

Pytania Specjalizacyjne / Specialization Questions

Sample questions ITA/Part I Paper A

1. **Inadequate tissue oxygenation may occur, in spite of a normal PaO₂, in the presence of**
 - A. anaemia
 - B. a shift to the left of the oxyhemoglobin dissociation curve
 - C. low cardiac output
 - D. local vasoconstriction
 - E. metabolic alkalosis
2. **Which of the following statements are true?**
 - A. the carotid bodies are sensitive to arterial blood pressure
 - B. hypotension produces increased baroreceptor discharge
 - C. increased plasma renin activity stimulates aldosterone production
 - D. posture influences aldosterone production
 - E. antidiuretic hormone secretion is increased in systemic hypertension
3. **The elastic tissue within the arterial system**
 - A. allows transitory storage of the major part of the stroke volume during the ejection phase
 - B. contributes to the onward flow of blood during ventricular diastole
 - C. minimises the effects of intrathoracic pressure upon aortic pressure
 - D. contributes to conversion from intermittent to continuous blood flow
 - E. maintains coronary perfusion
4. **During sustained severe exercise the**
 - A. oxygen saturation of mixed venous blood remains above 70 per cent
 - B. minute volume of ventilation may reach 130 litres
 - C. pulmonary vascular resistance falls
 - D. cardiac output may reach 50 litres/min
 - E. core temperature may reach 40°C
5. **Ventricular dP/dt is increased by an increase in**
 - A. after-load
 - B. pre-load
 - C. myocardial contractility
 - D. ionized calcium concentration
 - E. heart rate
6. **In the normal pulmonary vascular bed**
 - A. the mean arterial pressure is half the mean aortic pressure
 - B. the vascular resistance is lower than the systemic vascular resistance
 - C. 50% of the total blood volume is present at rest
 - D. the wedge pressure equals the capillary pressure
 - E. hypoxia causes dilation of vessels
7. **Intra-pleural pressure is**
 - A. subatmospheric
 - B. related to mid-oesophageal pressure
 - C. changing throughout the ventilatory cycle
 - D. equal throughout the pleural space
 - E. increased by coughing
8. **Closing capacity**
 - A. normally exceeds residual volume
 - B. decreases in the supine position
 - C. is the sum of closing volume and residual volume
 - D. decreases with age
 - E. is normally less than functional residual capacity
9. **Intrapulmonary shunts increase**
 - A. mixed venous oxygen tension
 - B. arterial oxygen saturation
 - C. when pulmonary blood flow is partially obstructed
 - D. in the presence of atelectasis
 - E. with severe fluid overload
10. **The symbol P50 refers to the**
 - A. partial pressure of oxygen at 50 mmHg (6.7 kPa)
 - B. PaO₂ at which the oxygen content is 50 ml/100 ml blood
 - C. percentage saturation of hemoglobin at a PaO₂ of 50 mmHg (6.7kPa)
 - D. oxygen content of plasma at a PaO₂ of 50 mmHg (6.7kPa)
 - E. PO₂ at which the hemoglobin is 50% saturated
11. **Pituitary feedback mechanism regulates secretion of**
 - A. ACTH
 - B. adrenaline
 - C. cortisol
 - D. insulin
 - E. thyroxine
12. **Cerebrospinal fluid**
 - A. production in an adult is 150 ml/24 h
 - B. is mainly reabsorbed in the lateral ventricles
 - C. does not accurately reflect acute changes in base excess in arterial blood
 - D. is virtually free of glucose
 - E. specific gravity (relative density) is 1015-1020
13. **The transmitter substances in all the ganglia of the autonomic nervous system include**
 - A. acetylcholine
 - B. noradrenaline
 - C. 5-hydroxytryptamine
 - D. butyrylcholine
 - E. dopamine
14. **Inulin**
 - A. is totally removed from blood passing through the kidney
 - B. is not reabsorbed by the renal tubules
 - C. is secreted by renal tubular cells
 - D. is metabolised by renal tubular cells
 - E. has a concentration in glomerular filtrate which is the same as that in plasma
15. **Concerning water excretion**
 - A. the ascending limb of the Loop of Henle is impermeable to water
 - B. chloride reabsorption from the Loop of Henle occurs passively
 - C. under conditions of maximum antidiuresis, 5% of water reabsorption occurs in the distal tubule
 - D. the maximum medullary osmolality is 800 mosmols/L
 - E. dehydration induces aldosterone production

