2025

COMMERCE

Paper : DSE-406A

[International Finance (IF)]

Full Marks : 40

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Module - I

Answer ***any two*** questions.

1. The table below depicts spot-market exchange rates of some of the SAARC nations. The row-wise quotes are provided for the local currency (L.C.) of the SAARC nations whereas the columns represent major foreign currencies (F.C.) being frequently traded among the forex markets across the globe. You are to read the exchange rate as units of local currency per unit of foreign currency.

(F.C.) → / (L.C.) ↓	British Pound Sterling (GBP)	European Union Euro (EUR)	United States Dollar (USD)	Australian Dollar (AUD)	Swiss Franc (CHF)
Indian Rupees (INR)	115.12/8	96.41/3	85.16/7	55.14/22	103.7/9
Pakistani Rupees (PKR)	375.38/91	320.11/85	281.35/98	180.17/56	341.11/72
Bangladeshi Taka (BDT)	165.49/56	138.812/64	121.563/85	79.14/8	149.63/76
Sri Lankan Rupees (LKR)	408.55/75	341.18/44	299.7/301.5	194.41/85	365.23/97

(a) Convert the exchange rates of Pakistan, into either direct or indirect quotes, as you may deem appropriate. Express your answers in two-way quotes only.

(b) Determine the spread of all the major foreign currencies in terms of INR. Comment on the nature of the spread, so determined by you.

(c) Provided the forward swap points for BDT against 1 unit of EUR for 30 days, 60 days and 90 days are stated as 12/18, 25/40 and 45/88 respectively and for INR against 1 unit of USD for similar time periods are 9/6, 18/10 and 34/11 can you estimate F_{30}, F_{60} and F_{90} rates; of BDT against 1 unit of EUR, and of INR against 1 unit of USD.

(d) If the Sri Lankan Rupee is expected to be at a 3.55 percent 180 days-forward premium per unit of USD whereas 7.28 percent 180 days- forward discount per unit of CHF, can you estimate what forward rate the market is expecting for Sri Lankan Rupees for both USD quote and CHF quote? [Consider 360 days = 1 year]

(e) Can you compute the possible exchange rate between USD (base currency) and EUR (quote currency) based on the INR quote and PKR quote? What opportunity can you sense from these derived exchange rates, so computed by you? 2+2+2+2+2

2. (a) Assume that the Polish currency (called zloty) is worth \$0.32. The U.S. dollar is worth 0.7 euros. A U.S. dollar can be exchanged for 8 Mexican pesos. Last year a dollar was valued at 2.9 Polish zloty, and the peso was valued at \$0.10.

(i) Would U.S. exporters to Mexico that accept pesos as payment be favourably or unfavourably affected by the change in the Mexican peso's value over the last year and would U.S. importers from Poland that pay for imports in zloty be favourably or unfavourably affected by the change in the zloty's value over the last year?

(ii) What is the percentage change in the cross-exchange rate of the peso in zloty over the last year? How would firms in Mexico that sell products to Poland denominated in zloty be affected by the change in the cross-exchange rate?

(iii) If Mexican firms expect an annual inflation of 8 percent during the year, what interest rate Mexicans can earn on their peso deposits if the real rate of return enjoyed by their Polish counterparts is 3 percent?

(b) Is there any opportunity to earn riskless profits from the following spot market exchange rates quoted in the inter-bank market? Identify only the possible opportunities.

Bank A : USDCAD 1.32/9

Bank B : EURSGD 1.43/8

Bank C : SGDCAD 1.04/7

Bank D : CADEUR 0.58/9

(c) If $e_0 = 1.35$ and $e_2 = 1.46$, being the exchange rate between two hypothetical nations N_1 and N_2, at two different time periods, whereby country N_1 is having a stable inflation of 6 percent per annum, can you estimate the annual inflation of country N_2 for the given period if country N_2's inflation is rising @ 5 percent on a year-on-year basis. Exchange rate is directly quoted with reference to Country N_1. [Notations used have their usual meanings]

(d) Mention the trade position to be taken by the firms having a foreign currency exposure while hedging using the Currency Futures contract for offsetting the initial trade position in the following case :

"Hard Rock Private Limited of India had imported heavy machinery equipment amounting to 125,000 USD from a UAE based engineering firm Al Ameen Mahabis Construction group on the 10th of July this year. On the date of transaction, the spot rates are quoted : $S_{0\ (Rs/\$)} = 87.52$ and $S_{0\ (Dirham/\$)} = 3.75$. The Indian firm is required to settle its payables within a three-months' time for which their risk management team is exploring USDINR Futures contract in the Indian FX market (lot size = USD 1000) having a quote of USDINR 29JUL25 FUT (near month) = 87.89; USDINR 26AUG25 FUT (next month) = 88.22 and USDINR 26SEP25 FUT (far month) = 88.54; whereas Al Ameen is also exploring USD Futures contract in DGCX (Dubai Gold and Commodities Exchange) having a lot size of 2500 USD. The USDAED JULY FUT contract is quoted at 3.80, AUG contract at 3.87 and SEP contract at 3.91." 3+3+2+2

3. (a) Can a currency futures contract be settled daily or can it be settled only at expiry? State in this context how daily settlement price and final settlement price is determined and mention when does pay-in and pay-out of such settlements takes place.

