Si	gnat	ure and Name	of Invigilator		Answer Sheet No.:										
			<u> </u>					(To	be fil	led by	the (	Candi	idate)		
1.	(Sig	nature)				Roll No.	. [		T						
	(Na	me)						figur	es as	per a	<u>l</u> dmis	l sion (	ard)		
2	(C:o	-makuwa)			Dall	No			00 00	per u		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
2.		•		Roll No(In words)											
	(Na	me)			,										
Г	T_	8706				Test B	ooki	et N	0.						
L	<u> </u>	6700	PAPE	R–II											
Ti	ime	: 1 <sup>1</sup> / <sub>4</sub> hours]	COMPUTER A	PPLI	<b>ICA</b>	TIONS	S	[Ma	axin	num	Maı	rks :	100		
N	umb	er of Pages i	n this Booklet : <b>8</b>		Nı	umber of	Que	estio	ns ir	ı this	Boo	oklet	t : <b>50</b>		
			for the Candidates		परीक्षार्थियों के लिए निर्देश										
1.	Writ	e your roll number	in the space provided on the top of	this 1.	<ol> <li>पहले पृष्ठ के ऊपर नियत स्थान पर अपना रोल नम्बर लिखिए।</li> </ol>										
	page	-	1 1 1		2. इस प्रश्न-पत्र में पचास बहुविकल्पीय प्रश्न हैं।										
2.	This	paper consists of fi	fty multiple-choice type of question	s. 3.	3. परीक्षा प्रारम्भ होने पर, प्रश्न-पुस्तिका आपको दे दी जायेगी। पहले पाँच मिनट आपको प्रश्न-पुस्तिका खोलने तथा उसकी निम्नलिखित जाँच के लिए दिये										
3.			t of examination, the question boon the first 5 minutes, you are reque			र्हो प्रश्न-पुस्तिका । जिसकी जाँच ३					खत जॉन	व के वि	लए दिये		
			d compulsorily examine it as below		(i)	। ।जसका जाय उ प्रश्न-पुस्तिका					ाज पर र	नगी का	ागज की		
	(i)		the Question Booklet, tear off the pa		(1)	सील को फाड़	लें। र								
		seal on the edge	of this cover page. Do not acce sticker-seal and do not accept an o	en		स्वीकार न करें									
		booklet.			(ii)	कवर पृष्ठ पर छ									
	(ii)	Tally the number of pages and number of question the booklet with the information printed on the co				संख्या को अच जिनमें पृष्ठ / प्र									
		page. Faulty boo	klets due to pages/questions miss	ing		अर्थात किसी	भी प्रक	ार की ह	<sup>र्</sup> डिपूर्ण	पुस्तिव	हा स्वीव	<b>कार</b> न व	क्ररें तथा		
		or duplicate or not in serial or				उसी समय उसे									
	discrepancy should be got replaced immediately correct booklet from the invigilator within the peri			of		ले लें। इसके तो आपकी प्र									
		5 minutes. Afte will be replaced	:let		अतिरिक्त सम						, ,,				
	(iii)	_	tion is over, the Serial No. of the boo	klet	(iii)										
	` '		d in the Answer-sheets and the Seneet should be entered on this Book			करें और उत्तर- दें।	पत्रक क	ते ऋम र	तंख्या इर	स प्रश्न-	पुस्तिका	। पर ओ	कित कर		

Example: A B D where (C) is the correct response.

correct response against each item.

Your responses to the items are to be indicated in the Answer Sheet given inside the Paper I booklet only. If you mark at any place other than in the ovals in the Answer Sheet, it will not be evaluated.

Each item has four alternative responses marked (A), (B), (C) and (D). You have to darken the oval as indicated below on the

- 6. Read instructions given inside carefully.
- 7. Rough Work is to be done in the end of this booklet.
- If you write your name or put any mark on any part of the test booklet, except for the space allotted for the relevant entries, which may disclose your identity, you will render yourself liable to disqualification.
- 9. You have to return the test question booklet to the invigilators at the end of the examination compulsorily and must not carry it with you outside the Examination Hall.
- 10. Use only Blue/Black Ball point pen.
- 11. Use of any calculator or log table etc., is prohibited.
- 12. There is NO negative marking.