16. The anion gap

- A. is normally 12mmol/L
- B. increases in lactic acidosis
- C. is decreased in aspirin poisoning
- D. decreases in diabetic ketoacidosis
- E. is increased in renal failure

17. Concerning carbonic acid and bicarbonate in the blood

- A. at pH 7.4, the ratio of bicarbonate to carbonic acid is 20 to 1
- B. the buffer system depends upon carbonic anhydrase
- C. the hydrogen ion formed by carbonic acid is buffered by reduced haemoglobin
- D. the Henderson-Hasselbalch equation describes the buffer equilibrium
- E. extracellular buffering of excess hydrogen ions occurs instantaneously

18. Cytochrome P450

- A. is an enzyme which regulates the speed of oxygen release from haemoglobin
- B. is present in sympathetic nerve endings
- C. participates in the metabolism of noradrenaline
- D. is a terminal oxidase important in biotransformation of drugs
- E. is a potent enzyme inducer

19. In the movement of fluids and dissolved molecules

- A. diffusion is proportional to the permeability of the membrane
- B. a non-diffusible anion will slow transfer of a diffusible cation
- C. the trans-membrane potential depends upon the presence of non-diffusible ions
- D. the osmotic pressure is necessary to prevent ionic migration
- E. filtration is hydrostatic pressure dependent

20. The stomach

- A. is responsible for the absorption of approximately 25% of the ingested protein
- B. secretes vitamin B12
- C. acidity depends upon the activity of carbonic anhydrase in its parietal cells
- D. decreases its motility when fat enters the intestine
- E. is capable of large changes in capacity with small changes in pressure

21. Labetalol

- A. can cause postural hypotension
- B. reduces heart rate
- C. has an elimination half-life of 24 hours
- D. is a more potent alpha than beta adrenoceptor blocker
- E. may cause bronchoconstriction

22. Beta adrenoceptor stimulant drugs can cause

- A. hyperglycaemia
- B. hypokalaemia
- C. increased gastrointestinal motility
- D. skeletal muscle tremor
- E. increased contractility of the pregnant uterus

23. Reliable early signs of cyanide toxicity due to sodium nitroprusside infusion include

- A. progressive metabolic acidosis
- B. abnormal electroencephalographic changes
- C. increased mixed venous oxygen tension
- D. constant response to low dose infusion of sodium nitroprusside
- E. a decrease in haemoglobin saturation

24. Effects of atropine instillation in the normal eye include

- A. paralysis of the sphincter pupillae muscle
- B. paralysis of the ciliary muscle
- C. increase in intra-ocular pressure
- D. enophthalmos
- E. photophobia

25. Intracranial blood volume is increased by

- A. halothane
- B. vecuronium
- C. thiopentone
- D. nitroglycerine
- E. ketamine

26. Tinnitus may be caused by

- A. codeine
- B. aspirin
- C. cocaine
- D. lidocaine (lignocaine)
- E. gentamycin

27. Cerebral oxygen consumption is significantly decreased by

- A. propofol
- B. thiopentone
- C. nimodipine
- D. nitrous oxide
- E. fentanyl

28. Uptake of an inhalational anaesthetic from the alveoli to the blood is influenced by the

- A. blood/gas partition coefficient of the agent
- B. alveolar ventilation
- C. cardiac output
- D. ventilation/perfusion ratio in the lung
- E. partial pressure gradient across the alveolar capillary membrane

29. Prolonged exposure to nitrous oxide

- A. inactivates vitamin B12
- B. interferes with methionine metabolism
- C. interferes with folate metabolism
- D. impairs desoxyribonucleic acid (DNA) synthesis
- E. produces megaloblastic haemopoiesis

