely underlying mechanism ?
(1) Increased aromatization of androgens
(2) hCG-secreting tumor
(3) Androgen deficiency syndrome
(4) Klinefelter syndrome
(5) Question not attempted

60. A 34-year-old woman presents to your clinic with a variety of complaints that have been worsening over the past year or so. She notes fatigue, amenorrhea and weight gain. She states that her primary physician diagnosed her with hypothyroidism several months ago and she has been faithfully taking thyroid hormone replacement. Her Thyroid-Stimulating Hormone (TSH) has been in the normal range over the last two laboratory checks. When her symptoms did not improve on thyroxin, she was sent to your clinic for further evaluation. A diagnosis of pan hypopituitarism is considered. All of the following are consistent with normal pituitary function except -
(1) Basal elevation of Follicle-Stimulating Hormone (FSH) and Luteinizing Hormone (LH) in a post-menopausal woman.
(2) Elevation of aldosterone after infusion of cosyntropin.
(3) Elevation of growth hormone after ingestion of a glucose load.
(4) Elevation of cortisol after injection of regular insulin.
(5) Question not attempted

61. After a water deprivation test, a patient increases their urine osmolality from 350 to 375 mOsm/kg $H_2O$ following administration of desmopressin (7% increase). What is the most likely diagnosis ?
(1) Primary polydipsia
(2) Nephrogenic diabetes insipidus
(3) Partial hypothalamic diabetes insipidus
(4) Osmoreceptor dysfunction
(5) Question not attempted

62. A 22-year-old man presents to his primary care physician with decreased libido and loss of morning erections. He had a recent low-impact fracture of his right tibia. His height was 185 cm and weight was 100 kg. Laboratory tests included a serum testosterone of 96 ng/dL on a sample obtained at 4:00 pm and serum LH of 1.0 mIU/mL. Which of the following information is not necessary in the evaluation of this patient ?
(1) DEXA scan of the hip and spine
(2) Karyotype to evaluate for Klinefelter syndrome
(3) Serum prolactin level
(4) Repeat serum testosterone obtained between 7:00 am and 10:00 am
(5) Question not attempted

63. Which of the following is the most sensitive test for diagnosing acromegaly ?
(1) Random growth hormone level.
(2) Serum IGF-1 level.
(3) Oral glucose tolerance test with growth hormone measurement.
(4) MRI of the pituitary.
(5) Question not attempted

64. According to ethnic-specific cutoffs, which of the following waist circumference values indicates increased risk in South Asian (Indian) men ?
(1) 100 cm (2) 94 cm
(3) 90 cm (4) 85 cm
(5) Question not attempted

65. Which of the following is a GLP-1 receptor agonist associated with weight loss and a reduction in cardiovascular events, but is contraindicated in patients with medullary thyroid carcinoma ?
(1) Sitagliptin
(2) Canagliflozin
(3) Dulaglutide
(4) Glipizide
(5) Question not attempted

66. Which of the following statements is true regarding the management of albuminuria and declining kidney function in patients with diabetes ?
(1) ACE inhibitors and ARBs should be used together to maximize albuminuria reduction.
(2) Blood pressure targets for diabetic patients with increased cardiovascular risk should ideally be <150/90 mmHg.
(3) SGLT-2 inhibitors are contraindicated in all patients with chronic kidney disease due to risk of ketoacidosis.
(4) Improved glycemic control, ACE inhibitors or ARBs, blood pressure control and SGLT-2 inhibitors (in T2DM) are all part of standard management.
(5) Question not attempted

67. The Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial of intensive glucose lowering in diabetic patients at high risk of cardiovascular disease was stopped prematurely. Which of the following is one of the main messages from the trial ?
(1) Intensive glucose lowering increases rate of mortality
(2) Intensive glucose lowering increases risk of myocardial infarction
(3) Intensive glucose lowering reduces hospitalization for heart failure
(4) Intensive glucose lowering was achieved with no increased risk of hypoglycaemia
(5) Question not attempted

68. What is the only glycogen storage disease that affects both the liver and the muscle ?
(1) Type Ia glycogen storage disease
(2) Type III glycogen storage disease
(3) Type VI glycogen storage disease
(4) Type IX glycogen storage disease
(5) Question not attempted

