

# E-GAMSAT Sample Exam

## Section I – Reasoning in Humanities and Social Sciences

26 questions – 35 minutes

## Section II – Written Communication

1 question – 30 minutes

## Section III – Reasoning in Biological and Physical Sciences

30 questions – 45 minutes

It is important when completing this sample exam to simulate real exam conditions, especially where timing is concerned. This is not a full length exam but covers sections I, II, and III.

Answers and solutions are available online at [e-gamsat.com](http://e-gamsat.com)

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## Section I: Reasoning in Humanities and Social Sciences

Perusal: 3 minutes

Time allowed: 35 minutes

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### Unit One

#### Questions 1-5

This passage is taken from Adam Smith's *The Wealth of Nations*:

To take an example, therefore, from a very trifling manufacture; but one in which the division of labour has been very often taken notice of, the trade of the pin-maker; a workman not educated to this business (which the division of labour has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could scarce, perhaps, with his utmost industry, make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving, the head; to make the head requires two or three distinct operations; to put it on is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactories, are all performed by distinct hands, though in others the same man will sometimes perform two or three of them. I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day. There are in a pound upwards of four thousand pins of a middling size. Those ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. Each person, therefore, making a tenth part of forty-eight thousand pins, might be considered as making four thousand eight hundred pins in a day. But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made twenty, perhaps not one pin in a day; that is, certainly, not the two hundred and fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations.

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- 1 Which skills must workers have for the division of labour described above?
  - A an eye for quality and detail
  - B ability to work quickly
  - C ability to do multiple steps in the manufacturing process
  - D none of the above
  
- 2 Which phrase best describes Adam Smith's vision?
  - A if you want something done right, do it yourself
  - B slow and steady wins the race
  - C a well-trained worker is irreplaceable
  - D individually we are a drop; together we are an ocean
  
- 3 Which of these examples best embodies the division of labour?
  - A a painter adding each new layer to his painting
  - B contractors who specialize in installing flooring
  - C an automobile company using assembly line production
  - D a school where each teacher specializes in one subject
  
- 4 Which was NOT argued as a reason that the division of labour is advantageous?
  - A increased productivity
  - B the ability to use unskilled laborers
  - C decreased manufacturing cost
  - D increased efficiency
  
- 5 What is the author saying about pin-making when he describes it as "a very trifling manufacture?"
  - A it is a trivial industry
  - B it is an industry that makes use of unskilled labour
  - C it is an industry that performs a tedious task
  - D it is an industry that employs a relatively insignificant number workers per factory

## Unit Two

## Questions 6-10

This passage is taken from William Shakespeare's *Macbeth*:

If it were done when 'tis done, then 'twere well  
It were done quickly. If th'assassination  
Could trammel up the consequence, and catch  
With his surcease success: that but this blow  
5 Might be the be-all and the end-all, here,  
But here upon this bank and shoal of time,  
We'd jump the life to come. But in these cases  
We still have judgement here, that we but teach  
Bloody instructions which, being taught, return  
10 To plague th'inventor. This even-handed justice  
Commends th'ingredience of our poisoned chalice  
To our own lips. He's here in double trust:  
First, as I am his kinsman and his subject,  
Strong both against the deed; then, as his host,  
15 Who should against his murderer shut the door,  
Not bear the knife myself. Besides, this Duncan  
Hath borne his faculties so meek, hath been  
So clear in his great office, that his virtues  
Will plead like angels, trumpet-tongued against  
20 The deep damnation of his taking-off,  
And pity, like a naked new-born babe,  
Striding the blast, or heaven's cherubin, horsed  
Upon the sightless couriers of the air,  
Shall blow the horrid deed in every eye  
25 That tears shall drown the wind. I have no spur  
To prick the sides of my intent, but only  
Vaulting ambition which o'erleaps itself  
And falls on th'other.

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- 6 Which is NOT a reason that Macbeth is hesitant to kill Duncan
- A Duncan is the king
  - B Duncan is his relative
  - C Duncan trusts him
  - D Duncan's death would lead to war
- 7 According to the passage, which best describes Duncan as a leader?
- A selfish
  - B uncorrupt
  - C unpopular
  - D friendly
- 8 What does Macbeth mean when he says he possesses "I have no spur To prick the sides of my intent, but only Vaulting ambition which o'erleaps itself And falls on th'other"?
- A his ambition is his main motivation
  - B his ambition may be his downfall
  - C he has difficulty making his decision
  - D all of the Above
- 9 Which best describes the overall mood of this passage?
- A conflicted
  - B ambitious
  - C vengeful
  - D fearful
- 10 Macbeth states in the passage: "...that we but teach Bloody instructions which, being taught, return To plague th'inventor..." What phrase best describes this portion of the passage?
- A do not throw stones in glass houses
  - B if someone slaps you, turn the other cheek
  - C an eye for an eye, a tooth for a tooth
  - D he who has the last laugh, laughs loudest

Unit Three  
Questions 11-15

This passage is from George Graham Vest's speech Tribute to Dogs:

