Self-Test 1 (KEY)

Basics & Prerequisites

The tasks in this self-test are designed to be solvable by any student who has mastered the material. The answers provided are written instructionally to walk you through the problem-solving process for each task. A well-prepared student should score between 9 and 11 out of 12 without assistance from AI or others. A 12 out of 12 — without help — requires outlier performance or sheer luck. This self-test is optional, and your result will not count towards your grade. Direct any questions to your section's TA.

1. According to the course FAQ, which of the following might you NOT like about this course?
   - A. Some of the class examples will be about your personal life. *[The course does not claim to know about your personal life]*
   - B. The lecture is politically incorrect. *[The course is not politically incorrect — it examines how economics shapes society]*
   - C. **The course will often take you outside your comfort zone.** *[The FAQ explicitly states that the course challenges students beyond their comfort zone]*
   - D. The course is difficult and many students become disappointed and drop out. *[The course is of average difficulty]*

2. According to the course FAQ, in which way does the assessment in Economics differ from the assessment in other subjects?
   - A. Questions in Economics are easy to understand and solve.
   - B. Questions in Economics are easy to understand but difficult to solve.
   - C. **Questions in Economics are difficult to understand but easy to solve.**
   - D. Questions in Economics are difficult to understand and solve.

   [According to the course FAQ, the key challenge in assessments is decoding what each question actually asks — once you understand it, the answer follows]

3. Tomorrow, Richard has time to play 3 hours of GTA or 6 rounds of backgammon with Monica. What is the opportunity cost of 1 hour of GTA?
   - A. Zero.
   - B. Half a round of backgammon.
   - C. **2 rounds of backgammon.**
   - D. 6 rounds of backgammon.
   - E. 3 hours of GTA.
   - F. 6 hours of GTA.

   [In 3 hours Richard can play 6 rounds of backgammon, so each hour of GTA costs 6/3 = 2 rounds of backgammon]

4. The price of a concert ticket is $60, the price of a dinner $30, and the price for a coffee is $10. Which of the following statements could be true in this context?
   - A. The opportunity cost of buying a coffee is 6 concert tickets. *[A coffee only buys 10/60 of a ticket]*
   - B. The opportunity cost of buying a dinner is 6 coffees. *[A dinner means forgoing $30/$10 = 3 coffees]*
   - C. The opportunity cost of buying a coffee is 2 dinners. *[A coffee only buys 10/30 of a dinner]*
   - D. **The opportunity cost of buying a concert ticket is 2 dinners.** *[A concert ticket costs $60 and a dinner costs $30, so buying a concert ticket means forgoing $60/$30 = 2 dinners]*

5. Which of the following concepts is most central to the study of economics?
    A. Profit. *[Profit is a concept in economics, but it is a specific outcome rather than the central focus of the discipline]*
    B. Causation. *[Causation is a methodological tool used across many disciplines, not a concept unique or central to economics]*
    C. Scarcity. *[Scarcity is a key condition that makes choice necessary, but it is choice itself that is the central focus of economic analysis]*
    D. Choice. *[Economics is fundamentally the study of how individuals and societies make choices under conditions of scarcity]*

6. Ryan must choose among three jobs: the first pays \$150 per day; the second pays \$110 per day; the third pays \$80 per day. How much is his opportunity cost of choosing the first job?
    A. Around \$40 per day.
    B. Around \$110 per day.
    C. Around \$150 per day.
    D. Around \$190 per day.
    [His opportunity cost is the benefit forgone from the next best alternative choice, which is the second job, that pays \$110 per day]

7. Which of the following assertions may fail because of the fallacy of composition?
    A. If you stand up at the concert you can see better. *[If one person stands up they can see better, but if everyone stands up simultaneously, no one sees better. The assertion fails when generalized from the part to the whole]*
    B. He only dates blonds. She is blond. He will date her. *[This is an unwarranted generalization — being blond is a necessary condition, but not a sufficient one]*
    C. He is taller than average, so he should be heavier than average. *[This is a non-sequitur. Height and weight are correlated on average but one does not logically follow from the other]*
    D. If we use grey floor tiles, the floor will be grey. *[Grey tiles do produce a grey floor. No fallacy is committed]*

8. Which of the following best describes the relationship between the number of hours a student studies for Big Questions (X) and their final grade (Y)?
    A. X and Y are independent.
    B. X and Y are correlated but there is no causation. *[It does not seem that X and Y are related indirectly through some third variable]*
    C. X and Y have a causative relationship. *[The hours of study should cause better performance in a class]*

9. What is the purpose of using ceteris paribus in economics?
    A. To isolate the impact of a specific economic variable. *[You should change one variable at a time while keeping everything else equal, in order to isolate its effect on another variable]*
    B. To estimate outcomes by changing some variables randomly. *[Ceteris paribus requires holding all other variables constant, not changing them randomly]*
    C. To test the validity of economic theories by varying several factors systematically. *[Ceteris paribus means changing one variable at a time, not several simultaneously]*
    D. All of the above.

10. Alan inherited \$500,000 that he can use in 2 possible ways:
    (i) Buy a flat for \$400,000, spend another \$100,000 renovating it, and increase its market value to \$600,000;
    (ii) Buy a supercar for \$500,000, whose market value will fall to \$400,000 once he drives it out of the dealership.
    What is the opportunity cost of the supercar for Alan?
    A. Zero.
    B. \$400,000.
    C. \$500,000.
    D. \$600,000.
    E. \$750,000.
    [Opportunity cost is the benefit foregone from the next best alternative — in this case, the \$600,000 market value of the renovated flat]

11. The demand for macadamias is $p = 110 - 4q$, where q denotes the quantity in kg and p the price per kg in \$. The supply of macadamias is $p = -10 + 2q$. At which quantity do supply and demand intersect?
    A. Around 20 kg.
    B. Around 40 kg.
    C. Around 60 kg.
    D. Around 80 kg.
    [Setting the two equations equal: $110 - 4q = -10 + 2q$, or $6q = 120$, or $q = 20$ kg]

12. According to scenario of the previous task, at which price do supply and demand intersect?
    A. Around \$15.
    B. Around \$30.
    C. Around \$45.
    D. Around \$60.
    [Since $q = 20$ kg, we can substitute in the demand: $p = 110 - 4q = 110 - 4 \cdot 20 = \$30$. Alternatively, we can substitute in the supply: $p = -10 + 2q = -10 + 2 \cdot 20 = \$30$]

Good afternoon! One of the most valuable skills you will acquire in college is notetaking. Contrary to what many believe, taking notes is not at all a trivial task. It requires simultaneous use of the most complex brain activities such as listening, reading, comprehending, abstracting and writing. That is why notetaking is difficult for the untrained brain, but as you practice it, it will make you smarter and faster. If you look around you, you will realize that notetaking is a common habit of successful people. Country presidents, prime ministers, CEOs, top artists and even athletes take notes at an everyday basis. If you watch some of the fiercer past presidential debates on YouTube, you will realize that when one of the candidates speaks, the other –mostly off camera– always takes notes. When you attend or watch a lecture the content of which you must later learn, it is imperative that you take good notes of what is going on. It requires work but later it will save you tons of time because you will have everything in a few pages. Time is the most valuable resource for all successful individuals. Do not waste it by not taking notes. *Kosmas*

Please report any typos, mistakes, or suggestions for improvement to kmarinakis@smu.edu.sg.