



UCAT Practice Questions
SAMPLE BOOKLET

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QUESTIONS: VERBAL REASONING

Erythrosuchus (red crocodile) is an extinct genus of archosauriform reptile from the Triassic of South Africa. Remains have been found from the Cynognathus Assemblage Zone of the Beaufort Group in the Karoo of South Africa.

In the Late Triassic, the ecological niche left by Erythrosuchus was filled by creatures like Saurosuchus and Postosuchus.

Erythrosuchus was the largest predator of its time, and was around 5 metres (16 ft) long. It walked on all fours and had limbs which were positioned semi-vertically under its body, unlike the more sprawling gait of earlier reptiles. Its head was large and dinosaur-like, reaching a length of 1 metre (3.3 ft), and had sharp, conical teeth.

Erythrosuchus was the largest erythrosuchid, but apart from its size, it was similar in appearance to other related genera. It had a large head and comparatively short neck. One of the few distinguishing features of Erythrosuchus other than its size is the smoothness of the margin of the squamosal, a bone at the rear of the skull. In other erythrosuchids, the margin of this bone projects backward from the skull, giving it a hook-like appearance. In Erythrosuchus, the margin is convex and lacks a hook.

Source: Wikipedia <https://en.wikipedia.org/wiki/Erythrosuchus>

For each of the following statements, answer True, False or Can't tell.

1. Erythrosuchids are a collection of animals.

- a. True
- b. False
- c. Can't tell

2. The size of the Erythrosuchus is the only distinguishing feature of the animal.

- a. True
- b. False
- c. Can't tell

3. Saurosuchus and Postosuchus are not extinct.

- a. True
- b. False
- c. Can't tell

4. Erythrosuchus looks more like a dinosaur than it does a crocodile.

- a. True
- b. False
- c. Can't tell

QUESTIONS: DECISION MAKING

QUESTION 1

Should families be able to fly on a plane if they have a child under the age of five?

- a. No, as other people on the flight will become irritated by them, thereby decreasing customer numbers for plane companies.
- b. No, as families cannot provide adequate care to their children if they are on a plane which may be detrimental for the children.
- c. Yes, as planes have specific guidelines in place which enable families with children under the age of five to have a pleasant experience on the plane.
- d. Yes, as families deserve to go on holiday too; parenthood should not be a means for people to stop being able to enjoy themselves.

