Applaa UCAT Practice Mock 145

Mock Practice Exam Booklet

Applaa: Socratic Practice Engine

Submit and grade your answers online for instant worked solutions:

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Instructions & Study Method

Welcome to your Applaa offline practice booklet. Please follow these guidelines to maximize your learning outcome:

1. Distraction-Free Practice: Solve the multiple-choice questions in Section 1 under timed conditions. Do not look for shortcuts or answers until you are completely done.

2. Check & Submit Online: We have intentionally excluded the answer key from this printout. To get your score, see worked solutions, and track your progress metrics, open: **https://applaa.com/practice/check?exam=ucat&paper;=145** on any browser. Bubble in your answers in our digital check sheet.

3. Learn with Appy Buddy (AI Socratic Tutor): Applaa is a 100% ad-free educational space. Our online AI Tutor guides you step-by-step through questions you get wrong, showing you how to solve them rather than just giving you the answer.

Section 1: Practice Questions

Question 1 — [Verbal Reasoning / true_false_cant_tell]

Read the passage below and decide if the following statement is True, False, or Can't Tell based on the text. Passage: In 2020, research conducted by researchers led by Dr. Rosalind Franklin at the Genetic Engineering Center investigated the properties of Graphene. Initial experimental setups achieved an energy conversion efficiency of 29 percent. By refining the chemical vapor deposition process and reducing crystalline defects, the team successfully boosted the efficiency of Graphene to 47 percent in follow-up trials. Despite these promising results, commercial viability is currently limited by the high cost of raw precursor materials and safety regulations governing nanotechnology manufacturing. Statement: The research team led by Dr. Rosalind Franklin managed to increase the energy conversion efficiency of Graphene.

A: True

B: False

C: Can't Tell

Question 2 — [Verbal Reasoning / true_false_cant_tell]

Read the passage below and decide if the following statement is True, False, or Can't Tell based on the text. Passage: In 2022, research conducted by researchers led by Dr. Marcus Vance at the Genetic Engineering Center investigated the properties of Phosphorene. Initial experimental setups achieved an energy conversion efficiency of 26 percent. By refining the chemical vapor deposition process and reducing crystalline defects, the team successfully boosted the efficiency of Phosphorene to 47 percent in follow-up trials. Despite these promising results, commercial viability is currently limited by the high cost of raw precursor materials and safety regulations governing nanotechnology manufacturing. Statement: Phosphorene became commercially viable immediately following the trials led by Dr. Marcus Vance.

A: True

B: False

C: Can't Tell

Question 3 — [Verbal Reasoning / true_false_cant_tell]

Read the passage below and decide if the following statement is True, False, or Can't Tell based on the text. Passage: In 2014, research conducted by researchers led by Prof. Lise Meitner at the Materials Science Lab investigated the properties of Carbyne. Initial experimental setups achieved an energy conversion efficiency of 25 percent. By refining the chemical vapor deposition process and reducing crystalline defects, the team successfully boosted the efficiency of Carbyne to 37 percent in follow-up trials. Despite these promising results, commercial viability is currently limited by the high cost of raw precursor materials and safety regulations governing nanotechnology manufacturing. Statement: Carbyne became commercially viable immediately following the trials led by Prof. Lise Meitner.

A: True

B: False

C: Can't Tell

Question 4 — [Verbal Reasoning / true_false_cant_tell]

Read the passage below and decide if the following statement is True, False, or Can't Tell based on the text. Passage: Public health campaigns in Ukraine during the late twentieth century made significant progress in combating infectious diseases. In 1975, the incidence rate of Tuberculosis was recorded at 295 cases per 100,000 people. Following a nationwide distribution of protective nets and sanitation improvements, the rate fell to 204 cases per 100,000 people over the next decade. While this decline was celebrated as a major victory, health officials warned that rising temperatures could allow vector populations to rebound in rural regions. Statement: Rising temperatures caused the incidence rate of Tuberculosis to increase during the campaign.

