

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREES EXAMINATION, MAY 2011

EC 04 803—COMMUNICATION SWITCHING SYSTEMS

Time: Three Hours

Maximum: 100 Marks

Answer all questions.

- I. (a) Name the two different approaches of organising stored program control? State the major differences between the two methods.
 - (b) State the principle of Time division switching.
 - (c) What is meant by:
 - (i) blocking network.
 - (ii) full connectivity.
 - (d) Explain the principle of TSIC Time slot Interchange.
 - (e) A subscriber makes three phone calls of three minutes, four minutes, and two minutes duration in a one hour period. Calculate the subscriber traffic in erlangs, and in CCS.
 - (f) Differentiate between the loss system and delay system.
 - (g) What are the two major classes of signalling techniques? Also specify different types of signalling techniques exist in each of these two classes?
 - (h) What are self routing switches? Explain.

 $(8 \times 5 = 40 \text{ marks})$

II. (a) Draw the schematic representation of Time multiplexed space switch and explain its operation.

(15 marks)

Or

(b) With the help of diagram explain the operation of two stage TS Switch (Time Space Switch) and two stage ST (Space - Time) Switch.

(15 marks)

III. (a) Discuss about DMS-100 switching system.

(15 marks)

Or

(b) For a $N \times N$ three stage switching network derive the expression for its blocking probability, P_B .

(15 marks)

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IV. (a) Discu	ss in detail about :	(Pages	
(i)	Lost calls returned system.		(8 marks)
(ii)	Lost calls held system.		HTHMS (7 marks)
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(b) Expla	in the following:—	ACTUALITATION MADE - E08	BC 04
(i)	Grade of service.		(6 marks)
(ii)	Blocking Probability.		(6 marks)
(iii)	Traffic Intensity.	Arabar all qua	(3 marks)
V. (a) (i) Co	mpare in Channel signalling	g and common channel signa	lling. (8 marks)
(ii) Di	scuss about ATM routers.	nirkolowa koratylki ami Tibo akii	ometo and speed (7 marks)
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(b) Write	notes on :	petwork	grixadd (f)
(i)	PCM signalling.	varyttos	(7 marks)
(ii)	Common channel signalling	principle.	(8 marks)
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