69. A 38-year-old woman has had type 1 diabetes mellitus since the age of 12 years. She has maintained excellent control (HbAlc 6.0%) with a basal/bolus injection regimen. She tests her glucose level four or five times a day and review of her meter download shows many glucose levels in the 30s and 40s. However, the patient is unconcerned because she has no symptoms at these times. On questioning, she admits to recently "spacing out" while driving, which led to a minor traffic accident. Regarding the etiology and treatment of hypoglycemia in this patient :
(1) She has adapted to low blood glucose concentration and no change in treatment is required.
(2) She has developed hypoglycemia unawareness and her target HbAlc should be increased.
(3) Strict avoidance of hypoglycemia is of little benefit in reversing hypoglycemia-associated autonomic failure.
(4) An excessive counter-regulatory hormone response to hypoglycemia may contribute to her lack of symptoms.
(5) Question not attempted

70. Tirzepatide is indicated in all the following conditions, except
(1) Type 1 diabetes
(2) Type 2 diabetes
(3) Obesity
(4) Obstructive Sleep Apnea (OSA).
(5) Question not attempted

71. A 55-year-old man presents with polyuria, nocturia and hypernatremia. His urine osmolality remains low after water deprivation but increases significantly after desmopressin administration. What is the most likely diagnosis ?
(1) Primary polydipsia
(2) Nephrogenic diabetes insipidus
(3) Central diabetes insipidus
(4) Syndrome of inappropriate ADH.
(5) Question not attempted

72. A 55-year-old man patient presents with an 8-month history of progressive difficulty in swallowing and dysarthria. He has lost 6 kg in weight. On examination he has a fasciculation on the tongue and a brisk jaw jerk. What is the likely diagnosis ?
(1) Amyotrophic lateral sclerosis
(2) Subacute combined degeneration of the cord
(3) Senile dementia
(4) Multiple sclerosis
(5) Question not attempted

73. Which of the following is false about Nephrogenic Systemic Fibrosis (NSF) ?
(1) The incidence of NSF in patients with severe renal dysfunction (GFR<30) varies from 0.19-4%
(2) The onset of NSF has been reported between 5- and 75-days following exposure
(3) The risk of NSF among patients exposed to standard or lower doses of Group 1 gadolinium agents (non-macrocyclic agents) to be sufficiently low or possibly non-existent.
(4) The use of gadolinium in young children and infants is discouraged due to the unknown risks and their immature renal systems.
(5) Question not attempted

74. A 30-year-old woman has increasingly frequent headaches characterized by bilateral holocranial headache, photophobia, nausea and rare vomiting. The headaches occur 25 days each month and she is now using an acetaminophen/butalbital combination medication almost daily. The most likely diagnosis is :
(1) Chronic migraine
(2) Chronic migraine with medication overuse
(3) Chronic tension-type headache
(4) Chronic tension-type headache with medication overuse
(5) Question not attempted

75. A 65-year-old male presents with constant falls and fatigue. His symptoms have progressively worsened throughout the years. He reports feeling unstable when standing and has fallen 4 times in the past year. It takes him longer to perform certain activities of daily living and describes himself as feeling weak. The patient denies any illicit drug or alcohol use. He smokes 2 packs of cigarettes daily for the past 25 years. He denies night sweats or fever, but has lost 5 pounds over the course of 8 months. Medical history is significant for type 2 diabetes mellitus, hypertension and recently diagnosed depression. The patient appears apathetic, with mild patchy scaling on the eyebrows. A mild right-hand tremor is present at rest and tempered with voluntary movement. On gait testing, the patient has a stooped posture and takes shorter steps as he moves forward. When firmly pulling the patient by the shoulders, he falls back. Which of following best explains this patient's clinical presentation ?
(1) Cerebellar neuronal atrophy
(2) Alpha-synuclein deposition in nigrostriatal neurons
(3) Spontaneous neural depolarization in focal region of primary motor cortex
(4) Pharmacologically-induced dopaminergic antagonism
(5) Question not attempted

