



Physiology MCQ Bank 0

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1. The carotid bodies:

- a) have a low blood flow per gram of tissue
- b) contain baroreceptors
- c) respond to changes in pH
- d) respond to small changes in PaO_2
- e) are located on the external carotid arteries

2. The following are examples of active transport:

- a) sodium extrusion from cells
- b) water reabsorption from the proximal convoluted tubule
- c) potassium excretion in the distal convoluted tubule
- d) glucose absorption from the gut
- e) water reabsorption in the loop of Henle

3. Growth hormone and insulin have opposite effects on:

- a) carbohydrate uptake by muscle
- b) catabolism of fat
- c) synthesis of fat
- d) synthesis of protein
- e) somatic growth

4. Stimulation of the tenth cranial nerve causes:

- a) slowing of A-V conduction
- b) constriction of coronary vessels
- c) increased secretion of gastric acid
- d) miosis
- e) relaxation of the pylorus

5. An increase in sympathetic stimulation to the heart causes:

- a) a fall in diastolic time
- b) a fall in dP/dt
- c) an increase in stroke volume
- d) dilation of the coronary vasculature
- e) an increase in myocardial oxygen consumption

6. If oxygen is added to inspired air to increase its partial pressure from 20 kPa (150 mmHg) to 60 kPa (450 mmHg):

- a) dissolved oxygen will increase approximately three-fold
- b) the oxygen content of the blood will increase approximately three-fold
- c) the PaN_2 will remain the same

- d) the PaO_2 will increase approximately three-fold
- e) hypercarbia will be prevented

7. Pulmonary vascular resistance is increased by:

- a) serotonin
- b) hypocarbia
- c) hypoxia
- d) a fall in pH
- e) adrenaline

8. On changing from the upright to the supine position:

- a) baroreceptor activity decreases
- b) leg vein pressure is reduced
- c) the blood volume in the pulmonary circulation falls
- d) stroke volume increases
- e) renin activity increases

9. The fall in urine output associated with major trauma may be caused by:

- a) haemorrhage
- b) a rise in antidiuretic hormone activity
- c) a fall in aldosterone activity
- d) an increase in the level of circulating catecholamines
- e) a rise in corticosteroid output

10. In the foetal circulation before birth:

- a) the PO_2 is higher in the ductus venosus than in the ductus arteriosus
- b) blood can go from the right atrium to the aorta without passing through the left atrium and ventricle
- c) the PO_2 in the aortic arch is higher than in the descending aorta
- d) blood flowing through the foramen ovale comes principally from the superior vena cava
- e) blood passes through the ductus arteriosus because of the high pulmonary vascular resistance

11. In the central venous pressure waveform:

- a) the a wave occurs after ventricular systole
- b) the v wave is caused by atrial contraction
- c) the a wave is absent in atrial fibrillation
- d) the a wave corresponds with closure of the aortic valve
- e) the v wave occurs during diastole

12. Renin activity is increased by:

- a) an increase in circulating adrenaline
- b) hypotension
- c) increased sodium ingestion
- d) an increase in aldosterone output
- e) hypovolaemia

13. Acute antagonism of beta adrenergic receptors causes:

- a) hyperglycaemia
- b) peripheral vasodilatation
- c) suppression of uterine contractility

- d) pupillary dilatation
- e) a reduction in cardiac output

14. Unilateral transection of dorsal nerve roots C3-T2 produces:

- a) motor paralysis
- b) loss of sensation
- c) loss of reflexes
- d) loss of sympathetic and sudomotor tone
- e) hypotonia

15. The rate of gastric emptying is:

- a) delayed by fat in the duodenum
- b) delayed by secretin
- c) delayed by fat in the oesophagus
- d) enhanced by alcohol
- e) independent of volume and type of food ingested

16. An increase in aldosterone production occurs in response to:

- a) ingestion of sodium chloride
- b) an increase in blood volume
- c) an increased intake of potassium
- d) angiotensin II
- e) trauma

17. Cerebrospinal fluid:

- a) is the main source of brain nutrition
- b) is mainly produced by active secretion from the choroid plexus
- c) contains virtually no glucose
- d) pH changes rapidly in response to changes in plasma pH
- e) pressure increases with jugular venous obstruction

