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
<u>any 5 (five)</u> from Group B to E, taking <u>at least one</u> 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)   Which is not a feature of perfect competition?
          (a) large number of buyers   (b) homogeneous product
          (c) barriers to entry into the market (d) large number of sellers

    (ii) Microeconomics does not deal with
          (a) Individuals   (b) Households
          (c) Unemployment   (d) Firms

    (iii) The primary functions of Commercial banks does not include
          (a) Savings deposit account   (b) Cash credits
          (c) Discounting of bills   (d) Regulating interest rates

    (iv) Sole proprietorship type of business has _____
          (a) Limited liability   (b) Unlimited liability
          (c) Perpetual succession   (d) Separate legal entity

    (v)   The golden rule for_____ account, is 'Debit what comes in and credit what goes out'.
          (a) Nominal   (b) Real
          (c) Deferred   (d) Personal

    (vi) Quick ratio is a _____ ratio
          (a) Profitability   (b) Liquidity
          (c) Turnover   (d) Valuation

    (vii) At zero activity level, semi-variable cost is
          (a) Total Fixed component   (b) Total Variable component
          (c) Zero   (d) None of the above

    (viii) This is true for Equity share capital
          (a) It is more risky   (b) It is cheaper
          (c) Can be retained indefinitely by the company (d)Is an asset of the company

(ix)   Which is not true at Break Even Point
(a) Total income and total cost are the same   (b) High profit
(c) No loss   (d) No profit.

(x)   The value of a Fixed Asset after deducting depreciation is referred to as
(a) Average value   (b) Added value
(c) Step up value   (d) Written down value.

Group – B

2.   (a)   What is inflation?

    (b)   Explain what are demand-pull and cost-push inflation.

4 + 8 = 12

3.   (a)   What is meant by Demand, in a market ? What is the Law of Demand and the related Demand graph?

    (b)   What are the determinants of Demand ?

    (c)   What are the exceptions to the Law of Demand ?

4 + 4 + 4 = 12

Group – C

4.   Discuss Sole Proprietorship and Public Limited Company as types of business and highlight their characteristics.

12

5.   Discuss the roles and functions of RBI.

12

6.   (a)   What is meant by B.E.P? Why is it important for a company to be aware of its B.E.P.?

    (b)   Highlight the various aspects of B.E.P. through a graphical representation.

    (c)   Selling Price = Rs.200/unit. Variable Cost = Rs. 160/unit
Total Fixed cost = Rs. 8,00,000.
Based on this information, compute
(i)   CS ratio
(ii) BEP (quantity)
(iii) BEP (sales value).

3 + 3 + 6 = 12

Group – D

7. **Profitability statement of ABC Ltd.**   **Balance Sheet of ABC Ltd.**
    for year ending 31.03.'21.   **as on 31.03.'21.**
    (figures in Rs. Lakhs)   (figures in Rs. Lakhs)

			Liabilities		Assets		
Net Sales		75.1	Equity Share Capital	16.0	Fixed assets		33.0
Cost of goods sold		55.2			Investment		1.5
Gross Profit		19.9	Reserves	11.2			
					Current assets		
Depreciation	3.0				Cash/bank	2.0	
General expenses	1.2				Debtors	11.8	
Selling expenses	1.8	6.0	Loans	21.2	Stock	10.6	24.4
Earnings before Interest And Tax (EBIT)		13.9					
Interest		2.1	Current Liabilities	10.5			
Profit before tax (PBT)		11.8		58.9			58.9
Tax		5.9					
Profit after tax (PAT)		5.9					

Based on the above figures compute

(a) Quick ratio   (b) Return On Investment
(c) Inventory turnover ratio   (d) Net profit margin ratio
(e) Current ratio   (e) Debt-Equity ratio

12

Group – E

8. (a)   What are Debt and Equity Share capital as sources of fund and what are the major differences between the two ?

(b) The value of an asset at the beginning of year 1 is Rs. 10,00,000/-

The annual rate of depreciation is 10%.

Based on the Straight line and Reducing balance methods separately, prepare statements showing the annual Depreciation amounts and Written Down Values for the first 3 years.

6 + 6 = 12

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9. (a) What is meant by Discounting of Cash flows and why is it necessary?

(b) The following information are available in respect of two projects

(figs. in Rs.lakhs)

YEAR	PROJECT X	PROJECT Y	PROJECTS X&Y
	Cash Flows	*Cash Flows*	*Discounting factors*
0 (Investment)	(110)	(160)	1.000
1	25	35	0.909
2	30	45	0.826
3	35	50	0.752
4	45	55	0.683
5	65	75	0.621

Based on Net present Values of the above projects, comment on which of the projects would be better .

4 + 8 = 12

Department & Section	Submission Link
AEIE	https://classroom.google.com/c/MzAwNTEwMzE2NjQ1/a/MzY1MDkyMjExMTc0/details
BT	https://classroom.google.com/c/MzE3MjAxMzQyNDI2/a/MzU3NDEwOTcwNzE5/details
CE-A	https://classroom.google.com/c/MzAwNTIyNDg4MDcw/a/MzY1MDkyMjExMDEx/details
CE-B	https://classroom.google.com/c/MzEyNTQyNTAzODQy/a/MzY1MTcwMTk0Mzg1/details
CHE	https://classroom.google.com/c/MzA2NTkzODQ5ODY2/a/MzU3NDA5MTA4MTI3/details
CSE-A	https://classroom.google.com/c/MzAwNTQ3NzU1OTU5/a/MzY0NjQ5MDAwNDk1/details
CSE-B	https://classroom.google.com/c/MzEwMzM1MzA1NTky/a/MzY1MTYxMjUxNjIz/details
CSE-C	https://classroom.google.com/c/MzAwODY2NjkxNzkx/a/MzY0NjQ5MDAwNTE2/details
ECE-A	https://classroom.google.com/c/MzExNzA0NzIxMTg4/a/MzY1MTU1NDcxODYy/details
ECE-B	https://classroom.google.com/c/MzAxMzkwODExOTEw/a/MzY1MDgxMTQxNzAz/details
ECE-C	https://classroom.google.com/c/Mjk5NzgzOTIzNDQ3/a/MzY1MDg4MDc1OTc4/details
EE	https://classroom.google.com/c/MzAwNTQ3NjAzNzQz/a/MzY0NjQ5MDAwNTky/details
IT	https://classroom.google.com/c/MzAwNTM2MzI3ODEw/a/MzY0NTI0NDAyMDUw/details
ME-A	https://classroom.google.com/c/MzEwNzY3NjY5MDc4/a/MzY1MTU3ODc2ODMz/details
ME-B	https://classroom.google.com/c/MzEwNzY3NjY5MDky/a/MzY1MTU3ODc2NzQ4/details