QUESTION 2

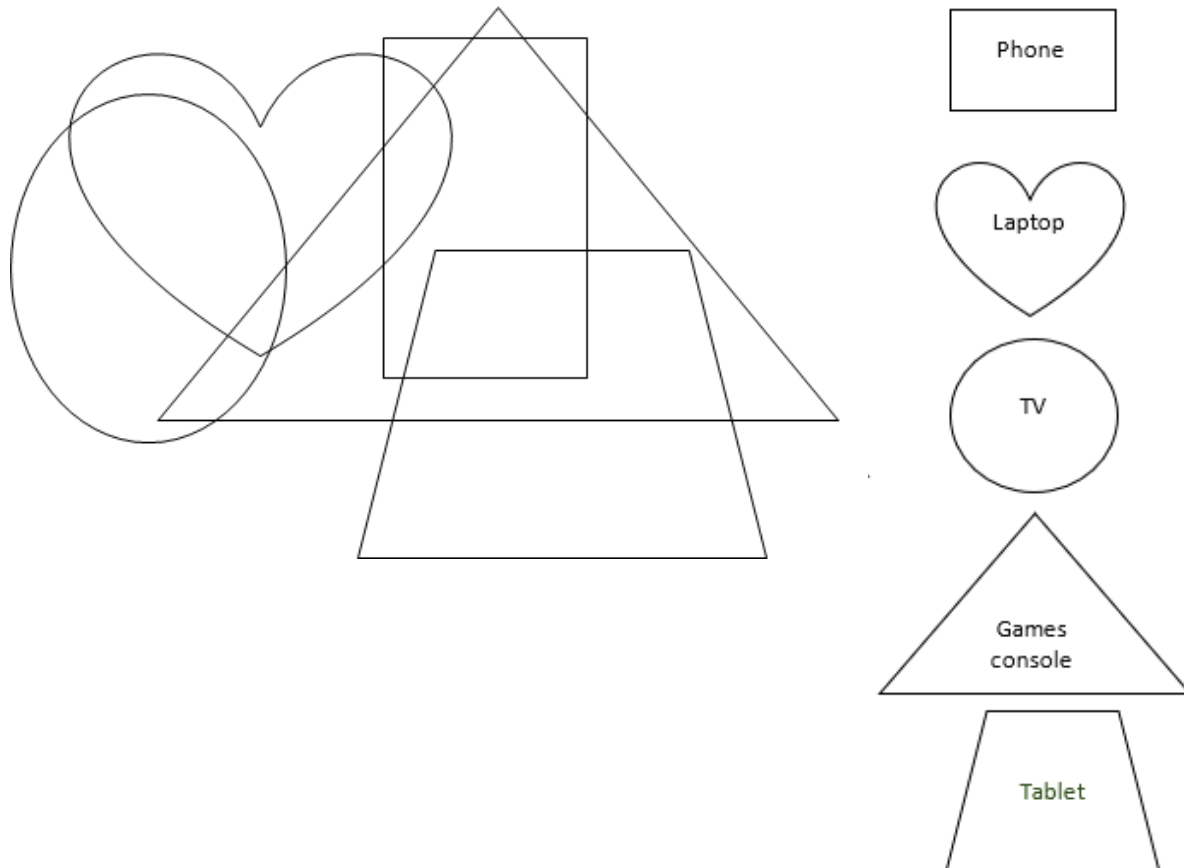
There are 76 people at a festival. When asked, 35 say they like classical music, and 23 say they like pop music.

Between which two numbers must people like neither classical nor pop?

- a. Between 18 and 41
- b. Between 20 and 38
- c. Between 16 and 36
- d. Between 19 and 64

QUESTION 3

The following diagram depicts the different forms of technology within a variety of households.



Which of the following statements is true?

- Some households that had at least all three of a phone, tablet and games console, also had a TV or a laptop.
- No household had both a TV and a games console.
- Fewer people had both a laptop and phone than both a phone and TV.
- No household had all four of a phone, tablet, laptop and games console.

QUESTIONS: QUANTITATIVE REASONING

QUESTION 1

John receives his marks from 6 test papers.

In his first three papers, he scored 82, 103 and 100.

In his 4th paper, he received a mark that was half the average of all 6 of his test scores.

Across his 5th and 6th test papers, he received an average of 119.

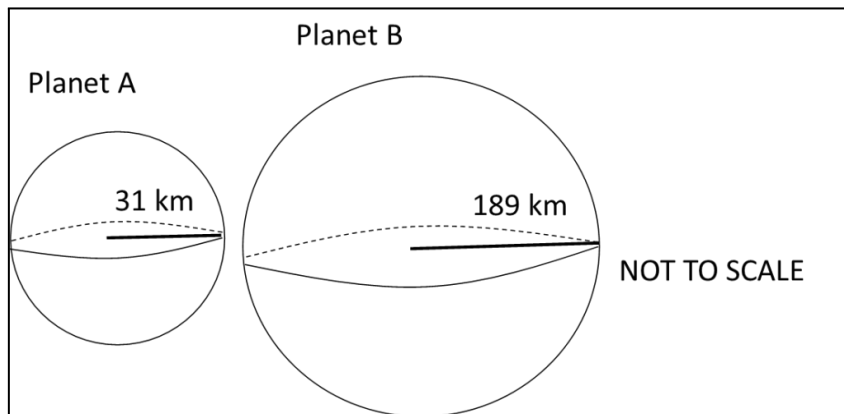
By calculating to the nearest tenth where necessary, what was John's average mark across all 6 papers?