18. Carbonic anhydrase is found at high concentration in:

- a) plasma
- b) red blood cells
- c) renal tubular cells
- d) gastric parietal cells
- e) cardiac muscle cells

19. The Hb-oxygen dissociation curve shifts to the right in:

- a) acute hypoxia
- b) stored blood
- c) metabolic acidosis
- d) respiratory alkalosis
- e) hypothermia

20. The functional residual capacity:

- a) is increased in the obese
- b) is approximately 10% higher in men than in women
- c) falls with general anaesthesia
- d) increases on changing from the supine to the standing position

e) falls with increasing age

ANSWERS

1. FFTFF
2. TFTTF
3. TTTF
4. TFTFT
5. TFTTT
6. TFFTF
7. TFTTF
8. FTFTF
9. TTFTT
10. TTTFT
11. FFTFT
12. TTFFT
13. FFFFT
14. FTTFF
15. TTFFF
16. FFTTT
17. FTFFT
18. FTTTF
19. FFTFF
20. FTTTT

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Physiology MCQ Bank 1

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1. In calculating the shunt fraction, the following need to be measured or estimated:

- a) mixed venous oxygen content
- b) pulmonary end-capillary oxygen content
- c) arterial oxygen content
- d) alveolar partial pressure of oxygen
- e) haemoglobin concentration

2. Pulse pressure increases with an increase in:

- a) stroke volume
- b) left ventricular end-diastolic volume
- c) arterial partial pressure of oxygen
- d) systemic vascular resistance
- e) blood viscosity

3. Acute untreated haemorrhagic shock in a patient will lead to:

- a) an increase in physiological dead-space
- b) an increase in the arterio-venous PCO_2 difference
- c) a fall in the pulmonary vascular volume
- d) an increase in antidiuretic hormone secretion
- e) an increase in plasma bicarbonate concentration

4. An increase in aldosterone secretion follows:

- a) a sodium chloride load
- b) a rise in blood volume
- c) an increase in oral potassium absorption
- d) trauma
- e) an increase in production of angiotensin II

5. Stimulation of alpha-adrenergic receptors will cause:

- a) vasoconstriction of the coronary arteries
- b) increased tone in the bladder neck muscle
- c) increased platelet aggregation
- d) lipolysis
- e) bronchodilation

ANSWERS

- 1. TTTTT
- 2. TTFFF
- 3. TFTTF
- 4. FFTTT
- 5. TTFFF



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Physiology MCQ Bank 2

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6. In the normal adult heart:

- a) mitral valve closure occurs before tricuspid valve closure
- b) pulmonary valve closure occurs before aortic valve closure
- c) there is isometric contraction of the left ventricle after the aortic valve opens
- d) atrial contraction is of more importance to ventricular filling if the heart rate increases
- e) the aortic valve cusps are immobile during ventricular filling

7. Resistance to laminar flow in a vessel is:

- a) proportional to wall thickness
- b) inversely proportional to the fourth power of the radius
- c) proportional to length
- d) independent of haematocrit
- e) proportional to the pressure drop

8. Autoregulatory mechanisms used in hypovolaemia include:

- a) an increase in precapillary sphincter tone
- b) an increase in capillary hydrostatic pressure
- c) a decrease in baroreceptor activity
- d) stimulation of the juxtaglomerular apparatus
- e) an increase in angiotensin II

9. Myocardial contractility is increased by:

- a) catecholamines
- b) an increase in heart rate
- c) an increase in fibre length
- d) an increase in parasympathetic nervous system activity
- e) calcium ions

10. The carotid sinuses:

- a) have stretch receptors in their walls
- b) give afferent impulses via the glossopharyngeal nerve
- c) stimulate the respiratory centre
- d) contain chemoreceptors
- e) stimulate the vasomotor centre

ANSWERS

- 6.TFFT
- 7.FTTFF
- 8.TTTTT
- 9.TTTFT
- 10.TTFFT

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[Print this page!](#)**Physiology MCQ Bank 3**

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11. The following cause a decrease in the arterial partial pressure of oxygen:

- a) anaemia
- b) carbon monoxide
- c) hyperventilation
- d) a rise in physiological dead-space
- e) old age

12. Iron absorption is dependent on:

- a) total body vitamin C
- b) HCl in the stomach
- c) an intact colonic mucosa
- d) total body iron
- e) erythropoietin levels in the blood