30. Inhalational anaesthetic agents with a blood/gas partition coefficient of less than 2.6 include

- A. sevoflurane
- B. isoflurane
- C. desflurane
- D. halothane
- E. diethyl ether

31. Anaphylaxis to intravenous anaesthetics

- A. is prevented by antihistamine premedication
- B. is characterised by profound hypotension
- C. only occurs with prior exposure
- D. is associated with elevated serum trypsin concentrations
- E. is dose related

32. Ketamine

- A. sensitises the myocardium to adrenaline
- B. is a butyrophenone derivative
- C. is poorly soluble in water
- D. causes bronchoconstriction
- E. has a marked chronotropic effect

33. Concerning propofol

- A. it has a high clearance rate in excess of liver blood flow
- B. extra-hepatic metabolism occurs to a significant extent
- C. significant reduction in the volume of distribution occurs in elderly patients
- D. it may induce burst suppression of EEG activity
- E. clearance is 870-2140 ml/min

34. Local anaesthetic agents primarily biotransformed in the liver include

- A. ropivacaine
- B. prilocaine
- C. lignocaine (lidocaine)
- D. procaine
- E. bupivacaine

35. Toxic effects of amide local anaesthetics include

- A. myocardial depression
- B. methaemoglobinemia
- C. central nervous system depression
- D. bronchospasm
- E. convulsions

36. Concerning pharmacokinetics:

- A. only non-ionised drugs will readily distribute into the lipid phase of membranes
- B. propofol has a high clearance
- C. for a given clearance, the elimination half life of a drug is directly proportional to the volume of distribution
- D. drugs with a low extraction ratio are affected by hepatic blood flow
- E. the clearance of lidocaine (lignocaine) approaches hepatic blood flow

37. Recognised factors in the inactivation of mivacurium include

- A. glomerular filtration
- B. protein binding
- C. hepatic biotransformation
- D. hydrolysis by plasma cholinesterase
- E. blood pH

38. Morphine may provoke

- A. nausea and vomiting
- B. bronchoconstriction
- C. increased output of urine
- D. constipation
- E. constriction of the pupils

39. Platelet aggregation is reduced by

- A. acetylsalicylic acid
- B. dipyridamole
- C. tranexamic acid
- D. ketorolac
- E. dextran

40. Sodium cromoglycate is

- A. a bronchodilator
- B. an antihistamine
- C. a stabiliser of the mast cell membrane
- D. a cardiac stimulant
- E. effective in acute asthma

41. Concerning diffusion:

- A. rate of diffusion is proportional to concentration gradient
- B. at cellular level, carbon dioxide equilibration takes place in less than 0.1s
- C. the diffusion rate of most volatile anaesthetics is similar to carbon dioxide
- D. carbon monoxide is used in the measurement of pulmonary diffusing capacity
- E. the rate of diffusion of a substance is directly proportional to its molecular size

42. Surface tension

- A. is greater in small than in large alveoli
- B. arises from the cohesive forces between the molecules of a liquid
- C. increases as lung volume decreases
- D. is decreased by surfactant
- E. of alveolar lining fluid is higher than that of water

43. Successful countershock for ventricular fibrillation requires

- A. energy levels of 200 to 360 joules
- B. ECG monitoring
- C. simultaneous depolarisation of all myocardial fibres
- D. synchronized DC countershock
- E. prior administration of adrenaline

44. Concerning high frequency jet ventilation

- A. minute volume ventilation is independent of the entrained gas
- B. an increase in I/E ratio increases the lung volume
- C. a decrease in driving pressure causes a decrease in PaCO₂
- D. it is contraindicated in patients with broncho-pleural fistula
- E. CO₂ elimination is improved by increasing the frequency

45. The reaction of carbon dioxide with soda lime includes the

- A. formation of sodium carbonate
- B. formation of calcium carbonate
- C. release of heat
- D. release of water
- E. production of carbon monoxide