- a. 86.7
- b. 89.1
- c. 94.5
- d. 95.1
- e. Can't tell

Question 2 begins on the next page

QUESTION 2

Planet A and Planet B are drawn below and labelled are their respective radii.



$$\text{Volume of sphere} = \frac{4}{3} \times \pi \times r^3$$

$$\text{Surface area of sphere} = 4\pi r^2$$

$$\text{Circumference of circle} = 2\pi r$$

$$\text{Take } \pi = 3.14$$

Planet A has 7,800 rocks on its surface.

By calculating to the nearest whole number where possible, and assuming that rock population increases proportionately with surface area, estimate how many rocks are on the surface of Planet B.

- a. 560,780
- b. 23,330
- c. 320,670
- d. 120,650
- e. 289,930

Question 3 begins on the next page

QUESTION 3

A car prize company offers 'raffle tickets' for the potential reward of a car worth £95,000 combined with a cash prize of £20,000.

Tickets cost £3 each. Each participant can purchase as many tickets as they want. The tickets are sold in 5 large neighbourhoods.

Shown below are the names of each neighbourhood, the number of participants (regardless of whether they buy one ticket or more than one ticket), and the amount of money that was generated from sales in that neighbourhood.

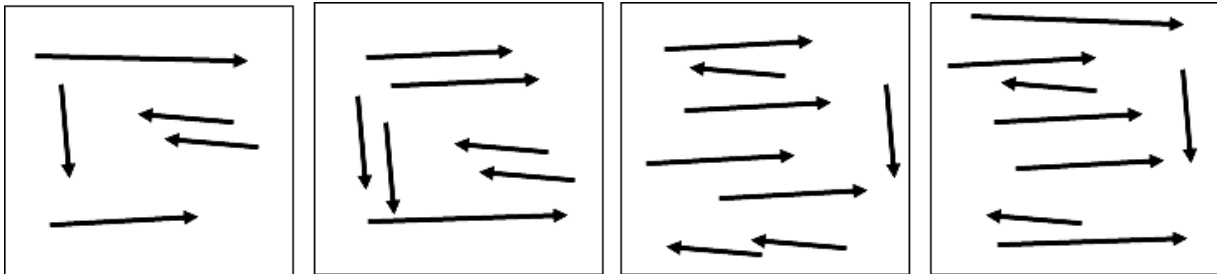
Neighbourhood	Participants (thousands)	Total money generated (£ thousand)
A	21	126
B	12	108
C	17	239.7
D	41	910.2
E	25	112.5

What percentage of all participants are from neighbourhood D?

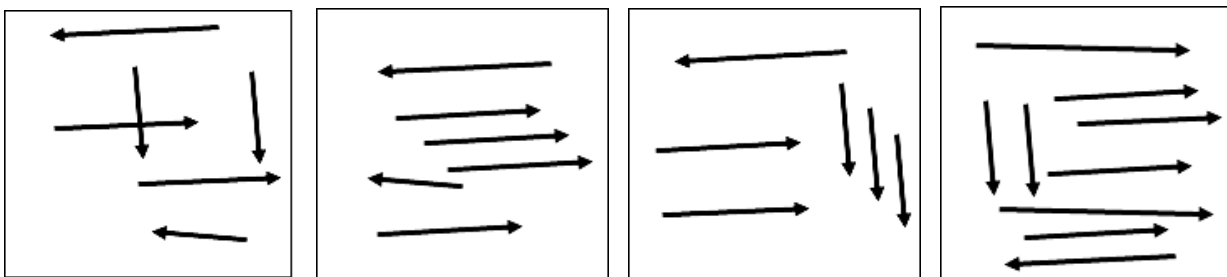
- a. 24%
- b. 35%
- c. 57%
- d. 51%
- e. 66%

QUESTIONS: ABSTRACT REASONING

QUESTION 1



Which of the figures below best completes the series above?