76. A 42-year-old man presents to the emergency department complaining of severe vertiginous dizziness associated with nausea. Which of the following examination findings is most consistent with a peripheral cause of vertigo ?
(1) Downbeat nystagmus
(2) Gaze-evoked nystagmus
(3) Rebound nystagmus
(4) Unidirectional horizontal nystagmus
(5) Question not attempted

77. All of the following are usually associated with absence seizures EXCEPT :
(1) Lip smacking
(2) Postictal confusion
(3) Rapid blinking
(4) Small amplitude clonic movements of the hands
(5) Question not attempted

78. A 74-year-old woman with a recently worsening tremor, presents in OPD. She notes that it predominantly affects her hands and is worse with action such as trying to eat. It is not present at rest. She has no other symptoms. On examination, her resting heart rate is 52 beats/min (she is an avid runner and physically fit) with normal vital signs otherwise. Which of the following is the best initial therapy ?
(1) Bilateral hand botulinum toxin injections
(2) L-dopa
(3) Primidone
(4) Propranolol
(5) Question not attempted

79. Which of the following is the target of the autoantibody found in 70% of patients with a clinical diagnosis of neuromyelitis optica ?
(1) Aquaporin-4
(2) Cyclic citrullinated peptides
(3) Double-stranded DNA
(4) tRNA synthetase
(5) Question not attempted

80. Substance P, which is released from primary afferent nociceptors, has all of the following biological activities, except :
(1) Chemoattractant for leukocytes.
(2) Degranulation of mast cells.
(3) Increase intracellular concentration of cyclic guanosine monophosphate.
(4) Increase the production and release of inflammatory mediators.
(5) Question not attempted

81. In what anatomical structural way is the olfactory system unique among the sensory systems ?
(1) Initial afferent projections bypass the thalamus and synapse directly with the primary olfactory cortex.
(2) The olfactory system's primary sensory neurons uniquely are chemoreceptors.
(3) Primary olfactory cortex is anatomically distant from the hippocampus and amygdala.
(4) The primary sensory neuron synapses directly with the olfactory cortex.
(5) Question not attempted

82. Which of the following statements regarding Parkinson disease is true ?
(1) Cigarette smoking reduces the risk of developing the disease.
(2) Older age at presentation is more likely to be associated to genetic predisposition.
(3) Parkinson disease has been identified as a monogenetic disorder related to mutations in the α-synuclein protein.
(4) The hallmark pathologic feature of Parkinson disease is presence of neurofibrillary tangle and tau protein in the substantia nigra pars compacta.
(5) Question not attempted

83. In approximately, what proportion of patients treated with donanemab was amyloid cleared at the 18-month time point, in the TRAILBLAZER-ALZ 2 study ?
(1) 20% (2) 50%
(3) 80% (4) 100%
(5) Question not attempted

84. A 33-year-old female presents with drooping of her eyelid that seem to occur while reading or watching television. This appears to get worse later in the day. She also reports that at times she sees "double". A few weeks ago, she was prescribed an antibiotic medication for a urinary tract infection. She does not recall the name of the antibiotic. On physical exam, bilateral ptosis, with the left affected more than the right is seen. Pupillary function intact. A glove is filled with ice and subsequently applied to the patient's eyelid. After two minutes, the patient's ptosis has improved. Which of the following is most likely to yield rapid symptom improvement ?
(1) Corticosteroids
(2) Plasma exchange
(3) Acetylcholinesterase inhibitor
(4) Thymectomy
(5) Question not attempted

85. A 65-year-old male presents with severe right-sided eye and facial pain, nausea, vomiting, coloured halos around lights and loss of visual acuity. His right eye is quite red and that pupil is dilated and fixed. Which of the following diagnostic tests would confirm the diagnosis ?
(1) CT of the head
(2) MRI of the head
(3) Tonometry
(4) Slit-lamp examination
(5) Question not attempted

86. A 50-year-old male complains of weakness and numbness in the hands for the last month. He describes paraesthesia in the thumb and the index and middle fingers. The symptoms are worse at night. He also describes decreased grip strength bilaterally. He works as a mechanical engineer. The patient denies fevers, chills or weight loss. The examination is notable for atrophy of the thenar eminences bilaterally and decreased sensation in median nerve distribution. All the following are causes of carpal tunnel syndrome, except
(1) Amyloidosis
(2) Chronic lymphocytic leukemia
(3) Hypothyroidism
(4) Rheumatoid arthritis
(5) Question not attempted

