uninsured United Parachute Technologies, LLC.









UPT Sigma Tandem Instructor Exam

Instructions: Choose the best answer for each question.

1.	The responsibility to ensure the valid credentials of the begins, belongs to whom?	e UP	T Si	gma Tandem Examiner before the course
	A. The Examiner		C.	The Tandem Instructor Candidate
	☐ B. UPT Tandem Admin		D.	None of the Above
2.	Have you verified that your UPT Tandem Examiner's	ratino	g is (current for the duration of the course?
	☐ A. Yes			
	☐ B. No			
3.	Have you read the Sigma Manual in its entirety?			
	☐ A. No			
	☐ B. Yes			
4.	Do you have a current and approved medical?			
	☐ A. Yes			
	☐ B. No			
5.	Normal drogue fall terminal velocity is?			
	☐ A. 120mph (193 km/h)		C.	150mph (241 km/h)
	☐ B. 130mph (209 km/h)		D.	170mph (274 km/h)
6.	Tandem freefall terminal velocity is?			
	A. 120mph (193 km/h)		C.	150mph (241 km/h)
	☐ B. 130mph (209 km/h)		D.	170mph (274 km/h)
7.	How many seconds does it take to fall 1,000 feet at to	ermin	al ve	elocity with a drogue?
	☐ A. 2 Seconds		C.	6 Seconds
	☐ B. 3 Seconds		D.	8 Seconds

8.	How	mar	ny seconds does it take to fall 1,000 feet at te	rmina	al ve	elocity without a drogue?
		A.	2 Seconds		C.	6 Seconds
		В.	4 Seconds		D.	8 Seconds
9.	Wha	t is t	he main purpose of a drogue?			
		A.	To get stable on exit		C.	To aid in stability
		В.	Reduce tandem freefall velocity		D.	To help avoid side spins
10.	If a d	_		eefall	, ho	w long will it take to slow the tandem down to
		A.	6 seconds or 1000ft (300m)		C.	10 seconds or 2000ft (600m)
		В.	8 seconds or 1500ft (500m)		D.	12 seconds or 2500ft (800m)
11.	A pa	cked	d Sigma tandem system and student harness	weig	jhs a	approximately?
		A.	45 lbs. (20.4 kg)		C.	63 lbs. (28.6 kg)
		В.	40 lbs. (18.1 kg)		D.	58 lbs. (26.3 kg)
12.	A pa	cked	d Micro Sigma tandem system and student ha	arnes	s w	eighs approximately?
		A.	56 lbs. (25.4 kg)		C.	50 lbs. (22.7 kg)
		В.	38 lbs. (17.2 kg)		D.	43 lbs. (19.5 kg)
13.	Wha	t is t	he minimum exit weight of the Sigma Tander	n Sys	sten	n?
		A.	250 lbs. (113.4 kg) for VR 360 / SR 370		C.	200 lbs. (90.7 kg) for VR 360 / SR 360
		В.	200 lbs. (90.7 kg) for VR 360 / SR 370 / SR 340		D.	No defined minimum exit weight
14.			he maximum combined suspended weight fo (Specify both reserves)	r the	Sigi	ma system? For the Micro Sigma Tandem
		A.	500 lbs. (226.5 kg) SR 340 / 550 lbs. (249.5 kg) SR 370		C.	500 lbs. (226.5 kg) VR 360 / 550 lbs. (249.5 kg) SR 370
		В.	450 lbs. (204.1 kg) VR 360 / 500 lbs. (226.5 kg) SR 340		D.	550 lbs. (249.5 kg) VR 360 / 500 lbs. 226.5 kg) SR 340