A

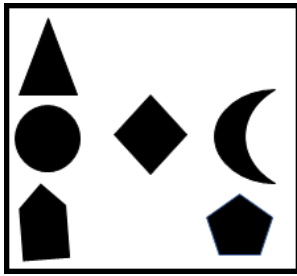
B

C

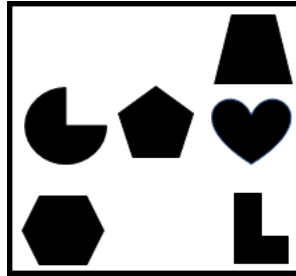
D

Question 2 begins on the next page

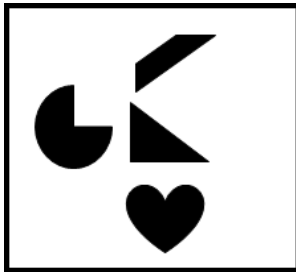
QUESTION 2



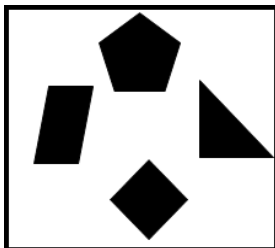
IS TO



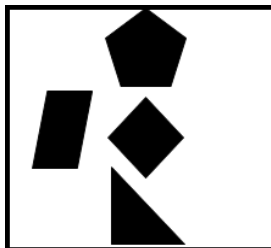
AS



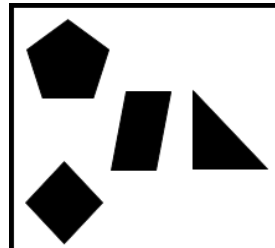
IS TO



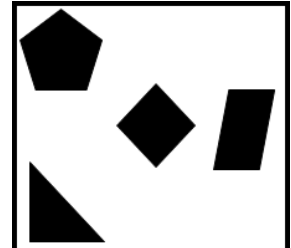
A



B



C

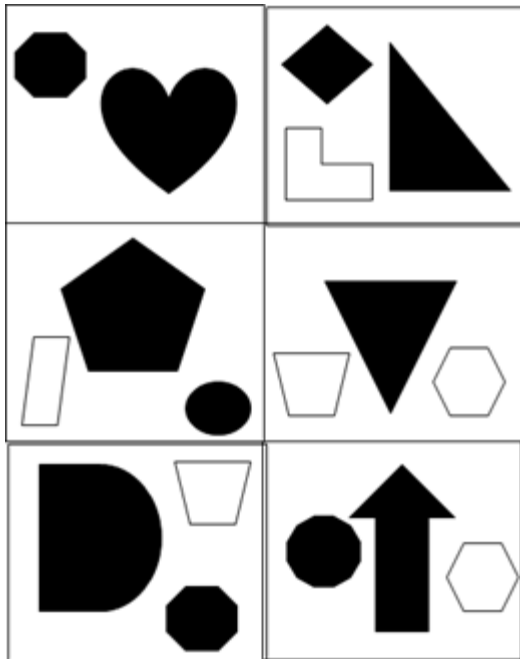


D

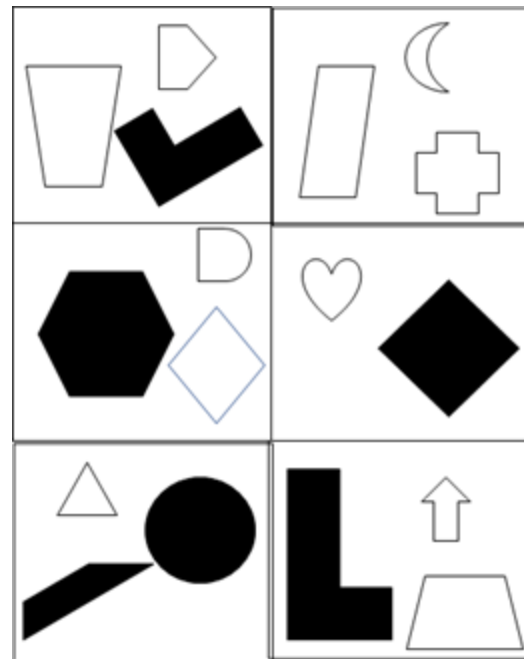
Question 3 begins on the next page

QUESTION 3

SET A

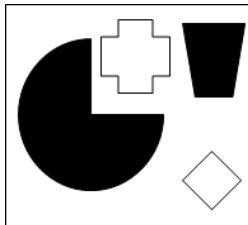


SET B



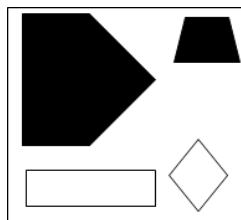
Determine if each of the following sets of shapes belongs to Set A, Set B or neither.

