

[N.B. - The figures in the margin indicate full marks. Questions must be answered in English. Examiner will take account of the quality of language and of the manner in which the answers are presented. Different parts, if any, of the same question must be answered in one place in order of sequence.]

Marks

1. a) Toyota City, Japan, August 31, 2022—Toyota Motor Corporation (Toyota) has decided to invest up to 730 billion yen (approximately \$5.6 billion) in Japan and the United States toward supplying automotive batteries for battery electric vehicles (BEVs), for which demand is growing, and aims to begin battery production between 2024 and 2026. This investment is aimed at enabling Toyota to flexibly meet the needs of its various customers in all countries and regions by offering multiple powertrains and providing as many options as possible.

With this investment, Toyota intends to increase its combined battery production capacity in Japan and the United States by up to 40 GWh. By utilizing the Toyota Production System and building production lines that are more efficient than ever, Toyota also intends to further strengthen its competitiveness and invest in the training of personnel engaged in battery production and the passing down of monozukuri (art of making things) manufacturing skills.

In Japan, a total of approximately 400 billion yen will be newly invested in the Himeji Plant of Prime Planet Energy & Solutions Co., Ltd. (PPES) and in Toyota plants and property, while in the United States, approximately 325 billion yen (approximately 2.5 billion dollars) will be newly invested in Toyota Battery Manufacturing, North Carolina (TBMNC; owned 90% by Toyota Motor North America, Inc. and 10% by Toyota Tsusho Corporation) toward increasing automotive battery production.

Toyota intends to continue its efforts to build a supply system that can steadily meet the growing demand for BEVs in various regions, including the supply of automotive batteries from its partners.

Toyota believes that there is more than one option for achieving carbon neutrality. It also believes that the means of reducing CO₂ emissions as much as possible and as quickly as possible while protecting the livelihoods of its customers vary greatly depending on the country and region. With such in mind, Toyota will continue to make every effort to flexibly meet the needs of its various customers in all countries and regions by offering multiple powertrains and providing as many options as possible.

Toyota Motor Corporation works to develop and manufacture innovative, safe and high-quality products and services that create happiness by providing mobility for all. Toyota believe that true achievement comes from supporting its customers, partners, employees, and the communities in which Toyota operate. Since Toyota's founding over 80 years ago in 1937, Toyota have applied Guiding Principles in pursuit of a safer, greener and more inclusive society. Today, as Toyota transform into a mobility company developing connected, automated, shared and electrified technologies where everyone is free to move.

Competitor's information:

Hydrogen is expected to be popularized as a renewable energy source. Other competitors will strive to reduce costs and realize a "hydrogen society" by expanding lineup of FCVs (Fuel Cell Electric Vehicle) and also by using FC (Fuel Cell) systems for a wide range of applications, including commercial trucks as well as both stationary and movable power sources.

Honda and South Korean battery maker LG Energy Solutions are investing \$3.5 billion to build a joint venture battery factory in southern Ohio, USA, the car company said October 11, 2022. Honda will strive to realize carbon neutrality for all products and corporate activities Honda is involved in by 2050.

It is announced in March 27, 2022 that BMW to foray into battery manufacturing, plans five Gigafactory. BMW aims to have electric cars to account for at least half of its total sales by 2030. Suzuki Motor Corporation on August 29, 2022 announced the setting up of a new research and development (R&D) centre in India. The facility at Hansalpur will be set up with an investment of around Rs 7,300 crore. It would manufacture advanced chemistry cell batteries for electric vehicles. The US Department of Energy (DOE) has announced a conditional loan of \$2.5 billion for Ultium Cells, a joint venture of General Motors (GM) and battery manufacturer LG Energy Solution, to help finance EV lithium-ion battery cell factories in three states. The loan is intended to support the expansion of electric vehicle deployment in the US. The loan, which is expected to close within

months, will help Ultium provide EV batteries for GM, which has said that it plans to manufacture 1 million EVs a year by 2025.

The Japanese carmaker Nissan has announced that it will invest 500 million US dollars in its Canton assembly plant in the US state of Mississippi. Two electric models for Nissan and Infiniti as well as battery packs for them are to be produced there from 2025. Nissan is also planning a battery cell factory in the USA.

Requirement:

Assess the external factors of battery electric vehicles of Toyota based on Porter's five forces and explain how to take steps against each force?

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- b) In the recent past China and South Korea became the manufacturing hub and center point of the world. Over a short period of time both the countries started dominating the world with their products and services. This is exactly in line with the 1980s the dramatic success of Japanese firms and products such as Toyota and Sony in the United States and other international markets provided a powerful jolt to US managers and awakened them to the importance of international and global markets. And now China and South Korea represented potential major international market opportunities for firms from countries including the United States, Japan, and the European Union. This has possible mainly due to prudent policies of the government of those countries, clear focus on the deliverables and equally equipped companies with strong technical and management competence to take the challenge forward successfully.

