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श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकीसंस्थान, तिरुवनंतपुरम्-11

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY

THIRUVANANTHAPURAM—695 011

ENTRANCE EXAMINATION - ACADEMIC SESSION JANUARY 2019

PROGRAMME: DM/PDCC Cardiothoracic and Vascular Anaesthesia

Time:90 Minutes Max. Marks: 100

(Select the most appropriate answer)

(There are**no negative**marks for wrong answers)

1. Spot the **correct** statement.
   A. The axis of lead II extends from shoulder to shoulder with the right arm electrode being the negative electrode and the left arm electrode positive
   B. The axis of lead II runs from the negative right-arm electrode to the positive left-leg electrode
   C. The axis of lead II extends from the negative left-arm electrode to the positive left-leg electrode.
   D. The axis of lead II runs from the positive right-arm electrode to the negative left-leg Electrode

2. An arterial SaO2 of 60% corresponds roughly to a PaO2 of:

   A. 30 mmHg
   B. 75 mmHg
   C. 50 mmHg
   D. 60 mmHg

3. In a junctional escape rhythm, the P wave can occur:
   A. Within the T wave
   B. On top of the preceding Q wave
   C. Before, during, or after the QRS complex
   D. Earlier than expected

4. Spot the **INCORRECT** statement regarding volatile anesthetic agents.

A. Oil/gas solubility of a volatile agent is related to potency

B. Blood/gas partition coefficient relates to the speed of onset

C. The lower the blood/gas partition coefficient, the less soluble the volatile anesthetic agent.

D. The more soluble the volatile agent, the more rapid the induction.

5. Premature ventricular contractions are most dangerous if they:

A. Are multiformed and increase in frequency
B. Appear wide and bizarre
C. Occur after the T wave
D. Are uniform and wide

6. Spot the **INCORRECT** statement.

A. Case-control studies do not begin with the outcomes. These studies follow subjects of the study over time.

B. Cohort study is a clinical research study in which people who presently have a certain condition or receive a particular treatment are followed over time and compared with another group of people who are not affected by the condition.

C. Cross-sectional study is the observation of a defined population at a single point in time or time interval

D. A statistical process that combines the findings from individual studies is called meta-analysis.

7. Patients with a slow idioventricular rhythm that doesn't respond to atropine should receive:

A. Lidocaine
B. Dobutamine
C. Synchronized cardioversion
D. Transcutaneous pacing

8. Identify the **INCORRECT** statement:

A. The sensitivity of a clinical test refers to the ability of the test to correctly identify those patients with the disease.

B. The specificity of a clinical test refers to the ability of the test to correctly identify those patients without the disease.

C. A test with a high sensitivity but low specificity results in many patients who are disease free being told of the possibility that they have the disease and are then subject to further investigation.

D. The Positive Predictive Value of a test is a proportion that is useful to clinicians since it answers the question: 'How likely is it that this patient has the disease given that the test result is negative?'

9. Which of the following may cause first-degree AV block?

A. Stress (Physical and/or mental)
B. Digoxin
C. Angiotensin-converting enzyme inhibitors
D. Physical exertion

10. Which of the following forced expiratory measurements reflect the status of medium –sized to small-sized airways?

A. Forced expiratory flow $(FEF)_{200-1200}$

B. Peak Expiratory Flow Rate (PEFR)

C. Maximum Voluntary Ventilation (MVV)

D. Forced expiratory flow $(FEF)_{25\%-75\%}$

11. The first letter in the five-letter coding system for pacemaker identifies the:

A. Chamber in which the pacemaker senses intrinsic activity
B. Heart chamber being paced
C. Pacemaker's response to the intrinsic electrical activity
D. Pacemaker's response to a tachyarrhythmia

12. Spot the INCORRECT statement regarding Time Constant.

A. The rate of filling of an individual lung unit is referred to as its time constant

B. A time constant is the product of the resistance and compliance of a particular lung unit.

C. In the time afforded by one time constant, 63% of the lung will fill (or empty).

D. Two time constants allow 95% of the inspiratory or expiratory phase to be completed.

13. A patient with biventricular pacing usually has which pacing leads?

A. A lead for both ventricles only
B. A lead for each atria and each ventricle
C. A lead for the right atrium and each ventricle
D. A lead for the left atrium and both ventricles

14. Spot the **INCORRECT** statement regarding Airway Occlusion Pressure ($P_{0.1}$).

A. It is defined as the value of airway pressure 0.1 seconds after initiation of an inspiratory effort against an occluded airway.

