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Question Booklet No.

QUESTION BOOKLET

Subject Name : Medical

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(Enter your Roll number in the above space)

Booklet Series



Time Allowed : 2 Hours

Maximum Marks : 100

INSTRUCTIONS FOR CANDIDATES

- 1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS QUESTION BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR QUESTIONS ETC. IF SO, GET IT REPLACED BY A COMPLETE QUESTION BOOKLET.
- 2. Please note that it is your responsibility to encode and fill in the Roll Number and Question Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the OMR Answer Sheet liable for rejection.
- 3. This Question Booklet contains **100** questions. Each question is printed in **English** only. Each question comprises of five responses (answers). You will select the response which you want to mark on the OMR Answer 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 question.
- 4. You will have to mark all your responses **ONLY** on the separate OMR Answer Sheet provided. See Instructions at the backside of the OMR Answer Sheet.
- 5. **All** questions carry equal marks.
- 6. Before you proceed to mark in the OMR Answer Sheet the responses to various questions in the Question Booklet, you will have to fill in some particulars in the OMR Answer Sheet as per Instructions mentioned on the OMR Answer Sheet.
- 7. After you have completed filling in all your responses on the OMR Answer Sheet and the examination has concluded, you should hand over to the Invigilator **only the OMR Answer Sheet**. You are permitted to take away with you the **Question Booklet**, along with candidate's copy of the **OMR Answer Sheet**.
- 8. Sheets for rough work are appended in the Question Booklet at the end.
- 9. **Penalty for wrong answers :**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE AS UNDER :
 - (i) There are five alternatives for the answer to every question. For each question, for which a wrong answer has been given by you, **0.25 mark** assigned to that question will be deducted as penalty.
 - (ii) If you give 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 to that question.
 - (iii) As a candidate, if you decide not to attempt a question, then you will have to darken the corresponding circle [E] in the OMR Answer Sheet as shown in the diagram below.

| S. No. | Response |
|--------|---------------------|
| 1 | (A) (B) (C) (D) (E) |

PLEASE NOTE CAREFULLY : RESPONSE FOR ALL QUESTIONS IS MANDATORY

- (iv) Failure to mark/darken the circle [E] in Un-attempted questions will attract penalty and one fourth mark or **0.25** mark for each [E] left blank will be deducted.

DO NOT OPEN THE SEAL UNTIL YOU ARE INSTRUCTED TO DO SO

1. Which of the following blood vessels is responsible for carrying oxygenated blood from the lungs to the left atrium of the heart?
 - [A] Pulmonary artery
 - [B] Pulmonary vein
 - [C] Aorta
 - [D] Superior vena cava
 - [E] Un-attempted
2. Which of the following statements accurately describes generic drugs?
 - [A] Generic drugs have the same brand name as the original innovator drug
 - [B] Generic drugs have different chemical structures compared to the innovator drug
 - [C] Generic drugs are typically more expensive than the innovator drug
 - [D] Generic drugs have the same active ingredients and therapeutic effects as the innovator drug
 - [E] Un-attempted
3. Breast tumors may be positive for estrogen receptors (ER+), progesterone receptors (PR+) or both (ER/PR+). What percentage of breast cancer cases are estimated to be hormone receptor-positive (ER+ or ER/PR+) and what is the primary treatment modality for localized breast cancer?
 - [A] 10-20%; Radiation therapy
 - [B] 30-40%; Hormonal therapy
 - [C] 50-60%; Chemotherapy
 - [D] 70-80%; Surgery
 - [E] Un-attempted
4. What is the legal limit of blood alcohol concentration as per traffic rules in India?
 - [A] 40 mg%
 - [B] 50 mg%
 - [C] 30 mg%
 - [D] 20 mg%
 - [E] Un-attempted
5. A 60-year old male with a history of hypertension and heart failure presents to the clinic complaining of worsening symptoms of dyspnea and fatigue. His blood pressure is elevated and he has peripheral edema. An echocardiogram reveals decreased Left Ventricular Ejection Fraction (LVEF) and dilated ventricles. Which of the following pharmacological agents is the most appropriate choice for this patient?
 - [A] Beta-blocker
 - [B] Calcium channel blocker
 - [C] Angiotensin-Converting Enzyme (ACE) inhibitor
 - [D] Digitalis
 - [E] Un-attempted
6. A 28-year old male presents with a persistent and severe depressed mood, loss of interest or pleasure in almost all activities, significant weight loss, insomnia, fatigue and feelings of worthlessness. The symptoms have been present for the past six months and have significantly impaired his daily functioning. Which of the following pharmacological agents is the most appropriate first-line treatment for this patient?
 - [A] Selective Serotonin Reuptake Inhibitor (SSRI)
 - [B] Tricyclic Antidepressant (TCA)
 - [C] Monoamine Oxidase Inhibitor (MAOI)
 - [D] Atypical antipsychotic
 - [E] Un-attempted