i



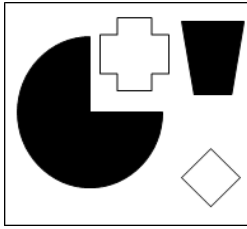
- Set A
- Set B
- Neither

ii



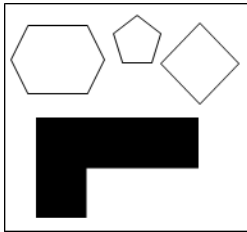
- Set A
- Set B
- Neither

iii



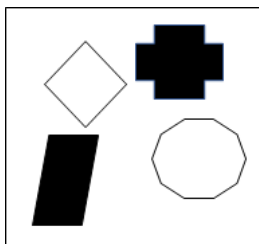
- a. Set A
- b. Set B
- c. Neither

iv



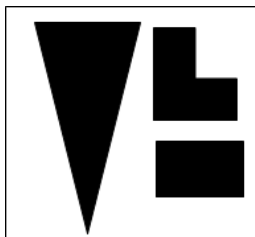
- a. Set A
- b. Set B
- c. Neither

v



- a. Set A
- b. Set B
- c. Neither

vi



- a. Set A
- b. Set B
- c. Neither

QUESTIONS: SITUATIONAL JUDGEMENT

QUESTION 1

Maryam is a fifth-year medical school student who is known by all her colleagues for her dedication and commitment to her medical degree. She is a very studious individual and scores highly in all her exams and assessments. Currently, she is on the cardiology rotation and enjoys being on the wards.

Over the past few months, however, Maryam has noticed a decline in her overall health; she feels extremely fatigued very often and has severe migraines during the weeks.

Pick an answer that you feel is the most appropriate for Maryam in each of the following situations.

- a. **Ask the consultant cardiologist to squeeze in some time in his day to examine her.**

A very appropriate thing to do
Appropriate, but not ideal
Inappropriate, but not awful
A very inappropriate thing to do

- b. **Make an appointment with her local GP as soon as possible.**

A very appropriate thing to do
Appropriate, but not ideal
Inappropriate, but not awful
A very inappropriate thing to do

- c. **Ask that she be assigned less strenuous tasks during the day.**

A very appropriate thing to do
Appropriate, but not ideal
Inappropriate, but not awful
A very inappropriate thing to do

d. Google her symptoms at lunch.

- A very appropriate thing to do
- Appropriate, but not ideal
- Inappropriate, but not awful
- A very inappropriate thing to do

e. Ignore the symptoms in the hope that everything will return to normal soon.

- A very appropriate thing to do
- Appropriate, but not ideal
- Inappropriate, but not awful
- A very inappropriate thing to do

QUESTION 2

You are a fifth-year medical student about to sit your final exams of the year before you graduate. You have been working extremely hard and revising long hours. A few days before the exam, your friend tells you that she has access to the paper as her uncle is on the examination panel.

Pick an answer that you feel is the most appropriate for you in the following situations.

a. Ask to see the paper to relieve the burden of the exams.

- A very appropriate thing to do
- Appropriate, but not ideal
- Inappropriate, but not awful
- A very inappropriate thing to do

b. Ask your friend if the exam is difficult.

- A very appropriate thing to do
- Appropriate, but not ideal

Inappropriate, but not awful
A very inappropriate thing to do

c. Inform her that you have an obligation to report this to the medical school.