B. It is a measure of the patients central ventilator drive.

C. Normal $P_{0.1}$ is about 1-2 cm H20 during mechanicalventilation.

D. Values above 1-2 cm H20 indicate decreased ventilator drive.

15. Antiarrhythmic drug that depresses the rate of depolarization belong to the class

A. I
B. II
C. III
D. IV

16. Flow-volume loops are useful for assessing all the following EXCEPT:

A. Leaks in patient circuit

B. AutoPEEP

C. Bronchodilator response

D. Over-distention

17. The class III antiarrhythmic drug used for the rapid conversion of recent-onset atrial fibrillation or flutter to sinus rhythm is:

A. Digoxin
B. Ibutilide fumarate
C. Procainamide
D. Verapamil

18. The normal lactate levels in arterial blood in healthy individuals is:

A. ≤ 2 mM/l

B. ≤ 5 mM/l

C. ≤ 0. 2 mM/l

D. ≤ 0.5 mM/l

19. When recording a 12-leadECG, the paper speed should be set at:

A. 10 mm/sec
B. 20 mm/sec
C. 25 mm/sec
D. 50 mm/sec

20. Spot the **INCORRECT** statement regarding Alveolar pressure (PA), Pulmonary artery pressure(Pa), and Pulmonary venous pressure (Pv) in West Zones of the human lung.

A. PA>Pa>Pv

B. Pa>PA>Pv

C. Pa>Pv>PA

D. Pv>PA>Pa

21. If your patient has a T-wave inversion, S-T segment elevation, and pathological Q waves in leads II, III, and aVF, suspect an acute myocardial infarctionin the:

A. Anterior wall
B. Inferior wall
C. Lateral wall
D. Septal wall

22. Which one of the following factors **CANNOT** result in a significant decrease in mixed venous oxygen saturation?

A. Decrease in cardiac output

B. Decreased hemoglobin concentration

C. Decrease in arterial oxygen saturation

D. Decreasedoxygen extraction

23. The circumflex artery supplies oxygenated blood to which area of the heart?

A. Anterior wall of the left ventricle
B. Left atrium
C. Right bundle branch
D. Right ventricle

24. Spot the **INCORRECT** statement regarding respiratory chemistry and acid-base regulation.

A. Bicarbonate is regulated mainly by the lung.

B. Ratio of bases to acids in the human body must remain at 20:1 to maintain a normal pH.

C. The bicarbonate buffer system accounts for more than half of total buffering.

D. Proteins and phosphates are buffers in the cells.

25. A patient admitted with acute myocardial infarction complains of chest pain. ECG monitor shows a heart rate of 35 beats/minute. Which area of the heart is now the heart's pacemaker?

A. Sinoatrialnode
B. Atrioventricular node
C. Bundle of His
D. Purkinje fibers

26. Spot the **INCORRECT** statement regarding oxygen transport in the blood.

A. The PaO_2 constitutes only 2% to 3% of the total oxygen transported in the body.

B. A shift of the oxyhemoglobin dissociation curve to the right results in a lower P_{50} value

C. Decreased body temperature increases oxygen affinity to hemoglobin.

D. 2,3-diphosphoglycerate is an intermediate metabolite of glucose that facilitates dissociation of oxygen from hemoglobin at the tissues

27. Which ECG characteristics are typical in a patient with WPW syndrome?

A. Prolonged PR interval and narrow QRS complex
B. Prolonged PR interval and presence of delta wave
C. Shortened PR interval and narrow QRS complex
D. Widened QRS complex and presence of a delta wave

28. Which of the following intravenous anesthetics is converted from a water-soluble to a lipid-soluble drug after exposure to the bloodstream?
A. Propofol
B. Midazolam
C. Ketamine
D. Etomidate

29. Prolongation of QT interval is noted in a patient who is receiving Quinidine. This patient is at risk for which one of the following?