7. Which of the following statements accurately describes the concept of drug potency?
- [A] Drug potency is determined by the rate of drug absorption and distribution
 - [B] Drug potency is a measure of the maximum effect a drug can produce
 - [C] Drug potency refers to the ability of a drug to bind to its target receptor
 - [D] Drug potency is a measure of the dose required to produce a specific effect
 - [E] Un-attempted
8. Which of the following is **not** a function of the Parathyroid Hormone (PTH)?
- [A] Regulation of calcium levels in the blood
 - [B] Promotion of bone resorption
 - [C] Enhancement of intestinal absorption of calcium
 - [D] Inhibition of renal reabsorption of calcium
 - [E] Un-attempted
9. Which of the following is a low-potency corticosteroid used topically in the treatment of atopic dermatitis?
- [A] Clobetasol propionate
 - [B] Fluocinonide
 - [C] Triamcinolone acetonide
 - [D] Hydrocortisone
 - [E] Un-attempted
10. A 19-month old girl with diarrhea for the past 3 months is brought to the out-patient department. She passes soft but formed stool in the morning and then 7-8 of increasingly soft-to-watery stools. Occasionally, there is undigested food in her stools. There are no nocturnal stools, fever or weight loss. Examination is unremarkable. Her investigation : hemoglobin-12.4 mg/dL; tTG-IgA negative and a normal stool examination. What is the likely diagnosis?
- [A] Toddler's diarrhea
 - [B] Cow milk protein allergy
 - [C] Celiac Disease
 - [D] Giardiasis
 - [E] Un-attempted
11. Which of the following biochemical changes is common to both aging cartilage and osteoarthritic (OA) cartilage?
- [A] Increased water content
 - [B] Decreased collagen content and decreased modulus of elasticity
 - [C] Decreased proteoglycan content
 - [D] Increased chondroitin sulfate concentration
 - [E] Un-attempted
12. Which of the following can be lifesaving in angioneurotic edema?
- [A] Antihistamine
 - [B] Hydrocortisone
 - [C] Mineralocorticoid
 - [D] Adrenaline
 - [E] Un-attempted
13. What is the long-term impact of cholecystectomy on digestion?
- [A] Increased absorption of nutrients
 - [B] Decreased absorption of nutrients
 - [C] No significant impact on digestion
 - [D] Increased risk of food allergies
 - [E] Un-attempted

14. A 45-year old female patient presents with symptoms of fatigue, weakness and increased heart rate. Physical examination reveals a palpable thyroid gland and laboratory tests indicate elevated levels of serum thyroxine (T4) and triiodothyronine (T3) along with decreased levels of thyroid-stimulating hormone (TSH). Which of the following conditions is most likely responsible for these findings?
- [A] Primary hyperthyroidism
[B] Secondary hyperthyroidism
[C] Primary hypothyroidism
[D] Secondary hypothyroidism
[E] Un-attempted
15. Which of the following anti-asthma medications has both a rapid onset and long duration of action (up to 12 hours)?
- [A] Budesonide
[B] Formoterol
[C] Aminophylline
[D] Salbutamol
[E] Un-attempted
16. An extra finger in humans is rare but is due to a dominant gene. When one parent is normal and the other parent has an extra finger but is heterozygous for the trait, what is the probability that the first child will be normal?
- [A] 0%
[B] 25%
[C] 50%
[D] 75%
[E] Un-attempted
17. A mutation in DNA gyrase is likely to result in resistance to which one of the following antibiotics?
- [A] Amphotericin B
[B] Ciprofloxacin
[C] Penicillin
[D] Rifampin
[E] Un-attempted
18. Abnormal vision, including photopsia or flashes of light, photophobia and color changes are seen with which of the following anti-fungal drugs?
- [A] Voriconazole
[B] Amphotericin-B (conventional)
[C] Amphotericin-B (liposomal)
[D] Caspofungin
[E] Un-attempted
19. White lathery froth is seen in death due to
- [A] drowning
[B] hanging
[C] organophosphorus poisoning
[D] mineral acid poisoning
[E] Un-attempted
20. The topical prostaglandins are increasingly chosen as initial monotherapy in open-angle glaucoma and have been consistently shown to be effective. Which advantage do they have over topical beta blockers?
- [A] Once weekly dosing
[B] No risk of systemic side effects
[C] Do not cause local irritation (itching and dryness)
[D] Cheaper
[E] Un-attempted
21. Which of the following bones forms the forehead and the superior part of the orbit?
- [A] Maxilla
[B] Frontal bone
[C] Occipital bone
[D] Temporal bone
[E] Un-attempted