46. Poiseuille's law states that flow rate is proportional to the

- A. square of the radius of the tube
- B. length of the tube
- C. density of the fluid
- D. viscosity of the fluid
- E. pressure gradient

47. Concerning the pneumotachograph:

- A. it measures pressure change across a resistance
- B. its accuracy does not require laminar gas flow
- C. it is not suitable for accurate breath-by-breath measurement
- D. its accuracy is affected by temperature change
- E. changes in gas composition require recalibration

48. Recognised methods of effectively reducing operating room concentrations of waste volatile anaesthetic gases include

- A. the use of a condenser humidifier
- B. the use of low flow anaesthesia
- C. piping waste gases to floor level
- D. passing waste gases through activated charcoal
- B. passive ducting to the external atmosphere

49. Concerning heat loss during anaesthesia:

- A. conduction is the most important phenomenon
- B. convection is decreased when the air adjacent to the body is warm
- C. radiation is decreased by aluminium foil blankets
- D. respiration equals 30% of the total heat loss
- E. sweating is decreased when the relative humidity increases

50. The humidity of the atmosphere is measured by

- A. determining the dew point
- B. a wet and dry bulb thermometer
- C. cooling a known volume of air
- D. absorption of water by a hair
- E. measuring barometric pressure

51. Techniques for measuring blood flow include

- A. ultrasound
- B. dye dilution
- C. plethysmography
- D. thermal dilution
- E. electromagnetism

52. Pressure in the superior vena cava is influenced by the

- A. right ventricular performance
- B. position of the patient
- C. intra-abdominal pressure
- D. mean airway pressure
- E. competence of the tricuspid valve

53. It is necessary to know the arterial PCO₂ in order to measure

- A. carbon dioxide output
- B. physiological dead space
- C. minute volume of ventilation
- D. residual lung volume
- E. functional residual capacity

54. A pressure volume loop can measure

- A. lung compliance
- B. airway resistance
- C. intra-pleural pressure
- D. functional residual capacity
- E. closing volume

55. Measurement of the relationship between intracranial pressure and volume assesses

- A. the integrity of the blood-brain barrier
- B. cerebral compliance
- C. cerebral blood flow
- D. cerebral metabolic rate
- E. cerebral vascular diameter

56. In a supine young adult with a residual volume of 1200 ml

- A. closing volume will decrease with increasing age
- B. closing volume will be approximately 1000 ml
- C. closing capacity will be decreased by general anaesthesia
- D. closing capacity is approximately 1700 ml
- E. total lung capacity is about 5000 ml

57. Concerning manometers:

- A. pressure which supports a 10mm column of mercury will support a 13.6cm column of water
- B. 1 kPa is equal to a pressure of 7.5mm Hg
- C. the two limbs of a fluid manometer must be of equal diameter
- D. a mercury barometer used to measure atmospheric pressure is sealed with a vacuum above the surface of the liquid
- E. aneroid gauges do not contain liquid

58. Concerning the measurement of body fluid spaces:

- A. indocyanine green is excreted unchanged in the urine
- B. extracellular fluid volume is measured using deuterium
- C. intracellular fluid volume is measured indirectly from extracellular volume and total body water
- D. plasma volume is measured with iodine labelled serum albumin
- E. chromium labelled red cells are used to measure blood volume

59. The following can be used in the statistical analysis of the results of a clinical investigation

- A. unpaired t-test
- B. X₂ (chi-squared) test
- C. analysis of variance
- D. sequential analysis
- E. paired t-test

60. Concerning the following statements:

- A. the null hypothesis states that the two treatments are equally effective
- B. the significance level is a probability value that ensures that the outcome is clinically significant
- C. the standard deviation is a measure of the central value of the sample
- D. the standard error is used for the estimation of confidence intervals
- E. blood pressure is measured on an ordinal scale

**Sample questions ITA/Part I
Paper B****1. Mechanical hyperventilation in a normal patient during the entire course of anaesthesia is associated with**