A. Atrial fibrillation
B. Junctional tachycardia
C. Polymorphic ventricular tachycardia
D. Atrial flutter

30. In the resting adult, what percentage of total body O2 consumption is due to the work of breathing?
A.2%
B. 5%
C. 10%
D. 20%

31. Which of the following 12 lead ECGs are bipolar?

A. aVR, aVL, aVF
B. I, II, III
C. V_1, V_2, V_3
D. V_4, V_5, V_6

32. Lead I views which area of the heart?

A. Inferior wall
B. Anterior wall
C. Posterior wall
D. Lateral wall

33. Useful therapy for hypercyanotic "tet spells" in patients with tetralogy of Fallot might include any of the following **EXCEPT:**
A. Esmolol
B.Morphine
C.Phenylephrine
D.Isoproterenol

34. When is left axis deviation in ECG considered normal?

A. In infants
B. In small children
C. In pregnant women
D. In healthy adults

35. Which one of the following statements is **TRUE** regarding unstable angina?
    A. The pain is typically triggered by exertion or stress
    B. The pain is typically relieved by rest
    C. The pain typically lasts less than 2 minutes
    D. The pain may occur when the patient is sleeping
    E.

36. Which vascular structure has the highest oxygen content in the fetal circulation?
    A. Aorta
    B. Umbilical vein
    C. Ductus arteriosus
    D. Umbilical artery

37. Which coronary artery typically supplies the posteromedial papillary muscle?
    A. Left circumflex
    B. Left anterior descending
    C. Obtuse Marginal
    D. Right coronary

38. The resting potential of which ion is primarily responsible for the baseline (phase 4) resting conductance of cardiac myocytes?
    A. Calcium
    B. Sodium
    C. Potassium
    D. Magnesium
    E.

39. Which of the following is the normal value for Mixed venous O_2 content?
    A. 18-20 ml/dL
    B. 4-5.5 ml/dL
    C. 13-16 ml/dL
    D. 30-65 ml/dL
    E.

40. Absolute contraindications to pulmonary artery catheterization includeall the following except:
    A. Right atrial or right ventricular mass
    B. Tricuspid or pulmonary stenosis
    C. Mechanical tricuspid or pulmonary valve prosthesis
    D. Patients with right bundle branch block
    E.

41. A decrease in mixed venous oxygen saturation (SVO_2) can indicate one of the following situations **EXCEPT**:
    A.Decreased cardiac output
    B. Decreased oxygen consumption
    C. Decrease arterial oxygen saturation
    D. Decreased hemoglobin concentration

42. Which of the following is INCORRECT regarding NIRS (Near Infra-red Spectroscopy)?
    A. NIRS employs wavelengths of 600 – 900 nm
    B. The measurement is capillary weighted - 70% capillary, 5% venous , & 25% arterial
    C. NIRS is capable of monitoring the brain during circulatory arrest.
    D. A common intervention trigger is taken as: Regional oxygen saturation (rSO2) <50% or 20% change from rSO2 baseline

43. Which one of the following is **INCORRECT** regarding match of right atrial pressure recordings to the physiologic mechanisms:
    A. A wave: Atrial systole
    B. C wave: Tricuspid valve closure
    C. V wave: Atrial filling with closed AV valve
    D. X descent: opening of Tricuspid valve

44. Which systemic vein has the lowest oxygen saturation?
    A. Coronary sinus
    B. Superior vena cava
    C. Inferior vena cava
    D. Renal vein

45. What does the French size of a catheter refer to?
    A. Outer circumference
    B. Inner diameter
    C. Inner circumference
    D. Outer diameter

46. Which of the following is the most important factor in determining Pulmonary Vascular Resistance?
    A. Blood vessel radius
    B. Blood vessel length
    C. Blood viscosity
    D. Pulsatality of blood flow

47. Which of the following is the best modality to rule out pulmonary vasoconstriction as an etiology of elevated pulmonary vascular resistance ?
    A. Hyperventilation
    B. Increased sedation
    C. Oxygen administration
    D. Fluid bolus

48. What is the primary mechanism by which myocardium compensates for increased oxygen demand?
    A. Increased oxygen extraction
    B. Increased coronary blood flow
    C. Increased parasympathetic stimulus
    D. Decreased adenosine release

49. In resting conditions, what percentage of oxygen in coronary blood flow is extracted by the myocardium
    A. 50%
    B. 20%
    C. 40%
    D. 70%

50. The P wave on lead aVR of the normal electrocardiogram will be:
    A. An upward deflection
    B. A downward deflection
    C. Not detectable
    D. Highly variable

51. The fundamental difference between microshock and macroshock is related to:

A. Location of shock
B. Duration
C. Voltage
D.Lethality

52. Anesthetic loss to the plastic and rubber components of the anesthetic circuit, hindering achievement of an adequate inspired concentration, is a factor with which of the following anesthetics?
A.Desflurane
B. Isoflurane
C. Sevoflurane
D.N2O

53.The blood volume of a 10-kg, 1-year-old infant is
A. 600 mL
B. 800 mL
C. 1000 mL
D. 1300 mL