22. 'Wearing off' phenomenon in Parkinson's Disease (PD) is characterized by the reemergence of Parkinsonian symptoms as the effect of levodopa diminishes near the end of the dose interval, usually three to four hours after a dose. It is treated initially with adjustments in levodopa therapy, but if levodopa adjustments are not adequate, an adjunctive therapy (e.g., dopamine agonist, catechol-O-methyl transferase inhibitor, monoamine oxidase type B inhibitor) is added. The main limiting factor to all adjunctive medications is that they may cause or worsen which of the following?

- (a) Dyskinesia
- (b) Orthostasis
- (c) Akinesia
- (d) Tremor
- [A] Only (a) and (b)
- [B] (a), (b), (c), (d)
- [C] Only (a), (c) and (d)
- [D] Only (b)
- [E] Un-attempted

23. Which of the following factors is most likely to have a significant impact on drug clearance?

- [A] Protein binding
- [B] Volume of distribution
- [C] Half-life
- [D] Hepatic enzyme activity
- [E] Un-attempted

24. If pharmacotherapy is considered necessary, initial pharmacotherapy for Generalized Anxiety Disorder in adults should be with

- [A] non-benzodiazepine like buspirone
- [B] benzodiazepine like lorazepam
- [C] serotonergic reuptake inhibitor like paroxetine
- [D] antihistamine like hydroxyzine
- [E] Un-attempted

25. The complications mentioned-pneumonia (the most common complication), parotitis, bronchitis, sinusitis, myocarditis, pericarditis, encephalitis, myositis and multi organ failure-typically are seen with which of the following?

- [A] Interferon therapy
- [B] Influenza virus infection
- [C] During treatment of syphilis
- [D] Lepra reaction
- [E] Un-attempted

26. Systemic therapies such as retinoids, methotrexate, biologic agents like anti-TNF agents (etanercept), anti-IL 12/IL-23 antibody (ustekinumab); anti-IL-17 antibody (secukinumab); and the anti-IL-23/IL-39 antibody (guselkumab), are used in the treatment of

- [A] systemic lupus erythematosus
- [B] severe psoriasis
- [C] dermatomyositis
- [D] Stevens-Johnson syndrome
- [E] Un-attempted

27. In neurons, the rapid rise in potential and depolarization is initiated by the opening of sodium ion channels within the plasma membrane. The subsequent return to resting potential and repolarization is mediated by the opening of potassium ion channels. To reestablish the appropriate balance of ions

- [A] an ATP-driven pump (Na/K-ATPase) induces the movement of sodium ions out of the cell and potassium ions into the cell
- [B] an ATP-driven pump (Na/K-ATPase) induces the movement of potassium ions out of the cell and sodium ions into the cell
- [C] a sodium-proton exchanger (Na^+/H^+ exchanger) induces the movement of sodium ions out of the cell and potassium ions into the cell
- [D] various cotransporters are available which are capable of moving ions either up or down concentration gradients at the rate of 1000 to 100000 molecules per second
- [E] Un-attempted