5. प्रश्नों के उत्तर **केवल प्रश्न पत्र I के अन्दर दिये गये** उत्तर-पत्रक पर ही अंकित स्थान पर उत्तर चिन्हांकित करते है, तो उसका मुल्यांकन नहीं होगा।

4. प्रत्येक प्रश्न के लिए चार उत्तर विकल्प (A), (B), (C) तथा (D) दिये गये हैं।

आपको सही उत्तर के दीर्घवृत्त को पेन से भरकर काला करना है जैसा कि नीचे

- करने हैं। यदि आप उत्तर पत्रक पर दिये गये दीर्घवृत्त के अलावा किसी अन्य
- 6. अन्दर दिये गये निर्देशों को ध्यानपूर्वक पढें।

दिखाया गया है।

जबकि (C) सही उत्तर है।

7. कच्चा काम (Rough Work) इस पुस्तिका के अन्तिम पृष्ठ पर करें।

उदाहरण : A B D

- यदि आप उत्तर-पुस्तिका पर अपना नाम या ऐसा कोई भी निशान जिससे आपकी पहचान हो सके, किसी भी भाग पर दर्शाते या अंकित करते हैं तो परीक्षा के लिये अयोग्य घोषित कर दिये जायेंगे।
- 9. आपको परीक्षा समाप्त होने पर उत्तर-पुस्तिका निरीक्षक महोदय को लौटाना आवश्यक है और परीक्षा समाप्ति के बाद अपने साथ परीक्षा भवन से बाहर न लेकर जायें।
- 10. केवल नीले / काले बाल प्वाईंट पैन का ही इस्तेमाल करें।
- 11. किसी भी प्रकार का संगणक ( कैलकुलेटर ) या लाग टेबल आदि का प्रयोग वर्जित है।
- 12. गलत उत्तर के लिए अंक नहीं काटे जायेंगे।

## **Computer Science and Applications**

## PAPER-II

Note: This paper contains fifty (50) objective-type questions, each question carrying two (2) marks. Attempt all of them.

1.			the foll →1A/0A,	-	g strings	is in	the	language	defined	by	gramma		
	(A)	01100	, 111, 011,	(B)	00101		(C)	10011	(I	))	11111		
2.	For a (A)	-	0 1		N vertices N <sup>N-1</sup>	s, the to		mber of sp N <sup>N-2</sup>	Ü		s given by : 2N + 1		
3.	The p	preposit	ion (p→	· q) ^ (~	$\sim q \vee p$ ) is	equival	ent to	:					
	(A)	$q \rightarrow p$				(B)	$p \rightarrow$	q					
	(C)	$(q \rightarrow p)$	$)\vee (p\to c)$	l)		(D)	(p –	$\rightarrow$ q) $\vee$ (q $\rightarrow$ 1	p)				
4.	The logic of pumping lemma is a good example of :												
	(A) pigeon hole principle						recursion						
	(C)	divide	and con	quer to	echnique	(D)	itera	ntion					
5.	Let A = { $x \mid -1 < x < 1$ } = B. The function $f(x) = \frac{x}{2}$ from A to B is:												
	(A)	injectiv	7e			(B)	surj	ective					
	(C)	both ir	njective a	nd su	rjective	(D)	neit	her injectiv	e nor surj	ectiv	/e		
6.	The r	number	of 1's pr	esent	in the bin	ary repi	esent	ation of (3	× 512 + 7×	64 -	$+5 \times 8 + 3)_{10}$		
	(A)	8		(B)	9		(C)	10	(I	))	11		
7.			e followin	-		emoves	static	hazard fro	m a two l	evel	AND - OF		
	(A)	xy + z	$\overline{x}$			(B)	<i>x</i> y -	$+z\overline{x}+wyz$					
	(C)	xy+z	$\overline{x} + yz$			(D)	<i>x</i> y -	$+z\overline{x}+wz$					
8.	Whic	h of the	e followii	ng log	ic has the	maxim	um fa	n out ?					
	(A)	RTL		(B)	ECL		(C)	NMOS	(Γ	))	CMOS		
9.		_	d code w		-	2, -3 t		cimal 5 is 1	_	-			
	(A)	0101		(B)	0111		(C)	1011	(I	))	1000		
т.	0706					•							

