UNIVERSITY OF JOHANNESBURG

UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
OCTOBER/NOVEMBER 2015

PROGRAMME:	BEd Hons
MODULE:	Research Theories and Methods
CODE:	RTM0017
TIME:	120 MIN
MARKS:	100
EXAMINERS:	Prof CPH Myburgh
MODERATOR:	Prof S Schulze (UNISA)

(This paper consists of 2 pages and Annexure 1)

INSTRUCTIONS:

1. Answer all questions

QUESTION 1

1.1 Distinguish between an inductive and deductive strategy in research. (6)
1.2 Name considerations which apply as criteria in the choice of a research topic. (6)
1.3 A researcher conducts research on the attitude of first year students towards their studies at the University of Johannesburg. The students, inter alia, have to complete a questionnaire. Is this field or laboratory research? Motivate your answer. (3)
[15]

QUESTION 2

2.1 Discuss the importance (role) of a thorough literature study in research. (7)
2.2 Name criteria you would apply when choosing sources in the library. (4)
[11]

QUESTION 3

3.1 Name FOUR research techniques that can be used to obtain research data. (4)
3.2 Describe a method to determine the reliability of an instrument. (5)
[9]

QUESTION 4

4.1 List four characteristics of a well formulated hypothesis. (4)
4.2 A teacher develops a programme to improve learner skills in the four main operations in Mathematics. She classifies the learners in connection with their skills by means of a scale before and after the programme has been conducted. The question arises whether the programme has made any difference.

(a) Formulate a null-hypothesis for this research. (3)
(b) Formulate a non-directed alternative hypothesis for this research. (3)
(c) Formulate a directed alternative hypothesis for this research. (3)
[13]

QUESTION 5

5.1 Explain why it is often necessary to make use of sampling in research. (3)
5.2 Use the attached table (Annexure 1) to draw a simple random sample of 8 from a population of 120. The population is numbered from 1 to 120. Start at the number 34095 (row 2, column 10). Write down the selected numbers. (4)
5.3 For the same population of 120 in 5.2, again start at 34095 and draw a systematic sample of 12 persons. Write down the selected numbers. (4)
5.4 You have been asked to conduct an opinion survey among sixty (60) students consisting of 40 male students and 20 female students. Determine how many male and how many female students will be included in a proportional stratified sample of 24. (4)
[15]

QUESTION 6

6.1 Discuss the advantages and disadvantages of a questionnaire. (6)
6.2 By using an example distinguish between:
(a) a nominal scale (3) and
(b) an ordinal scale. (3)
[12]

QUESTION 7

Discuss the assessment of individual questions in a questionnaire. Use applicable examples to illustrate. [10]

QUESTION 8

In a research report five phases or dimensions can be distinguished. Discuss the five phases, that is, what each one comprises of. [15]