28. Which of the following is **not** an adverse effect of loop diuretics?
 [A] Hypokalemia
 [B] Ototoxicity
 [C] Hypersensitivity reactions, usually manifested as a rash or rarely acute interstitial nephritis
 [D] Metabolic acidosis
 [E] Un-attempted
29. Most clinicians suggest methotrexate as the DMARD of choice for the initial treatment of patients with active Rheumatoid Arthritis (RA). It is well-established that methotrexate treatment requires meticulous monitoring for all of the following toxicities, *except*
 [A] bone marrow toxicity
 [B] liver toxicity
 [C] kidney toxicity
 [D] lung toxicity
 [E] Un-attempted
30. Fill in the blanks :
 The final phase of erythroid development involves the maturation of the _____ into erythrocytes and during this stage the erythrocyte acquires its _____ shape.
 [A] reticulocyte; convex
 [B] proerythroblast; biconcave
 [C] Colony Forming Unit-Erythroid (CFU-E); convex
 [D] reticulocyte; biconcave
 [E] Un-attempted
31. A 32-year old female patient with a diagnosis of relapsing-remitting multiple sclerosis presents with an increase in the frequency and severity of relapses. Magnetic Resonance Imaging reveals new active lesions. Which of the following pharmacological agents is the most effective first-line disease-modifying therapy for this patient?
 [A] Interferon beta
 [B] Glatiramer acetate
 [C] Natalizumab
 [D] Fingolimod
 [E] Un-attempted
32. Fill in the blank with the most suitable response :
 It has been seen that any of the topical antiviral agents (trifluridine, acyclovir, ganciclovir) were equally effective and resulted in healing of 90 percent of herpes simplex keratitis within _____ weeks.
 [A] two
 [B] four
 [C] six
 [D] eight
 [E] Un-attempted
33. Which of the following is commonly used for sedation of the agitated adult Intensive Care Unit (ICU) patient where it is particularly useful when rapid sedation and rapid awakening is desirable (e.g., patients who require frequent neurologic examinations) because it has a short duration of effect?
 [A] Morphine sulfate
 [B] Haloperidol
 [C] Propofol
 [D] Lorazepam
 [E] Un-attempted
34. Can appendicitis resolve on its own without treatment?
 [A] Yes, in most cases
 [B] No, it always requires surgery
 [C] It depends on the severity of the inflammation
 [D] Only if treated with antibiotics
 [E] Un-attempted
35. Which coronary artery carries 80% of the flow to the heart muscle?
 [A] Left anterior descending artery
 [B] Circumflex coronary artery
 [C] Left main coronary artery
 [D] Right coronary artery
 [E] Un-attempted

36. Which of the following is used subcutaneously in the treatment of osteoporosis in postmenopausal females who are at high risk for fracture?
- [A] Alendronate
[B] Teriparatide
[C] Raloxifene
[D] Ibandronate
[E] Un-attempted
37. Regarding Acute Otitis Media (AOM) in children,
- [A] bulging of the tympanic membrane is more likely to be associated with a bacterial pathogen in the middle ear
[B] young children can easily localize pain to the ear
[C] perforation of the tympanic membrane with acute purulent otorrhea does not occur
[D] children with severe/marked bulging of the tympanic membrane are unlikely to benefit from antibiotic therapy
[E] Un-attempted
38. Papillary necrosis can be seen in all, *except*
- [A] analgesic nephropathy
[B] diabetic nephropathy
[C] sickle cell nephropathy
[D] hypertensive nephropathy
[E] Un-attempted
39. The most common causes of advanced kidney disease resulting in requirement for renal replacement therapy are
- (a) Diabetes mellitus
(b) Renal tubular acidosis
(c) Medullary cystic kidney disease
(d) Glomerulonephritis
(e) Hypertension
(f) Renal vascular disease
- [A] (a), (b), (c), (d), (e) and (f)
[B] Only (a), (b) and (f)
[C] Only (a), (d), (e) and (f)
[D] Only (b), (c), (d), (e) and (f)
[E] Un-attempted
40. Hand, foot and mouth disease is caused by
- [A] Coxsackievirus A16
[B] Parvovirus B19
[C] Human herpes virus 6
[D] Epstein-Barr virus 15
[E] Un-attempted
41. A good treatment option for patients with marked disability from frequent migraine, who do not respond to or cannot tolerate other first-line options (beta-blockers, antidepressants), is
- [A] opioids
[B] calcitonin gene-related peptide antagonists
[C] surgical removal of muscle or nerve tissue from headache 'trigger sites'
[D] vagal nerve resection
[E] Un-attempted
42. Which is the first permanent tooth to erupt?
- [A] First premolar
[B] First molar
[C] First incisor
[D] Second premolar
[E] Un-attempted
43. It is well-known that the bioavailability of itraconazole is highly variable; the capsule formulation has a bioavailability of approximately 55 percent, whereas the bioavailability of the itraconazole solution is 30 percent greater than with capsules. From this, it follows that
- [A] Itraconazole formulations cannot be used interchangeably
[B] the solution should not be preferred due to high bioavailability
[C] Itraconazole capsules are contraindicated in patients on solution
[D] Itraconazole should not be used in patients requiring antifungal therapy
[E] Un-attempted