- 5      Gentlemen of the Jury: The best friend a man has in the world may turn against him and become his enemy. His son or daughter that he has reared with loving care may prove ungrateful. Those who are nearest and dearest to us, those whom we trust with our happiness and our good name may become traitors to their faith. The money that a man has, he may lose. It flies away from him, perhaps when he needs it most. A man's reputation may be sacrificed in a moment of ill-considered action. The people who are prone to fall on their knees to do us honor when success is with us, may be the first to throw the stone of malice when failure settles its cloud upon our heads.
- 10      The one absolutely unselfish friend that man can have in this selfish world, the one that never deserts him, the one that never proves ungrateful or treacherous is his dog. A man's dog stands by him in prosperity and in poverty, in health and in sickness. He will sleep on the cold ground, where the wintry winds blow and the snow drives fiercely, if only he may be near his master's side. He will kiss the hand that has no
- 15      food to offer. He will lick the wounds and sores that come in encounters with the roughness of the world. He guards the sleep of his pauper master as if he were a prince. When all other friends desert, he remains. When riches take wings, and reputation falls to pieces, he is as constant in his love as the sun in its journey through the heavens.
- 20      If fortune drives the master forth, an outcast in the world, friendless and homeless, the faithful dog asks no higher privilege than that of accompanying him, to guard him against danger, to fight against his enemies. And when the last scene of all comes, and death takes his master in its embrace and his body is laid away in the cold
- 25      ground, no matter if all other friends pursue their way, there by the graveside will the noble dog be found, his head between his paws, his eyes sad, but open in alert watchfulness, faithful and true even in death.

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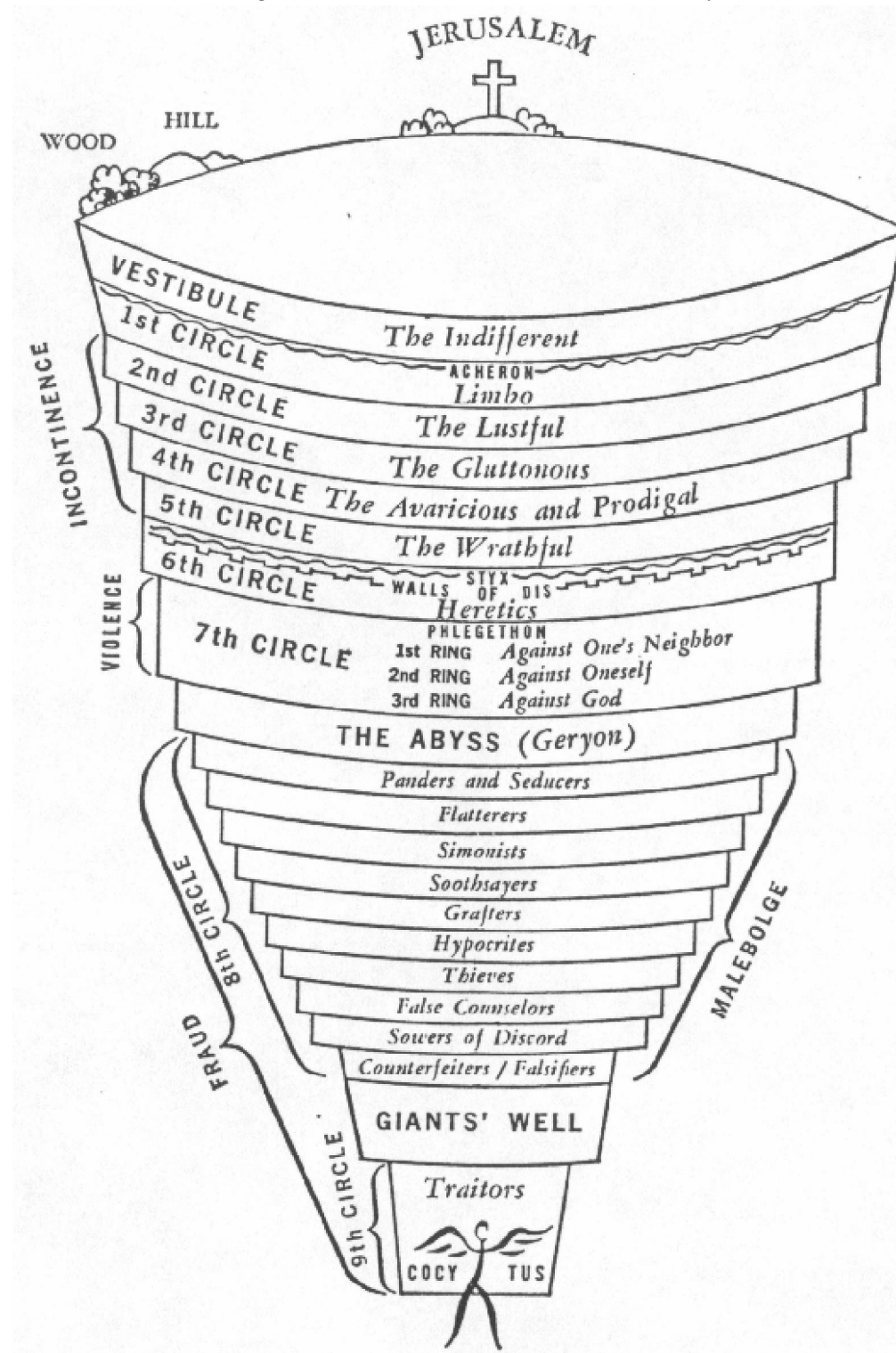
- 11 What is the occupation of the speaker?
- A veterinarian
  - B doctor
  - C Lawyer
  - D Writer
- 12 What best describes the speaker's opinion of people?
- A Fickle
  - B Uncaring
  - C Greedy
  - D Self-serving
- 13 The passage suggests a dog will remain loyal to his master through which hardship?
- A The death of his wife
  - B The acquisition of a new dog
  - C Long periods of separation
  - D Times of poverty
- 14 This speech was likely intended to convince the audience:
- A That pets are the property of their masters
  - B That people cannot be relied upon
  - C That killing a dog is a crime
  - D That dogs and humans have a working relationship
- 15 Which word best describes Vest's feeling toward dogs?
- A Approbation
  - B Enmity
  - C Resentment
  - D Amour



## Unit Four

### Questions 16-20

The picture below depicts the circles of Hell from Dante's *Inferno*. The closer the offense is to the bottom of the diagram, the more severe it was considered by the author.