87. A 29-year-old African American woman presents with bilateral facial weakness. This symptom developed over the course of a few hours and has never happened before. Upon further questioning, the patient reports seeing her pulmonologist every 6 months to follow her lung function and seeing her ophthalmologist annually for an eye exam. Neurological exam is significant for the patient being unable to smile or raise her eyebrows. There is also an erythematous and tender nodule affecting the pretibial surfaces of both legs. Magnetic Resonance Imaging (MRI) of the brain shows leptomeningeal enhancement. Which of the following is most likely the diagnosis in this patient ?
(1) Neurosarcoidosis
(2) Lyme disease
(3) Guillain-Barre syndrome
(4) Myasthenia gravis
(5) Question not attempted

88. Which of the following oral iron preparations provides the highest elemental iron content per tablet ?
(1) Ferrous sulfate 325 mg
(2) Ferrous gluconate 325 mg
(3) Polysaccharide iron 150 mg
(4) Ferrous fumarate 325 mg
(5) Question not attempted

89. Which of the following is a known cause of pancytopenia with a hypocellular bone marrow ?
(1) Iron deficiency anemia.
(2) Acute promyelocytic leukemia.
(3) Acquired aplastic anemia.
(4) Vitamin B12 deficiency.
(5) Question not attempted

90. Which of the following syndromes is associated with myeloid neoplasms under germline predisposition with organ dysfunction ?
(1) Noonan syndrome
(2) ETV6 mutation
(3) CEBPA mutation
(4) Sickle cell disease
(5) Question not attempted

91. What is the target hemoglobin level for men with Polycythemia Vera to prevent thrombotic complications ?
(1) ≤120 g/L (2) ≤140 g/L
(3) ≤160 g/L (4) ≤100 g/L
(5) Question not attempted

92. A 50-year-old woman presents with Cushingoid facies and hyperpigmentation of the skin on her face. She smoked 20 cigarettes per year for 20 years. Her chest X-ray reveals a 3 cm mass in the right upper lobe. A CT guided needle biopsy of the lung lesion is performed. Which is the likely cytologic finding ?
(1) Squamous cell carcinoma
(2) Small cell (oat cell) carcinoma
(3) Large cell carcinoma
(4) Adenocarcinoma
(5) Question not attempted

93. Heterozygosity for Hemoglobin E :
(1) Is a rare form of unstable hemoglobinopathy.
(2) Is associated with lifelong, low-grade hemolysis.
(3) Is frequently associated with iron deficiency.
(4) Is of little if any clinical significance.
(5) Question not attempted

94. Which of the following is the primary function of ADAMTS13 ?
(1) Cleaving Fibrinogen
(2) Degrading von Willebrand factor multimers
(3) Activating Protein C
(4) Inhibiting thrombin
(5) Question not attempted

95. All of the following genetic mutations are associated with an increased risk of deep venous thrombosis EXCEPT :
(1) Factor V Leiden mutation
(2) Glycoprotein 1b platelet receptor
(3) Prothrombin 20210G
(4) Tissue plasminogen activator
(5) Question not attempted

96. Which of the following mutated genes does not lead to activation of the JAK-STAT signalling pathway ?
(1) JAK2 V617F (2) TET2
(3) CALR (4) MPL
(5) Question not attempted

97. You are asked to see a patient who had coronary bypass surgery 6 days ago. The patient has abruptly developed a cold right foot and his platelet count decreased from 350,000/μl yesterday to 155,000/μl today. He is afebrile and his only medication is subcutaneous heparin for Deep Vein Thrombosis (DVT) prophylaxis. You are suspicious that the patient may have heparin-induced thrombocytopenia. What should you recommend ?
(1) Discontinue heparin and start argatroban.
(2) Discontinue heparin and observe platelet trend.
(3) Discontinue heparin and start aspirin.
(4) Send heparin-PF4 Enzyme-Linked Immunosorbent Assay (ELISA) and base treatment on results.
(5) Question not attempted