15.	How	do y	ou calculate your maximum tandem student	weig	ht?	
		A.	Maximum system weight minus tandem instructor weight minus sigma system weight		C.	Sigma system weight minus student harness weight minus tandem instructor weight
		B.	Maximum system weight minus exit weight		D.	Maximum system weight minus sigma system & student harness weight minus tandem instructor weight
16.	How	long	g should the trap door effect be?			
		A.	1.5 seconds		C.	0.5 a second
		В.	1 second		D.	3/4 of a second
17.	What	pro	oblem is caused by a drogue center line that i	s too	sho	ort?
		A.	Hard opening		C.	Longer than normal trap door effect
		B.	Slower than normal tandem terminal speed		D.	None of the above
18.	What	pro	oblem is caused by a drogue center line that i	s too	lon	g?
		A.	Drogue will not extract the bag		C.	Slower than normal drogue fall speed
		B.	Pilot chute in tow		D.	Higher snatch force, hard opening
19.	How	can	you tell if a drogue was cocked during packi	ng?		
		A.	It was packed by a rigger		C.	Bridle scrunched and drogue centerline window color
		B.	If the safety pin is seated correctly		D.	If the closing loop is properly routed
20.	What	t mig	ght happen if you deploy a drogue which had	not b	eer	cocked properly during packing?
		A.	Could cause instability		C.	Terminal velocity increases. Drogue should inflate within 6-8 seconds
		B.	Will not create enough drag to pull safety pin		D.	It will not deploy the main
21.	What	wo	uld happen if you held onto the drogue during	g dro	gue	deployment?
		A.	Normal drogue deployment		C.	Possible entanglement with drogue bridle
		R	Open Container with Droque Issues EP	П	D	Premature Deployment

22.	Wha	t is t	he purpose of the "safety pin" on the drogue	bridle	€?	
		A.	To ensure the drogue is cocked		C.	Ensures the main container opens before the drogue collapses
		В.	Guarantees an in-sequence deployment		D.	Helps prevent the main container from opening prematurely
23.			gth should the exposed kill line be above the alibration?	gron	nme	et at the base of the drogue envelope during
		A.	2.5" – 5.5" (64mm – 140mm) for a 60" drogue		C.	7.5" (191mm) for a 60" drogue
		В.	1.5" – 5" (39mm – 128mm) for a 54" drogue		D.	B and C are correct
24.	How	ofte	n should the drogue calibration be checked?			
		A.	Between each reserve repack cycle		C.	Approximately every 30 days
		В.	During every main pack		D.	Approximately every 25 jumps
25.			uld happen if the kill line were not attached to ne were to break during deployment?	the	#5 I	ink at the top of the main deployment bag or
		A.	Slower than normal canopy deployment		C.	A and B are correct
		В.	The drogue will collapse		D.	The drogue would not collapse
26.	Wha	t are	the negative consequences of such an occu	ırrend	ce (d	question # 25)?
		A.	Potential for hard opening		C.	Streamer malfunction
		В.	Open container with drogue issues malfunction		D.	Total malfunction
27.	Expla	ain t	he negative consequences of loose student s	side a	attac	chment straps on exit?
		A.	Rocking drogue fall, student's legs outside instructors		C.	Harder to get stable, buffeting
		В.	Uncontrollable turns, unstable drogue fall		D.	All of the above
28.	Wha	t is t	he main reason to avoid reaching in front of a	a stud	dent	?
		A.	This is the appropriate response to put the student into the proper position		C.	Can cause instability
		В.	The student might grab your arms		D.	Can cause bad handcam footage

29. Wha	at sho	ould you feel immediately upon pulling the dro	ogue	rele	ase handle?
	A.	The trap door effect		C.	An uninflated drogue
	В.	The safety pin releasing		D.	Separation from the main canopy risers
30. Whi	ch di	rection should the closing pin be inserted?			
	A.	In the 11 o'clock position		C.	From the bottom of the container
	B.	In the direction of the arrow on the disk		D.	A and C are correct
31. Wha	ıt miç	ght happen if the closing pin is inserted from o	or po	intin	g in the wrong direction?
	A.	It could cause a Partial Malfunction		C.	It could cause a Horseshoe Malfunction
	В.	It could cause a Total Malfunction		D.	It could cause an Open Container with Drogue Issues Malfunction
32. Wha	t wil	happen to the pull force if you pack twists in	to the	e rip	cords below the pin?
	A.	Cause a Partial Malfunction		C.	Cause hard pulls
	В.	Cause a collapsed drogue in tow		D.	None of the above
		D unit manufacturers are authorized for the Sation or mode)	Sigma	а Та	ndem System? (In the approved tandem
	A.	Mars		C.	Vigil
	B.	Cypres		D.	All of the above
34. The	red l	anyard attached to the Sigma RSL is connec	ted to	o the	Ð
	A.	Collins Lanyard		C.	Skyhook
	В.	Reserve Pin		D.	Cutaway Handle
35. The	Colli	ns Lanyard is designed to do what?			
	A.	Activate the Skyhook		C.	To act as a secondary cutaway device
	B.	Deploy the reserve		D.	Release non-RSL riser if the right riser releases prematurely
36. Wha	t do	es the 17 Point Check represent?			
	A.	On aircraft checks for the instructor and student		C.	Gear check
	B.	Checks under canopy		D.	Briefing items under the Part 105.45

