



Name: _____

Entrance Test

***Bachelor's degree in Economics and Management
Dual Degree with Lyon 2 University (France)
Sunday 27th September 2020***

Duration: 90 min

No documents allowed - Please switch off your mobile phone

Part 1: Problem Solving & Quantitative Reasoning 10 points - Indicative time: 45 minutes

Part 2: General Knowledge of Economics and Management 20 points - Indicative time: 45 minutes

Part 1: Problem solving & Quantitative reasoning 10 points - Indicative time: 45 minutes

Q1. Vichet invested 5000\$ at 4% interest rate. At which interest rate must he invest an additional 1000\$ if he wants his total annual income to be equal to 300\$?

- a. 12%
- b. 16%
- c. 10%
- d. 8%

Q2. Last year, total income of Sokhon's taxi company was 150 000\$. This year, his taxi company total income raises to 175 000\$. What will be the amount of Sokhon's taxi company total income next year if it keep increasing by the same percentage every year?

- a. 215 455\$
- b. 214 155\$
- c. 195 000\$
- d. 204 155\$



Q3. Six people attend a meeting in France. To say hello, each person gives one kiss on the cheek of every other person present at the meeting. What is the total number of kisses given at this meeting?

- a. 13
- b. 15
- c. 17
- d. 6

Q4. You have invited 56 friends to your birthday party. Knowing that you need 3 eggs to make 8 pancakes, how many eggs do you need to make a pancake for every one of your guests?

- a. 21
- b. 24
- c. 18
- d. 32

Q5. There are 40 questions in an exam. Over the first 30 questions, Sophal has got 60% of right answers. What percentage of right answers of the remaining questions does Sophal need in order to get 10/20 as a total score?

- a. 25%
- b. 50%
- c. 60%
- d. 20%

Q6. If the GDP growth rate of Cambodia is 5% a year. How long will it take to see the GDP of Cambodia double?

- a. 5 years
- b. 10 years
- c. 17 years
- d. 20 years

Q7. Chamroeun goes to the Peace Book Center store. He spends there half of his money on office consumables, $\frac{1}{3}$ on software and the remaining 15\$ on sport goods. How much did Chamroeun spend at the Peace Book Center store?

- a. 60\$
- b. 120\$
- c. 90\$
- d. 35\$



Q8. A service apartment has 80 tenants, 45% of whom use the amenities. Of the people who use the amenities, 20 use the swimming pool and 30 use the gym. How many tenants use both the swimming pool and the gym?

- a. 14
- b. 36
- c. 44
- d. 12

Q9. If $\sqrt{2x + y} - 4 = 22$, what is the value of y in terms of x ?

- a. $\frac{289-x}{2}$
- b. $289 - x$
- c. $\frac{22-x}{4}$
- d. $676 - 2x$

Q10. Sokneang has class at 8:00 a.m. She arrives late at 8:34 a.m. She tells her teacher that she left home at 7:25 am riding her motorbike at 35 kilometers per hour but unfortunately she has got stuck in the traffic jam for 25 minutes. How far does Sokneang live from school?

- a. 15 Km
- b. 25,67 Km
- c. 35 Km
- d. 62,75 Km



Part 2: General Knowledge of Economics and Management 20 points - Indicative time: 45 minutes

Q11. What is the World Bank?

- a. An international financial organization that mostly grants loans to developing countries;
- b. A commercial bank operating worldwide;
- c. An international organization advocating for the human rights;
- d. A Cambodian commercial bank.

Q12. Which of the following market configurations corresponds to a monopoly?

- a. There are several companies producing the same good;
- b. There is only one company producing a specific good and serving the demand;
- c. There are only two companies producing the same good;
- d. The good is produced only by companies located abroad and must be imported into the country.

Q13. What is approximately the GDP per capita in Cambodia?

- a. 500\$ a month;
- b. 1600\$ a year;
- c. 35 000\$ a year;
- d. 1000\$ a month.

Q14. The fundamental problem of economics is:

- a. To establish a democratic political framework for the smooth operation of the government;
- b. To establish prices that reflect the relative scarcities of products and resources;
- c. To deal with the scarcity of productive resources relative to an unlimited number of economic needs/desires;
- d. To define and implement best ways to make profits.

Q15. What is the ASEAN?

- a. A peace treaty;
- b. A political cooperation agreement between Asia and the United States of America;
- c. A river;
- d. A free trade agreement between some South-East Asian countries.

Q16. What is the main consequence of the inflation?

- a. The general level of price for goods and services goes down;
- b. The total quantity of goods and services produced increases;
- c. The general level of price for goods and services goes up;
- d. The total quantity of goods and services produced decreases.



Q17. In a free market economy, what is the main objective of any company according to the economy theory?