- 16 In which circle would a person greedy for wealth belong?
- A 8th
  - B 6th
  - C 5th
  - D 4th
- 17 According to the diagram, which person's offense is worse?
- A a psychic
  - B an adulterer
  - C an overeater
  - D a pimp
- 18 Which offense belongs in the 2<sup>nd</sup> ring of the 7<sup>th</sup> circle?
- A home invasion
  - B suicide
  - C homicide
  - D tax evasion
- 19 According to Dante, which person is the farthest from Jerusalem?
- A a false prophet
  - B a spy
  - C a man who murders a stranger
  - D a man who murders his brother
- 20 According to the diagram, which heading does NOT encompass someone who produces fake money?
- A malebolge
  - B fraud
  - C 9<sup>th</sup> circle
  - D 8<sup>th</sup> circle

Unit Five  
Questions 21-25

Robert Frost's The Road Not Taken

- 5 Two roads diverged in a yellow wood,  
And sorry I could not travel both  
And be one traveler, long I stood  
And looked down one as far as I could  
To where it bent in the undergrowth;
- 10 Then took the other, as just as fair,  
And having perhaps the better claim,  
Because it was grassy and wanted wear;  
Though as for that the passing there  
Had worn them really about the same,
- 15 And both that morning equally lay  
In leaves no step had trodden black.  
Oh, I kept the first for another day!  
Yet knowing how way leads on to way,  
I doubted if I should ever come back.
- 20 I shall be telling this with a sigh  
Somewhere ages and ages hence:  
Two roads diverged in a wood, and I-  
I took the one less traveled by,  
And that has made all the difference.

- 21 How does the author seem to feel about his decision in the poem?
- A Emotional
  - B Speculative
  - C Nostalgic
  - D Regretful
- 22 What does Frost say about the road he did not choose?
- A He looked down it briefly
  - B It was in an orange woods
  - C It was a straight path
  - D It was covered in untouched leaves
- 23 Which is true about the road chosen in the poem?
- A He looked down it longer than the first road
  - B It looked less traveled
  - C It was grassier than the first path
  - D It was covered in more leaves than the first path
- 24 What common human tendency does Frost mention in the poem?
- A Exaggeration when retelling stories
  - B Rushing to make a decision
  - C Getting lost easily
  - D Taking the easier path in life
- 25 What is the rhyme scheme of the poem?
- A AABBA
  - B ABABB
  - C ABAAB
  - D ABBA

Unit Six  
Question 26



*"Have you given much thought to what kind  
of job you want after you retire?"*

- 26 This cartoon's humour is based on the fact that
- A modern society is in a state of flux, and traditional notions and concepts are not what they used to be.
  - B many elderly people in the 21<sup>st</sup> century try too hard to be young, fit, and hip again, regardless of how ridiculous they may seem in so doing.
  - C rites of passage such as work, retirement, and death are common to us all, no matter how hard we try to forget about them.
  - D middle-aged males tend to have feelings of guilt associated with their impending retirements.

## Section II: Written Communication

Perusal: 2 minutes

Time allowed: 30 minutes

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Consider the following comments and develop a piece of writing in response to one or more of them.

Your writing will be judged on the quality of your response to the theme; how well you organize and present your point of view, and how effectively you express yourself. You will not be judged on the views or attitudes you express.

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The best argument against democracy is a five-minute conversation with the average voter.

Winston Churchill

We are imperfect. We cannot expect perfect government.

William Howard Taft

Democracy gives every man the right to be his own oppressor.

James Russell Lowell

Democracy substitutes election by the incompetent many for appointment by the corrupt few

George Bernard Shaw

Democracy: The state of affairs in which you consent to having your pocket picked, and elect the best man to do it.

