A		Reg. No. :											
Question Paper Code: 57902A													
	B.E./	B.Tech. DEGREE EX	KAN	1INA	ATIO	N, N	IOV	2019)				
		Seventh	Sen	neste	r								
		Chemical I	Engi	neer	ing								
1:	5UCH702 – CHEMICA	L ENGINEERING F MANAC	PRO GEM	CES IEN	S EC Г	CON	OMI	CS A	AND	INE	OUS.	ΓIRA	١L
		(Regulat	ion	2015)								
Dur	ation: Three hours]	Maxi	imur	n: 10)0 M	arks	
		Answer AL	L Q	uesti	ions								
		PART A - (10	x 1 =	= 10	Mar	ks)							
1.	Cost of instrumentation in a modern chemical process ranges from CO1- I percent of the total plant cost									1- R			
	(a) 5 to 10	(b) 20 to 30	(c) 40) to 5	0			(d) 6	50 to	70		
2.	The study of relations environments.	hip between man and	his	wor	king							CO	1- R
	(a) Time Study	(b) Ergonomic	(c) M	otior	n Stu	dy	((d) A	ll of	thes	e	
3.	All of the following in	nfluence capital budg	eting	g cas	h flo	ws E	EXCI	EPT				CO	2- R
	(a) Accelerated depreciation.(c) Tax rate changes			b) S									
				(d) Method of project financing used.									
4.	For a given fluid, as the	For a given fluid, as the pipe diameter increases, the pumping cost									CO	2- R	
	(a) Decreases		(b) In	creas	ses							
	(c) Remains the same		(d) M	ay in	icrea	se or	dec	rease	e.			
5.	Current assets divided by current liabilities is the formula for									CO	3- R		
	(a) Acid test ratio			(b) F	ROC	E rat	io						
	(c) Current ratio			(d) (Gross	s pro	fit to	sale	s rati	io			

6.	In a manufacturing industry, break-even point occurs, when the								
	(a) Annual sales equal the fixed cost								
	(b) Total annual product cost equals the total annual sales								
	(c) Total annual rate of production equals the assigned value								
	(d) Annual profit equals the expected value								
7.	The factor that is defined by the ratio of maximum instantaneous production rate to the production rate for which the equipment is designed is	CO4- R							
	(a) Load (b) Capacity (c) Diversity (d) D	emand							
8.	'The quick ratio EXCLUDES which of the following?								
	(a) Accounts Receivable (b) Inventory								
	(c) Cash (d) Working Capital								
9.	n economic evaluation of an on-going company the ratio of net sales o total investment is								
	(a) Appraisal value (b) Bond value (c) Earning value (d) Shar	e value							
10.	The terms of trade measure:	CO5- R							
	(a) The income of one country compared to another								
	(b) The GDP of one country compared to another(c) The quantity of exports of one country compared to another								
	(d) Export prices compared to import prices								
	PART - B (5 x 2= 10 Marks)								
11.	Outline the methods adapted for communicating in an organization.								
12.	What are fixed cost and variable costs?								
13.	A storage tank was priced at Rs.5000 in 1982 when the cost index was 460. What is its value today when the cost index is 800?								
14.	Define Inventory.								
15.	Why do you expect the economic balance in a company?								

16. (a) Support with a neat sketch the various types of business CO1-U (16) organizations and also give their advantages and disadvantages.

Or

- (b) Explain on forecasting, routing, scheduling, costs control, CO1-U (16) inventory control
- 17. (a) Explain the relationship between Interest and Time value of CO2- App (16) money

Or

- (b) A process plant has an initial investment of Rs.50 lakhs. The CO2- App (16) estimated salvage value is Rs.2 lakhs. It has a life of 8 years. Estimate the book value of the plant after 5 years by
 (a) Straight line depreciation method
 (b) Declining balance method and
 - (c) Sinking fund method with a sinking fund interest rate of 10%.
- 18. (a) Explain the selection of various project alternatives CO3- U (16) Or
 - (b) What are the comparable annual costs for the following two paint CO3- App (16) mills used in grinding pigments in oil to make a finished paint product if money is worth 8%? Mill A costs \$12,000, has a life of 14 years, a salvage value of \$2,000, and annual operating costs of \$3,000. Mill B has a life of 14 years, operating costs of \$4,000 and has a salvage value of \$1,000. What are the respective present worth's of services rendered by the two mills given above.
- 19. (a) The following data are available for a company with no funded CO4 -App (16) debt, current assets \$250, current liabilities \$40, Stock 8 million shares with par value per share \$50, quick assets \$150 million, surplus (earnings retained) \$610. Fixed assets \$1200 and other assets none. Prepare a balance sheet for the above data (All the USD(\$) values are in millions). Compute all the possible balance sheet ratios for the above problem.

Or

- (b) Prepare the income statement from the following data: CO4- U (16) Gross date sale 200 lakhs, Excise duty and discount Rs 10 lakhs, Annual fixed cost Rs 70 lakhs, gross sale Rs 200 lakhs and Variable cost Rs 100 lakhs. The company executes a net profit of Rs 12 lakhs, The Company has to pay Rs 2 lakhs as finance financial cost and decides to declare a dividend of 45% on gross profit, Inventories account for Rs 20 lakhs, The Company gives product on loan and accounts receivable is Rs 15 lakhs. Also evaluate economic ratio is associated with income statement and comment on the status of the company.
- 20. (a) Explain Economic balance on unit operations with multiple CO5-U (16) variables.

Or

(b) Explain the economics balance for evaporator with an example. CO5-U (16)