SECTION I

Factual questions (1 point each-10 points) No lengthy answers

1. Suppose that on a 100 item multiple choice test almost all students scored between 95 and 100 but a small scattering number of participants scored as low as 20.When plotted as a curve, the distribution will show what type of a curve?

2. If all participants in a group have the same score, what is the value of the standard deviation of the scores?

3. If a difference between two variables is declared to be statistically significant, what decision is being made about the Ho?

4. The researcher commits what type of an error when she/he fails to reject the Ho which incorrectly states that there is no difference between the population means?

THE FOLLOWING QUESTIONS ARE BASED ON THE TABLES BELOW (I &5 &VI). REFER TO SPECIFIC TABLE WHEN YOU ANSWER THE QUESTIONS.
Answers should be appropriate for the points

Question for Table 1

1 (a) what values for 'preferences' are listed for each measurement tool? Name each one

(b) Are the differences in 'preference' values statistically significant?

(c) What statistical test is used to test the data?

(d) What level of significance is used?

Question for Table 5 (10 points).

2. (a) what is the value of the Pearson' r' for the relationship between 'quadriceps strength' and the 'side step test? Explain clearly to justify your answer.

   (b) I s the 'r' value significant? Provide a rationale for your answer

Questions for Table VI

3. (a) How many groups were in the samples? and what are the groups

 (b) What t' ratio listed in the table had the largest 'p' value?

   (c) What does the result (answer to b) indicate?

   (d) Are the results statistically significant? Provide a rationale for your answer

   (e) Is this an parametric statistic or non parametric statistic?
Explain the difference between two

TABLE VI ■ Quality of Life Experienced by Women and Men (N = 171)

INSTRUMENTS AND COMPONENTS/SCALES	WOMEN (n = 74) MEAN (SD)	MEN (n = 97) MEAN (SD)	T VALUE (DF = 169)	P VALUE
SF-36 (0 = low QoL, 100 = high QoL)				
The Physical Component Score (PCS)*	48.5 (5.7)	51.1 (7.4)	−2.50	0.01
The Mental Component Score (MCS)†	48.2 (7.6)	51.4 (7.5)	−2.74	0.007
Physical Functioning (PF)	51.3 (23.7)	58.6 (24.1)	−1.98	0.049
Role-Physical (RP)	4.7 (14.1)	12.6 (23.7)	−2.54‡	0.007
Bodily Pain (BP)	57.6 (26.2)	62.5 (27.3)		0.24
General Health (GH)	51.1 (17.6)	54.2 (20.1)		0.30
Vitality (VT)	39.8 (19.0)	47.5 (23.2)	−2.31§	0.02
Social Functioning (SF)	61.0 (27.4)	66.1 (23.2)		0.19
Role-Emotional (RE)	27.5 (39.5)	37.8 (42.7)		0.11
Mental Health (MH)	62.3 (22.9)	72.7 (20.1)	−3.15	0.002
QLI (0 = low QoL, 30 = high QoL)				
Total Scale	20.1 (3.5)	21.2 (3.6)	−2.06	0.04
Health Functioning	17.9 (4.1)	19.3 (4.6)	−1.99	0.049
Socioeconomic	22.6 (3.6)	22.9 (3.7)		0.58
Psychologic/spiritual	19.6 (4.6)	21.1 (4.3)	−2.10	0.04
Family (N = 69 women and 94 men)	25.6 (4.7)	26.0 (3.9)		0.51

*PCS = PF, RP, BP, GH. †MCS = VT, SF, RE, MH. ‡df = 161, §df = 168. QoL = Quality of life; QLI, Quality-of-Life Index-Cardiac Version.
Kristofferzon, M., Löfmark, R., & Carlsson, M. (2005). Perceived coping, social support, and quality of life 1 month after myocardial infarction: A comparison between Swedish women and men. Heart & Lung, 34(1), p. 47.

TABLE 5 ■ Pearson's Product-Moment Correlation between Strength Indices and Function after Surgery

	n	Quadriceps Strength Index 60°/s	Hamstring Strength Index 60°/s	Quadriceps Strength Index 120°/s	Hamstring Strength Index 20°/s
Hop index	31	$r = 0.655^{**}$	$r = 0.247$	$r = 0.744^{**}$	$r = 0.431^{*}$
Sig. (two tailed)		$p = 0.000$	$p = 0.080$	$p = 0.000$	$p = 0.016$
Triple hop index	31	$r = 0.619^{**}$	$r = 0.342$	$r = 0.742^{**}$	$r = 0.420^{*}$
Sig. (two tailed)		$p = 0.000$	$p = 0.060$	$p = 0.000$	$p = 0.019$
Shuttle run test	31	$r = -0.498^{**}$	$r = -0.149$	$r = -0.457^{**}$	$r = -0.178$
Sig. (two tailed)		$p = 0.004$	$p = 0.424$	$p = 0.010$	$p = 0.338$
Side step test	31	$r = -0.528^{**}$	$r = -0.124$	$r = -0.519^{**}$	$r = 0.238^{*}$
Sig. (two tailed)		$p = 0.002$	$p = 0.506$	$p = 0.003$	$p = 0.198$
Carioca test	31	$r = -0.474^{*}$	$r = -0.047$	$r = -0.510^{**}$	$r = 0.267$
Sig. (two tailed)		$p = 0.000$	$p = 0.802$	$p = 0.003$	$p = 0.146$

*Correlation is significant at the 0.05 level (two tailed).
**Correlation is significant at the 0.01 level (two tailed).

Keays, S. L., Bullock-Saxton, J. E., Newcombe, P., & Keays, A. C. (2003). The relationship between knee strength and functional stability before and after anterior cruciate ligament reconstruction. *Journal of Orthopaedic Research, 21*(2), 235. Copyright © 2003, with permission from The Orthopaedic Research Society.

TABLE 1 ■ Overall Preference, Validity, and Reliability for Three Pediatric Pain Intensity Assessment Scales

	FACES	VAS	OUCHER	χ^2
Preference	56% (1)	18% (3)	26% (2)	24.08^{**} ($^{**}p \leq .0001$)
Validity	70% (1)	61% (2)	70% (1)	0.81
Adjusted reliability +	67% (2)	45% (3)	70% (1)	6.12^{*} ($^{*}p < .05$)

Luffy, R., & Grove, S. K. (2003). Examining the validity, reliability, and preference of three pediatric pain measurement tools in African American children. *Pediatric Nursing, 29*(1), 54–9.