Benjamin Lichtenberg

### Section III: Reasoning in Biological and Physical Sciences

Perusal: 5 minutes

Time allowed: 45 minutes

#### Unit One

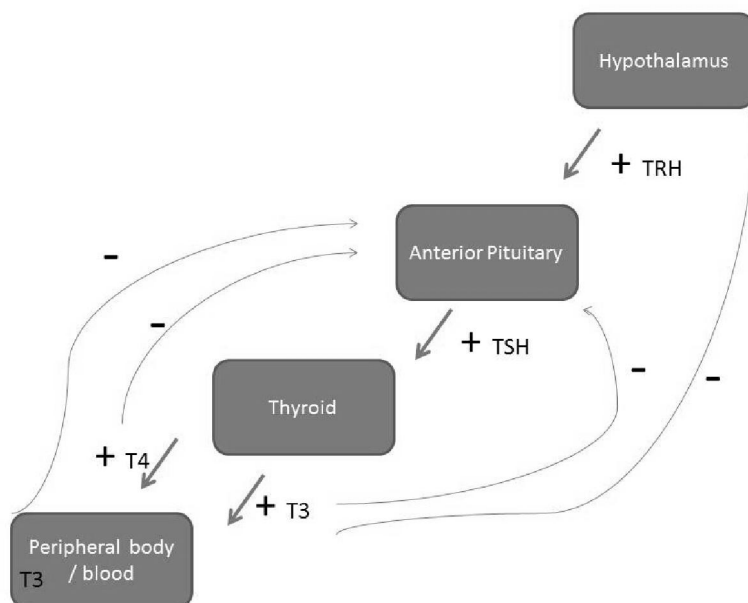
#### Question 1-5

The thyroid gland secretes thyroid hormones that control body metabolism. The secretion is under tight feedback control. The thyroid secretes the active T3 hormone and the inactive T4 that is converted in the peripheral tissues to T3. The hypothalamus secretes thyroid releasing hormone (TRH) that stimulates the anterior pituitary gland to secrete thyroid stimulating hormone (TSH). Thyroid stimulating hormone then stimulates the thyroid gland to secrete T4 and T3.

A key component of thyroid hormone production is iodine and the amino acid tyrosine. Feedback regulation occurs as in Figure 1a, below. There is also negative feedback of TSH to TRH, TRH to the hypothalamus, and of T4 and T3 to the thyroid gland.

Overactive secretion of a gland without proper stimulation or failure to adhere to the negative feedback can lead to poorly regulated thyroid gland hormone levels and disease. It is possible to take thyroid hormone as a pill (T4) to supplement if these levels are low.

Figure 1a



- 1 Which of the following most strongly influence the basal metabolic rate (BMR)?

- A TRH.
  - B TSH.
  - C T4.
  - D T3.
- 2 Production of thyroid hormones by the thyroid gland is negatively influenced by?
- A TRH.
  - B TSH.
  - C FSH.
  - D T4.
- 3 If a person has the thyroid gland completely removed and does not take any thyroid hormone pills, the above pathway would be affected by?
- A Increased conversion of T4 to T3 in the peripheral system.
  - B Decrease in TSH level.
  - C Increase in TRH level .
  - D No change in BMR.
- 4 A hypoactive thyroid gland does not make enough thyroid hormone for the body's needs and metabolism despite proper stimulation. This results in a slow metabolism. A person with a hypoactive thyroid has blood drawn to measure the thyroid hormone levels. Which of the following are likely from this person?
- A Low T4, Low T3, High TSH.
  - B High T4, Low T3, High TSH.
  - C Normal T4, Normal T3, Low TSH.
  - D High T4, High T3, Low TSH.
- 5 A hyperactive thyroid gland makes too much thyroid hormone creates a very high metabolism. A thyroid gland can be overactive without stimulation from the pituitary or hypothalamus (automaticity). A person with a hyperactive thyroid gland has blood drawn to measure thyroid hormone levels. Which of the following are likely from this person?
- A Low T4, Low T3, High TSH.
  - B High T4, Low T3, High TSH.
  - C Normal T4, Normal T3, Low TSH.
  - D High T4, High T3, Low TSH.
- 6 Occasionally people abuse medications and take thyroid hormone pills unnecessarily. Sometimes they do this thinking it will help with weight loss by boosting the metabolism. If a person was taking excessive thyroid hormone pills and had blood drawn to measure thyroid hormone levels; which of the following would likely be from this person?
- A Low T4, Low T3, High TSH.
  - B High T4, Normal T3, Low TSH.
  - C Normal T4, Normal T3, Low TSH.
  - D High T4, High T3, Low TSH.



Unit Two  
Questions 7 – 11

In 1889, Svante Arrhenius proposed that the rate constant for a given reaction is given by the formula:

$$k = A e^{(E_a / RT)}$$

where  $E_a$  is the activation energy for the reaction,  $R$  is the gas constant (8.314 J/mol K),  $T$  is the absolute temperature, and  $A$  is a factor, which depends on factors such as molecular size. Catalysts change the reaction pathway, which may result in a change in  $E_a$ ,  $A$ , or both.

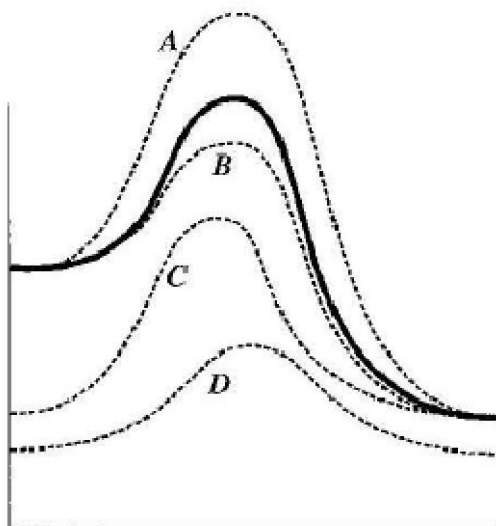
In heterogeneous catalysis, the catalyst is in a different phase from the reactants and products. For example, a solid may catalyse a fluid-phase reaction. Such catalysis involves the following steps:

- A reactant molecule diffuses through the liquid to the surface of the catalyst.
- The reactant molecule bonds to the catalyst (adsorption).
- Adsorbed molecules bond with each other or with a molecule which collides with the adsorbed molecules.
- The product leaves the catalyst.

In homogeneous catalysis, the catalyst is in the same phase as the reactants and products. Acids often act by this mechanism.