A: True

B: False

C: Can't Tell

Question 5 — [Decision Making / error_checking]

How many of the four pictures in the left-hand column are exactly the same as the corresponding picture in the right-hand column?

A: 0

B: 1

C: 2

D: 3

E: 4

Question 6 — [Decision Making / error_checking]

How many of the four pictures in the left-hand column are exactly the same as the corresponding picture in the right-hand column?

A: 0

B: 1

C: 2

D: 3

E: 4

Question 7 — [Decision Making / error_checking]

How many of the four pictures in the left-hand column are exactly the same as the corresponding picture in the right-hand column?

A: 0

B: 1

C: 2

D: 3

E: 4

Question 8 — [Decision Making / venn_deduction]

Based on the Venn diagram, how many members belong to both Tennis and Athletics?

A: 15
B: 20
C: 5
D: 23

Question 9 — [Quantitative Reasoning / chart_interpretation]

What is the simplified ratio of the revenue of Dept D to that of Dept B?

A: 3:4
B: 2:5
C: 3:5
D: 5:9
E: 4:3

Question 10 — [Quantitative Reasoning / chart_interpretation]

What is the simplified ratio of the revenue of Dept C to that of Dept D?

A: 1:2
B: 2:1
C: 2:5
D: 1:1
E: 14:13

Question 11 — [Quantitative Reasoning / chart_interpretation]

What is the combined revenue of Dept C and Dept A (in thousands)?

A: $180k
B: $230k
C: $220k
D: $210k
E: $200k

Question 12 — [Quantitative Reasoning / chart_interpretation]

What is the simplified ratio of the revenue of Dept B to that of Dept D?

A: 1:3
B: 12:5
C: 3:4
D: 4:1
E: 3:5

Check Answers: applaa.com/practice/check?exam=ucat&paper=145

Question 13 — [Abstract Reasoning / set_ab]

Does the Test Shape belong to Set A, Set B, or Neither?

A: Set A

B: Set B

C: Neither

Question 14 — [Abstract Reasoning / set_ab]

Does the Test Shape belong to Set A, Set B, or Neither?

A: Set A

B: Set B

C: Neither

Question 15 — [Abstract Reasoning / sequence]

Which of the options completes the sequence shown in the diagram?

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E: <svg width="70" height="70" viewBox="0 0 70 70" xmlns="http://www.w3.org/2000/svg" style="background-color:#f8f9fa;border:1px solid #ced4da;"> <rect x="0" y="0" width="70" height="70" rx="4" ry="0" fill="#f8f9fa" stroke="#343a40" stroke-width="2" fill-opacity="1.0" /> <polygon points="14.5,27.84 24.320439999999998,10.83 4.67956,10.83" fill="#888888" stroke="#000000" stroke-width="2" /> <polygon points="51.5,29.84 61.32044,12.83 41.67956,12.83" fill="#888888" stroke="#000000" stroke-width="2" /> <polygon points="17.5,41.16 27.320439999999998,58.17 7.67956,58.17" fill="#888888" stroke="#000000" stroke-width="2" /> <polygon points="55.5,60.84 65.32044,43.83 45.67956,43.83" fill="#888888" stroke="#000000" stroke-width="2" /> </svg>

Question 16 — [Abstract Reasoning / sequence]

Which of the options completes the sequence shown in the diagram?