44. A 14-year old girl suddenly collapsed during a dance class. Despite resuscitative efforts, she was pronounced dead. On autopsy, the heart weighed 700 grams and asymmetric septal hypertrophy was found. Which of the following findings will you expect on microscopy?
- [A] Myofibril disarray
 - [B] Non-caseating granulomatous inflammation
 - [C] Patchy amorphous eosinophilic infiltrates
 - [D] Regional areas of interstitial fibrosis
 - [E] Un-attempted
45. A 45-year old male presents to the emergency department with severe chest pain. An Electrocardiogram (ECG) reveals ST-segment elevation in leads V1 to V4. The patient is diagnosed with Acute Myocardial Infarction (AMI). Which of the following physiological changes is most likely to occur during an AMI?
- [A] Increased sympathetic activity leading to decreased heart rate
 - [B] Decreased parasympathetic activity leading to decreased heart rate
 - [C] Decreased cardiac output due to decreased preload
 - [D] Increased venous return due to decreased peripheral resistance
 - [E] Un-attempted
46. Which of the following is an example of a cohort study?
- [A] A study that compares the safety and efficacy of two different medications in patients with a particular disease
 - [B] A study that surveys individuals about their dietary habits and tracks their cancer development over 10 years
 - [C] A study that analyzes existing medical records to identify risk factors for heart disease
 - [D] A study that collects blood samples from a population to measure cholesterol levels
 - [E] Un-attempted
47. In the past decades, for the rapid identification of *Mycobacterium tuberculosis* in clinical specimens of pulmonary and extrapulmonary TB cases, some methods have been developed, which are based on
- [A] nucleic acid amplification
 - [B] liquid culture system and molecular line probe
 - [C] acid-fast microscopy
 - [D] drug susceptibility testing
 - [E] Un-attempted
48. The MAC value is the concentration of an inhalation agent in the alveoli required to prevent movement in response to a noxious stimulus in what percent of subjects after allowing sufficient time for uptake and redistribution of the inhalation agent to reach a steady state?
- [A] 10
 - [B] 25
 - [C] 50
 - [D] 100
 - [E] Un-attempted
49. The membrane of Synaptic Vesicles (SVs) in motor neuron has which protein(s) essential for fusion and docking of SVs at active zones?
- [A] Synaptotagmin and synaptobrevin
 - [B] Syntaxin and synaptosomal associated protein
 - [C] Voltage-gated calcium (Ca) channels
 - [D] Myelin
 - [E] Un-attempted

50. Which of the following is the recommended initial therapy for most patients with newly diagnosed type-2 diabetes due to its advantages of glycemic efficacy, promotion of modest weight loss, very low incidence of hypoglycemia, general tolerability and favorable cost?
- [A] Glibenclamide
 - [B] Metformin
 - [C] Glucagon-like peptide 1 (GLP-1) receptor agonist
 - [D] Sodium-glucose cotransporter 2 (SGLT2) inhibitor
 - [E] Un-attempted
51. Medications used in the prevention of motion sickness are all of the following, *except*
- [A] Scopolamine (transdermal), 1 mg transdermal patch, applied behind the ear at least four hours (preferably 12 hours) before exposure to motion
 - [B] Dimenhydrinate 25 mg orally every six to eight hours as needed, with the first dose taken 30 to 60 minutes prior to the anticipated travel
 - [C] Meclizine 25 mg orally every six to eight hours as needed, with the first dose taken 30 to 60 minutes prior to the anticipated travel
 - [D] Fexofenadine 120 mg orally every twelve hours as needed, with the first dose taken 2 hours prior to the anticipated travel
 - [E] Un-attempted
52. Poisoning with all of the following causes metabolic acidosis, *except*
- [A] methanol
 - [B] ethylene glycol
 - [C] fludrocortisone
 - [D] aspirin
 - [E] Un-attempted
53. The ovarian carcinoma related with ovarian and pelvic endometriosis is
- [A] clear cell carcinoma
 - [B] serous adenocarcinoma
 - [C] mucinous adenocarcinoma
 - [D] Brenner tumor
 - [E] Un-attempted
54. How many cranial nerves innervate motor, sensory and autonomic structures are there in the eyes?
- [A] Three
 - [B] Four
 - [C] Five
 - [D] Six
 - [E] Un-attempted
55. Which of the following childhood disorders improves with increase in age?
- [A] Conduct disorder
 - [B] Emotional problems
 - [C] Sleep disorder
 - [D] Temper tantrum
 - [E] Un-attempted
56. Which statistical parameter does the unpaired t-test calculate to provide a conclusion?
- [A] Mean difference
 - [B] Standard deviation
 - [C] Correlation coefficient
 - [D] P-value
 - [E] Un-attempted
57. Which of the following is **not** an appropriate choice of anti-epileptic drug?
- [A] Initial treatment of focal epilepsy : Levetiracetam
 - [B] Absence of seizures : Ethosuximide
 - [C] Female of childbearing age with either genetic generalized epilepsy or focal epilepsy : Valproate
 - [D] Renal failure on hemodialysis : Lamotrigine
 - [E] Un-attempted