98. A 58-year-old man is referred to you with endomyocardial biopsy-proven amyloidosis. The λ monoclonal protein in the serum is 60 mg/dL. The k/λ free light chain ratio is 0.01. You perform a bone marrow biopsy that shows 7% plasma cells. The serum troponin level is 0.08 ng/mL. The N-terminal pro-brain natriuretic peptide value is 7800 pg/mL. What is your recommendation ?
(1) Referral to a transplant centre for high-dose therapy.
(2) Referral for cardiac transplantation.
(3) Referral for conventional chemotherapy.
(4) Initiation of digoxin to prevent atrial fibrillation.
(5) Question not attempted

99. What is a likely treatment option for Barrett esophagus with high-grade dysplasia and no surrounding esophageal adenocarcinoma ?
(1) Neoadjuvant chemoradiation therapy
(2) Laser therapy
(3) Endoscopic mucosal resection (EMR)
(4) Endoscopic prosthetic stent
(5) Question not attempted

100. Which histologic subtype is most commonly seen in carcinoma of unknown primary ?
(1) Well to moderately differentiated adenocarcinoma
(2) Squamous cell cancer
(3) Poorly differentiated carcinoma
(4) Neuroendocrine
(5) Question not attempted

101. Which of the following drugs is approved for first-line treatment of metastatic non-small-cell lung cancer tumors expressing PD-L1 ?
(1) Nivolumab
(2) Atezolizumab
(3) Pembrolizumab
(4) Bevacizumab
(5) Question not attempted

**102.** Which mutation is present in more than 90% of patients with Waldenström's Macroglobulinemia (WM) ?
(1) CXCR4
(2) ARID 1A
(3) CD79B
(4) MYD88 L265P
(5) Question not attempted

**103.** Which monoclonal antibody targets CD22 in B-cell precursor Acute Lymphoblastic Leukemia (ALL) ?
(1) Rituximab
(2) Inotuzumab
(3) Blinatumomab
(4) Ofatumumab
(5) Question not attempted

**104.** After an envenomation, the time to symptom onset and clinical presentation can be quite variable depending on:
(1) The age of the patient.
(2) The anatomic location of the bite.
(3) The weight of the patient.
(4) All of these
(5) Question not attempted

**105.** There is typically a latency period of 1 to 2 weeks between high-dose whole-body radiation exposure and manifest sickness. This is because
(1) radiation damage repair occurs quite quickly.
(2) manifest sickness does not typically appear until typical cell turnover times of self-renewing tissues.
(3) it takes some time for the body's immune response to kick in.
(4) radiation damage repair occurs very slowly.
(5) Question not attempted

**106.** Which of the following is not a risk factor of altitude illness ?
(1) Rate of Ascent
(2) Prior history of high-altitude illness
(3) Lack of Physical Fitness
(4) Exertion
(5) Question not attempted

**107.** Ross syndrome, a rare disorder of thermoregulation, is characterized by which triad of clinical features ?
(1) Segmental anhidrosis, hyporeflexia and tonic pupil.
(2) Hyperhidrosis, hyperreflexia and miosis.
(3) Anhidrosis, spasticity and mydriasis.
(4) Flushing, ataxia and Argyll Robertson pupil.
(5) Question not attempted

**108.** The fetal origins of adult disease (FOAD) hypothesis suggests that low birth weight is linked to which of the following adult diseases ?
(1) Coronary artery disease
(2) Hypertension
(3) Obesity
(4) All of these
(5) Question not attempted

**109.** A 32-year-old chemical worker ingests a vial of methylmercury in a suicide attempt. She is admitted to the hospital, lavaged and begun on DMSA chelation. The development of which of the following symptoms would concern you the most in respect to her long-term outcome ?
(1) Hypertension and tachycardia
(2) Myalgias
(3) Prolonged QTc on ECG
(4) Visual field constriction and perioral numbness
(5) Question not attempted

**110.** Which of the following statements about Vitamin E is true ?
(1) High doses of Vitamin E (>800 mg/d) may reduce platelet aggregation.
(2) Vitamin E excess is related to increased risk of venous thrombosis.
(3) Peripheral neuropathy and a pigmented retinopathy is not seen in Vitamin E deficiency.
(4) Vitamin E doses <400 mg/d may increase mortality from any cause.
(5) Question not attempted