13. If a normal person hyperventilates for 2 hours to an arterial PCO_2 of 4 kPa:

- a) the cerebral blood flow decreases
- b) the standard bicarbonate decreases
- c) the Hb-oxygen dissociation curve shifts to the left
- d) the ionised calcium concentration decreases
- e) the plasma bicarbonate increases

14. Hypoglycaemia may result from:

- a) excessive insulin secretion
- b) alpha-adrenergic stimulation
- c) beta-adrenergic stimulation
- d) glucagon secretion
- e) hypothermia

15. Ingested lipid:

- a) is important in prostaglandin synthesis
- b) increases in the faeces with a decrease in bile secretion
- c) is absorbed via the intestinal lymphatics
- d) is mainly in the form of triglycerides
- e) can be used as a source of ATP production

ANSWERS

- 11. FFFFT
- 12. FTFTF
- 13. TFTTF
- 14. TFTFF
- 15. TTTTT

[Print this page!](#)**Physiology MCQ Bank 4**

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16. The following may be found in normal adult venous blood:

- a) 3% carboxyhaemoglobin
- b) 5% methaemoglobin
- c) 70% oxyhaemoglobin
- d) 2% free haemoglobin
- e) 2% fetal haemoglobin

17. In normal human lungs:

- a) a low PO_2 produces pulmonary vasodilatation
- b) beta-2 agonists cause bronchoconstriction
- c) pulmonary vascular resistance is increased by serotonin
- d) pulmonary vascular resistance is decreased by histamine
- e) pulmonary vascular resistance is decreased by noradrenaline

18. The normal response to surgery includes:

- a) a decrease in urine volume
- b) a decrease in the urinary excretion of sodium
- c) a decrease in plasma cortisol level
- d) an increase in the urinary excretion of nitrogen
- e) an increase in the urinary excretion of potassium

19. Capillary permeability is increased by:

- a) bradykinin
- b) adrenaline
- c) calcium
- d) vasopressin
- e) histamine

20. Expected changes in a patient with a pheochromocytoma include:

- a) a decreased haematocrit
- b) a decreased total blood volume
- c) a decreased serum sodium concentration
- d) an abnormal glucose tolerance test
- e) a reduced metabolic rate

ANSWERS

- 16. TFTFF
- 17. FFTFF
- 18. TTFTT
- 19. TFFFT
- 20. FTFTF

[Print this page!](#)**Physiology MCQ Bank 5****1. The liver:**

- a) receives most of its oxygen supply from the portal vein
- b) has its highest oxygen tension at the centre of a lobule
- c) produces heparin
- d) has a normal portal venous pressure of greater than 20 mmHg
- e) receives approximately 25% of the cardiac output

2. Skeletal muscle blood flow:

- a) increases with noradrenaline
- b) receives 50% of the cardiac output at rest
- c) may cease during isometric contraction
- d) increases with rhythmic contraction
- e) increases with adrenaline

3. In thermoregulation:

- a) respiratory heat loss is insignificant under normal conditions
- b) brown fat is an important source of heat production in neonates
- c) shivering is due to impulses conducted via autonomic efferents
- d) peripheral vasoconstriction increases heat production
- e) sweating is mediated by sympathetic cholinergic neurones

4. Adrenaline:

- a) is synthesized by demethylation of noradrenaline
- b) increases coronary blood flow
- c) increases free fatty acids in the blood
- d) mobilizes glycogen stores from the liver
- e) is metabolized in the plasma by monoamine oxidase

5. Glucagon:

- a) is a positive inotrope
- b) is produced by the beta cells of the pancreas
- c) stimulates production of free fatty acids in the blood
- d) release is increased in starvation
- e) stimulates glycogen synthesis

ANSWERS

- 1. TFFT
- 2. FTTT
- 3. TFFT (fundamentals of anaesthesia, 2nd edition page 446)
- 4. FTTT
- 5. TTTT

**Physiology MCQ Bank 6****6. Surfactant:**

- a) is a mucopolypeptide
- b) causes a decrease in surface tension
- c) results in the same surface tension for different sized alveoli
- d) causes an increase in compliance
- e) production is reduced after a prolonged reduction in pulmonary blood flow