54.In statistical hypothesis testing, if the *P* value is less than the predetermined α value, which of the following is most likely?
A.The observed result is unlikely under the null hypothesis
B.The observed result is unlikely under an alternative hypothesis
C. The sample size is too small
D.The predetermined power is too low

55. Fenoldopam may be used as an alternative to which of the following?
A.Epinephrine
B.Phenylephrine
C.Sodium nitroprusside
D.Dopamine

56. Which of the following respiratory indices is increased in neonates compared with adults?
A.Tidal volume (mL/kg)
B. Alveolar ventilation (mL/kg/min)
C.Functional residual capacity (mL/kg)
D.$PaCO_2$

57. Which one of the following is **INCORRECT** regarding match of central venous pressure waves to the physiologic mechanisms:

A. a wave: Atrial systole
B. c wave: Initial bulging of tricuspid valve (TV) into the atrium with the onset of ventricular systole.
C. v wave: Atrial filling with closed Atrio-ventricular valve
D. xdescent: opening of Tricuspid valve and right ventricular filling

58. Which one of the following may be used in thepostanesthesia care unit to painlessly identify patients with residual blockade.

A. Single-twitch response (depolarizing blockade),
B. Train-of-four (TOF),
C. Double-burst stimulation,
D. Tetanic stimulation

59. Which one of the following is **NOT TRUE?**

A. Benzodiazepines produce sedation through inhibitionof gammaaminobutyric acid -facilitatorytransmission
B. Benzodiazepines do not produce analgesia.
C. The time to onset of oral diazepam is 30 minutes.
D. Diazepam does cross the placenta

60. Which one of the following is **NOT** an effect of Sympathetic stimulation?

A. Salivary glands: vasoconstriction, reduced secretion;
B. Gastrointestinal (GI) tract motility: increased
C. Liver: increased glycolysis and reduced gluconeogenesis;
D. Pancreatic beta cells: vasoconstriction, reduced secretion.

61. Which liver enzyme stimulates the adrenal cortex to secrete aldosterone?

A. Angiotensin I

B. Angiotensin II

C. Renin

D. Antidiuretic hormone

Answer is B.Pathophysiology made incredibly easy 5thediton 2013 Lippincott Williams Page 68.

62. Which immunoglobulin is responsible for the immediate hypersensitivity reactions of humoral immunity.

A. IgA

B. IgG

C. IgE

D. IgM

63. A patient with an aortic aneurysm at the base of the aorta, spiderlike extremities, and a displaced ocular lens is likely to have:

A. Tay-Sachs disease

B. Down syndrome

C. Marfan syndrome

D. Cystic fibrosis

64. Which part of the immune system is responsible for rejection of organ transplants?

A. Humoral

B. Complement system

C. Autoimmunity

D. Cell-mediated

Answer is D Pathophysiology made incredibly easy 5thediton 2013 Lippincott Williams Page 481.

65. A patient comes to the emergency department with a history of vomiting for the past 5 days. An arterial blood gas (ABG) analysis obtained on admission reveals the following:pH =7.5, $PaCO_2$ = 48 mmHg, HCO3 = 39 mEq/L, and PaO_2 = 110 mmHg. These ABG results reveal which acid-base imbalance?

A. Respiratory acidosis
B. Respiratory alkalosis
C. Metabolic acidosis
D. Metabolic alkalosis

66. What value of arterial oxygen tension to inspired oxygen concentration (PaO2/FiO2) or higher suggests a successful weaning outcome?

A. 50 to 75 mmHg

B. 90 to 100 mmHg

C. 100 to 120mmHg

D. 150 to 200 mmHg

67. Which one of the following is the normal value of dynamic lung compliance in an adult?

A. 100 to 150 ml/cm H_2O

B. 50 to 75 ml/cm H_2O

C. 20 to 25 ml/cm H_2O

D. 30 to 40 ml/cmH_2O

68. Which one of the following is the normal value of static lung compliance in an adult?

A. 100 to 150 ml/cm H_2O

B. 15 to 25 ml/cm H_2O

C. 20 to 25 ml/cm H_2O

D. 40 to 60 ml/cm H_2O

69. The PaCO2 of a patient is 55 mmHg ata ventilator rate of 10/minute. What should be the ventilator rate if a $PaCO_2$ of 40 mmHg is desired assuming that the dead space, ventilator tidal volume, and spontaneous ventilation remain unchanged?