A very appropriate thing to do
Appropriate, but not ideal
Inappropriate, but not awful
A very inappropriate thing to do

d. Pretend she has not heard what her friend has said and continue revising.

A very appropriate thing to do
Appropriate, but not ideal
Inappropriate, but not awful
A very inappropriate thing to do

e. Sit the exam and hope that her friend is the only one with access to the paper.

A very appropriate thing to do
Appropriate, but not ideal
Inappropriate, but not awful
A very inappropriate thing to do

QUESTION 3

Anjali is currently working on the neurology ward and she is enjoying it so far. The senior registrar is always willing to answer any questions she may have and encourages her to be inquisitive and curious. He has asked her to review a patient's drug chart, and when she is doing so, she sees that he has prescribed a drug that is not commonly used by other doctors anymore.

The drug is still safe to use, but Anjali remembers from her revision that there is a newer drug that could work a lot better for the patient. She is indecisive about whether to replace the drug prescribed by the senior registrar with the new one instead.

How important are the following factors for Anjali to consider in this situation?

a. The patient has requested to stay on the current drug.

Very important

Important

Of minor importance

Not important at all

b. The senior registrar's feelings may be hurt by Anjali's decision to replace the drug.

Very important

Important

Of minor importance

Not important at all

c. Whether Anjali should inform the rest of the team about the medication change.

Very important

Important

Of minor importance

Not important at all

d. Stopping the current drug may have side effects.

Very important

Important

Of minor importance
Not important at all

e. The patient takes other medication.

Very important
Important
Of minor importance
Not important at all

f. The drug that Anjali wants to prescribe is more expensive than the current one.

Very important
Important
Of minor importance
Not important at all

ANSWERS: VERBAL REASONING

1. A (True)

The text has the following statements: “Erythrosuchus was the largest erythrosuchid” and “in other erythrosuchids”, so we can conclude that this is true.

2. B (False)

The text explicitly mentions: “One of the few distinguishing features of Erythrosuchus *other than its size* is the smoothness of the margin of the squamosal....” Therefore this is false.

3. C (Can't tell)

Although it is easy to assume this, it is not explicitly mentioned in the text. The Saurosuchus and Postosuchus succeeded the Erythrosuchus, and may or may not still exist.

4. C (Can't tell)

Although the text mentions that the “head was large and dinosaur-like”, it is not enough to conclude that the overall appearance resembles a dinosaur more greatly.

ANSWERS: DECISION MAKING

1. C (Yes, as planes have specific guidelines in place which enable families with children under the age of 5 to have a pleasant experience on the plane)

This is correct as it is the only option to mention children specifically under the age of five as well as families on the plane.

- A is incorrect as it suggests that the strongest reason against families with children under five years old being able to fly is the effect on customers choosing not to fly on planes anymore
- B is incorrect because, whilst it may be true, it does not provide a solution (C is therefore stronger)
- D is incorrect as it provides an opinion only. There is no means of justification.

2. A (Between 18 and 41)

- Maximum number of people that like one type of music and not the other:
 $35 + 23 = 58$
- Number of people who like neither: $76 - 58 = 18$
- Maximum number of people that like both types of music = 35
- Number of people who like neither = $76 - 35 = 41$
- Therefore, the number of people who like neither lies in between 18 and 41.

3. D (No household had all four of a phone, tablet, laptop and games console.)

This is correct as the laptop (heart shape) does not overlap with the games console (trapezium).

ANSWERS: QUANTITATIVE REASONING

1. D (95.1)

- Take the average score of all six papers to be x
- The average is calculated by adding all test scores and dividing by the number of papers (6)
- As the fourth paper scored half the average, we can take this to be $x/2$
- As the score for the fifth and sixth papers average 119, we can assume he scored 119 in each of these (as the average of $119+119$ is 119)
- Sum of test scores = $82 + 103 + 100 + (x/2) + 119 + 119$
- \rightarrow this gives $523 + (x/2)$
- Dividing this test score by 6 will give us the average, which we took to be x
- $\rightarrow x = [523+(x/2)] / 6$
- $\rightarrow 6x = 523 + x/2$
- $\rightarrow 12x = 2(523) + x$
- $\rightarrow 11x = 1046$
- $\rightarrow x = 95.1$