(b) Mumbai based 'Dhamaka Pataka Cracker' company imported firecrackers from an Australian leading fireworks company 'GoldenGate Heavenly Lightworks' worth 50,000 AUD on 14th July 2025. The spot rate on the date of transaction is quoted as $S_{o(Rs/A\$)} = 55.52$; whereas on the same date Australian Dollars in the OTC market is quoted as $F_{90(Rs/A\$)} = 57.24$. 'Dhamaka Pataka' is of the opinion that Australian Dollar might strengthen in the coming days. The payables are expected to get settled within a period of 90 days from the date of transaction.

(i) Does Dhamaka Pataka is exposed to any foreign currency risk? Can such risk be mitigated?

(ii) Supposing Dhamaka Pataka decides to remain uncovered, shall it gain if the spot rate on the date of settlement turned out to be 56.85.

(iii) Based on its previous hedging experiences, Dhamaka Pataka decides to cover its exposure using the currency forwards available on the date of transaction, then determine whether it shall gain or suffer a loss, if on the date of settlement, a similar forward contracts on Australian dollars are quoted at 57.72.

(iv) What actual gains or losses shall arise, if instead of $S_{90(Rs/A\$)}$ being 56.85, it turned out to be 57.75?

(c) Work out a strategy whether covered interest arbitrage might be profitable under the given circumstances.

Australian Interest rates : 3.75 – 4.00 percent p.a.

Singapore Interest rates : 1.50 – 1.70 percent p.a.

Spot : 1 S$ = A$1.234 – 1.238

90 days forward rate of S$ as of today = A$1.240 – 1.244

180 days forward rate of S$ as of today = A$1.262 – 1.266

Compute the gain, if any in annualized percentage terms. 2+4+4

Please Turn Over

4. (a) "Perfect Hedging is a Utopian concept". Elucidate.

(b) Find the optimal number of future contracts that the firm shall enter to hedge its exposure based on the given information and state whether this will lead to under hedging or over hedging.

"Donald Inc. of United States is exposed to foreign exchange risk worth 680,000 Australian Dollars against goods being imported from an Australian Firm. Lot size of AUD FUT contract in Chicago Mercantile Exchange denominated in USD is 12,500.

The minimum variance hedge ratio for AUD Futures contract for which the underlying is the spot exchange rate of AUDUSD is determined to be 0.96. The correlation coefficient between Spot price movement and Future price movement of AUDUSD is found out to be 0.95 over a period of last six months." What possible change would there be in your answer if minimum variance hedge ratio is ascertained to be 1.12 and relevant correlation coefficient being 0.91 during the last calendar year?

(c) As treasurer of Trump Corporation (a U.S. exporter to New Zealand), you must decide how to hedge (if at all) future receivables of 250,000 New Zealand dollars 90 days from now. Call options are available for a premium of $0.01 with an exercise price of $0.55 per New Zealand dollar whereas Put options are available for a premium of $0.03 per unit at an exercise price of $0.49 per New Zealand dollar. The forecasted spot rate of the NZ$ in 90 days are as follows :

FUTURE SPOT RATE	PROBABILITY
$0.44	30%
$0.40	50%
$0.38	20%

Given that you hedge your position with options, determine a probable pay-off for NZ dollars to be received in 90 days. Also, state whether the relevant option shall be exercised if the spot rate on the date of settlement turned out to be $0.49/ NZ$. Justify your answer based on its intrinsic value. At what Future Spot rate, the relevant option shall be in-the-Money?

Or,

ABC company has taken a 6 months loan from their collaboration for $2 million. Interest payable on maturity is LIBOR+1%. The current 6 months LIBOR is 2%. Exchange Rates are :

Spot US $1 : ₹ 86.5275

6 months forward : ₹ 86.4575

What would be their total commitment in Rupees if they enter into a forward contract?

(d) Spell out the benefits of currency swaps. 2+2+4+2

Module - II

Answer ***any two*** questions.

5. (a) "There are several reasons as to why many countries have adopted Arm's Length Principle (ALP)."— Briefly explain any two points of significance and any two limitations of applying ALP in international transactions.