- 7 The rate of a reaction may depend on which of the following?
- I. Concentrations of the reactants
  - II. Concentration of a catalyst
  - III. Surface area of a heterogeneous catalyst
  - IV. Temperature
- A I only  
B IV only  
C I and IV only  
D I, II, III, and IV
- 8 Which of the following is true of a catalysed reaction?
- A a catalyst may be the limiting reagent.
  - B at equilibrium, more products are produced when a catalyst is present.
  - C the catalysed reaction pathway has a lower energy of activation than the uncatalysed reaction pathway.
  - D the rate of the reverse reaction will be slower for the catalysed reaction.

- 9 Consider a reversible reaction. If the activation energy for the forward reaction is lowered by a catalyst, what can be said about the activation energy for the reverse reaction?
- A it is also lowered.
  - B it is raised.
  - C it is unaffected by the catalyst.
  - D the effect of the catalyst on the reverse reaction cannot be predicted without more information.
- 10 If the solid line in the graph below represents the reaction profile for an uncatalysed reaction, which line might represent the reaction profile for the catalysed reaction?



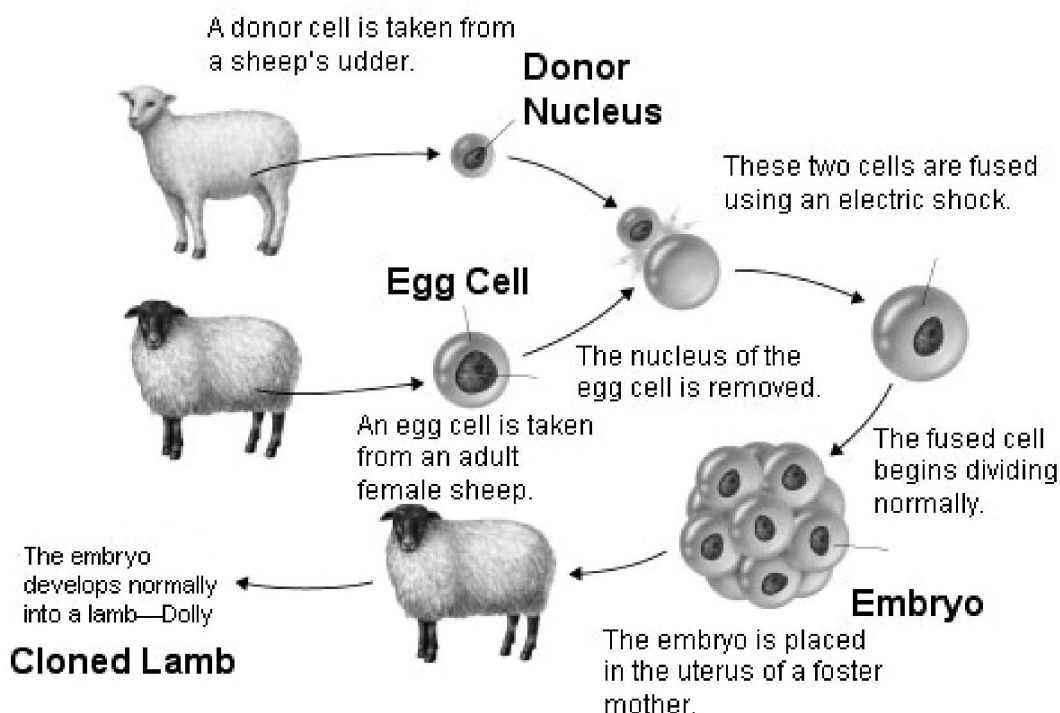
- A line A.
  - B line B.
  - C line C.
  - D line D.
- 11 Suppose a reaction is acid-catalysed by a solution of pH 3.0. What can be said about the pH of the resulting solution?
- A it will be greater than 3.0 because the acid is consumed.
  - B it will be equal to 3.0 because the acid is regenerated.
  - C it will be equal to 3.0 because catalysts have no effect on equilibrium.
  - D it cannot be predicted without information on the acidity of the reactants and products.

Unit Three  
Question 12-15

The cloning process describes a number of different methods that can be used to produce genetically identical copies of a biological entity through non-sexual means. The copied material, which has the same genetic makeup as the original, is referred to as a clone.

The diagram given below describes the method used to clone a sheep named Dolly in which the nucleus from an adult somatic cell or udder cell is transferred to an enucleated egg cell. Following transfer, the two cells were fused together and the latter was transferred into a black-faced sheep resulting in the development of an adult cloned lamb named Dolly.

Based on the diagram, answer the following questions



- 12 The cloned lamb produced will be
- A black-faced male.
  - B black-faced female.
  - C white-faced male.
  - D white-faced female.

- 13 Clones occur naturally when...?
- A two eggs are fertilized and develop simultaneously.
  - B two eggs are fertilized by one sperm and develop simultaneously.
  - C one egg is fertilized by two sperms and two embryos form.
  - D one egg is fertilized by one sperm and the embryo divides into two.
- 14 Which one among the following would be considered as clone's biological father and mother?
- A the surrogate mother and the egg cell donor.
  - B the egg cell donor and udder cell donor.
  - C the genetic material donor and the surrogate mother.
  - D none of these.
- 15 This process of cloning sheep involves all of the following except
- A removal of udder cell from an adult sheep.
  - B artificial doubling of the haploid chromosome number of an egg cell.
  - C harvesting egg cells from a female.
  - D implantation of developing embryo in the uterus of surrogate mother.

#### Unit Four Questions 16-19

The human body may operate as a conductor if it completes an electrical circuit. When this occurs the person may experience an electric shock. The severity of the shock increases as both the magnitudes of the current and the contact time increase. Different types of tissues have different conductivities: current passing through electrically excitable tissue like muscle and nerves inflicts the most pain and damage.