37.	vvnat	is t	he minimum functionally open main parachut	e altı	tude	for tandem jumps after probation?
		A.	4500ft (1400m)		C.	3500ft (1100m)
		В.	4000ft (1200m)		D.	3000ft (1000m)
38. \	What	is t	he minimum exit altitude for tandem jumps af	ter p	roba	ation?
		A.	9500ft (3000m) AGL		C.	7500ft (2300m) AGL
		В.	9500ft (3000m) MSL		D.	7500ft (2300m) MSL
39. \	What	are	the leading causes for a tandem pair going	unsta	ble	when leaving the aircraft?
		A.	Improper harnessing		C.	Improper set up, launch, fly away
		B.	Poor presentation into the relative wind		D.	All of the above
40.\	Wher	e ca	an you find the regulations on who may do R\	N wit	th a	tandem pair?
		A.	Sigma Manual		C.	UPT SOPs
		В.	Examiner Manual		D.	All of the above
41.\	Wher	e do	o you find the requirements for videographer	quali	ficat	ions before they can film a tandem?
		A.	USPA BSR		C.	DZ Policy Handbook
		В.	UPT Service Bulletins		D.	Sigma Manual
42.\	Wher	n sh	ould the drogue be deployed during a stable,	une	vent	ful tandem exit?
		A.	Within 3 seconds of leaving the aircraft		C.	10 seconds
		В.	5-8 seconds		D.	Immediately if you feel instability
43.	s ba	ckin	g out of a side door aircraft on tandem jumps	allo	wed	?
		A.	Yes			
		В.	No			
44.\	What	is t	he minimum horizontal separation under can	ору f	or a	tandem from any other canopy?
		A.	1000ft (300m)		C.	500ft (150m)
		В.	100ft (30m)		D.	There is no minimum
45. ⁻	The r	esp	onsibility for pre-flighting a UPT Tandem sys	em b	eloi	ngs to?
		A.	Tandem instructor jumping the system		C.	Chief Instructor
		В.	Safety and Training Advisor		D.	Another tandem instructor

		-	onsibility for ensuring that a Sigma tandem s Bulletin compliant falls on whom?	ysten	n ha	ve in-date reserve repacks and are Produc
		A.	Chief Instructor		C.	DZ Owner
		B.	Tandem Instructor jumping the system		D.	Safety and Training Advisor
47.	What	is t	he proper student arm position on exit?			
		A.	Thumbs under the main lift web, arms crossed		C.	Arms at the side
		B.	Thumbs under the main lift web, arms uncrossed		D.	Arms in a neutral box position
48.	What	is t	he minimum briefing you should give any stu	dent	befo	ore a tandem jump?
		A.	Briefing on how to exit and freefall		C.	Briefing on how to land
		B.	Briefing items under FAR Part 105.45 OR in accordance with governing body's tandem briefing requirements		D.	Briefing on aircraft procedures
49.	What	is a	a negative aspect of over training a tandem s	tuder	t?	
		A.	Student overconfidence		C.	Student becomes afraid
		B.	Information overload		D.	Student refusal
50.	What	t is t	he minimum age for tandem jumping on a UF	PT Si	gma	within the United States?
		A.	Age of legal consent		C.	21 years of age
		B.	18 years of age		D.	With parental consent
			dministrative actions does uninsured United F er / student does a tandem jump?	Parac	hute	e Technologies, LLC require before a
		A.	B and D are correct		C.	USA Tandem Waiver Video
		B.	UPT Assumption of Risk Waiver		D.	USPA or UPT Assumption of Risk Waiver Video
52.	How	mar	ny tandem jumps in the last 12 months must	a rate	d in	structor make to renew a tandem rating?
		A.	20 jumps		C.	15 jumps
		B.	25 jumps		D.	30 jumps