- A. markedly diminished requirements for post-operative analgesia
- B. a shift to the right of the oxyhaemoglobin dissociation curve
- C. a decrease in PaO₂
- D. postoperative hypoventilation
- E. cutaneous vasodilatation

2. Predictors of cardiac morbidity and mortality include

- A. aortic stenosis
- B. myocardial infarction occurring 2 months previously
- C. a prolonged QT (frequency corrected) interval
- D. occasional ventricular extra-systoles
- E. intra-operative nodal rhythm

- 3. Patients with untreated hypothyroidism show**
- resistance to hypnotics
 - depression of cardiac performance
 - high voltage T waves on the ECG
 - increased sensitivity to non-depolarising neuromuscular blocking drugs
 - delayed return of consciousness after anaesthesia
- 4. Concerning therapy with anticholinergic drugs:**
- the action of glycopyrrolate is longer than atropine
 - atropine increases dead space
 - atropine premedication should be avoided in febrile children
 - 1.0 mg atropine produces complete vagal blockade in a 70 kg man
 - hyoscine (scopolamine) premedication should be avoided in elderly patients
- 5. Intense peripheral vasoconstriction can be reversed with**
- phentolamine
 - sodium nitroprusside
 - esmolol
 - nifedipine
 - high spinal anaesthesia
- 6. Drugs known to increase barrier pressure at the gastro-oesophageal junction include**
- droperidol
 - atropine
 - metoclopramide
 - fentanyl
 - neostigmine
- 7. Recognised treatment of a post-operative thyrotoxic crisis includes**
- sedation
 - plasmapheresis
 - corticosteroids
 - propranolol
 - calcitonin
- 8. Recognised complications of abdomino-perineal resection of the rectum include**
- deep venous thrombosis
 - paralytic ileus
 - air embolism
 - postoperative atelectasis
 - uraemia
- 9. Factors associated with the development of postoperative atelectasis include**
- abdominal pain
 - COPD
 - ankylosing spondylitis
 - thoracic surgery
 - spinal anaesthesia
- 10. Impairment of left ventricular function resulting from ischaemia during general anaesthesia**
- occurs prior to ST segment depression
 - fully recovers when ST segment depression returns to normal
 - is best recognised by monitoring the pulmonary capillary wedge pressure
 - involves a decrease in left ventricular compliance
 - can occur in a normal heart
- 11. True statements about endotracheal intubation include**
- severe laryngeal lesions can be caused by endotracheal tubes
 - pneumomediastinum can occur
 - diffusion of nitrous oxide into air-inflated cuffs can double intracuff pressure
 - after 48 hours of intubation, endotracheal tubes should be replaced by tracheostomy tubes
 - most major cuff-related injuries result from use of inappropriately high cuff-to-trachealwall pressures
- 12. Compared with the adequately spontaneously breathing patient, neuromuscular paralysis and controlled ventilation in the supine, anaesthetised patient are associated with**
- improved overall matching of ventilation to perfusion
 - increased VD/VT
 - decreased anterior diaphragmatic motion
 - increased posterior diaphragmatic motion
 - improved venous return to the right heart
- 13. Possible mechanisms for the bronchodilation, which occurs during halothane anaesthesia, include**
- inhibition of release of bronchoactive substances
 - stimulation of beta-adrenergic receptors
 - inhibition of acetylcholine release within the lung parenchyma
 - inhibition of alpha-adrenergic receptors
 - stimulation of carotid body chemoreceptors
- 14. Problems with routine preoperative chest X-rays include**
- a high percentage of false positive
 - a high percentage of false negative
 - a considerable risk of radiation induced cancer
 - very few unsuspected positive findings
 - a high percentage of clinically insignificant, positive findings
- 15. Venous air embolism is associated with**
- arterial hypotension
 - a decrease in end-tidal carbon dioxide concentration
 - cardiac arrhythmias
 - a decrease in pulmonary vascular resistance
 - a decrease in intracranial pressure
- 16. Postoperative cerebral vasospasm in a patient with a subarachnoid haemorrhage**
- does not occur provided that the aneurysm has been clipped successfully
 - may be treated with calcium antagonists
 - usually occurs two weeks after operation
 - is prevented by postoperative ventilation
 - may produce a hemiplegia
- 17. In the diagnosis of brain-stem death**
- clinical criteria are invalid in a hypothermic patient
 - caloric testing is used to test the integrity of the Vth cranial nerve
 - an isoelectric EEG is pathognomonic
 - absence of neuromuscular blockade should be confirmed with a peripheral nerve stimulator
 - reflex movements of the legs may still occur
- 18. Methods of reducing intracranial pressure include**
- mannitol
 - sodium nitroprusside
 - ventricular drainage
 - isoflurane
 - nimodipine

