

ECONOMICS FOR ENGINEERS
(HUM3201)

Time Allotted : 2½ hrs

Full Marks : 60

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 4 (four) from Group B to E, taking one from each group.*

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

Group – A

1. Answer any twelve:

12 × 1 = 12

Choose the correct alternative for the following

- (i) Which of the following is NOT a method used to calculate National Income?
(a) The expenditure method (b) The income method
(c) The output method (d) The sales method
- (ii) Which of the following is NOT a characteristic of perfect competition?
(a) Free entry and exit of firms (b) Identical products
(c) Few sellers controlling the market (d) Large number of buyers and sellers
- (iii) Which of the following is included in the calculation of GDP?
(a) Transfer payments (b) Sale of second-hand goods
(c) Final goods and services (d) Intermediate goods
- (iv) What is the main objective of monetary policy by the central bank?
(a) To increase unemployment
(b) To control inflation and stabilize the economy
(c) To decrease GDP growth
(d) To increase government expenditure
- (v) Which of the following is NOT a benefit of international trade?
(a) Access to a wider variety of goods and services
(b) Reduction in the cost of production
(c) Lower quality products
(d) Economic growth through specialization
- (vi) What is the "Posting" process in accounting?
(a) The process of recording transactions in a journal.
(b) The process of transferring journal entries to the ledger accounts.
(c) The process of preparing financial statements.
(d) The process of closing the books at the end of the period.

- (vii) _____ is an example of Personal Account in book keeping
 (a) Owners' Capital (b) Cash
 (c) Purchases (d) Furniture
- (viii) _____ is calculated by dividing the average annual profit by the initial investment and multiplying by 100.
 (a) ARR (b) IRR
 (c) NPV (d) PI
- (ix) The Written Down Value (WDV) method of depreciation:
 (a) Reduces the depreciation expense over time
 (b) Involves an equal depreciation charge each year
 (c) Applies a fixed percentage of depreciation on the original cost every year
 (d) Does not account for residual value
- (x) Which financial ratio specifically measures how much profit a company generates for every rupee of shareholders equity?
 (a) Price-to-Earnings (P/E) Ratio (b) Operating Margin
 (c) Return on Equity (ROE) (d) Dividend Yield

Fill in the blanks with the correct word

- (xi) Willingness to buy a product backed by purchasing power is known as _____.
- (xii) When the proprietor withdraws some money from the business for his personal or domestic use, it is known as _____.
- (xiii) The rate of return required by investors for providing capital to the firm is known as _____.
- (xiv) In a perfectly competitive market, the long-run equilibrium price is determined at the point where the firm's _____ cost equals the market price, ensuring zero economic profit.
- (xv) The ratio obtained by dividing current assets by current liabilities is called _____.

Group - B

2. (a) Mention the factors that can influence the demand. [[C03](Remember/LOCQ)]
 (b) If the prices of the inputs are reduced for the production of a particular commodity, then how the supply of that particular commodity will change. Explain graphically. [[C03&4](Remember/LOCQ)]
 (c) What are Cross Price Elasticity and Income Elasticity of Demand? [[C01&2](Remember/LOCQ)]
4 + 4 + 4 = 12
3. (a) Define equilibrium price and equilibrium output. [[C01] (Understanding/LOCQ)]
 (b) Illustrate the equilibrium price and output using a graph. [[C02] (Application/IOC)]
 (c) Explain the concept of market forces (demand and supply) and how they determine the equilibrium price in a competitive market. [[C03] (Application/IOCQ)]

- (d) How does a shift in demand or supply affect the equilibrium price and quantity? Provide a graphical explanation.

[[CO5](Analysis/HOCQ)]

2 + 2 + 4 + 4 = 12

Group - C

4. (a) What is the balance of trade? How is it different from the balance of payments?
[[CO3](Analyse/HOCQ)]
(b) Explain the functions of commercial banks.
[[CO3](Remember/LOCQ)]
6 + 6 = 12
5. (a) List any two major exports and any two major imports of India. What do these trade items indicate about India's economy?
[[CO5](Apply/IOCQ)]
(b) Write short note on World Bank.
[[CO2](Remember/LOCQ)]
(c) Discuss the functions of IMF.
[[CO5](Remember/LOCQ)]
4 + 4 + 4 = 12

Group - D

6. (a) What is the importance of master budget in financial planning?
[[CO3,CO2](Analyse/HOCQ)]
(b) Define operating budget and capital budget.
[[CO3,CO2](Remember/LOCQ)]
(c) Record the following transaction in journal and post it to the ledger and balance the ledger accounts.
2nd July,2024 Purchased goods for cash Rs.20,000.
[[CO6](Apply/IOCQ)]
3 + 4 + 5 = 12
7. From the following trial balance of M/s Kausal Traders, prepare Trading and Profit and Loss Account for the year ended 31st March 2012 and a Balance Sheet as on that date:

Dr. Balances	Rupees	Cr. Balances	Rupees
Opening stock on 1 st April	16000	Capital	80000
Purchases	75000	Sales	200000
Sales Return	5000	Purchases returns	2000
Carriage inwards	1500	Discount	500
Plant and Machinery	40000	Sundry creditors	10000
Furniture	5000	Bills payable	1500
Freehold Property	45650		
Cash in Hand	5000		
Carriage Outwards	400		
Wages	30000		
Salaries	18000		
Lighting	800		
Sundry debtors	28000		
Travelling expenses	1200		
Rent and Taxes	4800		
Drawing	5000		

Dr. Balances	Rupees	Cr. Balances	Rupees
Insurance	450		
General Expenses	12200		
Total	294000		294000

Adjustments:

- Stock on 31st March 2012 was valued at Rs. 38000 (market value Rs. 20000).
- Wages amounting to Rs. 2000 and salaries amounting to Rs. 1500 are outstanding.
- Prepaid insurance amounted to Rs. 150.
- Provide depreciation on plant and machinery at 5% and on furniture and fixtures at 10%.

Prepare trading Account, Profit and Loss Account and Balance Sheet. *[[C03&4](Analyse/HOCQ)]*

(2 + 5 + 5) = 12

Group - E

8. (a) A company is considering the following investment projects:

	Cash Flows (in Rs.)			
Projects	Year 0	Year 1	Year 2	Year 3
A	-10,000	+10,000	+10,000	
B	-10,000	+7,500	+7,500	
C	-10,000	+2,000	+4,000	+12,000

Rank the project according to NPV method; assuming discount rates of 10%.

[[C01](Analyse/HOCQ)]

- (b) Define Profitability Index. Mention the formula to calculate it. What are acceptance and rejection criteria in PI?

[[C01](Remember/LOCQ)]

8 + 4 = 12

9. (a) What is NBCR?

[[C04](Remember/LOCQ)]

- (b) A company invests ₹80,000 in a project with a life of 4 years. The project generates equal annual cash inflows of ₹25,000. Calculate the Internal Rate of Return (IRR) of the project.

[[C04](Remember/LOCQ)]

- (c) A project requires an initial investment of ₹5, 00,000. The project generates benefits of ₹1, 50,000 per year for 5 years, and costs of ₹75,000 per year for 5 years. Calculate the Net Benefit-Cost Ratio of the project.

[[C02](Apply/IOCQ)]

2 + 5 + 5 = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	44.79	20.83	34.38