A current between 1 and 10 mA may be perceived as painful, although it is usually harmless to a healthy individual. However, once current in excess of 10 mA passes through muscle tissue, the damage inflicted may be more severe, especially if the electrocution is caused by the person grasping a live wire, which they may not be able to release.

Surprisingly, currents passing through cardiac tissue pose less of a threat if the magnitude of the current exceeds 1000 mA than if the magnitude were 70 mA. A lower current disrupts the electrical coupling of the heart, causing irregular contraction, or ventricular fibrillation. A current over 1 A passing through cardiac tissue is so large that it causes the heart to stop completely; once the current is removed, the heart usually regains its normal rhythm.

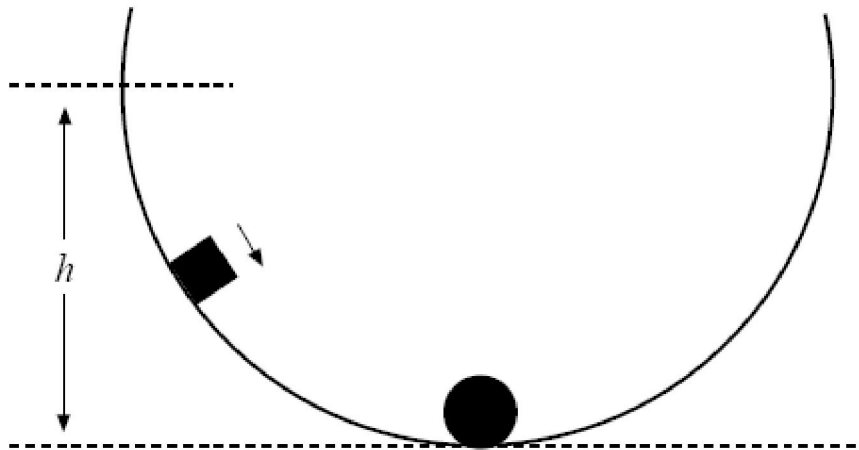
Ohm's law implies the resistance of the body influences the severity of damage resulting from a shock. Human tissue has relatively low electrical resistivity since there is an abundance of dissolved ions in the cells. However, the waterproof outer layer of skin on the body has a high resistance when dry; approximately  $10^4$   $\Omega$ . This resistance significantly decreases when the skin is moistened. The total electrical resistance of the body can be approximated by using the electrical resistance of the skin.

- 16 A labourer (with dry skin) accidentally comes into contact with a live wire and experiences a current of 1 A. The resistance of the wire is 9  $\Omega$ . Remembering that power is the product of current and voltage, how much total energy is dissipated after 45 seconds?
- A 15 J.
  - B 675 J.
  - C 10 kJ.
  - D 451 kJ.
- 17 What impact would a high cellular ion concentration have if a person was to experience electrocution?
- A they would be more resistant to damage.
  - B they would be less resistant to damage.
  - C their resistance to damage would not be changed.
  - D insufficient information is provided to answer the question.

- 18 A defibrillator is a device used to momentarily stop then restart heart activity. What is the minimum voltage needed between the leads of the defibrillator in order for it to be effective against dry skin?
- A 7 V.
  - B  $10^2$  V.
  - C  $7 \times 10^2$  V.
  - D  $10^4$  V.
- 19 A person with dry skin accidentally touches a live wire. The wire has a current of 1.5A, with resistance of only 1  $\Omega$ . A friend, just coming out of the shower, tries to assist the person but makes skin direct contact with them. The time needed for 10 Coulomb's of charge to pass through the entire circuit will?
- A increase.
  - B decrease.
  - C remain the same.
  - D insufficient information is provided to answer the question.

Unit Five  
Question 20

A block of mass  $m$  starts from rest and slides down a frictionless semi-circular track from a height  $h$  as shown below. When it reaches the lowest point of the track, it collides with a stationary piece of putty also having mass  $m$ .



- 20 If the block and the putty stick together and continue to slide, the maximum height that the block-putty system could reach is:
- A  $h/4$ .
  - B  $h/2$ .
  - C  $h$ .
  - D independent of  $h$ .



## Unit Six

### Questions 21-25

Morphine alkaloids derived from the opium poppy have long been used as analgesics. Codeine, the methyl ether of morphine, is a naturally occurring alkaloid with medicinal properties very similar to those of morphine. Thousands of derivatives of morphine have been synthesized and tested for their biological effects. For example, the diacylated derivative of morphine, heroin, is a highly addictive drug. Much effort has gone into understanding how morphine and its derivatives function.