2. D (289,930)

- Planet A surface area = $4 \times 3.14 \times 31 \times 31 = 12,070 \text{ km}^2$
- Planet B surface area = $4 \times 3.14 \times 189 \times 189 = 448,656 \text{ km}^2$
- $12,070 \text{ km}^2 \rightarrow 7800$ rocks
- Therefore the number of rocks on $448,656 \text{ km}^2 = (7,800 \div 12,070) \times 448,656 = 289,930$ (to the nearest 10)

3. B (35%)

- Total participants = $21k + 12k + 17k + 41k + 25k = 116k$
- Participants from D = $41k$
- $\% = (41 \div 116) \times 100 = 35.3\%$

ANSWERS: ABSTRACT REASONING

QUESTION 1

D

The pattern here is that the number of arrows facing right increases by one each time. The rest of the arrows are distractors. D is correct as the number of arrows facing right is 6.

QUESTION 2

D

The corresponding shapes move one position to the left and gain a side.

QUESTION 3

The patterns within the sets are:

- Set A: the shape with a prime number of sides is the biggest and always black.
- Set B: the shape with a prime number of sides is the smallest and always white.

- i. **Set A**
- ii. **Set A**
- iii. **Neither (no shapes have a prime number of sides)**
- iv. **Set B**
- v. **Set A**

ANSWERS: SITUATIONAL JUDGEMENT

QUESTION 1

a. Inappropriate, but not awful

Although Maryam is acknowledging that she needs to be seen by a doctor, it is not the consultant's responsibility to do this. Going to her own GP would be more appropriate.

b. A very appropriate thing to do

Maryam is recognising her own limits and is making a sensible decision to see the GP.

c. Appropriate, but not ideal

Although Maryam is recognising her own limits here, she is avoiding the underlying issue which may not be resolved unless she seeks help from her GP.

d. Inappropriate, but not awful

Although Maryam is acknowledging the fact that her health needs prioritising, googling her symptoms is likely to cause her more stress and potentially worsen her symptoms.

e. A very inappropriate thing to do

This is not a sensible decision and will mean that Maryam is not aware of her own limits. Prioritising your health as a doctor is important as an optimum level of health allows the doctor to give the highest quality of care to patients.

QUESTION 2

a. A very inappropriate thing to do

This involves you in this grave offence. Cheating is treated as a serious offence and is an extremely dishonest and unprofessional act.

b. A very inappropriate thing to do

This implies that you are not taking the situation seriously - it involves you in the offence as you are not doing the sensible act of reporting this.

c. A very appropriate thing to do

This allows for an open relationship with your friend as well as a firm, sensible response that asserts the fact that this is unacceptable behaviour.

d. A very inappropriate thing to do

Not reporting this is just as bad as being directly involved in the offence.

e. A very inappropriate thing to do

Not reporting this is just as bad as being directly involved in the offence.

QUESTION 3**a. Very important**

The patient has a right to their own choice under the principle of autonomy so this needs to be respected.

b. Of minor importance

Giving the patient the best possible care is the most important factor to consider and so this is of minor importance. The senior registrar should be informed by Anjali, however, as he is part of the team and has the right to know. It is also unlikely that his feelings will be hurt as the question informs us that he encourages Anjali to make these well-informed, evidence-based decisions with the patient's best interests at heart.

c. Very important

Effective communication in the entire multidisciplinary team is key to maintaining a friendly and healthy atmosphere within the hospital and ensures that patients are given the best quality of care possible.

d. Very important

Anjali needs to find out about these before she makes her decision as patient safety could be endangered.

e. Very important

There could be potentially harmful contraindications with other medications with the one that Anjali wants to prescribe.

f. Of minor importance

Whilst this factor should still be considered, it not vital to the scenario as the focus should be the strongest on providing the highest quality of care to the patient.