Accordingly, international arena features both opportunities and threats for firms seeking strategic competitiveness in global markets.

Bangladesh, during the recent past has caught the eyes of businesses the world over due to its immense potential to grow as a business hub in the region. Increase in infrastructure development is a constant phase does provide the business community a sense of confidence. Adding to that, certain recent media surveys attributes that Bangladesh has progressed as country in the Doing Business Index.

Requirements:

Using Porter's Theory of Competitive Advantage advise how Bangladesh could achieve strategic competitiveness in the global market. Your reasoning needs to be in point form.

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2. Siemens AG is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability, and internationality for more than 170 years. Active around the world, the company focuses on intelligent infrastructure for buildings and distributed energy systems, and on automation and digitalization in the process and manufacturing industries. Siemens brings together the digital and physical worlds to benefit customers and society. Through Mobility, a leading supplier of intelligent mobility solutions for rail and road transport, Siemens is helping to shape the world market for passenger and freight services. Via its majority stake in Siemens Health, a publicly listed company, Siemens is also a world-leading supplier of medical technology and digital health services. Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power that has been listed on the stock exchange since September 28, 2020. In fiscal 2020, which ended on September 30, 2020, the Siemens Group generated revenue of €57.1 billion and net income of €4.2 billion. As of September 30, 2020, the company has around 293,000 employees worldwide.

Atos is a global leader in digital transformation with 105,000 employees and annual revenue of over € 11 billion. European number one in cybersecurity, cloud and high-performance computing, the Group provides tailored end-to-end solutions for all industries in 71 countries. A pioneer in de-carbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos operates under the brands Atos and Syntel. Atos is a SE (Societas Europaea), listed on the CAC40 Paris stock index. The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space

Atos and Siemens are strategic partners since 2011. Their world-renowned partnership has allowed customers to benefit from the unique value proposition of a global leader in digital transformation and a global technology powerhouse to even better shape their digital future. Major technology breakthroughs have been achieved for both groups in IoT, Machine Learning, Cybersecurity, AR/VR, Edge computing, and materialized into an end-to-end joint digital solutions and services portfolio. 2020 marks the launch of a new joint go-to-market initiative that will leverage the existing €330 million

common digital investments and will significantly support the digital growth ambitions laid out by each company. Without limiting the scope of the cooperation, there will be a specific focus on the following markets: Automotive, Pharmaceuticals, Chemicals, Food & Beverage, Airports, Hospitals, Digital Grid, Safe Office, and Digital workplace.

Atos-Siemens Global Alliance has 4 pillars

1. Trusted and long-standing partnership
2. Enabling the Digital Enterprise
3. Human-Centricity and Sustainability
4. Joint Technology Research

Atos and Siemens are part of Horizon Europe, the biggest research and innovation framework program in Europe, running from 2021–2027. It promises to achieve breakthroughs, discoveries, and world-firsts by taking great ideas from the lab to the market, especially in the field of digitalization. Fourteen projects are currently under way.

Atos and Siemens support the UK Government's New Hospitals Program. Atos and Siemens were among the founding members of the Charter of Trust, the world's first joint charter for greater cybersecurity, established in 2018.

Siemens and Atos have joined forces to improve blockchain delivery for customers by creating a set of generic re-usable blockchain components. Unique approach provides customers with tested interoperability, improved quality, speed, efficiency, and sustainability in solution delivery. Together, Siemens and Atos can solve a wide range of traceability problems for customers —whether it is following a shipment around the globe or tracing ingredients from farm to fork.

Siemens and Atos, jointly, replaced the legacy system of Spanish utility company, Repsol Electrical & Gas, with a new standardized yet customizable system. Siemens provided the modern application and Atos executed the systems integration. Now Repsol Electrical & Gas has one integrated meter data-management system with an open, modular architecture, fit for the future and with significantly lower internal costs. Atos and Siemens manage more than 130 million smart meters worldwide.

As two strongly complementary global leaders, leveraging joint industry expertise and joint technology research which help hospitals to develop a blueprint and a clear roadmap for a benefits-driven approach that maximizes use of existing data and assets.

Better patient experiences

- Maximize patient experience and satisfaction at every touchpoint
- Real time location services. Siemens provides advanced IoT infrastructure to capture the location of equipment, staff and patients. This data is integrated by to into workflow system to optimize equipment utilization.

Process and financial efficiency

- Achieve cost savings, energy efficiency, waste reduction and higher staff productivity.
- The cooperation of Atos and Siemens is crucial in providing hospitals highly integrated systems and help to identify a set of technologies that digitally advanced hospitals should consider implementing

Security and compliance

- Ensure security and compliance of converged IT and OT and the resilience of your organization. Since Atos is #1 in Europe and #3 world wide for cybersecurity, and Siemens among the top 10 of global software publishers, together we can provide the holistic approach to cybersecurity that digital hospitals require.

