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ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)

DEPARTMENT OF BUSINESS AND TECHNOLOGY MANAGEMENT

Mid-Semester Examination

Summer Semester, A. Y. 2022-2023

Course No. : BTM 4403

Time : 1.5 hours

Course Title : Macro Economics

Full Marks : 75

Answer all 3 (three) questions. All questions carry equal marks. Marks of each question and corresponding CO and PO are written in the right margin within brackets.

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|-------|---|---|----------------|
| 1. a) | Why do economists use real GDP rather than nominal GDP to gauge economic well-being? | 5 | (CO1)
(PO1) |
| b) | Explain why an economy's income must equal its expenditure. | 5 | (CO1)
(PO1) |
| c) | Why is it desirable for a country to have a large GDP? Give an example of something that would raise GDP and yet be undesirable. | 5 | (CO1)
(PO1) |
| d) | The government purchases component of GDP does not include spending on transfer payments such as Social Security. Explain why transfer payments are excluded. | 5 | (CO1)
(PO1) |
| e) | One day, Barry the Barber, Inc., collects \$400 for haircuts. Over this day, his equipment depreciates in value by \$50. Of the remaining \$350, Barry sends \$30 to the government in sales taxes, takes home \$220 in wages, and retains \$100 in his business to add new equipment in the future. From the \$220 that Barry takes home, he pays \$70 in income taxes. Based on this information, compute Barry's contribution to the following measures of income. | 5 | (CO1)
(PO1) |
| | i. gross domestic product | | |
| | ii. net national product | | |
| | iii. national income | | |
| | iv. personal income | | |
| | v. disposable personal income | | |
| 2. a) | Which do you think has a greater effect on the CPI: a 10 percent increase in the price of chicken or a 10 percent increase in the price of caviar? Why? | 5 | (CO2)
(PO2) |
| b) | Describe the three problems that make the CPI an imperfect measure of the cost of living. | 5 | (CO2)
(PO2) |
| c) | Over a long period of time, the price of a candy bar rose from \$0.20 to \$1.20. Over the same period, the CPI rose from 150 to 300. Adjusted for overall inflation, how much did the price of the candy bar change? | 5 | (CO2)
(PO2) |
| d) | The residents of Vegopia spend all of their income on cauliflower, broccoli, and carrots. In 2016, they spend a total of \$200 for 100 heads of cauliflower, \$75 for 50 bunches of broccoli, and \$50 for 500 carrots. In 2017, they spend a total of \$225 for 75 heads of cauliflower, \$120 for 80 bunches of broccoli, and \$100 for 500 carrots. | 5 | (CO2)
(PO2) |
| | i. Calculate the price of one unit of each vegetable in each year. | | |
| | ii. Using 2016 as the base year, calculate the CPI for each year. | | |

- iii. What is the inflation rate in 2017?
- e) Suppose that a borrower and a lender agree on the nominal interest rate to be paid on a loan. Then inflation turns out to be higher than they both expected. 5 (CO2)
(PO2)
- Is the real interest rate on this loan higher or lower than expected?
 - Does the lender gain or lose from this unexpectedly high inflation? Does the borrower gain or lose?
 - Inflation during the 1970s was much higher than most people had expected when the decade began. How did this affect homeowners who obtained fixed-rate mortgages during the 1960s? How did it affect the banks that lent the money?
3. a) In many developing nations, young women have lower enrollment rates in secondary school than do young men. Describe several ways in which greater educational opportunities for young women could lead to faster economic growth in these countries. 5 (CO3)
(PO2)
- b) Investment can be increased both by reducing taxes on private saving and by reducing the government budget deficit. 5 (CO3)
(PO2)
- Why is it difficult to implement both of these policies at the same time?
 - What would you need to know about private saving to judge which of these two policies would be a more effective way to raise investment?
- c) Suppose that Intel is considering building a new chipmaking factory. 5 (CO3)
(PO2)
- Assuming that Intel needs to borrow money in the bond market, why would an increase in interest rates affect Intel's decision about whether to build the factory?
 - If Intel has enough of its own funds to finance the new factory without borrowing, would an increase in interest rates still affect Intel's decision about whether to build the factory? Explain.
- d) Suppose that a particular society decided to reduce consumption and increase investment. 5 (CO3)
(PO2)
- How would this change affect economic growth?
 - What groups in society would benefit from this change? What groups might be hurt?
- e) The great 18th-century economist Adam Smith wrote, "Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things." Explain how each of the three conditions Smith describes would promote economic growth. 5 (CO3)
(PO2)