A. 12/minute

B. 14/minute

C. 16/minute

D. 18/minute

70. Which one of the following is the normal Magnesium concentration in the plasma?

A. 138 to 142 mEq/L

B. 3 to 5 mEq/L

C. 4.5 to 5.5 mEq/L

D. 1.5 to 2.5 mEq/L

71. Which one of the following statements is **UNTRUE** regarding Propofol?

A. It contains no preservatives.

B. It has no analgesic properties.

C. It promotes salivation and vomiting.

D. It is highly fat soluble.

72. A PaO2 of 60 mm Hg corresponds to SaO2 of:

A. 50%

B. 60%

C. 75%

D. 90%

73. What is the frequency used in high frequency jet ventilation?

A. 60 to 150 cycles/minute

B. 240 to 660 cycles/minute

C. 480 to 1800 cycles/minute

D. 150 to 200 cycles/minute

74. Which one of the following is **INCORRECT** regarding medical gas cylinders?

A. O2E-Cylinder Capacity is 625 to 700 L

B. N2O E-Cylinder Capacity is 1590 L

C. Air E-Cylinder Capacity is 1590 L

D. O2 H-Cylinder Capacity is 1800 to 2200 L

75. Pulmonary artery occlusion pressure is **MORE** than Left Ventricular End Diastolic Pressure (LVEDP) in all of the following situations **EXCEPT**:

A. Mitral stenosis

B. Left atrial myxoma

C. Pulmonary venous obstruction

D. Decreased left ventricular compliance

76. What is the diagnosis when the capnography shows that no plateau is reached before the next inspiration?

A. Chronic obstructive pulmonary disease

B. Incompetent expiratory valve

C. Incompetent inspiratory valve

D. Exhausted CO_2 absorbent

77. Spot the **INCORRECT** statement.

A. Plasma of a person having A blood group has Anti-B antibody

B. Plasma of a person having O blood group has neither Anti-A nor Anti-B antibodies

C. B antigen is present in RBC of a person having AB group.

D. NeitherA or B antigensarepresent in RBC of a person having O group.

78. Spot the **INCORRECT** statement.

A. A patient with unknown ABO blood group can receive plasma of person having AB blood group.

B. A patient with O blood group can receive plasma of person having B blood group.

C. A patient with B blood group can receive plasma of person having AB blood group.

D. A patient with A blood group can receive plasma of person having O blood group.

79. The relationship between intra-alveolar pressure, surface tension, and the radius of an alveolus is described by
A.Graham's law
B.Beer's law
C.Bernoulli's law
D.Laplace's law

80. The correct location for placement of the V5 lead is:
A.Midclavicular line, third intercostal space
B. Anterior axillary line, fourth intercostal space
C.Midclavicular line, fifth intercostal space
D.Anterior axillary line, fifth intercostal space

81. What is the O2 content of whole blood if the hemoglobin concentration is 10 g/dL, the Pao2 is 60 mm Hg, and the Sao2 is 90%?
A.10 mL/dL
B.12.5 mL/dL
C.15 mL/dL
D.17.5 mL/dL

82. By what percentage does cerebral blood flow change for each mm Hg increase in $PaCO_2$?
A. 1.0%
B. 2.0%
C. 7.0%
D. 10%

83. Spot the **INCORRECT** statement.

A. The antiplatelet effect of Clopidogrellasts 7 days

B. The antiplatelet effect of Ticlodipine lasts 21 days

C. The antiplatelet effect ofIbuprofen lasts 14 days

D. The antiplatelet effect of Aspirin lasts for the life of the platelet (7-10 days)

84. Spot the **INCORRECT** statement regarding MAC value of inhalation agents.

A. Desflurane: 6

B. Isoflurane : 1.5

C. Sevoflurane: 3.5

D. Halothane: 0.77

85. Spot the **INCORRECT** statement regarding Percentage of Inhalation agents metabolized:

A. Desflurane 0.2%
B. Isoflurane 0.17%
C. Sevoflurane 2–3%
D. Halothane 5%

86. Spot the **INCORRECT** statement regarding electrocautery.

A. The electrocautery generates very high-frequency currents (radiofrequency range) of 500,000 to 1 million Hz.
B. The high-frequency current has a high tissue penetration.
C. The electrosurgical return plate should be placed as close as possible to the operative site.
D. If the electrosurgical return plateis improperly applied or the cord is damaged or broken,the Electro-surgical unit will seek an alternate return pathway which could be via ECG Leads or temperature probe resulting in burns

87. Find the incorrect statement regarding various LMA design variations.

A. ProSeal LMA has a passage for gastric tube insertion

B. Fastrach is designed to facilitate endotracheal tube through it

C. LMA Supreme has got a built-in bite block but no channel for gastric tube

D. LMA CTrach incorporates camera to facilitate visualisation of endotracheal intubation

88. Find the **INCORRECT** statement on Intravenous Anaesthetics

A. Primary mechanism of actionof barbiturates is believed to be throughbinding to the γ-aminobutyric acid type A (GABA) receptor.

