Reg.No.						
		341				



## MANIPAL INSTITUTE OF TECHNOLOGY

Manipal University, Manipal – 576 104



## SESSIONALS 02 SUBJECT: ESSENTIALS OF MANAGEMENT & ENGINEERING ECONOMICS (HSS 401)

## REVISED CREDIT SYSTEM (27/10/2015)

		(21110120	13)				
Time: 1 Hour.			MAX.MARKS: 20				
		Instructions to	Cand	idates:			
*	Answer <b>ALL</b> the question	S.					
*	Use of Interest factor tal	ole is permitted.					
-		PAR	ТΔ				
1)	Organising enables a bu			ing a person to	(1)		
.,	a) an activity			a team			
	c) vision		,	mission	C02		
2)	tests meas			capacity or ability to acquire a skill or	(1)		
	do a particular kind of jo	DD.	· M	Aptitude	/a 0		
	<ul><li>a) Stress</li><li>c) Situational</li></ul>			Multi-dimensional	602		
0)	Which of the following is	not true about training					
3)	r-r mhanin		y :		(1)		
	<ul> <li>a) It is a short-durat</li> <li>b) It is technical in r</li> <li>c) It is primarily for r</li> <li>d) It is concerned w</li> </ul>	nature. managers and execut	ives.		Coz		
4)	An investment of \$60,00	00 resulted in uniforn	n incon	ne of \$10,000 per year for 10 years.	(1)		
	The rate of return on the	investment was close	est to				
	a) 16.4% per year		b)	14.2% per year	(03		
	c) 10.6% per year		d)	18.6% per year			
5)	Cash flow diagram for two cost (n=∞) for this with i=		is as s	hown in figure below. The capitalized	(1)		
		0 1 2	3	4			
		A=	1000		(03		
		1,00,000					
	a) 200,000	<b>b)</b> 1,00,000 + 100	0 (P/A,	i,3)			
	c) 1,10,000	<b>d)</b> 1,00,000 + 100	00 (P/A,	i,4)			
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6) Identify the type of departmentation illustrated by each organization chart.

a) President Manager, Manager, Manager, Training and Strategic Planning Marketing Researd Development b) President Supervisor, Supervisor. Supervisor. Platingand Painting Assembly Moulding c) Executive Team Coordinators Coordinators, Coordinators Zone 3 Zone 1 Zone 2

(02

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7) What is span of control? Explain any three factors that affect the span of control.

(2)

 $(1\frac{1}{2})$ 

CO2.

8) Explain job description and job specification with a relevant example.

(2)

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9) What is an induction programme? Explain briefly the two types of induction.

 $(1\frac{1}{2})$ 

(3)

10) A company that makes clutch discs for race cars had the cash flows shown below for one department. Calculate internal rate of return. Also comment on feasibility if MARR=10%.

C03

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Years	0	1	2	3	4	5
Cash flows (In Lakhs) Rs.	-65	30	84	10	-10	-12

- 11) To decrease the costs of operating a lock in a large river, a new system of operation is proposed. The system will cost Rs. 65,00,000 to design and build. It is estimated that it will have to be reworked every 10 years at a cost of Rs. 10,00,000. In addition, an expenditure of Rs. 5,00,000 will have to be made at the end of the fifth year for a new type of gear that will not be available until then. Annual operating costs are expected to be Rs.3,00,000 for the first 15 years and Rs. 3,50,000 a year thereafter. Compute the capitalized cost of perpetual service at i=8%.
- 12) The estimated cost of a completely installed and ready-to-operate 40-kilowatt generator is \$30,000. Its annual maintenance costs are estimated at \$500. The energy that can be generated annually at full load is estimated to be 100,000 kilowatt-hours. If the value of the energy generated is \$0.08 per kilowatt-hour, determine the annual worth of this generator at full load capacity? Take the MARR to be 9% and the salvage value of the machine to be \$2,000 at the end of its estimated life of 15 years.

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