- a. To produce as much as possible quantity;
- b. To sell as much as possible products;
- c. To make as much as possible profits;
- d. To have as much as possible clients.

Q18. What was the main benefit for Cambodia of the “Everything But Arms” agreement signed with the European Union (EU)?

- a. It allowed Cambodia to export its production to EU countries without paying any tariffs;
- b. It allowed EU countries to export their productions to Cambodia without paying any tariffs;
- c. It offers a 50% discount on tariffs imposed to Cambodian products exported to EU;
- d. It offers a 50% discount on tariffs imposed to EU countries products exported to Cambodia.

Q19. What is the main difference between microeconomics and macroeconomics?

- a. Microeconomics studies the individual behaviors of the economic agents while macroeconomics focuses on the whole economy;
- b. Microeconomics focuses on the small and medium companies while macroeconomics aims to study big corporations;
- c. Microeconomics studies the national economy while macroeconomics studies the international economy;
- d. There is no difference.

Q20. Rank the following countries from the richest to the poorest in terms of GDP: USA, South Korea, Cambodia and France.

- a. USA, France, South Korea, Cambodia;
- b. France, USA, South Korea, Cambodia;
- c. South Korea, USA, Cambodia, France;
- d. USA, South Korea, France, Cambodia.

Q21. What are the three sectors contributing the most to the Cambodian economy?

- a. Garment, construction and heavy industry;
- b. Garment, healthcare and agriculture;
- c. Garment, tourism and transports;
- d. Garment, agriculture and tourism.

Q22. What is the Chinese currency?

- a. Euro;
- b. US Dollar;
- c. Yuan;
- d. Yen.



Q23. Which of the following correspond to the factors of production defined by the economic theory?

- a. Capital, labor and land;
- b. Capital, currency and land;
- c. Capital, labor and vehicles;
- d. Currency, investment and consumption.

Q24. What is the Return on Investment?

- a. It is a ratio given by the benefit of an investment divided by the cost of this investment;
- b. It is the amount of profits made out of an investment;
- c. It is a ratio given by the cost of an investment divided by the benefit of this investment;
- d. It is the amount spent to invest.

Q25. Among the following people, who is NOT a famous economist?

- a. John Meynard Keynes;
- b. Adam Smith;
- c. Barack Obama;
- d. Robert Solow.

Q26. On the rice market, the supply is given by $Q = 100 \times P$, the demand is given by $Q = 60 - 20 \times P$ with Q: quantity of rice in tons and P: the price for a ton of rice. What are the quantity and the price of rice that makes the supply to equal the demand?

- a. $Q = 40$ and $P = 4$;
- b. $Q = 80$ and $P = 3$;
- c. $Q = 50$ and $P = 0.5$;
- d. We do not have enough data to find the price and the quantity.

Q27. What is the most expensive means of transportation to export a production (in USD/Kg)?

- a. By sea transport;
- b. By air transport;
- c. By rail transport;
- d. By road transport.

Q28. Why is it important to conduct a market study before launching a new business?

- a. To get to know well the market environment in order to assess whether or not our business idea might be profitable;
- b. To find facilities to set up our offices;
- c. To explore opportunities to export our business idea;
- d. To find in which already existing companies it can be good to invest.



Q29. How do we calculate a trade balance?

- a. Import minus export;
- b. Import plus export;
- c. Export minus import;
- d. Supply minus demand.

Q30. What does GAFAM mean?

- a. It is the acronym for the five most profitable US tech companies;
- b. It is the acronym for the five most profitable Cambodian companies;
- c. It is the name of the French professional football league;
- d. It is the name of an international NGO dealing with digital literacy.



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Part 1: Written assessment (20 points) - *Indicative time: 20 minutes*

Part 2: Structure and written expression (20 questions - 20 points) - *Indicative time: 20 minutes*

Part 3: Reading comprehension (10 questions - 10 points) - *Indicative time: 20 minutes*



Part 1: Writing Assessment (20 points) – Indicative time: 20 minutes

Instructions: On your exam sheet, write a clear, logical and well organized answer to the following question. Your answer should be in the form of a short essay. Your answer should not exceed 2 pages. Write legibly. Essays that are illegible or are written on a topic other than the one outlined in the question will not be scored. Please use the exam sheet to write your essay. (Do not forget to indicate your first and last name on the exam sheet!)

We are in 2040 in Phnom Penh, Cambodia. Describe what you see (people, buildings, infrastructures, street life, transportations, etc...) and tell us how is the economic growth rate, what economic sectors contribute the most to the economic development, how the inequalities in the country are and so on. In one word, draft the 2040 mapping of the socio-economic situation of Cambodia.