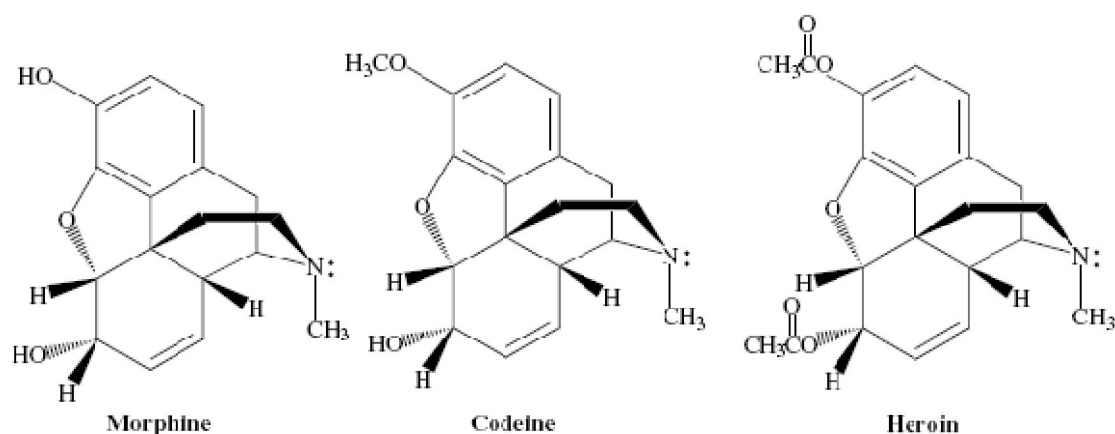


Figure 1

Studies have shown that certain common structural features of alkaloids are required for the compound to exhibit biological activity. These structural requirements are summarized by the so called “morphine rule”:

1. an aromatic ring adjacent to a quaternary carbon;
2. two carbons between this quaternary carbon and a tertiary amine.

Demerol and methadone, shown in Figure 2, are two synthetic alkaloids designed to satisfy the “morphine rule.” Synthetic alkaloids such as these have been found to mimic certain physiological properties of morphine and its derivatives, and have found pharmacological application due to other, more desirable biological effects. Methadone has been used widely as a treatment for heroin addiction; it reduces the physical symptoms accompanying withdrawal without producing many of the other effects of heroin.

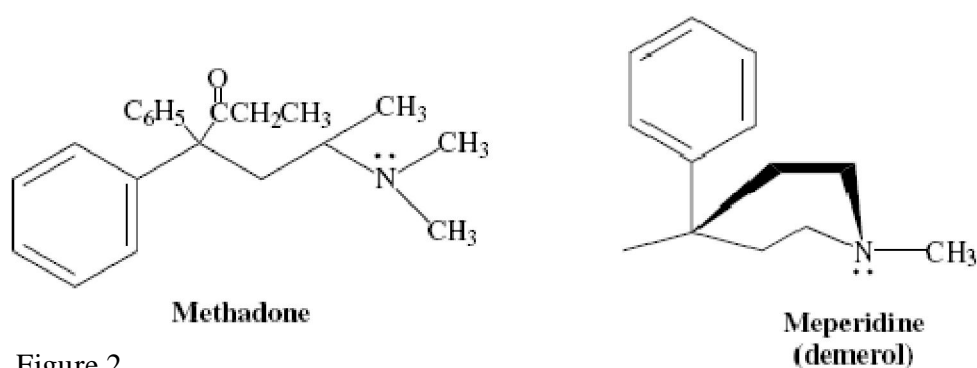
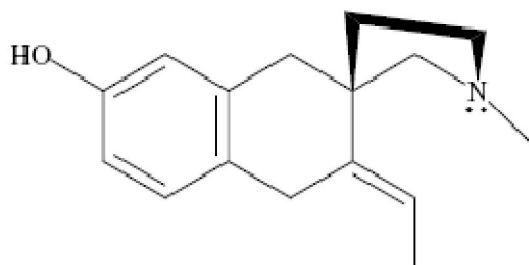


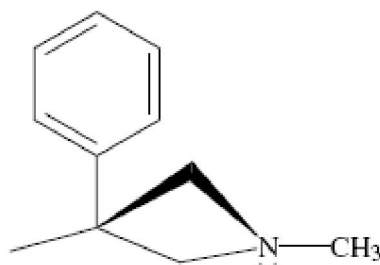
Figure 2

- 21 How many chiral carbons are there in morphine?
- A 4.  
B 5.  
C 6.  
D 7.
- 22 Morphine can be reacted with 2 equivalents of ethanoyl chloride (acetyl chloride) to form heroin. In this reaction, the hydroxy groups of morphine function as:
- A nucleophiles.  
B electrophiles.  
C leaving groups.  
D lewis acids.
- 23 Which of the following compounds would be most likely to have morphine-like biological effects?

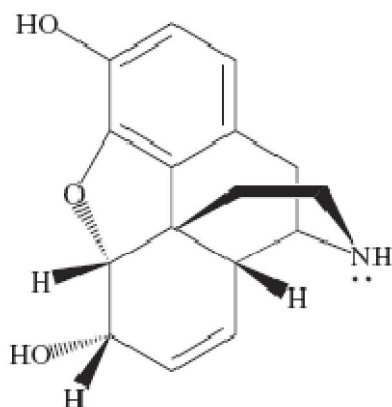
A



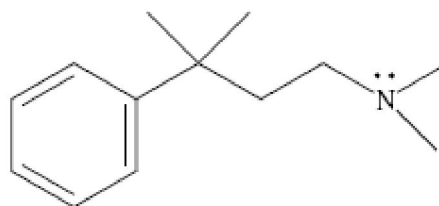
C



B

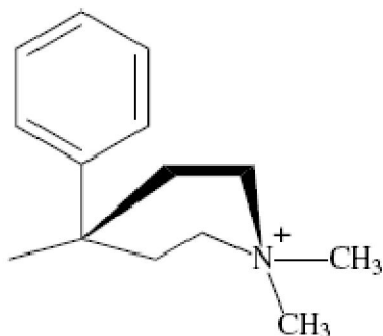


D

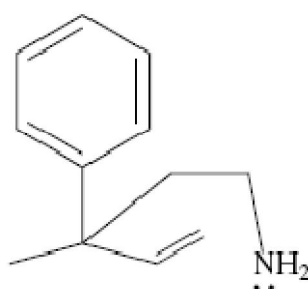


- 24 One of the requirements of the “morphine rule” is that an aromatic ring be attached to a quaternary carbon in order for the molecule to be biologically active. The quaternary carbon of any morphine-like substance must be:
- I. a stereocenter
  - II.  $sp^3$  hybridized
  - III.  $sp^2$  hybridized
- A I only.  
 B II only.  
 C I and II only.  
 D I and III only.
- 25 Hofmann elimination involves methylation of the amine nitrogen followed by elimination ( $E2$ ). Which of the following represents a possible product of one sequence of Hofmann elimination on Meperidine (demerol)?