A: <svg width="70" height="70" viewBox="0 0 70 70" xmlns="http://www.w3.org/2000/svg" style="background-color:#f8f9fa;border:1px solid #ced4da;"> <g><line x1="40.0" y1="35" x2="10" y2="35" stroke="#000000" stroke-width="2" /><polygon points="60,35 40.0,25.0 40.0,45.0" fill="#000000" stroke="#000000" stroke-width="1" /></g> </svg>

B: <svg width="70" height="70" viewBox="0 0 70 70" xmlns="http://www.w3.org/2000/svg" style="background-color:#f8f9fa;border:1px solid #ced4da;"> <g><line x1="35" y1="40.0" x2="35" y2="10" stroke="#000000" stroke-width="2" /><polygon points="35,60 45.0,40.0 25.0,40.0" fill="#000000" stroke="#000000" stroke-width="1" /></g> </svg>

C: <svg width="70" height="70" viewBox="0 0 70 70" xmlns="http://www.w3.org/2000/svg" style="background-color:#f8f9fa;border:1px solid #ced4da;"> <g><line x1="40.0" y1="35" x2="10" y2="35" stroke="#000000" stroke-width="2" /><polygon points="60,35 40.0,25.0 40.0,45.0" fill="#000000" stroke="#000000" stroke-width="1" /></g> </svg>

D: <svg width="70" height="70" viewBox="0 0 70 70" xmlns="http://www.w3.org/2000/svg" style="background-color:#f8f9fa;border:1px solid #ced4da;"> <g><line x1="30.0" y1="35" x2="60" y2="35" stroke="#000000" stroke-width="2" /><polygon points="10,35 30.0,25.0 30.0,45.0" fill="#000000" stroke="#000000" stroke-width="1" /></g> </svg>

E: <svg width="70" height="70" viewBox="0 0 70 70" xmlns="http://www.w3.org/2000/svg" style="background-color:#f8f9fa;border:1px solid #ced4da;"> <g><line x1="35" y1="30.0" x2="35" y2="60" stroke="#000000" stroke-width="2" /><polygon points="35,10 45.0,30.0 25.0,30.0" fill="#000000" stroke="#000000" stroke-width="1" /></g> </svg>

Question 17 — [Situational Judgement / importance]

Scenario: An elderly 86-year-old patient at Hope Hospital during the Wednesday day-shift tells a medical student, Hannah, that she lives alone and has no heating. The registrar, who has worked there for 10 years, tells the student to ignore this and focus only on the medical form. How important is the following factor to consider? Factor: The patient's domestic living conditions and safety at home.

A: Very Important

B: Important

C: Of Minor Importance

D: Not Important at All

Question 18 — [Situational Judgement / appropriateness]

Scenario: A medical student, Chloe, on a general surgery placement at Westside Clinic is told by a 65-year-old patient in confidence on Wednesday evening that they plan to physically harm their partner later that day. How appropriate is the following action? Action: The student promises to keep this completely confidential to maintain the patient's trust.

A: A very appropriate thing to do

B: Appropriate, but not ideal

C: Inappropriate, but not awful

D: A very inappropriate thing to do

Question 19 — [Situational Judgement / appropriateness]

Scenario: A junior doctor, Lucy, at St. Vincent's discovers that her close colleague, Charles, who has worked there for 7 months, has been falsifying overnight patient observation logs in oncology. How appropriate is the following action? Action: The doctor decides not to report it to protect her colleague's medical career.

A: A very appropriate thing to do

B: Appropriate, but not ideal

C: Inappropriate, but not awful

D: A very inappropriate thing to do

Question 20 — [Situational Judgement / importance]

Scenario: A GP, Ruby, in endocrinology at St. Vincent's is deciding whether to refer an anxious 82-year-old patient for an MRI scan for back pain, which is not clinically indicated. The patient has been experiencing symptoms for 4 weeks. How important is the following factor to consider? Factor: The patient's anxiety and their explicit request for the scan.

A: Very Important

B: Important

C: Of Minor Importance

D: Not Important at All

Submit Answers & Check worked Solutions

■ **Section Complete!**
You have completed this practice exam paper. To check your answers and view step-by-step worked explanations:

■ **Go to: https://applaa.com/practice/check?exam=ucat&paper;=145**

Simply bubble in your choices (e.g. A, B, C, D) and get instantly scored! You can then review the explanations or chat with Appy Buddy (AI Socratic tutor) to understand complex concepts.