Part 2: Structure and written expression (20 questions - 20 points) –

Indicative time: 20 minutes

Questions 1-10, each of the following sentences contains one blank. Each blank indicates that a word or a set of words have been left out. Below the sentence are four words or set of words, marked (A), (B), (C) and (D). Select the word or set of words that best complete the sentence.
PLEASE CIRCLE YOUR ANSWER ON THE ANSWER SHEET

1. The hummingbird is among _____ in the world.
 - a. a tiny and more colorful bird
 - b. as tiny as the most colorful bird
 - c. tiniest and colorful most the bird
 - d. the tiniest and most colorful birds

2. _____, Jupiter Hannon was the first black American to publish his own verse.
 - a. He was a poet and preacher of Long Island
 - b. A poet and preacher of Long Island
 - c. The poet and preacher of Long Island he was
 - d. The poet and he was a preacher of Long Island

3. Because _____ long tail, the cat possesses an excellent sense of balance.
 - a. it has
 - b. with a
 - c. of its
 - d. having

4. _____ one after another, parallel computers perform groups of operations at the same time.
 - a. Conventional computers, by handling tasks
 - b. Since tasks being handled by conventional computers
 - c. Since conventional computers handle tasks
 - d. Whereas conventional computers handle tasks

5. The sea fig's scientific name means "blooming at midday" and seldom _____ unless it receives full sun.
 - a. flowers
 - b. does it flower
 - c. it flowers
 - d. flowering



6. The Olympic torch _____ throughout the Olympic Games and is then extinguished at the closing ceremony.
- burns
 - is burning
 - is burned
 - burned
7. The first steam engine was invented by Hero, an engineer of ancient Greece, but it was _____ of _____.
- none practical use
 - no practical use
 - not only the practical use
 - practically not used
8. Under no circumstances _____ without looking carefully to the rear.
- should one back up a motor vehicle
 - should a motor vehicle one back up
 - one should back up a motor vehicle
 - a motor vehicle should back up
9. After banks have determined how much the money of one country is worth in another, _____ people from both places exchange one type of money for another.
- and they help
 - helping
 - to help
 - they help
10. Pumpkin seeds, _____ protein and iron, are a popular snack.
- that
 - provide
 - which
 - which provide

Question 11-20, each sentence has four underlined words or phrases. The four underlined parts of the sentence are marked (A), (B), (C), and (D). Identify the *one* underlined word or phrase that must be changed in order for the sentence to be correct. **PLEASE CIRCLE YOUR ANSWER ON THE ANSWER SHEET**

11. Washington Irving, one of America's most famous authors, was a lawyer, a businessman, and a United States diplomatic to England and Spain.
- A B C
D



12. The main boyhood interesting of psychologist Jean Piaget was observation of animals in their
A B C D
natural habitat.
13. Because its gravitationally bound to the Milky Way, the Andromeda galaxy is currently
A B C
approaching Earth.
D
14. Dams may be built for multiple purposes: providing water for irrigation, aid flood control, furnish
A B
hydroelectric power, and improve the passability of waterways.
C D
15. As soon as psychologists developed ways to measure human attributes, they discovered that most
A B
characteristics of the human beings seem to be distributed in the form of a bell-shaped curve.
C D
16. On the bottom of the New York Metro Card have three arrows and little white letters that say:
A B C D
“Insert this way/This side facing you”.
17. The increase population, and rapid economic growth in recent years, have put a large and
A B C
growing stress on the water resources and environment in Ho Chi Minh City, Vietnam.
D
18. For decades the food industry has been known serving up sugary or fat-laden products,
A B
promoted with ceaseless advertising.
C D
19. Most of the large industries in the country are well organized and structured and are sometimes
A B C
backed up internationally reputable mother companies.
D
20. All of the east-west interstate highways in the United States has even numbers, while north-south
A B C
interstate highways are odd-numbered.
D



Part 3: Reading comprehension (10 questions - 10 points) - Indicative time: 20 min.

Answer all of the questions following the text on the basis of what is stated or implied in that test. Choose the one best answer, (A), (B), (C), or (D), to each question. **PLEASE CIRCLE YOUR ANSWER ON THE ANSWER SHEET**

Questions are based on the following text:

"The evolution of the banana, star of the Western fruit bowl" By Rosie Mestel

Did you hear? The genome of the banana has been sequenced, an important development in scientist's efforts to produce better bananas.

A look at that genome has revealed curious things, said Pat Heslop-Harrison, a plant geneticist at the University of Leicester in England who was a coauthor of the report published this week in the journal Nature.

For example, there are regions of the banana genome that don't seem to be involved in making proteins but are shared by many different species of plants, far beyond bananas. What, he wonders, are they doing?

There are remnants of bits of banana streak virus spliced into the banana genome (too broken-up to cause disease, however).