10.	Upto (A)	how man		les, d	can the Kai 4	rnaugh m (C	~.	be used?	(D)	6		
11.	Wha		itput of the din ( )  int count = 1  while (di	;, dig		ogram se	gm	ent ?				
			printf ("%	%d/1	n", ++cou	int); ++	dig	rit;}				
	(A)	10	(	(B)	9	(0	<b>C</b> )	12	(D)	11		
10	A -1-	. (;: -1-	1									
12.		tic variab			-1:1							
	(B)	<ul><li>(A) Which cannot be initialized</li><li>(B) Which is initialized once at the commencement of execution and cannot be changed at runtime</li></ul>										
	(C)	(C) Which retains its value throughout the life of the program										
	(D)	Which is	the same	as a	n automati	c variable	e bu	ıt is placed at the	e head	of a program		
13.	If the	do { -	um=0; num; p	rint	emented f ("%d", nu	ım); num	.+ -	+;}				
		while	e (num >=	= 0)								
	( 4 )	}	.11		. 1							
	(A)	-			itely many							
	(B)	1 0			enter the lo ion error re	-						
	(C) (D)		•		e reported	eported						
	(D)	a ran tin	ic ciror w	VIII D	e reported							
14.	# define max $(x, y)$ $x = (x > y)$ ? $x : y$ is a macro definition, which can find the maximum of two numbers $x$ and $y$ if :											
	(A)	x and $y$ a	are both i	nteg	ers only							
	(B)	B) $x$ and $y$ are both declared as float only										
	(C)	U			red as dou	•						
	(D)	x and $y$ a	are both i	nteg	ers, float oi	double						
<b>15.</b>	The f	function s	printf()	worl	ks like prin	tf ( ), but	op	erates on :				
-	(A)	Data in a	• '	(B)	stdrr	(C		stdin	(D)	string		
J-8	706					3				P.T.O.		

**16.** A relation  $R = \{A, B, C, D, E, F\}$  is given with following set of functional dependencies :

$$F = \{A \rightarrow B, AD \rightarrow C, B \rightarrow F, A \rightarrow E\}$$

Which of the following is candidate key?

- (A) A
- (B) AC
- (C) AD
- (D) None of these

17. Immediate updates as a recovery protocol is preferable, when:

- (A) Database reads more than writes
- (B) Writes are more than reads
- (C) It does not matter as it is good in both the situations
- (D) There are only writes

**18.** Which of the following statement is wrong?

- (A) 2 phase locking protocol suffers from dead locks
- (B) Time Stamp protocol suffers from more abort
- (C) Time stamp protocol suffers from cascading rollbacks where as 2 phase locking protocol do not
- (D) None of these

**19.** Which data management language component enabled the DBA to define the schema components ?

(A) DML

(B) Subschema DLL

(C) Schema DLL

(D) All of these

**20.** A subclass having more than one super class is called \_\_\_\_\_

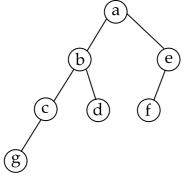
(A) Category

(B) Classification

(C) Combination

(D) Partial participation

**21.** In the balanced binary tree given below, how many nodes will become unbalanced when a node is inserted as a child of the node "g".



- (A) 1
- (B) 3
- (C) 7
- (D) 8

**22.** Preorder is also known as:

- (A) Depth first order
- (B) Breadth first order
- (C) Topological order
- (D) Linear order

23.	Which of the following statement is false?													
	(A)	Every tree is a bipartite graph												
	(B)	A tree contains a cycle												
	(C)			•	ontains (n –	-1) ed	ges							
	(D)	A tree is o			,	,	O							
	` /			O	•									
24.	If the	f the post fix form of a string is $ABC + -D^*$ , The actual string is:												
	(A)	(A - (B + C))	C))*D			(B)	((A -	-B) + C)*D						
	(C)	((A+B)-	C)*D			(D)	(A+	(B-C)*D)						
25.		Application of data structure queue is :  (A) Levelwise printing of tree (B) Implementation of priority queues												
	(A)		•	O		(B)	-		-	•	-			
	(C)	Function	call im	plem	entation	(D)	Dept	th first sear	ch in a	a grap	oh .			
26.	What is the transmission signal coding method for a T1 carrier called ?													
	(A)	Binary	(B)	NRZ	-	(C)	Bipo		(D)		chester			
	()	Zindi	(2)	1111	•	(=)	2.Pc		(2)	1110111				
27.	How much bandwidth is required to send 132 voice - grade channels by FDM on an													
	inter	national sa	tellite	syster	n ?									
	(A)	500 MHz		(B)	10 MHz		(C)	1320 MHz	Z	(D)	50 MHz			
28.	Wha	t is the diff	ference	hetw	reen the Fth	ernet	frame	nreamhle	field a	ınd th	e IEEE 802.3			
20.					Delimiter i			preamore	iicia a	iid tii	ic ille 002.5			
	(A)			(B)	1 bit		(C)	4 bits		(D)	16 bits			
20	TA71		-1:	· ( - 1	1 . ( 1		,							
29.		That is the function of a translating bridge ?  A) Connect similar remote LANs												
	(A)													
	(B)	Connect s												
	(C)				es of LANs			0 11						
	(D) Translate the network addresses into a layer 2 address													
30.	The program used to determine the round - trip delay between a workstation and a													
	desti	nation add	ress is	:			-	•						
	(A)	Tracert		(B)	Traceroute	9	(C)	Ping		(D)	Pop			
31.	Whi	ch statemer	nt is war	rong '	?									
J.	(A)			_	Islated origi	n. relo	cation	n must he n	erforn	ned hv	y the linker			
	(B)		-		n, the loader			_		ica Dy	, are mixer			
	` '			_			-			not				
	(C)		•	perio	rm relocatio	π, WI	iereas	50111E 10a06	=15 UO	1101				
	(D)	D) None of these												
J-8	706					5					P.T.O.			
,														