19. Acute subdural haematoma

- A. results from haemorrhage from the middle meningeal artery
- B. is frequently bilateral
- C. is often associated with secondary bleeding following decompression
- D. is a complication of chronic alcoholism
- E. carries a good prognosis when associated with a basal skull fracture

20. The following are associated with increased intracranial pressure following head trauma:

- A. papilloedema
- B. pulmonary oedema
- C. hypertension
- D. a Glasgow coma score greater than 12
- E. bradycardia

21. A left sided double lumen endobronchial tube

- A. can be used for left lower lobectomy
- B. is suitable for a right sided broncho-pleural fistula
- C. has a dedicated orifice for the left upper lobe bronchus
- D. is used in preference to a right sided tube wherever possible
- E. is contraindicated in a patient with a right pneumothorax

22. Recognised advantages of controlled ventilation in the treatment of flail chest include

- A. reduction of paradoxical ventilation
- B. the ability to use positive end-expiratory pressure (PEEP)
- C. decreased pain
- D. prevention of pneumothorax
- E. accelerated healing of rib fractures

23. Appropriate treatment of moderate postoperative hypoxaemia following coronary artery bypass grafting in a ventilated patient with normal cardiovascular parameters includes

- A. digitalisation
- B. addition of positive end-expiratory pressure (PEEP)
- C. dopamine infusion
- D. sodium nitroprusside infusion
- E. increasing the FiO_2

24. Atropine administration during anaesthesia to a patient with severe mitral stenosis can cause increased

- A. myocardial oxygen consumption
- B. left atrial pressure
- C. left ventricular filling pressure
- D. pulmonary capillary wedge pressure
- E. cardiac output

25. Recognised anaesthetic techniques for septoplasty include the use of

- A. a throat pack
- B. sodium nitroprusside induced hypotension
- C. nasal preparation with topical cocaine
- D. a nasogastric tube
- E. anticholinergic premedication

26. Traction on the medial rectus muscle of the eye produces

- A. hypertension
- B. bradycardia
- C. mydriasis
- D. Homer's syndrome
- E. cardiac dysrhythmias

27. Recognised methods of providing pain relief in the early stages of labour include

- A. thoracic epidural
- B. intrathecal analgesia
- C. intramuscular pethidine
- D. hypnosis
- E. nitrous oxide in oxygen

28. During the third trimester of pregnancy there is

- A. an increase in alveolar ventilation
- B. a decrease in haematocrit
- C. decreased basal metabolic rate
- D. an increased blood volume
- E. an increase in functional residual capacity

29. Drugs which should be avoided in the first trimester of pregnancy include

- A. ondansetron
- B. penicillin
- C. metoclopramide
- D. tetracycline
- E. metronidazole

30. The umbilical arteries

- A. originate from the fetal internal iliac arteries
- B. convey venous blood from the fetus
- C. contain blood at a PO_2 of 5.3 KPa (40mmHg)
- D. insert into the fetal inferior vena cava
- E. are unaffected by autoregulation

31. Post-laparotomy pain contributes to

- A. polyuria
- B. nausea
- C. hypoxaemia
- D. decreased functional residual capacity (FRC)
- E. tachycardia

32. Section of the trigeminal ganglion results in

- A. facial paralysis
- B. loss of salivary secretion
- C. ptosis of the eyelid
- D. vasodilatation of the facial skin
- E. corneal anaesthesia