Atos and Siemens solutions can jointly leverage for Digital hospital services, Cybersecurity in healthcare, digital twin for pharma and many new scopes all over the world.

Requirements:

- a) As a business analyst explain the reason for creating strategic alliance based on above real scenario?
- b) Why so many strategic alliances lead to a failure?

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3. Shareholders wealth maximization is the key consideration of relocation of business set-up of BMDC Ltd., which is relocated and incorporated in Eurozone and manufactures components for agricultural machinery. The company is financed by a combination of debt and equity, having obtained a listing five years ago. In addition to the founder's equity stake, the shareholders consist of pension funds and other institutional investors. Until recently, sales have been generated exclusively within the Eurozone area but the directors are keen to expand and have identified North America as a key export market.

The company recently completed its first sale to a customer based in the United States, although payment will not be received for another six months.

Hedging policy and key stakeholders

At a recent board meeting, BMDC Ltd. Finance Director argued that the expansion into foreign markets creates the need for a formal hedging policy and that shareholder value would be enhanced if this policy was communicated to the company's other stakeholders. However, BMDC Ltd. CEO disagreed with the Finance Director on the following grounds:

- First, existing shareholders are already well diversified and would therefore not benefit from additional risk reduction hedging strategies.
- Second, there is no obvious benefit to shareholder value by communicating the hedging policy to other stakeholders such as debt providers, employees, customers and suppliers.

Hedging products

Assume today's date is 1 March 2022. BMDC Co is due to receive \$18,600,000 from the American customer on 31 August 2022. The finance director is keen to minimise the company's exposure to foreign exchange risk and has identified forward contracts, exchange traded futures and options as a way of achieving this objective. The following quotations have been obtained.

Exchange rates (quoted as Euro/US\$1)

Spot	0.8707–0.8711
Six months forward	0.8729–0.8744

Currency futures (contract size Euro200,000; exercise price quoted as US\$ per Euro1)

	Exercise price
March	1.1476
June	1.1449
September	1.1422

Currency options (contract size Euro200,000; exercise price quoted as US\$ per Euro1, premium: US cents per Euro1)

	Calls			Puts		
Exercise price	March	June	Sept	March	June	September
1.1420	0.43	0.59	0.77	0.62	0.78	0.89

Assume futures and options contracts mature at the month end and that there is no basis risk. The number of contracts to be used should be rounded down to the nearest whole number in calculations. If the full amount cannot be hedged using an exact number of futures or options contracts, the balance is hedged using the forward market.

Margin information

Once the position is open, the euro futures contract outlined above will be marked-to-market on a daily basis. The terms of the contract require BMDC Ltd. to deposit an initial margin of \$3,500 per contract with the clearing house. Assume the maintenance margin is equivalent to the initial margin. The ticket size on the contract is \$0.0001.

Your manager is concerned about the impact of an open futures position on BMDC Ltd. cash flow and has asked you to calculate and explain the impact of the following hypothetical changes in the closing settlement price in the first three days of the contract.

Closing settlement prices (US\$ per Euro1)

Date	Settlement price
1 March	1.1410
2 March	1.1418
3 March	1.1433

Requirements:

- Explain the rationale for the policy of hedging BMDC Ltd. foreign exchange risk and the potential benefits to shareholder value if that policy is effectively communicated to the company's key stakeholders. 6
- Recommend a hedging strategy for BMDC Ltd. foreign currency receipt in six months' time based on the hedging choices the finance director is considering. Support your recommendation with appropriate discussion and relevant calculations. 8
- Calculate and explain the impact of the open futures position on BMDC Ltd. US\$ cash flow, based on the settlement prices provided. 6

4. Global companies continuously explore ways to be more efficient and effective to survive the challenging global competition. Some resort to mergers and acquisitions to survive. In the light of this, Summit Ltd and Power Ltd are planning to merge to form Sumpower Ltd. It has been agreed that Powell's shareholders will accept three shares in Summit for every share in Power they hold. Other details are as follows:

	Summit Ltd	Power Ltd
Number of shares	40m	10m
Annual earnings	10m	5.8m
P/E ratio	8	10

Post-merger annual earnings of the enlarged company are expected to be eight per cent higher than the sum of the earnings of each of the companies before the merger, due to economies of scale and other benefits. The market is expected to apply a P/E ratio of 9 to Sumpower Ltd.

Requirements:

- a) Explain to the stakeholders of both companies the justification on for the following integration strategies in mergers and acquisitions.
 - i) Horizontal take-over. 4
 - ii) Vertical backward and forward take-overs. 4
 - iii) Conglomerate mergers. 2
 - b) Determine the extent to which the shareholders of Power Ltd will benefit from the proposed merger. 5
5. a) To be useful, information presented in financial statements must be relevant to the decision-making needs of users and faithfully represent the phenomena that it purports to represent. However, it is generally accepted that standard-setters and preparers are constrained in the extent to which these characteristics are achievable.