7. Sinus arrhythmia:

- a) produces a lengthening of the P-R interval
- b) produces a lengthening of the R-R interval
- c) is maximal with breath holding
- d) is more marked during exercise
- e) is more marked in 70 year olds than in 20 year olds

8. A pressure-volume curve can be used for measuring:

- a) the work of breathing
- b) functional residual capacity
- c) anatomical dead space
- d) compliance
- e) respiratory quotient

9. The absolute refractory period for cardiac muscle is:

- a) as long as the entire action potential
- b) the period when no further action potential can be stimulated
- c) twice the length of the S-T interval
- d) as long as the mechanical contraction
- e) shorter for pacemaker tissue than for normal cardiac muscle

10. In a young normal adult:

- a) the glomerular filtration rate is approximately 125 ml/min
- b) the 24 hour urine creatinine content is approximately 800 mg
- c) urine specific gravity is always less than 1000
- d) renal blood flow is approximately 20% of cardiac output
- e) over 50% of water reabsorption from the glomerular filtrate occurs in the collecting ducts

ANSWERS

- 6.FTFTT
- 7.FTFFF
- 8.TFFTF
- 9.FTFFT
- 10.TFFTF

[Print this page!](#)**Physiology MCQ Bank 7****11. Total plasma calcium:**

- a) increases with phosphate
- b) increases with a rise in albumin,
- c) changes its degree of ionisation with pH changes
- d) is decreased in osteoporosis
- e) is affected by vitamin D

12. There is increased intestinal motility with:

- a) increased intraluminal pressure
- b) anticholinesterase drugs
- c) sympathetic block to T4
- d) stimulation of the splanchnic nerves
- e) increased circulating adrenaline

13. A healthy adult breathing an FIO₂ of 0.1 will:

- a) have a decreased cardiac output
- b) have a normal PaO₂
- c) have a changed alveolar PCO₂
- d) have an unchanged respiratory rate
- e) initially have a fall in pH

14. Acetylcholine is a neurotransmitter at:

- a) sweat glands
- b) the adrenal medulla
- c) the parotid gland
- d) parasympathetic ganglia
- e) the neuromuscular junction

15. Insulin:

- a) has the same effect on blood sugar as growth hormone
- b) inhibits entry of potassium into cells
- c) facilitates protein anabolism
- d) increases deposition of fats
- e) secretion is affected by catecholamines

ANSWERS

- 11. FTTFT
- 12. TTTFF
- 13. FFTFF
- 14. TTTTT
- 15. FFTTT

[Print this page!](#)**Physiology MCQ Bank 8****16. In a normal resting subject, a bradycardia would be expected following:**

- a) an increase in carotid sinus pressure
- b) an increase in right atrial pressure
- c) application of pressure to the eyeball
- d) the release of a Valsalva manoeuvre
- e) inspiration

17. The velocity of conduction of a nerve action potential:

- a) is inversely related to the cross-sectional area of the axon
- b) is faster in a myelinated fibre than in an unmyelinated one
- c) is decreased by cooling the nerve
- d) can exceed 100 m/s in humans
- e) is highest in pre-ganglionic autonomic fibres

18. The placenta:

- a) transports glucose from maternal to foetal blood by facilitated diffusion
- b) can synthesize glycogen
- c) actively transports oxygen from maternal to foetal blood
- d) allows protein molecules to pass from maternal to foetal blood by pinocytosis
- e) secretes oestradiol

19. Oxytocin:

- a) stimulates production of milk
- b) stimulates ejection of milk
- c) release is stimulated by dilatation of the cervix
- d) is synthesized in the anterior pituitary
- e) produces more powerful uterine contraction in the presence of progesterone

20. Aldosterone:

- a) production increases with a fall in plasma osmolality
- b) production decreases with a fall in blood volume
- c) production decreases with a rise in plasma renin level
- d) increases urinary potassium excretion
- e) may be produced by tumours of the adrenal cortex

ANSWERS

- 16. T F T T F
- 17. F T T T F
- 18. T F F F T
- 19. F T T F F
- 20. F F T T T



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Physiology MCQ Bank 9**1. Adrenaline**

- a) is secreted by the adrenal cortex
- b) decreases systemic vascular resistance at low doses
- c) decreases pulmonary vascular resistance
- d) constricts the pupil
- e) acts only at beta-1 receptors