33. Meralgia paraesthetica is relieved by nerve block of the

- A. lingual nerve
- B. trigeminal nerve
- C. lateral femoral cutaneous nerve
- D. lumbar sympathetic nerve
- E. femoral nerve

34. Side effects of opioid epidural analgesia include

- A. itching
- B. hypotension
- C. hypoventilation
- D. sedation
- E. urinary retention

35. Factors influencing the level of a spinal block include the

- A. specific gravity of the anaesthetic solution
- B. volume of the anaesthetic solution
- C. dose of local anaesthetic
- D. age of the patient
- E. position of the patient

36. Likely causes of coagulopathy in a patient who becomes septic following colonic resection include:

- A. deficiency of vitamin K
- B. liver damage due to halothane
- C. disseminated intravascular coagulation
- D. unsuspected von Willebrand's disease
- E. administration of low-dose subcutaneous heparin

37. Reduction in cardiac output associated with high positive end expiratory pressure therapy (PEEP) is secondary to

- A. diminished venous return to the right heart
- B. diminished left ventricular performance due to shift of the intraventricular septum
- C. increased right ventricular afterload
- D. decreased heart rate
- E. carbon dioxide retention

38. Positive end expiratory pressure (PEEP) decreases

- A. intrathoracic blood volume
- B. PaCO₂
- C. functional residual capacity
- D. intracranial pressure
- E. pulmonary capillary wedge pressure

39. A decrease in mixed venous oxygen saturation is commonly due to

- A. decreased cardiac output
- B. decreased metabolic rate
- C. increased pulmonary artery pressure
- D. a left to right shunt
- E. decreased arterial oxygen content

40. Possible causes of sudden onset of systolic and diastolic murmurs in a patient with infective endocarditis include

- A. pulmonary embolism
- B. inferior myocardial infarction
- C. prolapsed mitral valve cusp
- D. aortic valve rupture
- E. dissecting aortic aneurysm

41. A high urinary osmolality is associated with

- A. diabetes insipidus
- B. impaired renal function
- C. mannitol administration
- D. diabetic ketoacidosis
- E. dehydration

42. Suitable sedative agents for use in intensive care include infusion of

- A. propofol
- B. midazolam
- C. droperidol
- D. etomidate
- E. clonidine

43. A low arterial PO₂ with a high PCO₂ is associated with

- A. pulmonary oedema
- B. upper airway obstruction
- C. lobar pneumonia
- D. acute salicylate poisoning
- E. exercise at high altitude

44. In acute hepatic failure

- A. the prothrombin time is normal
- B. serum alkaline phosphatase may be normal
- C. serum albumin is often below 10gm/L
- D. pulse oximetry is inaccurate in the presence of jaundice
- E. serum LDH is a sensitive index of hepatocellular damage

45. The urinary output of creatinine depends upon

- A. protein intake
- B. urinary volume
- C. glomerular filtration rate
- D. catabolism
- E. the muscle mass of the individual

46. Probable causes of profound hypotension on commencement of artificial ventilation in a patient suffering multiple trauma include

- A. tension pneumothorax
- B. hypovolaemia
- C. cardiac tamponade
- D. fat embolism
- E. flail chest

47. Physical signs characteristic of acute pulmonary embolism include

- A. dyspnoea
- B. large 'a' wave on the central venous pressure (CVP) curve
- C. systolic arterial hypertension
- D. cyanosis
- E. tachycardia

48. Decompression sickness

- A. is associated with avascular necrosis of bone
- B. is due to an alveolar oxygen deficit
- C. is cured by breathing a mixture of oxygen and helium at atmospheric pressure
- D. symptoms can occur four hours after the initial drop in pressure
- E. is avoided if nitrogen is included in the inspired gas mixture

49. Acute pancreatitis is associated with

- A. retroperitoneal haemorrhage
- B. tetany
- C. pleural effusions
- D. gastric distension
- E. hyperglycaemia

50. Appropriate agents for reversal of acute bronchoconstriction include

- A. salbutamol
- B. ketamine
- C. adrenaline
- D. sodium chromoglycate
- E. atropine