B. Ketamine has multiple effects throughout the central nervous system, and it is well recognized to inhibit N-methyl-D-aspartate (NMDA) channels and neuronal hyperpolarization- activated cationic (HCN1) channels.

C. Dexmedetomidine is an α2-adrenergic agonist that can be used for anxiolysis, sedation, and analgesia properties.

D. Sporadic cases of lipemia, metabolic al alkalosis anddeath ,the so-termed 'propofol infusion syndrome' is seen with use of propofol for long-term sedation in children who are critically ill.

89. Identify the **INCORRECT** statement regarding pharmacokinetics:

A.Non-ionized (uncharged) drugs are less readily absorbed than ionized (charged) forms with reference to enteral drug delivery.

B. Drugs dissolved in solution are absorbed faster than those present in suspensions with reference to intravenous drug delivery.

C. A small volume of distribution in steady state(Vdss) implies that the drug has high aqueous solubility and will remain largely within the intravascular space.

D. Many drugs used in anesthesia are well described by two-compartment models and Elimination half-time is the time required for the drug concentration to fall by 50%.

90. Which of the following electrocardiographic feature is typical of left anterior fascicular block?

A. Q waves in theinferior leads.

B. Mean QRS axis between 0 and -(minus) 30 degrees

C. QRS duration >0.12 millisecond

D. rS pattern in the inferior leads and qR pattern in lateral leads

91. All the following characteristics are typical of hypertensive crises **EXCEPT**:

A. Diastolic blood pressure> 120 mm Hg

B. Retinal hemorrhages

C. Constriction of cerebral arterioles with decreased vascular permeability

D. Proteinuria

92. Each of the following is an appropriate therapy for a patient with acute ST segment elevation myocardial infarction and cardiogenic shock **EXCEPT**:

A. Percutaneous left ventricular assist device

B. Fibrinolytic therapy

C. Urgent percutaneous interventionion

D. Vasopressor drugs

93. As fluid passes through constriction, there is increase in velocity of fluid, as the total energy must remain constant, the potential energy fails. This fact is named after:

A. Avogadro
B. Reynold
C. Coanda
D. Bernoulli

94. Useful pharmacologic intervention for rate control in patients with Wolff-Parkinson-White syndrome who have atrial fibrillation include:

A. Diltiazem
B. Esmolol
C. Adenosine
D. Amiodarone

95. Which of the following is the **MOST** sensitive indicator of left ventricular myocardial ischemia?

A. ST segment changes in lead V5 of the electrocardiogram (ECG)
B. Appearance of V waves on the pulmonary capillary wedge pressure tracing
C. Decrease in cardiac output as measured by the thermodilution technique

D.Wall-motion abnormalities on the echocardiogram

96. Normal resting myocardial O2 consumption is
A. 2.0 mL/100 g/min
B. 3.5 mL/100 g/min
C. 8 mL/100 g/min
D. 15 mL/100 g/min

97. Normal resting coronary artery blood flow is
A. 10 mL/100 g/min
B. 40 mL/100 g/min
C. 75 mL/100 g/min
D. 120 mL/100 g/min

98. A patient with known Wolff-Parkinson-White (WPW) syndrome develops a wide complex tachycardia under general anesthesia. Vital signs are stable. Which of the following drugs is **MOST** likely to be successful in controlling heart rate in this patient?
A. Verapamil
B. Esmolol
C. Adenosine
D. Procainamide

99. A block in the left bundle branch is most likely to do which of the following?

A. Prolong the PR interval

B. Prolong the QRS interval

C. Prolong the ST segment

D. Prolong the QT interval

100. Which of the following forced expiratory measurements reflects the status of medium–sized to small-sized airways?

A. Forced expiratory flow $(FEF)_{200\text{-}1200}$

B. PEFR

C. Maximum Voluntary Ventilation (MVV)

D.Forced expiratory flow $(FEF)_{25\%\text{-}75\%}$