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**ECONOMIC INFORMATICS**

1. Why information management is so crucial?
2. Distinguish the characteristics of data and information. How businesses use data and information to gain competitive advantage? Briefly talk about insights that can be driven from data and information.
3. How data is organized to effectively support business processes?
4. Where is the information that makes businesses run? Distinguish centralized and decentralized information and briefly talk about the problems that may occur as a result of decentralized information system.
5. Briefly talk about the three levels of decision making in business organizations. Outline some characteristics of information typically required for each three level of decision making.
6. Explain the concept of GDP and briefly talk about the different approaches for GDP calculation. And provide examples on excel as we did in class.
7. Which different types of GDP do you know and how do they differ from each other? Provide practical examples.
8. How do we take the effects of inflation out of GDP to compare economic well-being over time? Explain nominal and Real GDP and provide examples on excel.
9. Draw an excel sheet with column and row and titles for the economy consisting of two goods. Place the ‘price’, ‘quantity’ and ‘total spending’ for 3 years. Calculate Nominal GDP in the terms of the excel formula for 3 years.
10. Draw an excel sheet with column and row and titles for the economy consisting of two goods. Place the ‘price’, ‘quantity’ and ‘total spending’ for 3 years. Calculate Real GDP in the terms of the excel formula for 3 years.
11. Recall the Excel knowledge that we gained during our GDP class and how would your strategy be if you are assigned to present a country’s GDP data in a professional Excel table?
12. Briefly explain the concept of portfolio management and explain how can portfolio structuring in Excel provide accuracy advantages?
13. Briefly explain the concept of portfolio management and explain how can portfolio structuring in Excel provide time efficiency advantages?
14. On Excel create a model that an investor can use to structure a portfolio using the three-level approach as we practiced during seminar class. The user will input the total portfolio size as well as his allocations at the levels of asset class, categories within each asset class, and specific mutual funds within each category. The portfolio output should show the amount of money that will be invested in each mutual fund.
15. Create a model where an investor decides the portfolio structure for the investment amount of $1,000,000.00. Think of yourself as an investor and create the categories and allocate funds to the categories using Excel. Briefly talk about your Excel experience and most importantly, why you prefer using Excel for this task.
16. Think of yourself as an investor who has two portfolio choices to decide on. Create the portfolios on the Excel sheet below and assign rate of return for each of them and based on the return rate pick one portfolio and explain how Excel helped you in this particular task.
17. Recall the knowledge that you learned from our class on Excel for Portfolio Management. How did RATE function help us to solve the problems?
18. Briefly talk about the concept of time value of money and highlight the importance of Excel for these calculations. Explain the syntax of FV function and briefly explain what the function does.
19. Briefly talk about the concept of time value of money and highlight the importance of Excel for these calculations. Explain the syntax of PV function and briefly explain what the function does.
20. Briefly talk about the concept of time value of money and highlight the importance of Excel for these calculations. Explain the syntax of NPV function and briefly explain what the function does. Identify the difference between NPV and XNPV functions.
21. Briefly talk about the concept of time value of money and highlight the importance of Excel for these calculations. Explain the syntax of XNPV function and briefly explain what the function does. Identify the difference between NPV and XNPV functions.
22. Briefly talk about the concept of time value of money and highlight the importance of Excel for these calculations. Explain the syntax of PMT function and briefly explain what the function does.
23. Jack deposited $1000 in saving account earning 6% interest rate. How much will the money be worth at the end of 3 years? List the inputs and make the calculation using Excel. Identify which Excel function can be used here.
24. You need $10,000 for your tuition expenses in 5 years how much should you deposit today in a saving account that pays 3% per year? List the inputs and make the calculation using Excel. Identify which Excel function can be used here.
25. Suppose that you are an investor and you are suggested a project which requires an initial investment of $5million and has returns of $1,25m over the period of next 5 years. Would you make this investment if the interest rate is 10%? Which Excel function would be useful here and how would you make the decision whether or not to invest in the project?
26. Briefly differentiate legacy systems from enterprise information systems. List the reasons why companies shift from legacy systems to EIS.
27. Graphically demonstrate the differences between disparate and integrated ERP.
28. Briefly talk about tiers of ERP vendors. What are the criterion that determine the tiers? List the three Tier 1 vendors.
