



Instructions:

- Please, read carefully the exam before answering. Make sure you understand!
- **Duration: 15 min**
 - Individual Exam: 5 min
 - Team Exam: 10 min

Question permutation table:

Version		1	2	3
Question				
1	→	4	2	7
2*	→	5	3	8
3	→	6	4	4
4	→	9	1	10
5	→	7	6	3
6	→	8	7	9
7	→	3	10	6
8	→	1	8	5
9	→	10	5	1
10	→	2	9	2

*: Question follows previous

1. Paul Romer formalized the relationship between the economics of ideas and economic growth, using the follow schema:

- (a) Ideas → Nonrivalry → Increasing Returns → Perfect Competition
- (b) Ideas → Nonrivalry → Increasing Returns → Imperfect Competition
- (c) Ideas → rivalry → Increasing Returns → Perfect Competition
- (d) Ideas → rivalry → Increasing Returns → Imperfect Competition

Correct answers: (b)

Explanation: According to Romer, an inherent characteristic of ideas is that they are nonrivalrous. This nonrivalry implies the presence of increasing returns to scale. And to model these increasing returns in a competitive environment with intentional research necessarily requires imperfect competition. Each of these terms and the links between them will now be discussed in detail.

2. According to Romer, the ideas share with most economic goods (at least partially):

- (a) Excludable
- (b) Free to access
- (c) It has a price
- (d) It implies a salary

Correct answers: (a)

Explanation: • The degree to which a good is excludable is the degree to which the owner of the good can charge a fee for its use. The firm that invents the design for the next computer chip can presumably lock the plans in a safe and restrict access to the design, at least for some period of time. Alternatively, copyright and patent systems grant inventors who receive copyrights or patents the right to charge for the use of their ideas.

3. There is a link between ideas an increasing returns because:

- (a) There an increasing cost
- (b) The cost is variable over time
- (c) Because an idea can be different each time
- (d) There is a fixed cost

Correct answers: (d)



Explanation: We know that there is a positive correlation (no causation) of growth and life expectancy, because there they might have access to different public services such as health, infrastructure, among others.

4. The reason why patent or copyrights are important, under the idea of Romer, is that:

- (a) it creates incentives to produce ideas
- (b) we need lawyers
- (c) it creates profits for the government
- (d) it leads to a perfect competition

Correct answers: (a)

Explanation: They are attempts to use the legal system to influence the degree of excludability of ideas. Without the patent or copyright, it may be quite easy for someone to “reverse engineer” an invention and the competition from this imitation might eliminate the incentive for the inventor to create the

5. Why the economy of the ideas contradict the malthusian idea about population:

- (a) more people, more ideas
- (b) more people, more consumers
- (c) more people, less food
- (d) more people, more fun

Correct answers: (a)

Explanation: The absolute number of individuals also plays an important role in producing new ideas. Having more potential innovators means having more ideas, and because ideas are nonrivalrous this is capable of raising everyone's living standards. The increasing scale of population along with the development of intellectual property rights—and of property rights more generally—combined to play a critical role in sparking the Industrial Revolution and the sustained economic growth that has followed.

6. The main different between endogenous growth model and the traditional one is that:

- (a) there is growth in the long-term
- (b) everything is endogenous
- (c) there is a capital accumulation
- (d) there are many other sources of growth

Correct answers: (a)

Explanation: the phrase “endogenous growth” was used to refer to models in which changes in such policies could influence the growth rate permanently.

7. In the endogenous growth model, the convergency theory:

- (a) does not hold
- (b) It is exactly the same as the Solow model
- (c) there is always convergency no matter from where you start
- (d) only hold for rich economies

Correct answers: (a)

8. In the Lucas Model we assume that $Y = K^\alpha(hL)^{1-\alpha}$, where h is:

- (a) human capital
- (b) labor
- (c) technology
- (d) solow residual

Correct answers: (a)



9. Why the Luca's model is considered an endogenous growth model:

- (a) permanent increase in spend in spending to get more skill, leads to a permanent growth
- (b) It is not a neoclassical function
- (c) because it has not
- (d) there is convergence among economies

Correct answers: (a)

10. In this Lucas Model, the growth is produced by :

- (a) human capital and physical capital accumulation
- (b) only by physical capital accumulation
- (c) only by human capital accumulation
- (d) there is no growth

Correct answers: (a)

You finished the exam - Well done!