58. A two-year old child was brought to the OPD by his parents with complaints of not eating anything. On examination, her weight is 11.5 kg (50th percentile of normal) and height is 64th percentile. What is the management?

- [A] Advise multivitamin tonic
- [B] Force to eat
- [C] Investigate for UTI
- [D] Ask parents to stop worrying
- [E] Un-attempted

59. What is the recommended treatment for mild cases of varicose veins?

- [A] Medication
- [B] Compression stockings
- [C] Surgery
- [D] Surgery followed by medication
- [E] Un-attempted

60. Tactile hallucinations are found in which poisoning?

- [A] Cocaine poisoning
- [B] Arsenic poisoning
- [C] Strychnine poisoning
- [D] Antimony poisoning
- [E] Un-attempted

61. Baroreceptors are a form of mechanoreceptor that become activated by the stretching of the vessel. Differences between the two major baroreceptors, i.e., the carotid baroreceptor and the aortic arch baroreceptor are

- [A] the carotid baroreceptor responds to both increase and decrease in blood pressure and sends afferent signals via the glossopharyngeal nerve while the aortic arch baroreceptor responds only to increase in blood pressure, sending its signals through the vagus nerve
- [B] the aortic arch baroreceptor responds to both increase and decrease in blood pressure and sends afferent signals via the glossopharyngeal nerve while the carotid baroreceptor responds only to increase in blood pressure, sending its signals through the vagus nerve
- [C] the carotid baroreceptor responds to both increase and decrease in blood pressure and sends afferent signals via the vagus nerve while the aortic arch baroreceptor responds only to increase in blood pressure, sending its signals through the glossopharyngeal nerve
- [D] the aortic arch baroreceptor responds to both increase and decrease in blood pressure and sends afferent signals via the vagus nerve while the carotid baroreceptor responds only to increase in blood pressure, sending its signals through the glossopharyngeal nerve
- [E] Un-attempted

62. Preferred anti-thyroid drug during the first trimester of pregnancy is
[A] Methimazole
[B] Radioiodine
[C] Propranolol
[D] Propylthiouracil
[E] Un-attempted
63. Which type of T cells are responsible for cell-mediated immunity?
[A] Th1 cells
[B] Th2 cells
[C] B cells
[D] Regulatory T cells
[E] Un-attempted
64. Clinical signs of malignant hyperthermia include generalized muscle rigidity, hyperthermia and all of the following, *except*
[A] hypercarbia
[B] hemolysis
[C] arrhythmias
[D] myoglobinuria
[E] Un-attempted
65. Which of the following is a key principle of primary health care?
[A] Technological advancement and innovation
[B] Fragmented and episodic care
[C] Equity and accessibility
[D] Treatment of complex and rare diseases
[E] Un-attempted
66. Low molecular weight heparin can be monitored by
[A] anti Xa assay
[B] aPTT
[C] PT
[D] bleeding time
[E] Un-attempted
67. A father has blood group B, mother has AB. Children are **not** likely to have blood group
[A] A
[B] B
[C] AB
[D] O
[E] Un-attempted
68. The four main regions of stomach are
[A] cardia, fundus, body, pylorus
[B] fundus, parietal cells, pylorus, HCl
[C] body, pylorus, oxyntic cells, cardia
[D] pylorus, cardia, sphincter, body
[E] Un-attempted
69. What is the significance of the Glasgow Coma Scale in medical practice?
[A] It helps to diagnose specific medical conditions
[B] It predicts the likelihood of future complications
[C] It guides treatment decisions and prognosis assessment
[D] It determines the need for surgical intervention
[E] Un-attempted
70. Which of the following is secreted into the blood in a 1 : 1 molar ratio with insulin and although its biological action is **not** well defined, it is used as a useful marker for insulin secretion?
[A] C-peptide
[B] HbA1c
[C] Preproinsulin
[D] Proinsulin
[E] Un-attempted

