HALDIA INSTITUTE OF TECHNOLOGY

(AN AUTONOMOUS INSTITUTION UNDER MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL)

Paper Code: HSMC-301

Paper Name: ECONOMICS FOR ENGINEERS

Time Allotted: 3 Hours *Full Marks*: 70

The figures in the margin indicate full marks

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

Group – A

(Multiple Choice Type Questions)

Choose the correct alternatives from the followings: 15 x 1 = 15

1. (i) Factors influencing demand a) Income of the people b) Prices of related goods c) Taste and preferences of consumers d) All of the above	CO1	PO11
(ii) Factors influencing supply a) Cost of the inputs b) Technology c) Prices of related goods d) All of the above	CO1	PO11
(iii) The components of Prime cost are a) Direct Material b) Direct Labour c) Direct expenses d) All of these	CO1	PO11
(iv) Which of the following items considered in the basket of goods and services used to compute Consumer Price Index for urban non manual employees a) Housing b) Beverages c) Clothing d) All of these	CO1	PO11
(v) Contribution is calculated by applying which of the following formula ? (a) Variable cost–Sales b) Sales–variable cost c) Sales–Fixed cost d) Fixed cost–Sales	CO1	PO11
(vi) Margin of Safety is equal to a) Actual Sales - BEP Sales b) BEP Sales – Actual Sales c) BEP Sales- Contribution d) Contribution – BEP Sales	CO1	PO11
(vii) Fixed Deposit collection by company is a) Unsecured loan b) Current Liabilities c) Fixed Liabilities d) Current Assets	CO6	PO11
(viii) NPV means a) Non Performing Value b) Net Present value c) All of these d) None of these	CO3	PO11
(ix) PI means (a) Personality Index b) Probability Index c) Profitability Index d) None of these	CO3	PO11
(x) As per the rule fixed by The Institute of Chartered Accountants of India (ICAI) Depreciation is calculated by (a) Reducing Balance Method b) Straight Line Method c) Annuity Method d) Sinking Fund Method	CO5	PO11

(xi) Cost of Goods sold means a) Net Sales minus Gross Profit b) Net Sales minus Net Profit c) Net Sales minus Net loss d) Net Sales minus Gross loss	CO6	PO11
(xii) ARR stands for a) Arithmetical rate of return b) Average Rate of Return c) Average Relative Return d) None of these	CO3	PO11
(xiii) In Inventory Control in a company which of the following costs are considered ? a) Ordering Cost b) Carrying Cost c) Stock out cost d) All of these	CO1	PO11
(xiv) PI method is used for project selection specifically under the situation of a) Capital abundance b) Capital Rationing c) Capital formation d) None of these (xv) EPS stands for a) Evaluation of Project Standard b) Earningn per share c) Expectation per service rendered d) Earning per service	CO3	PO11

Group – B

(Short Answer Type Questions)

Attempt any three from the followings: **3 x 5 = 15**

2. Discuss about (i) Price-Earning Ratio and (ii) Return on Equity ratio	CO6	PO11
3. What do you understand by the term ‘capital structure’ of a company? Explain.	CO2	PO11
4. What is the significance of Debt-Equity ratio? Explain logically.	CO6	PO11
5. What do you mean by Economic efficiency and technical efficiency? Explain.	CO5	PO11
6. Explain the Trade-Off between Ordering Cost, carrying Cost and Total cost with the helpof diagram	CO1	PO11

Group – C

(Long Answer Type Questions)

Attempt any four from the followings: **4 x 10 = 40**

7. Clearly discuss about various costs associated with cost ascertainment of the products of a company	CO1	PO11
8. Discuss about Laspeyres and Paasche index number calculation formula. Also clearly explain the concept of Consumer price Index and Wholesale Price Index.	CO4	PO11
9. Explain Purchase Model With Shortages (in case of Instantaneous supply)with the help of diagram.	CO1	PO11
10. A person who is now 35 years old is planning for his retired life. He plans to invest an equal amount of Rs. 10,000 at the end of every year for the next 25 years starting from the end of next year. The bank gives 10% interest rate, compounded annually. Find the maturity value of his account when he is 60 years old.	CO2	PO11
11. A person is planning for his retired life. He has 10 more years of service. He	CO2	PO11

would like to deposit 20% of his salary, which is Rs. 4,000 at the end of the first year, and thereafter he wishes to deposit the amount with an annual increase of Rs. 500 for the next 9 years with an interest rate of 15%. Find the total amount at the end of the 10^{th} year of the above series.		
12. A company is planning to purchase an advanced machine centre. Three original manufacturers have responded to its tenderwhose particulars are tabulated as follows :	CO2	PO11

Manufacturer	Down Payment (Rs.)	Yearly Equal Installment (Rs.)	No. of Installments
1	5,00,000	2,00,000	15
2	4,00,000	3,00,000	15
3	6,00,000	1,50,000	15

Determine the best alternative based on the Annual Equivalent Method by assuming i = 20%, compounded annually.

Answer Key:

Group – A

1.(i)	d	(ii)	d	(iii)	d	(iv)	d	(v)	d	(vi)	c
(vii)	a	(viii)	d	(ix)	b	(x)	a	(xi)	a	(xii)	b
(xiii)	a	(xiv)	a	(xv)	d	(xvi)	b	(xvii)	d	(xviii)	a
(xix)	c	(xx)	d	(xxi)	a	(xxii)	a	(xxiii)	a	(xxiv)	b
(xxv)	a	(xxvi)	a	(xxvii)	b	(xxviii)	b	(xxix)	b	(xxx)	c

Group – B

2. 3. 4. 5. 6. 7. 8. 9. 10. 11.

Group – C

12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23.

Note:

Font: Times New Roman (MS-WORD)
Size: 12
Don’t put anything in the header caption (Red mark line)
Put exact Paper Code and Paper Name.
Don’t put any True/False type question in MCQs.
Don’t put less / extra options in MCQs.
Repetition of question is highly prohibited.
Paper setters are requested to put answer of each question in the “Answer Key” section only. Don’t highlight/put any answer in the question section.