29. Briefly talk about supply chain. What are the three important flows involved in this process?
30. Briefly talk about CPFR (Collaborative Planning, Forecasting and Replenishment) system and analyze the case of Walmart and P&G. How the system helped both companies to optimize their processes?
31. Briefly talk about CRM (Customer Relationship Management) system and which advantages can the usage of relevant software programs can provide for businesses? Support your answer with real life example.
32. What is knowledge management (KM) and how technology can foster and structure KM in any business?
33. What is FinTech? How disruptive is the technology for finance industry?
34. Briefly talk about the opportunities and risk of FinTech adoption.
35. Classify FinTech in three categories and highlight which one out of three has developed more. Determine the underlying reasons for that development.
36. Briefly explain digital and mobile wallets. Highlight the underlying reasons of their widespread adoption in today’s society.
37. How FinTech has affected POSs? Explain the differences between mPOS and POS.
38. How FinTech renovated peer-to-peer payments? Give examples of innovative P2P providers.
39. Compare and contrast traditional payment services with the new payment systems offered by FinTech companies. Discuss the risks involved in FinTech payment systems.
40. How FinTech affected investment management services? Give examples of e-trading and HTF (high-frequency trading).
41. How FinTech affected investment management services? Give examples of copy trading and robo-advisor.
42. Briefly explain how FinTech reshaped lending and borrowing processes?
43. Briefly explain the concept of big data and list some of the opportunities and challenges that it creates for businesses.
44. How crucial is big data for modern business analytics?
45. Briefly explain the life cycle of Big data.
46. In our modern world how is big data created and processed? What is the most useful software to process big data?
47. What are the main characteristics of Big Data? Talk about the value of bug data for businesses.
48. What are the drivers of Big data’s mainstream adoption and what are the risks involved with the technology?
49. How efficient is Excel for Sensitivity Analysis?
50. How crucial are governance and management for success of big data? What are the risks associated with failure of governance and management of big data integration?
51. Briefly talk about blockchain and highlight the value proposition that is presented by that technology.
52. Briefly talk about blockchain utilization and list the three levels of it. Talk about the the level of storage of digital records.
53. Briefly talk about blockchain utilization and list the three levels of it. Talk about the the level of exchange of digital assets.
54. Briefly talk about blockchain utilization and list the three levels of it. Talk about the the level of recordation and execution of smart contracts.
55. Briefly talk about blockchain utilization and list the three levels of it. Talk about the classifications for blockchain implementation.
56. How does blockchain work? Briefly explain the logic behind it and talk about the transactions in blockchain system.
57. How does blockchain work? Briefly explain the logic behind it and talk about verification of transactions in blockchain system.
58. How does blockchain work? Briefly explain the logic behind it and talk about the validation of blocks.
59. How does blockchain work? Briefly explain the logic behind it and talk about blockchain mining.
60. How does blockchain work? Briefly explain the logic behind it and talk about the built-in defence in blockchain system.
61. Talk about the importance of blockchain in digital age. List some of the key drivers of blockchain for a modern business.
62. Talk about the importance of blockchain in digital age. List some of the key challenges of blockchain for a modern business.
63. Talk about the importance of blockchain in digital age. List some of the potential solutions to challenges of blockchain for a modern business.
64. How disruptive and innovative do you think is blockchain for digital age? What are the uses of technology in financial industry?
65. Why should companies operating in financial sector consider adopting blockchain to their operations? What is the value driven out of that technology?
66. Why should companies operating in non-financial sector consider adopting blockchain to their operations? What is the value driven out of that technology?
67. Briefly talk about the importance of blockchain for remittances. Think of yourself as an immigrant who works abroad and periodically sends money to the family. How would blockchain help you in this matter?
68. Compare two most popular methods of international financial transfers: via SWIFT and via blockchain. Which one would you prefer for your daily activities and why?
69. List the functions of money and explain how well can cryptocurrencies replace all these functions.
70. Briefly talk about potential benefits of cryptocurrencies.
71. Briefly talk about potential challenges associated with widespread adoption of cryptocurrencies.
72. Briefly talk about potential risks of cryptocurrencies. Highlight the risks related to criminality.
73. Briefly talk about potential risks of cryptocurrencies. Highlight the risks related to consumer protections.
74. Briefly talk about potential risks of cryptocurrencies. Highlight the risks related to monetary policy considerations of central banks.
75. Why did central banks end up developing the concept of CBDCs (Central Bank Digital Currencies)? What are the potential challenges and risks related with the concept?