55. II a I	ıano	em instructor (after probation) has not made	a tar	iden	n jump between 90-180 days, they must:
	A.	Review SOPs and 2 jumps with an evaluator		C.	Review SOPs and 2 jumps under the supervision of an examiner
	B.	Review SOPs and 1 jump with an experienced jumper		D.	Review SOPs and 2 jumps with an experienced jumper
54. If a l mus		lem Instructor (after probation) has not made	a tar	nden	n jump between 181 days – 2 years, they
	A.	Review SOPs, EPs and 2 jumps with an evaluator		C.	Review SOPs, EPs, 1 solo jump and 1 tandem jump with an experience jumper under the supervision of an examiner
	B.	Review SOPs, EPs and 1 jump with an experienced jumper		D.	Review SOPs, EPs and 2 jumps with an experienced jumper
55. Wha	it ad	ditional training must a student be given if the	ey ha	ve a	ccess to the drogue release?
	A.	Be given an altimeter and trained how to use it, 3 PRCPs with full gear on		C.	Be given an altimeter
	В.	Where the pull handle is and how to use it		D.	That they must pull 6 inches and then release
56. Und	er w	hat circumstances is relative work (docking) r	not pe	ermi	tted?
	A.	Never		C.	It is always permitted as long as the videographer only docks onto the passenger
	B.	When the student has access to the drogue release and has been trained how to use it		D.	It is always permitted as long as the videographer only docks onto the instructor
57. Wha jump		he minimum number of tandem jumps that no	eed to	o be	made before using a handcam on tandem
	A.	25 jumps		C.	125 jumps
	B.	50 jumps		D.	200 jumps
58. Are _l	pole	camera mounts authorized for use on handc	am ta	ande	em jumps?
	A.	Yes			
	В.	No			
59. Wha	ıt is t	he maximum degree of turn for tandem cano	pies	at oı	r below 500ft (150m) AGL?
	A.	90 degrees		C.	Whatever is necessary for a safe landing
	В.	180 degrees		D.	Depends on wind conditions

			iles Checks REQUIRED on EVERY TANDER is using a handcam device on the tandem ju			VE regardless of whether the tandem
		A.	Yes			
		B.	No			
61. W	her/	n are	e you to start your handles check?			
		A.	Once you are stable		C.	After you set drogue and check drogue
		B.	At some point before drogue release		D.	After you set drogue
62. W	/hat	is tl	he correct procedure for handles check in ord	der o	f exe	ecution:
		A.	Cutaway, reserve, altitude		C.	The order is not important as long as you touch all the handles
		B.	Left drogue release, secondary, cutaway, reserve, crystal ball		D.	Left drogue release, right drogue release, cutaway, reserve, RSL, altitude
63. D	esc	ribe	the correct aircraft emergency procedure be	low 1	,500	Oft (500m).
		A.	If aircraft is stable, stay with the aircraft and follow directions from the pilot. Ensure the student is seated and seat belted		C.	Assure the student that everything is going to be okay
		B.	If aircraft has catastrophic damage, attach as many attachment points as the situation will allow, starting with the upper left hook. Hold the student with right arm and legs if needed, exit and immediately deploy the reserve		D.	A and B is correct
64. D	esc	ribe	the correct aircraft emergency procedure be	twee	n 1,	500ft (500m) and 4000ft (1200m).
		A.	Attach the student, exit the aircraft and immediately deploy the reserve		C.	Stay in the aircraft and land with the airplane
		B.	Assure to the student that everything is going to be okay		D.	None of the above
65. D	esc	ribe	the correct aircraft emergency procedure ab	ove 4	1000	Oft (1200m).
		A.	Stay in the aircraft and land with the airplane		C.	Attach the student, exit, deploy the drogue, ensure inflation then release drogue
		В.	Exit and immediately pull reserve		D.	None of the above