There are whole sets of DNA repeats that plants normally have but bananas do not. And, intriguingly, three times since this genus of giant herbs took an evolutionary turn away from its relatives -- the grasses -- it has duplicated its entire set of chromosomes.

Two of the doublings took place at the Cretaceous-Tertiary boundary 65 million years ago, back when the dinosaurs and lots of other species went extinct, Heslop-Harrison noted.

Duplications like this are known to have happened in other plant groups at this same time but haven't occurred since, Heslop-Harrison said. Scientists don't know why, but they believe having extra copies of genes may have imparted some stability to plants during a time of rapid climate change after an asteroid hit Earth.

Having more than one gene of each type means that if one gene of a set loses function, the plant still has another one that works. And there's more room for adaptability to new circumstances, because one gene could be altered and co-opted for new purposes and there would still be the other one left to perform the original job.

"Perhaps it's the reason [bananas have] done so well in the subsequent millions of years," Heslop-Harrison said. "One can ask, will changes occurring in the world's climate now mean there's going



to be a whole set of new genome duplications that will enable plants to survive? We don't know that, but it's interesting to consider."

The banana genome sequenced by the French scientists was from the Pahang, a wild Malaysian banana of the species *Musa acuminata*. It's a key species in the complicated evolution of the bananas and plantains people eat around the world, including the Cavendish banana that we buy at the supermarket.

The sterile Cavendish is a so-called triploid: It has three sets of chromosomes instead of the normal two. One of those genomes came from Pahang. The others came from other subspecies of *Musa acuminata*.

The changes occurred stepwise, and went something like this:

Thousands of years ago, two wild banana species from different parts of the islands of Southeast Asia were brought into the same range by people. They formed hybrids. A bit like mules, the hybrids were vigorous but fairly sterile.

The hybrids were kept going without sex through propagation of their shoots.

At some point, the hybrids developed the ability to set fruit without being fertilized.

Then (for most bananas, including the Cavendish) came another chance event that caused the hybrids to end up with three sets of chromosomes. Every now and again, the few viable eggs and pollen that they made would mistakenly contain two sets of chromosomes instead of just one.

When a double-chromosome pollen combined with a single-chromosome egg (or vice versa), the result was a hopelessly sterile plant with even more vigorous fruit.

Events like this happened more than once and sometimes included other types of ancestral banana species.

Some scientists, in fact, have made a whole study of banana domestication and movement around the world. They've pieced the story together using quite different strands of information, including the genomes of wild and cultivated bananas, the microscopic relics of banana leaf material found at archaeological sites, and even the word for "banana" in different languages.

21. In paragraph 2, the word "curious" is closest in meaning to:

- a. inquisitive
- b. peculiar
- c. nosy
- d. intricate

22. What does paragraph 5 suggest about bananas?

- a. The banana genus may not yet be classifiable into a traditional category
- b. Bananas are actually a species of grass
- c. Bananas may now be categorized as "herbs" in supermarkets
- d. Because banana chromosomes duplicate themselves, they have better potential for successful cloning



23. Why does the author use "intriguingly" to describe the phenomenon in paragraph 5?
- To imply that bananas are far more interesting than other fruits
 - To make readers doubt the claims scientists are making about bananas
 - To suggest that duplication of chromosomes is a rare and interesting occurrence in the plant world
 - To encourage questions about whether bananas are grasses or herbs
24. Why is the observation in paragraph 6 important?
- It suggests that the banana mutated its genetic structure for survival
 - It shows that bananas can be traced as far back as dinosaurs
 - It suggests that bananas were fatal to dinosaurs and other species
 - It proves that bananas are immune to atmospheric changes
25. The word "co-opted" in paragraph 8 is closest in meaning to:
- decided upon together
 - argued against
 - removed from the study
 - adopted
26. The quote in paragraph 9 most closely suggests:
- Bananas may be an example of ways that species might alter their genetics to survive changes in the earth's climate and atmosphere
 - That the genetic mutations of bananas have no implications for other species
 - That genetic structure is the only factor that should be considered when predicting survival
 - Though bananas have made it this far, there is no proof that they will survive the next wave of significant atmospheric changes.
27. According to the article, all are steps in the evolution of the banana EXCEPT:
- Some banana hybrids began to develop three sets of chromosomes
 - The merging of two different banana species
 - Bananas reproduced widely and easily through fertilization
 - Bananas developed the ability to develop fruit without fertilization
28. The word "chance" in paragraph 15 is closest in meaning to:
- random
 - gamble
 - risky
 - opportune
29. All are variations of banana mentioned in the article EXCEPT:
- Cavendish
 - Dolus mundi
 - Musa acuminata
 - Plantains
30. The word "domestication" in the final paragraph is closest in meaning to:
- housebroken
 - well-controlled
 - adapted for human consumption
 - accepted within the culture