Table I

RANDOM SAMPLE FIGURES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	10480	15011	01536	02011	81647	91646	69179	14194	62590	36207	20969	99570	91291	90700
2	22358	46573	25595	85393	30995	89198	27982	53402	93965	34095	52666	19174	39615	99505
3	24130	48360	22527	97265	76393	64809	15179	24830	49340	32081	30680	19655	63348	58629
4	42067	93093	06243	61680	07856	16376	39440	53537	71341	57004	00849	74917	97758	16379
5	37570	39975	81837	16656	06121	91782	60468	81305	49684	60672	14110	06927	10263	54613
6	77921	06907	11008	42751	27756	53498	18602	70659	90655	15053	21916	81825	44394	42880
7	99562	72905	56420	69994	98872	31016	71194	18738	44013	48840	63213	21069	10634	12952
8	96301	91977	05463	07972	18876	20922	94595	56869	69014	60045	16425	84903	42508	32307
9	89579	14342	63661	10281	17453	18103	57740	84378	25331	12566	58678	44947	05585	56941
10	85475	36857	43342	53988	53060	59533	38867	62300	08158	17983	16439	11458	18593	64952
11	28918	69578	88231	33276	70997	79936	56865	05859	90106	31595	01547	85590	91610	78188
12	63553	40961	48235	03427	49626	69445	18663	72695	52180	20847	12234	90511	33703	90322
13	09429	93969	52636	92737	88974	33488	36320	17617	30015	08272	84115	27156	30613	74952
14	10365	61129	87529	85689	48237	52267	67689	93394	01511	26358	85104	20285	29975	89868
15	07119	97336	71048	08178	77233	13916	47564	81056	97735	85977	29372	74461	28551	90707
16	51085	12765	51821	51259	77452	16308	80756	92144	49442	53900	70960	63990	75601	40719
17	02368	21382	52404	60268	89368	19885	55322	44819	01188	65255	64835	44919	05944	55157
18	01011	54092	33362	94904	31273	04146	18594	29852	71585	85030	51132	01915	92747	64951
19	52162	53916	56369	58586	23216	14513	83149	98736	23495	64350	94738	17752	35156	35749
20	07056	97628	33787	09998	42698	06691	76988	13602	51851	46104	88916	19509	25625	58104
21	48663	91245	85828	14346	09172	30168	90229	04734	59193	22178	30421	61666	99904	32812
22	54164	58492	22421	74103	47070	25306	76468	26384	58151	06646	21524	15227	96909	44592
23	32639	32363	05597	24200	13363	38005	94342	28728	35806	06912	17012	64161	18296	22851
24	29334	27001	87637	87308	58731	00256	45834	15398	46557	41135	10367	07684	36188	18510
25	02488	33062	28834	07351	19731	92420	60952	61280	50001	67658	32586	86679	50720	94953
26	81525	72295	04839	96423	24878	82651	66566	14778	76797	14780	13300	87074	79666	95725
27	29676	20591	68086	26432	46901	20849	89768	81536	86645	12659	92259	57102	80428	25280
28	00742	57392	39064	65432	64573	40027	32832	61362	98947	96067	64760	64584	96096	98253
29	05366	04213	25669	26422	44407	44048	37937	83904	45766	66134	75470	66520	34693	90449
30	91921	26418	64117	94305	26766	25940	39972	22209	71500	64568	91402	42416	07844	69618
31	00582	04711	87917	77341	42206	35126	74087	99547	81817	42607	43808	76655	62028	76630
32	00725	69884	62797	56170	86324	88072	76222	36086	84637	93161	76038	65855	77919	88006
33	69011	65797	95876	55283	18988	27354	26575	08625	40810	59920	29841	80150	12777	48501
34	25976	57948	29888	88504	67917	48708	18912	82271	65424	69774	33611	54262	85963	03547
35	09763	83473	73577	12908	30883	18317	28290	35797	05998	41688	34952	37888	38917	88050
36	91567	42595	27958	30134	04024	86385	29880	99730	55536	84855	29080	09250	79656	73211
37	17955	56349	90999	49127	20044	59931	06115	20542	18059	02008	73708	83517	36103	42791
38	46503	18584	18845	49618	92304	51038	20655	58727	28168	15475	56942	53389	20562	87338
39	92157	89634	94824	78171	84610	82834	09922	25417	44137	48413	25555	21246	35509	20468
40	14577	62765	35605	81263	39667	47358	56873	58307	61607	49518	89656	20103	77490	18062
41	96427	07523	33362	64270	01638	92477	88989	98420	04880	45585	46565	04102	46880	45709
42	34914	63976	88720	82765	34476	17032	87589	40836	32427	70002	70663	88863	77775	69348
43	70060	28277	39475	46473	23219	53416	94970	25832	69975	94884	19661	72828	00102	66794
44	53976	54914	06990	67245	68350	82948	11398	42878	80287	88267	47363	46634	06541	97809
45	76072	29515	40980	07391	58745	25774	22967	80059	39911	96189	41151	14222	60697	59583
46	90725	52210	83974	29992	65831	38857	50490	83765	55857	14361	31720	57375	56228	41546
47	64364	67412	33339	31926	14883	24413	59744	82351	97473	89286	35931	04110	23726	51900
48	08962	00358	31662	25388	61642	34072	81249	35648	56891	68352	48373	45578	78547	81788
49	95012	68379	83526	70765	10593	04542	76483	54328	02349	17247	28865	14777	62730	92277
50	15664	10493	20482	38391	91132	21999	59516	81652	27195	48223	46751	22923	32261	85653
51	16408	81899	01453	53381	79401	21438	83035	82350	36693	31238	59649	91754	72772	02338
52	18629	81953	05520	91962	04739	13092	97662	24822	94730	06496	35090	04822	86772	98289
53	73115	35101	47498	87637	99016	71060	88824	71013	18735	20286	20286	72924	35165	43040
54	57491	16703	23167	49323	45021	33132	12544	41035	80780	45393	45393	12515	98931	91202
55	30405	83946	23792	14422	15059	45799	22716	19792	09983	74353	74353	30429	70735	25499
56	16631	35006	85900	96275	32388	52390	16815	69298	82732	38480	38480	32523	41961	44437
57	96773	20206	42559	78985	05300	22164	24369	54224	35083	19687	19687	91491	69383	19746
58	38935	64202	14349	82674	66523	44133	00697	35552	35970	19124	19124	29686	03387	59846
59	31624	76384	17403	53363	44167	64486	64758	75366	76554	31601	31601	33072	60332	92325
60	78919	19474	23632	27889	47914	02584	37680	20801	72152	39339	39339	08930	85001	87820
61	03931	33309	57047	74211	53445	17361	62825	39908	06607	91284	91284	25570	38818	46920
62	74426	33278	43972	10119	89917	15665	52872	73823	73144	88662	88662	74492	51805	99378
63	09066	00903	20795	95452	92648	45454	09552	88815	16553	51125	51125	97596	16296	66092
64	42238	12426	87025	14267	20979	04508	64535	31355	86064	29472	29472	05974	52468	16834
65	16153	08002	26504	41744	81959	65642	74240	56302	00033	67107	67107	70625	28725	34191
66	21457	40742	29820	96783	29400	21840	15035	34537	33310	06116	06116	15957	16572	06004
67	21581	57802	02050	89728	17937	37621	47075	42080	97403	48626	48626	43805	33386	21597
68	55612	78095	83197	33732	05810	24813	86902	60397	16489	03264	03264	42786	05269	92532
69	44657	66999	99324	51281	84463	60563	79312	93454	68876	25471	25471	25650	12682	73572
70	91340	64979	46949	81973	37949	61023	43997	15263	80644	43942	43942	71795	99533	50501
71	91227	21199	31935	27022	84067	05462	35216	14486	29891	58607	58607	14951	91696	85065