66.	Desc	ribe	the correct cutaway procedure for a partial r	nalfu	nctic	on.
		A.	Deploy the reserve		C.	Strip the right, track and pull reserve
		В.	Remove RSL, cutaway, ensure separation, deploy reserve		D.	Cutaway, ensure separation, deploy reserve
67.			he correct procedure for a premature deploying drogue?	ment	of y	our main (horseshoe) in which you canno
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		В.	Partial Malfunction EP		D.	Third Party Entanglement EP
68.			the correct response to an inflated drogue ("lopy deployment attempt?	in tov	/") tł	nat does not release the main pin during a
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		В.	Partial Malfunction EP		D.	Third Party Entanglement EP
69.	Wha	t is t	he correct response to an uninflated drogue	right	afteı	drogue set?
		A.	Wait 6 seconds for drogue to inflate, if it does not, pull drogue release		C.	Wait 6 seconds for drogue to inflate, if it does not, Partial Malfunction EP
		В.	Wait 6 seconds for drogue to inflate, if it does not, Total Malfunction EP		D.	Dip a shoulder to get clean air into your burble
70.	Wha	t is t	he correct response to a collapsed drogue in	tow?	•	
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		В.	Partial Malfunction EP		D.	Third Party Entanglement EP
71.	Wha	t sho	ould you do if you accidentally pull the drogue	e rele	ase	handle before you deploy the drogue?
		A.	Expect the trap door effect		C.	Total Malfunction EP
		В.	Set the drogue		D.	Expect main canopy deployment
72.			ould you do if you can't extract the drogue fro after exit?	m its	pou	nch after your second attempt within 10
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		В.	Partial Malfunction EP		D.	Third Party Entanglement EP
73.	Wha	t sho	ould you do if the bridle wraps around you or	your	pas	senger and you can't clear it?
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		В.	Partial Malfunction EP		D.	Third Party Entanglement EP

			he correct response if the drogue does not re and both together? Conduct…	eleas	e an	ter pulling left drogue release, right drogue
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		B.	Partial Malfunction EP		D.	Third Party Entanglement EP
75. E	Expla	ain t	he correct way to pull your reserve or cutawa	y hai	ndle	s free of their Velcro pockets.
		A.	Peel upward, then pull downward		C.	Peel using both hands
		B.	Grab handle and punch down		D.	As fast as possible
76. V	What	wo	uld you do if your left shoulder was dislocated	d, an	d yo	ou needed to pull your reserve?
		A.	Pull the reserve handle using your right hand		C.	Nothing, the AAD will activate at 2000ft (600m)
		B.	Ask the student to pull the reserve handle for you		D.	Disconnect RSL and pull upwards using the RSL Lanyard to deploy the reserve
77. V	What	is t	he primary cause of tandem incidents that re	sult i	n a 1	fatality?
		A.	Poor gear maintenance		C.	Instructor error
		B.	Poor packing		D.	Canopy collisions
78. V	What	is t	he procedure for a videographer caught in yo	our dr	ogu	e bridle?
		A.	Total Malfunction EP		C.	Open Container with Drogue Issues EP
		B.	Partial Malfunction EP		D.	Third Party Entanglement EP
			anglement scenario where both jumpers have entangled parachutists do?	e no	goo	d canopy and are below 3000ft (900m), wha
		A.	Both jumpers deploy their reserves		C.	The higher jumper initiates cutaway first, followed by the lower jumper
		B.	The lower jumper initiates cutaway to increase separation		D.	Both jumpers disconnect RSLs and attempt to climb above the other
80. V	What	is t	he proper instructor action in a high wind land	ding	with	no ground assistance available?
		A.	Keep toggles in both hands and run with the canopy		C.	Immediately pull the cutaway handle while airborne
		B.	Collapse the canopy by releasing one toggle and pulling the other hand-over-hand. If unsuccessful, disconnect RSL and cutaway		D.	Disconnect the RSL and PLF with toggles in hand

81. What can be done, after opening the main canopy, to	o make the student's harness more comfortable?
☐ A. Loosen the chest strap	C. Have the student sit back in the harness
☐ B. Reposition the leg straps	D. All of the above
82. The Side Lateral Connections must be detached, loc	osened, and reattached where?
☐ A. Instructor side lateral connection rings	C. They should never be detached
☐ B. Onto the student harness	☐ D. There is no need to reattach anywhere
83. What is your decision altitude?	
A. 3000ft (1000m)	C. 2500ft (800m)
☐ B. 4000ft (1200m)	D. 3500ft (1100m)
84. What is your 'do not cutaway below' altitude?	
A. 2000ft (600m)	C. 2500ft (800m)
☐ B. 1500ft (500m)	D. 3000ft (1000m)

Sigma Exam Knowledge Certification:

The following statement must be written by the Sigma Tandem Instructor Candidate in the space below:

score of 100% on (Date) at (Location). I have reviewed this exam in its entirety with my UPT Sigma Tandem Examiner."		
Instructor Candidate Name:		
Candidate Signature:		
Date:		
Extra room for noted corrections:		