- 71.** Patients who meet one of the following criteria regarding glucocorticoid use are less likely to have which suppressed HPA (Hypothalamic-Pituitary-Adrenal Axis)?
- [A] Patients who have taken glucocorticoids in the evening
 - [B] Patients who have received Prednisone for more than three weeks
 - [C] Any patient who has a Cushingoid appearance
 - [D] Patients treated with alternate-day Prednisone at a dose of less than 10 mg
 - [E] Un-attempted
- 72.** How does primordial prevention contribute to overall public health?
- [A] By reducing healthcare costs and resource utilization
 - [B] By providing early detection and treatment of diseases
 - [C] By promoting individual lifestyle modifications
 - [D] By targeting high-risk populations for interventions
 - [E] Un-attempted
- 73.** What is the relationship between folic acid and homocysteine in the body?
- [A] Folic acid lowers homocysteine levels
 - [B] Folic acid increases homocysteine levels
 - [C] Folic acid has no impact on homocysteine levels
 - [D] Folic acid interacts with homocysteine to form a complex
 - [E] Un-attempted
- 74.** A 35-year old man is presented with diarrhea, weight loss, lymphadenopathy and polyarthrititis. Endoscopy shows pale yellow, shaggy mucosa with intermittent superficial erythematous eroded patches in the duodenum. Biopsy reveals foamy macrophages in lamina propria with cytoplasmic Periodic Acid-Schiff (PAS) reactivity. What is the likely diagnosis?
- [A] Whipple's disease
 - [B] Crohn's disease
 - [C] Ulcerative colitis
 - [D] Tuberculosis
 - [E] Un-attempted
- 75.** INR values over 4.5 carry the risk of
- [A] thrombosis
 - [B] bleeding
 - [C] plaque rupture
 - [D] thrombocytopenia
 - [E] Un-attempted
- 76.** What is the importance of obtaining informed consent before a surgical examination?
- [A] To ensure the patient's confidentiality
 - [B] To determine the patient's financial status
 - [C] To provide legal protection for the healthcare provider
 - [D] To ensure that the patient understands the procedure, risks and benefits
 - [E] Un-attempted

- 77.** The main mechanisms of action of combined oral contraceptive pills include
- suppression of ovulation by inhibition of Gonadotropin-Releasing Hormone (GnRH) from the hypothalamus
 - inhibition of luteinizing hormone
 - inhibition of Follicle-Stimulating Hormone (FSH)
 - disruption of the mid-cycle LH surge
- (a), (b), (c), (d)
 - Only (a), (c) and (d)
 - Only (b) and (c)
 - Only (a)
 - Un-attempted
- 78.** What are the common symptoms of ruptured cerebral aneurysm?
- Severe headache, stiff neck and blurred vision
 - Severe pain all over the body and shortness of breath
 - Abdominal pain and nausea
 - Fatigue and dizziness
 - Un-attempted
- 79.** The rotator cuff is a group of muscles in the shoulder that allows a wide range of movements while maintaining the stability of the glenohumeral joint. It includes the following muscles :
Infraspinatus, teres minor, supraspinatus and
- teres major
 - subscapularis
 - pectoralis
 - Infraspinatus
 - Un-attempted
- 80.** What is the primary mode of transmission of polio virus?
- Airborne droplets
 - Sexual contact
 - Contaminated water or food
 - Mosquito bites
 - Un-attempted
- 81.** Acute tumor lysis syndrome is marked by all, *except*
- hyperkalemia
 - hypophosphatemia
 - hyperuricemia
 - hypocalcemia
 - Un-attempted
- 82.** Average age of attainment of developmental milestone about transferring object from one hand to other hand is
- 1.5 months
 - 3 months
 - 5.5 months
 - 10 months
 - Un-attempted
- 83.** A female presenting with primary or secondary amenorrhea
- should be reassured as no treatment is needed
 - should be prescribed Clomiphene to induce ovulation
 - will need to be operated urgently as it may be due to cancer
 - will need to undergo clinical testing to diagnose the cause
 - Un-attempted
- 84.** Which blood vessels are commonly used as grafts in bypass surgery?
- Carotid artery and saphenous vein
 - Renal artery and ulnar artery
 - Splenic artery and inferior epigastric artery
 - Saphenous vein and internal thoracic artery
 - Un-attempted