2. A typical mammalian motor neurone:

- a) innervates only one skeletal muscle cell
- b) is myelinated
- c) has its cell body in the ventral (anterior) horn of the spinal cord
- d) might receive an input directly from Group Ia afferent fibres in the spinal cord
- e) would be stimulated by application of glycine to its cell body

3. The vagus nerve:

- a) has little direct effect on the strength of ventricular contraction
- b) contains afferent and efferent fibres
- c) contains parasympathetic post-ganglionic fibres
- d) contains fibres which regulate gastric acid secretion
- e) has a role in bladder emptying

4. Vital capacity:

- a) is the volume of air expired from full inspiration to full expiration
- b) increases gradually with age in adults
- c) is greater in men than in women of similar age and height
- d) is equal to the sum of the inspiratory and expiratory reserve volumes
- e) may be measured by spirometry

5. Hyperventilation in a normal subject for 24 hours will produce a:

- a) fall in PaCO_2
- b) rise in PaCO_2
- c) rise in ionised calcium
- d) fall in cerebrospinal fluid bicarbonate
- e) rise in plasma bicarbonate

ANSWERS

- 1.FTTFF
- 2.FTTTF
- 3.TTFTF
- 4.TFTFT
- 5.TFFFF

[Print this page!](#)**Physiology MCQ Bank 10****6. The blood-brain barrier:**

- a) results in certain molecules in the blood taking longer to equilibrate with tissue fluid in the brain than with tissue fluid elsewhere
- b) permits CO₂ to pass freely
- c) is more permeable to water-soluble substances than fat-soluble substances
- d) is more permeable in neonates than in adults
- e) is readily crossed by dopamine

7. A reflex action:

- a) may be carried out by skeletal, smooth or cardiac muscle or by glands
- b) is not influenced by higher centres in the brain
- c) results from activity in at least two central nervous synapses in series
- d) may involve simultaneous contraction of some skeletal muscles and relaxation of others
- e) can be monosynaptic or polysynaptic

8. Platelets:

- a) are produced in the bone marrow
- b) increase in number after tissue damage
- c) have a small nucleus
- d) alter their shape when they make contact with collagen
- e) are activated by ADP and thrombin

9. The pressure:

- a) drop across the major veins is similar to that across the major arteries
- b) drop across the hepatic portal bed is similar to that across the splenic vascular bed
- c) in the hepatic portal vein is higher than that in the inferior vena cava
- d) drop across the vascular bed in the foot is greater when standing than when lying down
- e) drop across the pulmonary circulation is the same as across the systemic circulation

10. Athletes differ from normal individuals in having:

- a) a higher resting cardiac output
- b) a higher resting heart rate
- c) a decreased muscle mass
- d) a higher maximum oxygen consumption
- e) increased muscular efficiency at high blood lactate levels

ANSWERS

- 6.TTFTF
- 7.TFFT
- 8.TTFTT
- 9.FTFF
- 10.FFTT

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[Print this page!](#)**Physiology MCQ Bank 12****1. Stimulation of the parasympathetic nervous system:**

- a) increases the heart rate
- b) decreases the rate of gastric emptying
- c) dilates the pupil
- d) causes vasoconstriction
- e) causes contraction of the detrusor muscle in the bladder

2. Pregnancy at term is associated with a:

- a) 20% decrease in red cell mass
- b) rise in cardiac output
- c) fall in PaCO_2
- d) fall in haematocrit
- e) low protein-bound iodine

3. The P50 is:

- a) the oxygen saturation when the arterial partial pressure of oxygen is 50 mmHg
- b) the arterial oxygen tension when haemoglobin is 50% saturated
- c) an indicator of the position of the oxygen dissociation curve
- d) raised in foetal blood
- e) lowered in chronic anaemia

4. In a healthy adult human heart the:

- a) left ventricular end-systolic volume is approximately 30 ml
- b) first heart sound coincides with the onset of ventricular systole
- c) stroke volume is approximately 70 ml
- d) left ventricular end-diastolic pressure is about 50 mmHg
- e) second heart sound is caused by closure of the aortic and pulmonary valves

5. Renin:

- a) is released from granules in the juxtaglomerular cells of the afferent arteriole
- b) levels in the blood increase in response to a fall in plasma sodium concentration
- c) levels in the blood decrease when renal perfusion is decreased
- d) release is enhanced by angiotensin II
- e) release is inhibited by antidiuretic hormone