(b) Maruti Suzuki India Ltd., an Indian company declared income of ₹ 600 crores computed in accordance with Chapter IV-D but before making any adjustments for the following in respect of year ended on 31.03.2024 :

(i) 20,000 cars sold to Suzuki Motor Corporation, Japan which holds 56.2% shares in Maruti Suzuki India Ltd. at a price which is less by ¥ 400 for each car than the price charged from Mitsubishi Group.

(ii) Royalty of ¥ 2,40,00,000 was paid to Nissan Motor Co. Ltd. for the use of technical know-how in the manufacturing of car. However, Nissan Motor Co. Ltd. had provided the same know-how to another Indian company for ¥ 1,80,00,000.

(iii) Loan of Euro 1000 crores carrying interest @ 10% p.a. advanced by Deutsche Telekom, a German company was outstanding on 31.03.2024. The total book value of assets of Maruti Suzuki India Ltd. on the date was ₹ 1,80,000 crores. The said German company had also advanced a loan of similar amount to another Indian company @ 8% p.a. Total interest paid for the year was EURO 100 crores.

Explain in brief the provisions of the relevant Act affecting all these transactions and compute the income of the company (as per CUP method) chargeable to tax for AY 2024-25 keeping in mind that the value of 1¥ and of 1 EURO was ₹ 60 and ₹ 95 respectively throughout the year.

4+6

6. (a) What do you meant by 'Juridical Double Taxation' and 'Economic Double Taxation'?

(b) *"Multinational Corporations face a perennial charge for their misuses of tax havens to shield income from the local tax collector."*— In this context briefly explain the concept of 'Profit Extraction' as a form of tax avoidance.

(c) Mr. X, a resident Indian, has derived the following incomes for the previous year relevant to the assessment year 2024-25.

		₹
1.	Income from profession	4,26,000
2.	Rent from house property in Country A @ ₹ 15,000 p.m. received there, municipal tax paid in that country ₹ 30,000. (Tax paid in Country A for his income in equivalent Indian rupees 15,000 on the net income of ₹ 1,50,000)	
3.	Royalty on books from foreign country B (eligible for deduction under section 80QQB) converted into Indian rupees. Tax paid in country B @ 20%.	15,00,000
4.	The expenses incurred for earning royalty	1,50,000
5.	Interest from scheduled banks	27,000

Mr. X wishes to know whether he is eligible to any double taxation relief, and if so its quantum. India does not have double taxation avoidance agreement with Countries A and B. Mr. X opts to be taxed under the old regime.

(Old Regime Tax Slab : Up to ₹ 2,50,000 - Nil; ₹ 2,50,001 to ₹ 5,00,000 - 5%; ₹ 5,00,001-₹ 10,00,000 - 20%; ₹ 10,00,001 - ₹ 50,00,000 - 30%) 2+2+6

7. (a) "In general Eurocurrency spread is narrower than in domestic money markets." — What are the reasons for lower lending rates and higher deposit rates in Eurocurrency markets?

(b) XYZ Ltd., an Indian company, is planning to raise capital by issuing ADRs in the U.S. market. Each ADR represents 2 equity shares of XYZ Ltd. The current market price of one equity share in India is ₹ 500. The expected issue price of each ADR in the U.S. market is USD 25.

The following additional information is available : Total fund to be raised USD 4.5 million.

Exchange Rate : USDINR 82.50.

Underwriting Commission and Other Issue Expenses : 6% of total ADR issue proceeds.

Net proceeds from the ADR issue will be repatriated to India.

You are required to calculate the number of ADRs to be issued and cost of ADR if 20% dividend is expected with a growth rate of 15%. 5+5

8. (a) Briefly explain the concept of 'Cannibalization' with examples in the context of Capital Budgeting decisions for the MNCs.

(b) An Indian Multinational Company (MNC) is evaluating a 5-year project in Nigeria. The project involves setting up a manufacturing facility. Key details are as follows :

Base Case Assumptions (All values in USD) :

Initial investment : USD 20 million

Project life : 5 years

Annual revenue : USD 12 million

Annual operating costs (excluding depreciation) : USD 5 million

Depreciation : Straight-line over 5 years

Salvage value : USD 0

Corporate tax rate in Nigeria : 30%

Repatriation : All after-tax cash flows are repatriated annually

Withholding tax on repatriated funds : 10%

Cost of unlevered equity (ke) : 14%

Debt : USD 10 million at 6% annual interest (interest paid annually)

Tax shield benefits are discounted at the risk-free rate of 5%

Additional Factors :

Expropriation Risk : 10% chance of expropriation after Year 3, with zero recovery.

Recommend the management about the project. 3+7