85. A five-year old boy presents to emergency department with history of refusal to bear weight on left side for last 1 day. He also has mild fever for the same duration. What is the most likely diagnosis?
- [A] Septic arthritis of hip
[B] Transient synovitis
[C] Slipped capital femoral epiphysis
[D] Developmental dysplasia of hip
[E] Un-attempted
86. Disulfiram-like reaction can be seen with the use of which of the following antibiotics in a patient with alcohol dependence syndrome?
- [A] Cefoperazone
[B] Ciprofloxacin
[C] Doxycycline
[D] Azithromycin
[E] Un-attempted
87. Which of the following is **not** a late complication of tracheostomy?
- [A] Stenosis of trachea
[B] Difficulty with decannulation
[C] Surgical emphysema
[D] Tracheocutaneous fistula and scar
[E] Un-attempted
88. Paranoid personality disorder is characterized by all, *except*
- [A] lack of sense of humor
[B] pride about being objective
[C] high awareness
[D] excessive concern about appearance
[E] Un-attempted
89. Fish is a good source of all, *except*
- [A] iron
[B] iodine
[C] vitamin A
[D] phosphorus
[E] Un-attempted
90. Bedwetting at night in children is a concern after what age?
- [A] 2 years
[B] 3 years
[C] 4 years
[D] 5 years
[E] Un-attempted
91. The functional unit of liver is
- [A] Kupffer cell
[B] lobule
[C] zone
[D] hepatocyte
[E] Un-attempted
92. Thyrotoxicosis is most commonly associated with
- [A] paranoid state
[B] anxiety state
[C] mania
[D] delirium
[E] Un-attempted
93. Osteomyelitis in sickle cell disease is most commonly due to
- [A] *Pseudomonas*
[B] *Shigella*
[C] *Salmonella*
[D] *Enterococcus*
[E] Un-attempted

94. Mucormycosis was commonly seen during the COVID period. Classic sign of mucormycosis is
- [A] rapid onset of hypotension with loss of consciousness
 - [B] rapid onset of tissue necrosis with or without fever
 - [C] gradual onset of body aches and generalized malaise
 - [D] rapid onset of jaundice with hyperglycemia
 - [E] Un-attempted
95. Which composition type of urinary calculi will typically **not** be visible on plain X-ray of abdomen?
- [A] Struvite calculi
 - [B] Calcium phosphate calculi
 - [C] Uric acid calculi
 - [D] Cystine calculi
 - [E] Un-attempted
96. Which of the following is **not** correctly matched?
- [A] Tidal Volume (TV) : Volume inspired and expired with each breath
 - [B] Total Lung Capacity (TLC) : Volume of air in the lungs after maximal inspiration
 - [C] Functional Residual Capacity (FRC) : Volume remaining in the lungs after normal expiration
 - [D] Forced Expiratory Volume (FEV1) : Volume that can be expired in 1 minute of maximum forced expiration
 - [E] Un-attempted
97. Which of the following conditions is commonly associated with spontaneous bacterial peritonitis?
- [A] Liver cirrhosis
 - [B] Diabetes mellitus
 - [C] Hypertension
 - [D] Ulcerative colitis
 - [E] Un-attempted
98. All of the following are associated with better prognosis in schizophrenia, *except*
- [A] late age of onset
 - [B] acute onset
 - [C] marriage
 - [D] negative symptoms predominate
 - [E] Un-attempted
99. Which study is the most definitive test for the diagnosis of sleep apnea?
- [A] Sleep sonography
 - [B] Polysomnography
 - [C] Nocturnal oximetry
 - [D] Multiple sleep latency test
 - [E] Un-attempted
100. Virus mediated transfer of host DNA from one cell to another is called
- [A] transduction
 - [B] transformation
 - [C] transcription
 - [D] transportation
 - [E] Un-attempted

SPACE FOR ROUGH WORK