ANSWERS

- 1. FFFFT
- 2. FTTTF
- 3. FTTF
- 4. TTTFT
- 5. TTFFT

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[Print this page!](#)**Physiology MCQ Bank 13****1. The following are secreted from the adrenal cortex:**

- a) testosterone
- b) aldosterone
- c) angiotensin
- d) noradrenaline
- e) deoxycorticosterone

2. Aldosterone:

- a) secretion increases in response to a fall in blood volume
- b) is a polypeptide
- c) produces an increase in renal arterial pressure
- d) produces a fall in urine volume
- e) increases the reabsorption of sodium

3. Cerebrospinal fluid:

- a) is actively secreted by the choroid plexus
- b) is the major nutrition source of the brain
- c) has the same pH as arterial blood
- d) contains virtually no glucose
- e) has a higher chloride level than plasma

4. Red blood cell production:

- a) increases during acclimatisation to altitude
- b) can occur in the spleen
- c) is dependent on normal gastric secretory activity
- d) is stimulated by hypercarbia
- e) is dependent on erythropoietin

5. Bile:

- a) salts contribute to the solubility of cholesterol in the bile
- b) contains bilirubin mainly in the unconjugated form
- c) contributes more than pancreatic secretion to the neutralisation of acid from the stomach
- d) becomes more alkaline following concentration in the gall bladder
- e) is produced at a rate of approximately 2000 ml/day

ANSWERS

- 1. FTFFT
- 2. TFTFT
- 3. TFFFT
- 4. TTTFT
- 5. TFFFF

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[Print this page!](#)**Physiology MCQ Bank 14****1. Carbonic anhydrase plays a role in the:**

- a) production of HCl by the parietal cells of the stomach
- b) secretion of hydrogen ions from the fluid in the renal tubules
- c) passage of CO₂ from the pulmonary capillaries to the alveoli
- d) secretion of bicarbonate by the pancreas
- e) production of red blood cells

2. In a patient with severe hypovolaemia, the:

- a) physiological dead-space increases
- b) arterio-venous oxygen difference decreases
- c) alveolar-arterial oxygen difference increases
- d) minute volume increases
- e) arterial PCO₂ increases

3. The group A antigen:

- a) is present on the red cells of a group A patient
- b) may occur in the saliva of a group A patient
- c) is transmitted as an autosomal recessive characteristic
- d) is more common than the group B antigen
- e) is the most common cause of haemolytic disease of the newborn

4. The action of noradrenaline may be terminated by:

- a) monoamine oxidase in the nerve terminal
- b) catechol-O-methyltransferase in the liver
- c) catechol-O-methyltransferase in the nerve terminal
- d) dopa decarboxylase in the nerve terminal
- e) neuronal reuptake

5. An increase in the 2,3-DPG concentration in red blood cells occurs in:

- a) anaemia
- b) acclimatisation to altitude
- c) stored blood
- d) trained athletes
- e) cyanotic heart disease

ANSWERS

- 1. TTFFF
- 2. TFTTF
- 3. TTFTF
- 4. TTFFT
- 5. TTFFT

[Print this page!](#)**Physiology MCQ Bank 15****1. In normal cerebrospinal fluid, the:**

- a) chloride concentration is higher than in blood
- b) glucose concentration is the same as in plasma
- c) PCO_2 is higher than in mixed venous blood
- d) pH is the same as in arterial blood
- e) bicarbonate concentration is the same as in arterial blood

2. When breathing out against a closed glottis, the:

- a) intratracheal pressure rises
- b) heart rate slows transiently
- c) right ventricular output increases
- d) left ventricular output has a sustained increase
- e) systolic arterial pressure falls then rises

3. Changing position from standing to supine:

- a) increases stroke volume
- b) increases baroreceptor activity
- c) increases the pulmonary blood volume
- d) decreases leg vein pressure
- e) decreases the heart rate

4. Vagal stimulation produces:

- a) a fall in heart rate
- b) an increase in atrial contractility
- c) an increase in ventricular contractility
- d) slowing of A-V conduction
- e) a fall in stroke volume