32.	Task	ks done in parsin	g are :									
	(A) Check the validity of a source string											
	(B)											
	(C)	Both (A) and (l	3)									
	(D)	None of these	,									
33.	YAC	CC builds up		parsing	table.							
		LALR				(C)	SLR		(D)	LLR		
34.	The	action of passing	g the so	ource progr	am in	to the	proper sy	ntactic	class i	is known as :		
	(A)	Syntax analysis	3		(B)	Lexi	cal analys	is				
	(C)	Interpretation a	analys	is	(D)	Unif	form symb	ol gene	eratior	ı		
35.	The	dynamic binding	g occui	rs during th	ie:							
	(A)	Compile time			(B)	Run	time					
	(C)	Linking time			(D)	Pre -	- processin	g time				
36.	The	first operating s	ystem	of Micropro	ocesso	r is						
	(A)	ATLAS	(B)	CP/M		(C)	SAGE		(D)	T.H.E.		
37.		rocessor manage	ment, 1	ound robin	meth	od ess	entially us	ses the j	preem	ptive version		
		FILO	(B)	FIFO		(C)	SJF	(D)	Long	gest time first		
38.	Ара	age fault	·									
	(A)	is an error in s	pecific	page								
	(B)	is an access to	the pag	ge not curre	ently i	n maii	n memory					
	(C)	occurs when a	page p	orogram acc	esses	a pag	e of memo	ory				
	, ,	is reference to		-				-				
39.		synchror	nize cr	itical resour	ces to	prev	ent deadlo	ock.				
	(A)	P - operator	(B)	V - operat	tor	(C)	Semapho	ores	(D)	Hard disk		
40.	The	memory allocati	on sch	eme subject	ted to	"exte	rnal" fragr	nentati	on is :			
	(A)	Segmentation			(B)	Swa	pping					
	(C)	Demand pagin	g		(D)	Mul	tiple conti	guous f	fixed p	partitions		
41.	In so	oftware project p	lannir	ng, work Br	eakdo	wn st	ructure m	ust be		·		
		A graph		-	(B)	A tr						
	(C)	0 1	h		(D)	Non	e of the ab	ove				
		<b>.</b> .										

42.			McCA	BE'S cyclon	number is given by following formula:								
	(A)	c = e - n + 2p			, ,	c = e - n - 2p							
	(C)	c = e + n + 2p			(D)	c = e	-n* 2p						
43.	In a	good software	design,		coup	ling is	s desirable be	etween mo	odules.				
	(A)	Highest	(B)	Lowest		(C)	Internal	(D)	External				
44.	Syste	em study yields	the fol	lowing :									
	(A)	Requirement s	specifica	ations	(B)	Prev	ailing proces	s descript	ion				
	(C)	Data source ic	dentifica	ation	(D)	All t	he above						
<b>45.</b>	The	COCOMO mod	lel is us	sed for		_ •							
	(A)	software desig	ζn		(B)	softv	software cost estimation						
	(C)	software cost	approx	imation	(D)	softv	ware analysis	i					
46.	MMS (Multimedia Messaging Service) uses types of messages to perform messaging transactions.												
	(A)	4	(B)	6		(C)	8	(D)	10				
47.	Blue	tooth technolog	y uses	the transmi	ssion :	media	ı <b>.</b>						
	(A)	Radio links			(B)	Microwave links							
	(C)	VSAT commu	nicatio	n	(D)	Opti	ical fiber link	S					
48.	Downflow is the process associated with and back up of data in a warehouse.												
	(A)	packaging	(B)	archiving		(C)	extraction	(D)	loading				
49.	Pred	lictive modeling	; in dat	a mining us		technique	2.						
	(A)	Statistical			(B)	Asso	-						
	(C)	Value predicti	on		(D)	Non	e of these						
50.	The	use of a smart o	ard rep	oresents a fo	orm of	:							
	(A)	password enc	ryption		(B)	user	- ID encrypt	ion					
	(C)	authorization			(D)		nentication						

## Space For Rough Work

J-8706 8