111. All of the following are predisposing factors for systemic lupus erythematosus EXCEPT :
(1) C1 esterase inhibitor deficiency
(2) Female sex
(3) HLA-DR alleles
(4) Smoking
(5) Question not attempted

112. What is the main contributor to the resting energy expenditure of an individual ?
(1) Adipose tissue
(2) Exercise level
(3) Lean body mass
(4) Resting heart rate
(5) Question not attempted

113. When a sprinter runs the 100-metre dash, what structure within the muscles is primarily being used ?
(1) Muscle spindles
(2) Golgi Tendon organs
(3) Fast Twitch fibers
(4) Slow Twitch fibers
(5) Question not attempted

114. Visualizing structure in gene expression levels and grouping asthma patients into distinct molecular clusters is an example of :
(1) Unsupervised learning
(2) Supervised learning
(3) Semi-supervised learning
(4) Reinforcement learning
(5) Question not attempted

115. To date, the only established clinical application of foetal-derived cell therapy has been in patients with which of the following ?
(1) Parkinson disease
(2) Myocardial infarction
(3) Heart failure
(4) Cartilage repair
(5) Question not attempted

116. Which of the following therapies has shown promise in reducing traumatic flashbacks by engaging the brain's visuospatial working memory ?
(1) Virtual Reality Exposure Therapy
(2) Cognitive Behavioral Therapy
(3) Playing the computer game Tetris
(4) Eye Movement Desensitization and Reprocessing
(5) Question not attempted

117. Which histone modification is typically associated with transcriptional activation of genes ?
(1) Histone methylation
(2) Histone ubiquitination
(3) Histone acetylation
(4) Histone phosphorylation
(5) Question not attempted

118. Clinical Marker Included in the Revised Cardiac Risk Index for non-cardiac surgical procedures is :
(1) History of Road traffic accident
(2) S3 gallop on cardiac auscultation
(3) Serum creatinine >2.4 mg/dL
(4) Treatment with oral hypoglycemic agents
(5) Question not attempted

119. In the context of adult pneumococcal vaccination, which of the following is the correct sequence and interval for administering PCV13 and PPSV23 to an immunocompetent adult aged 65 years and older who has not previously received these vaccines ?
(1) Administer PPSV23 first, followed by PCV13 after 6 months.
(2) Administer PCV13 first, followed by PPSV23 after 1 year.
(3) Administer PCV13 & PPSV23 simultaneously at different injection sites.
(4) Administer PCV13 first, followed by PPSV23 after 2 months.
(5) Question not attempted

120. One of the following drugs is not implicated in obesity :
(1) Clozapine (2) Paroxetine
(3) Amlodipine (4) Valproate
(5) Question not attempted

121. Which of the following is the component of MPOWER of Global Tobacco Epidemic Report 2023 ?
(1) Increasing taxation on tobacco.
(2) Teaching about harmful effects of tobacco in schools.
(3) Implementing universal health screening for early tobacco-related disease detection.
(4) Expanding access to healthcare facilities.
(5) Question not attempted

122. Which of the following is false of Edmonton Obesity Staging System (EOSS) ?
(1) Classifies individuals with obesity into five graded categories.
(2) It is a functional staging system.
(3) Based on their morbidity and health-risk profile along three domains – medical, functional, and mental.
(4) Staging is dependent of BMI.
(5) Question not attempted

123. The most common restrictive-malabsorptive bypass procedure is –
(1) Roux-en-Y gastric bypass
(2) Biliopancreatic diversion
(3) Biliopancreatic diversion with duodenal switch
(4) None of these
(5) Question not attempted

124. Which type of healthcare delivery system encourages physicians to see more patients but to provide fewer services ?
(1) Capitation
(2) Fee-for-service
(3) Fixed salary compensation
(4) Out-of-pocket
(5) Question not attempted

125. Heuristics are part of
(1) Diagnostic Refinement
(2) Bayes' Theorem
(3) Intuitive System
(4) Diagnostic Verification
(5) Question not attempted