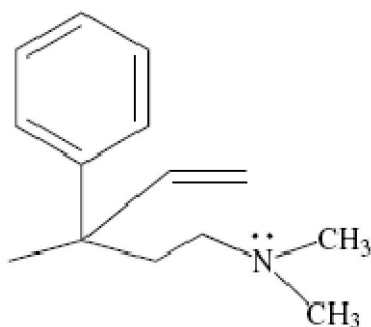
A



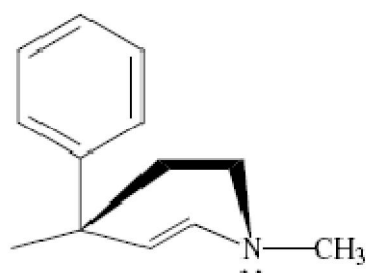
C



B



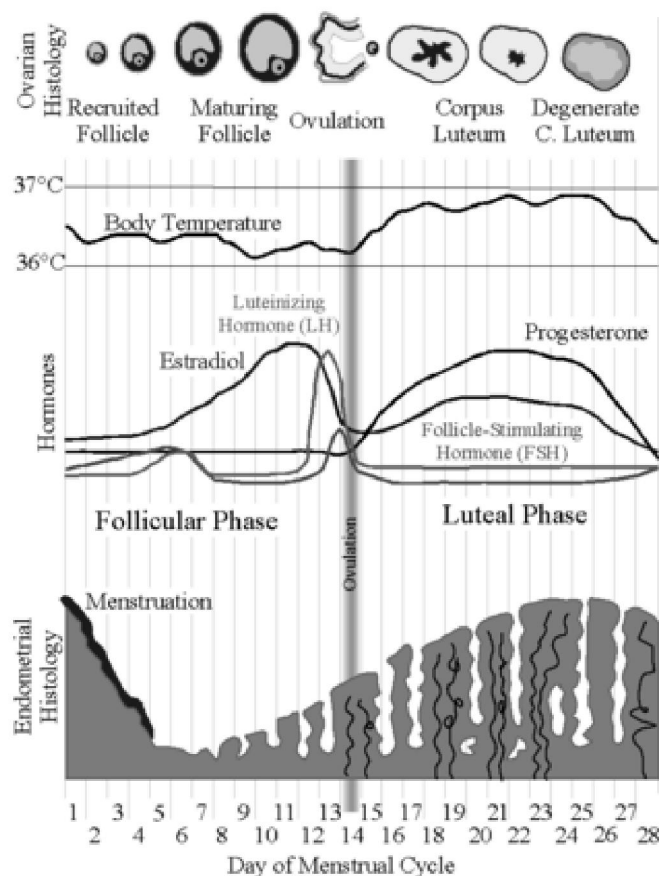
D



## Unit 4

## Questions 26-30

The ovarian cycle serves important role in the production of gametes and ovarian hormones. The follicular phase involves feedback to help the development of a follicle, resulting in the release of a single ovum at ovulation. The follicular phase is associated with an elevation of FSH. FSH stimulates the production of estrogen by the developing follicle. LH stimulates the production of progesterone by the corpus luteum. LH surges at ovulation; this surge is suppressed if implantation and pregnancy occurs. Ovulation occurs about 12 hours after the LH surge. The corpus luteum produces estrogen and progesterone. These hormones help to maintain pregnancy if menstruation does not occur. The corpus luteum will involute about 10 days after the LH surge unless HCG hormone is present. If implantation occurs, HCG is produced and will be produced to maintain the corpus luteum.



- 26 The relationship of FSH to Estradiol is similar to that of LH and
- A progesterone.
  - B testosterone.
  - C vasopression.
  - D luteotrophic Hormone.

- 27 During the follicular phase of a normal menstrual cycle, changes the ovary undergoes related to pituitary secretions of
- A FSH.
  - B LH.
  - C FSH and LH.
  - D oxytocin.
- 28 Common pregnancy tests rely on the detection of HCG hormone in the blood or urine. The presence of this hormone reflects:
- A that the corpus luteum has already involuted.
  - B LH levels are high.
  - C FSH is greater than LH.
  - D endometrium stability.
- 29 Women who do not want to become pregnant often take birth control pills that have small amounts of progesterone or estrogen and progesterone. This is because
- A higher Progesterone levels prevent menstruation, inhibiting follicle development.
  - B low Progesterone levels cause LH to spike and prevent ovulation.
  - C ovulation requires a spike in progesterone.
  - D the slight increase in body temperature prevents the follicle maturing.
- 30 Confirmatory evidence of ovulation include all of the following except:
- A sharp decline in estrogen levels.
  - B peak monthly temperature.
  - C progesterone begin to rise.
  - D LH levels have peaked.

# The End

Answers available at e-GAMSAT.com