5. The following are representative of myocardial afterload:

- a) mean aortic pressure
- b) mean pulmonary artery pressure
- c) left ventricular end-diastolic volume
- d) left ventricular end-diastolic pressure
- e) the rate of rise of left ventricular pressure

ANSWERS

- 1. TFTFF
- 2. TTFFF
- 3. TTTTT
- 4. TFFTT
- 5. TTFFF


[Print this page!](#)

Physiology MCQ Bank 16

1. On ascending to an altitude of 6000m, changes include:

- a) an increase in minute volume
- b) an initial increase in plasma pH
- c) a rise in urine pH
- d) a fall in arterial PO_2
- e) an increase in cerebral blood flow

2. Transferrin is:

- a) involved in iron uptake by the gut mucosa
- b) involved in iron transport across the gut mucosa
- c) involved in iron transport to muscle
- d) involved in iron transport to storage sites
- e) normally only 35% saturated with iron

3. Breathing 100% oxygen at atmospheric pressure for a prolonged period causes:

- a) retrosternal pain
- b) dizziness
- c) auditory disturbances
- d) convulsions
- e) atelectasis

4. The following transfusions will lead to agglutination:

	Donor	Recipient
a)	B	O
b)	AB	A
c)	B	AB
d)	O	AB
e)	AB	O

5. Chemoreceptors in the arterial system:

- a) have a higher rate of oxygen consumption per gram than brain tissue
- b) respond to changes in oxygen tension and not content
- c) respond to changes in pH
- d) conduct afferent information via the glossopharyngeal and vagus nerves
- e) are found in the carotid sinus

ANSWERS

- 1. TTTTF
- 2. FFTTT
- 3. TFFFT
- 4. TTFFT
- 5. FTTTF

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[Print this page!](#)**Physiology MCQ Bank 17****1. In the healthy heart, an increase in stroke volume is seen with an increase in:**

- a) dp/dt
- b) aortic systolic pressure
- c) left ventricular end-diastolic volume
- d) left ventricular end-systolic pressure
- e) heart rate

2. The a-wave of the central venous pressure waveform:

- a) is caused by atrial contraction
- b) is not seen in atrial fibrillation
- c) is caused by atrial filling during ventricular contraction
- d) decreases with inspiration
- e) is followed by the v-wave

3. In the electrocardiogram, the:

- a) P-R interval is equivalent to the A-V nodal conduction time
- b) T-wave is equivalent to ventricular repolarisation
- c) Q-T interval is equivalent to the duration of ventricular contraction
- d) U-wave represents sinoatrial node repolarisation
- e) duration of a normal P-wave is 0.2 seconds

4. Ptosis results from:

- a) parasympathetic block
- b) sympathetic block
- c) facial nerve block
- d) trigeminal nerve block
- e) oculomotor nerve block

5. The following are precursors of adrenaline:

- a) tyrosine
- b) phenylalanine
- c) noradrenaline
- d) dopamine
- e) isoprenaline

ANSWERS

- 1. T F T F F
- 2. T T F F F
- 3. T T T F F
- 4. F T T F T
- 5. T T T T F

[Print this page!](#)**Physiology MCQ Bank 18****1. The following lead to an increase in insulin secretion:**

- a) glucagon
- b) adrenaline
- c) growth hormone
- d) starvation
- e) major trauma

2. Adenyl cyclase:

- a) increases the conversion of ATP to cyclic AMP
- b) is closely linked to alpha- and beta-adrenergic receptors
- c) is inhibited by aminophylline
- d) release is triggered by cyclic AMP
- e) acts at a mitochondrial level

3. Surfactant:

- a) contains phospholipids
- b) prevents oedema formation in the alveolar wall
- c) reduces surface tension by approximately 30%
- d) produces a monomolecular layer
- e) stabilises the size of an alveolus

4. The oxyhaemoglobin dissociation curve is shifted to the left by:

- a) an increase in arterial PCO_2
- b) acidosis
- c) chronic anaemia
- d) carbon monoxide
- e) a fall in temperature

5. In the adult, growth hormone stimulates:

- a) glucose uptake into cells
- b) calcium absorption from the gut
- c) protein synthesis
- d) fat synthesis
- e) bone growth

ANSWERS

- 1. TFTFT
- 2. TTFFF
- 3. TTFFT
- 4. FFFTT
- 5. FFTFT