126. A 36-year-old woman collapses in her house because of a cardiac arrest. Her husband calls 108 after discovering her unconscious. Paramedics take her to the hospital, where she is put on life support and ultimately diagnosed as being in a persistent vegetative state. The husband, appointed by the court as his wife's legal guardian, moves to petition to remove the feeding tube. The woman's parents oppose the movement. The woman has no living will. Who has the legal right to make end-of-life decisions in this case ?
(1) The husband, as he is the legal guardian.
(2) The parents, as they are next of kin.
(3) The state, as the woman lacked a living will.
(4) The physicians, as they are the ones who would actually terminate care.
(5) Question not attempted

127. Which of the following is true ?
(1) Telling patients that they have a terminal illness will result in poor psychiatric outcomes.
(2) Telling patients, they have a terminal illness has no impact on their desire for future treatment.
(3) Telling patients that they have terminal illnesses is associated with their choosing hospice more frequently.
(4) Telling patients that they have terminal illnesses is associated higher likelihood of choosing aggressive care at the end of life.
(5) Question not attempted

128. A physician is considering allocating a limited number of ICU beds during a pandemic. What ethical principle should guide the decision ?
(1) Autonomy (2) Justice
(3) Fidelity (4) Beneficence
(5) Question not attempted

129. What is the most common cause of primary lung abscesses ?
(1) Viral aspiration from nasopharynx
(2) Anaerobic bacteria from gingival crevices
(3) Aerobic gram-negative rods from the skin
(4) Fungal spores from the environment
(5) Question not attempted

130. Which type of bite represents a potential medical emergency in an asplenic patient ?
(1) Cat bite (2) Dog bite
(3) Fish bite (4) Human bite
(5) Question not attempted

131. Ecthyma gangrenous is most commonly caused by
(1) *Pseudomonas aeruginosa*
(2) *Enterococcus faecalis*
(3) *Streptococcus pyogenes*
(4) *Escherichia coli*
(5) Question not attempted

132. Cellular Adaptive Immune System does not include
(1) CD8+
(2) CD4+
(3) $\Gamma\delta$ (alternative TCRs)
(4) Toll-like and Nod receptors
(5) Question not attempted

133. Bathing of intensive care unit (ICU) patients with chlorhexidine on a daily basis has been associated with which of the following outcomes ?
(1) Reduction in MRSA-positive clinical cultures attributable to the ICU.
(2) Increase in overall blood stream infection rates in ICU patients.
(3) Contamination of central lines and catheter sites.
(4) Increase in environmental contamination with VRE.
(5) Question not attempted

134. Granulomatous infantiseptica casued by
(1) *Bartonella* (2) *Brucella*
(3) *Legionella* (4) *Listeria*
(5) Question not attempted

135. Which of the following skin manifestations is characteristic of Purpura fulminans in severe meningococcal septicemia ?
(1) Maculopapular rash
(2) Vesicular rash
(3) Large purpuric lesions
(4) Erythema nodosum
(5) Question not attempted

136. In the shorter oral MDR-TB regimen, Bedaquiline (Bdq) is used for a total duration of :
(1) 4 months (2) 6 months
(3) 9 months (4) 11 months
(5) Question not attempted

137. A 32-year-old US traveller to Goa, India, for vacation develops diarrhoea and fever on the fifth day at the resort. After 36 hours of diarrhoea, stools begin to contain bright red blood. What will be the best course of action in this patient ?
(1) Oral ciprofloxacin, 500 mg twice a day for 3 days.
(2) Azithromycin, 1000-mg single dose.
(3) Levofloxacin, 500 mg once a day for 3 days.
(4) Metronidazole, 500 mg three times a day for 10 days.
(5) Question not attempted

138. In an HIV-infected patient, Isospora belli infection is different from Cryptosporidium infection in which of the following ways ?

(1) Isospora causes a more fulminant diarrheal syndrome leading to rapid dehydration and even death in the absence of rapid rehydration.

(2) Isospora infection may cause biliary tract disease, whereas Cryptosporidiosis is strictly limited to the lumen of the small and large bowel.