51. Factors correlated with increasing P(A-a)O₂ after surgery in the morbidly obese include

- A. location of incision
- B. type of incision
- C. weight/height ratio
- D. location of excess body fat
- E. intraoperative paralysis and artificial ventilation

52. Findings associated with near drowning in fresh water include

- A. atelectasis
- B. increased lung compliance
- C. loss of pulmonary surfactant
- D. increase in pulmonary venous admixture
- E. haemolysis

53. The "blood-brain barrier"

- A. is formed by the arachnoid villi
- B. is less permeable in the newborn
- C. is freely permeable to bicarbonate ions
- D. does not permit free passage of organic anions
- E. has similar functional characteristics to a cell membrane

54. Neonates with respiratory distress syndrome have

- A. decreased alveolar perfusion
- B. left-to-right cardiac shunts
- C. increased work of breathing
- D. normal alveolar surfactant activity
- E. a metabolic alkalosis

55. Concerning the neonatal respiratory system:

- A. the narrowest part of the airway is below the glottis
- B. thoraco-pulmonary compliance is higher than in the adult
- C. the mainstem bronchi leave the trachea at roughly equal angles
- D. the glottis lies higher in the neck than in the adult
- E. inspiration is predominantly diaphragmatic

56. Immediate treatment of an asthmatic child, unsuccessfully treated with epinephrine (adrenaline), who has become hypoxic, drowsy, hypercarbic and acidotic includes

- A. administration of sodium bicarbonate
- B. intravenous diazepam
- C. aminophylline infusion
- D. intubation and ventilation
- E. nebulised salbutamol

57. Concerning low platelet counts:

- A. before major surgery they should be increased to at least 50,000/ml
- B. in the non-surgical patient, counts of 40,000/ml are associated with increased haemorrhage
- C. platelet concentrate administration is the preferred method of treatment
- D. fresh frozen plasma should be administered to thrombocytopaenic patients prior to surgery
- E. they are invariably associated with altered platelet function

58. Thyroid stimulating hormone (TSH)

- A. increases blood flow to the thyroid gland
- B. is released from the hypothalamus
- C. is available as a synthetic product
- D. is elevated in iodine deficiency
- E. concentration is used to monitor thyroid hormone replacement therapy

59. In pre-renal oliguria

- A. urinary sodium concentration is greater than 75mmol/l
- B. urinary specific gravity is greater than 1015
- C. urine/plasma osmolality ratio is greater than 1.8
- D. urine/plasma urea ratio is greater than 10
- E. urine/plasma creatinine ratio is greater than 30

60. Differential diagnoses of an enlarged heart shadow observed on a chest X-ray include

- A. congestive cardiac failure
- B. pericardial effusion
- C. mitral valve disease
- D. hypertrophic subaortic stenosis
- E. hiatus hernia

Odpowiedzi do testów

Szanowni Państwo,

Poniżej przedstawiamy poprawne odpowiedzi do zestawów pytań, opublikowanych w Anestezjologii i Ratownictwie Nr 2/2008. Informacja zawarta w poprzednim numerze mogła sugerować, że publikowane przez nas pytania i odpowiedzi stanowią część testową państwowego egzaminu specjalizacyjnego; pytania pochodzą z tego samego lub podobnego banku pytań, nie są jednak zestawami bieżącymi.

Zestaw A

1. A,B,C,D
2. A,D,E
3. A,C,D
4. A,B,C,D,E
5. A,B,C,D,E
6. B,C,D
7. A,C,E
8. A,C,D
9. A
10. B,D,E
11. B,C
12. BDE
13. A,B,D,E
14. B,C,D,E
15. A,C

Zestaw B

1. C,E
2. A,B,E
3. A,B,C,D,E
4. A,B,C,D
5. A,B
6. BA,E
7. A,D
8. A,B,C
9. A,B,C,E
10. A,B,D,E
11. C
12. A,C,D
13. A,B,C
14. B
15. D,E