Requirement:

Explain TWO constraints on relevance and faithful representation of financial statements. 4

- b) ESG or Sustainability report is a communication tools which enables a company to be more transparent about the risks and opportunities it faces and the impacts it causes on environment and society and how it is governed.

Requirements:

- i) Why is ESG reporting important? 4
- ii) What is the difference between SDG and ESG? 4

- c) Integrated reporting advances the proposition that sustainability reporting and financial reporting are inherently linked and thus would benefit from merging.

Requirement:

Discuss how integrated reporting has developed from social and environmental reporting. 4

6. a) Financial Reporting Council (FRC), Bangladesh is established with a vision to ensuring quality in auditing, accounting and financial and non-financial reporting. As per the website, FRC is providing following services:

- To arrange and facilitate training on auditing standards, accounting standards, actuarial standards and valuation.
- To arrange and facilitate training program on costing standards and relevant topic.
- To prescribe Code of Conducts of Accountants.
- To clarify accounting treatment and applicable laws & accounting standards.

Requirement:

As a professional accountant of the private limited company, what will be your role if you see an official of the FRC (who is very known person of you) is widely circulating the confidential information of your company through social media like Whatsapp group, facebook group without discussing with the company management. 3

- b) You have been appointed as an auditor of the manufacturing company incorporated in Bangladesh. The principal activities of the company are manufacturing and assembling of heavy electrical equipment. It's a joint venture company (Ukraine own 70% and Bangladesh own 30%). Company is exporting to Russia around 55%. R & D and calibration purpose company bought assets around BDT 200 Million which is keeping at Russia for testing purpose.

Requirement:

Your firm has been re-appointed as an auditor for the period from July 01, 2021 to June 30, 2022. Due to the recent war between Russia vs Ukraine, draw the key audit guideline. 5

- c) Being a professional accountant, you have been promoted to a new position as a compliance officer in a successful Engine Oil manufacturing company which is registered in the global stock exchange and operating more than 100 countries. Board of Directors' assigned you to analysis the reason for over achieved profit. Company is making good profit in the competitive Bangladesh market. Global standard ingredients of the Engine Oil as follows:

Ingredients	%	Costs for 1 Liter
Base oil	78%	180
Viscosity – (viscosity improvement additive to improve flow)	13%	80
Detergent	2%	20
Dispersant	4%	40
Wear protection	1%	10
Other components	2%	20
Total costs		350

Company is selling 1liter engine oil with 20% Margin that is BDT 420/=. Due to the volatility of FX rate, overall raw material costs increase almost 5% except Viscosity which is increase more than 40% due to raw material price increase. Viscosity, or the thickness of the oil, is important because it determines the lubricant's film strength and efficiency in preventing friction between moving parts. Thick oil has a high viscosity, and thin oil has a low viscosity.

As a result, other competitors increased the price around 15% but your company didn't increase as per market standard and getting more market share. Also increasing marketing activities to gain the market share.

Competitors Sales price: BDT 483

Your sales price: BDT 470

In last quarter company gained the market share from 25% to 40% and operating profit increased drastically. All the General Manager (sales and production General Manager) has a variable bonus 1% on total Sales volume.

During the time of checking the costing of the product, you came to know the new costs structure as follows:

Ingredients	Costs for 1 Liter
Base oil	197
Viscosity – (viscosity improvement additive to improve flow)	85
Detergent	21
Dispersant	42
Wear protection	10
Other components	21
Total	376

Requirements:

- i) Explain the fundamental principles which are more prominent for safeguarding? 2
 - ii) What would be the key points that you should consider in your approach to identify the dilemma with details analysis? How to address? 5
- d) The board of directors of Nirman Ltd, a company listed on the Dhaka Stock Exchange need a significant capital injection to finance a capital-intensive project to consolidate the company's market share failure of which will result in a loss of 25% of its market share. The management of the company has approached National Commercial Bank (NCB) for a loan facility to undertake the project.

However, the bank's current lending policies require borrowers to demonstrate good projected cash flow, as well as a level of profitability which would indicate that repayments would be made. Unfortunately, the current projected statement of cash flow would not satisfy NCB's criteria for lending. The directors have told the bank that the company is in an excellent financial position that the financial results and statement of cash flow projections will meet the criteria and that the chief accountant will forward a report to this effect shortly. The chief accountant has just recently joined Nirman Ltd and has openly indicated that she cannot afford to lose her job because of her financial commitments and family concerns.

Requirement:

Discuss the professional and potential ethical conflicts which may arise in the above scenario and the ethical principles which would guide how a professional accountant should act in this situation. 4