(3) Isospora is more likely to infect immunocompetent hosts than Cryptosporidium.

(4) Isospora is less challenging to treat and generally responds well to trimethoprim/ sulfamethoxazole treatment.

(5) Question not attempted

139. Which of the following statements is TRUE regarding the treatment of Herpes Simplex Virus (HSV) infections ?

(1) Ganciclovir is the drug of choice for HSV encephalitis due to its superior CNS penetration.

(2) Acyclovir must be phosphorylated by host cell enzymes to become active.

(3) Valacyclovir has better oral bioavailability than acyclovir.

(4) Famciclovir is not effective against HSV-2 infections.

(5) Question not attempted

140. Which of the following statements about severe dengue is TRUE ?

(1) Severe dengue is only caused by primary infection with any one dengue virus serotype.

(2) Reinfection with a different dengue serotype may lead to severe dengue due to immune enhancement.

(3) Yellow fever mosquitoes (Culex species) are the primary vector for dengue virus transmission.

(4) The typical sign of severe dengue is a high white blood cell count and increased platelet levels.

(5) Question not attempted

141. Which of the following statements about trematodes is NOT true ?

(1) All adult trematodes are hermaphroditic.

(2) Blood flukes are bisexual.

(3) Schistosome eggs can be passed in urine or feces depending on the species.

(4) Cercariae of some trematodes penetrate the skin, while others are ingested.

(5) Question not attempted

142. Which of the following bacteria are a common cause of community-acquired pneumonia in hospitalized patients but not in patients treated as outpatients ?

(1) Chlamydia pneumoniae

(2) Haemophilus influenzae

(3) Legionella species

(4) Mycoplasma pneumoniae

(5) Question not attempted

143. Which of the following cellular reservoirs presents the greatest challenge to HIV eradication efforts ?

(1) Memory CD4+ T cells

(2) Activated CD4+ T cells

(3) Natural Killer cells

(4) Dendritic cells.

(5) Question not attempted

144. Which of the following is false regarding azole antifungal agents ?
(1) Dose related nausea and abdominal discomfort is the most common adverse drug reaction.
(2) Itraconazole is frequently hepatotoxic.
(3) Dividing the dose and administering the drug twice daily can improve tolerance and raise blood levels.
(4) A negative inotropic effect is rarely seen, manifested as subacute onset of cardiac failure.
(5) Question not attempted

145. In a 25-year-old adult with bacterial meningitis likely due to *Streptococcus pneumoniae* in a region with high prevalence of resistant strains, which of the following is the most appropriate initial empirical antibiotic therapy ?
(1) Vancomycin + Ceftriaxone
(2) Ampicillin + Gentamicin
(3) Meropenem alone
(4) Penicillin G + Rifampicin
(5) Question not attempted

146. A 19-year-old female has a several days history of urethral discharge. Mid-stream urine is negative. A swab was sent but no organisms were grown. Which one of the following should be prescribed ?
(1) Penicillin V
(2) Trimethoprim
(3) Doxycycline
(4) Metronidazole
(5) Question not attempted

147. Epigenetics is :
(1) The study of alterations in chromatin and histone proteins and methylation of DNA sequences that influence gene expression.
(2) The study of the entire library of proteins made in a cell or organ and the complex relationship of these proteins to disease.
(3) Genomic study of environmental species that have the potential to influence human biology directly or indirectly.
(4) None of these
(5) Question not attempted

148. Management of a non-ST elevation acute coronary syndrome (ACS) in women should differ from men in which of the following ways ?
(1) Non-invasive testing is not recommended in women.
(2) Medical management is preferred over revascularization in women but not in men.
(3) β-Blockers should be avoided because of increased risk for congestive heart failure.
(4) Lipid management goals are low-density lipoprotein cholesterol levels of less than 120 mg/dL.
(5) Question not attempted

149. Muscle aging is characterized by the following features :
(1) Loss of muscle fat infiltration
(2) Loss of contractile force
(3) Increase of muscle innervation
(4) All of these
(5) Question not attempted

150. Which of the following is NOT one of the 5M's of geriatrics ?
(1) Mobility (2) Mentation
(3) Medications (4) Metabolism
(5) Question not attempted

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