

ECONOMICS FOR ENGINEERS
(HMTS 3201)

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

Candidates are required to answer Group A and any 5 (five) from Group B to E, taking at least one from each group.

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

Group - A
(Multiple Choice Type Questions)

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) The market having infinite number of buyers and sellers is an example of
(a) Perfect competition (b) Monopolistic competition
(c) Oligopoly (d) Duopoly.
- (ii) The primary functions of Commercial banks does not include
(a) Savings deposit account (b) Cash credits
(c) Bill discounting (d) Regulating interest rates.
- (iii) Ledger account having credit balance is closed by writing
(a) To balance b/d (b) By balance c/d
(c) To balance c/d (d) To balance b/d.
- (iv) Original cost of an asset is Rs.1,00,000, salvage value Rs.40,000, expected life of the asset 5 years. Amount of depreciation is
(a) 16,000 (b) 14,000 (c) 14,500 (d) 12,000.
- (v) Which of the following is NOT a feature of public company?
(a) Transfer of share restricted
(b) No limit on maximum number of member
(c) Shareholders can freely transfer shares
(d) Can start business only after obtaining certificate of commencement of business.
- (vi) Any periodical payment of a fixed amount made at a regular interval is called
(a) Instalment (b) Fee (c) Annuity (d) Deferred annuity
- (vii) If opening stock is Rs. 40,000, closing stock is Rs. 60,000, cost of goods sold is Rs. 2,00,000, the stock turnover ratio is
(a) 2 times (b) 4 times (c) 3 times (d) 5 times

- (viii) This does not lower B.E.P.
(a) Lowering of Fixed costs (b) Increasing of Selling Price/unit
(c) Decreasing of level of activity (d) Decreasing of Variable cost/unit.
- (ix) Which of the following is an unfavourable impact of inflation?
(a) Higher profit (b) Higher production
(c) Inequality in the distribution of income (d) Higher investment.
- (x) Which of the following form of organization is characterized by “limited liability”?
(a) Sole Proprietorship (b) Company
(c) Partnership (d) Hindu undivided family.

Group - B

2. (a) Define price elasticity of demand. [(C05)(Remember/LOCQ)]
(b) Discuss 4 exceptions of Law of demand with example. [(C05)(Understand/LOCQ)]
(c) Explain excess supply situation with the help of a diagram. [(C05)(Analyze/IOCQ)]
2 + 4 + 6 = 12
3. (a) Distinguish between Perfect Competition and a Monopolistic market condition. [(C04)(Remember/LOCQ)]
(b) What are the central problems of Economics? [(C05)(Understand/LOCQ)]
(c) Discuss the measures of controlling inflation. [(C04)(Understand/IOCQ)]
4 + 4 + 4 = 12

Group - C

4. (a) What are the functions of Commercial Banks? [(C05)(Remember/LOCQ)]
(b) What are the benefits of International trade? [(C05)(Understand/IOCQ)]
(c) What is meant by N.P.A. in banking? [(C05)(Understand/IOCQ)]
6 + 4 + 2 = 12
5. (a) List out agency services provided by commercial bank. [(C05)(Remember/LOCQ)]
(b) Explain the term repo and reverse repo rate. [(C05)(Understand/LOCQ)]
(c) Differentiate BOP and BOT. [(C05)(Analyze/IOCQ)]
4 + 4 + 4 = 12

Group - D

6. (a) Journalise the following transactions 2021
5th Aug Sold goods to Karan Rs. 82,000
6th Aug Paid salary in cash Rs. 25,000

11th Aug Deposited Rs. 10,000 into business bank account from office cash
 17th Aug Bought stationery Rs. 7,000 and paid in cash Rs. 3,000 and balance by cheque
 23rd Aug Received commission Rs. 900. [[CO6](Evaluate/HOCQ)]

(b) **Balance Sheet of XYZ Ltd.
as on 31.03.22**

Liabilities	Rs.	Rs.	Asset	Rs.	Rs.
Equity share capital (Rs.100 each)		10,00,000	Plant and equipment		6,40,000
Retained earning		3,68,000	Land and buildings		80,000
Sundry creditors		1,04,000		3,60,000	1,60,000
Bills payable		2,00,000	Cash		3,20,000
Other current liabilities		20,000	Sundry debtors		4,80,000
			Less: Allowances		12,000
		16,92,000	Stock		16,92,000
			Prepaid insurance		

Sales Rs. 40,00,000

Net profit after tax 1,20,000

Based on the above information calculate

- (i) Current ratio
- (ii) Debtors Turnover Ratio
- (iii) Earning per share.

[[CO2,CO6](Evaluate/HOCQ)]
6 + 6 = 12

7. (a) Selling Price = Rs. 100/Unit
 Variable cost = Rs. 60/Unit
 Fixed cost = Rs. 4,00,000/-

Based on the information, compute

- i) PV ratio
- ii) B.E.P. (Quantity)
- iii) B.E.P. (Sales Value)
- iv) M.O.S for activity level of 15,000 units. [[CO2](Analyze/HOCQ)]

- (b) Based on the information given below you are required to work out the Flexible Budgets for level of activity of 1,00,000 units,

<u>Level of activity</u>	<u>80,000 units</u>	<u>90,000 units</u>
	<u>Rs.</u>	<u>Rs.</u>
Raw Material Cost	80,000	90,000
Other Variable Costs	1,60,000	1,80,000
Rent	20,000	20,000
Salaries	80,000	80,000
Supervision Expenses	80,000	84,000
Transportation Expenses	<u>2,00,000</u>	<u>2,10,000</u>
	<u>6,20,000</u>	<u>6,64,000</u>

[[CO2](Analyze/HOCQ)]
6 + 6 = 12

Group - E

8. (a) The following information is available regarding the existing capital structures of a company:

	<i>Amount(Rs)</i>	<i>After-tax cost(%)</i>
Equity share capital	8,00,000	14
Preference share capital	1,00,000	6
Long-term debt	6,00,000	8

What is the Weighted Average Cost of capital? [(CO1)(Analyze/HOCQ)]

- (b) The original cost of an equipment is Rs. 1,00,000/-
The annual rate of Depreciation is 10%.

Calculate the WDV at the end of three years, using the Straight Line method and Reducing balance method separately. [(CO6)(Understand/IOCQ)]

8 + 4 = 12

9. (a) The initial outlay of a project is Rs. 10,00,000. It will yield Rs. 4,00,000 at the end of the first year, Rs. 3,00,000, at the end of the second year, Rs. 5,00,000, at the end of the third year and Rs. 2,00,000 at the end of the fourth year. The life time of the project is 4 years. Taking a discount rate of 10%. You have to calculate net present value (NPV) and conclude on viability of the project.

[(CO3,CO1)(Analyse/IOCQ)]

- (b) Consideration of time is important for financial decision making, — explain.

[(CO1)(Analyse/IOCQ)]

7 + 5 = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	29.17	37.5	33.33

Course Outcome (CO):

After the completion of the course students will be able to

1. Evaluate a project and estimate the total cost of the project
2. Apply financial analytical methodologies to prepare a report regarding the financial performance of an organization
3. Participate actively in an organization’s capital budgeting process
4. Provide vital inputs regarding the pricing of a product
5. Apply the knowledge of the interplay of various economic variables and indicators in workplace
6. Provide insight about different accounting concepts and apply broader concepts like costs, revenues, assets, liabilities, capital, profit, investment and interest

*LOCQ: Lower Order Cognitive Question; IOCQ: Intermediate Order Cognitive Question; HOCQ: Higher Order Cognitive Question