THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF EDUCATION

BACHELOR OF EDUCATION HONOURS IN NATURAL SCIENCES

DEGREE PROGRAMME

LEVEL - 06

FINAL EXAMINATION 2021/2022

STU6505– MEASUREMENT & EVALUATION IN EDUCATION

DURATION – THREE (03) HOURS

Date: 26.11.2022 Time: 9.30 a.m. – 12.30 p.m.

Answer All Questions in Part I and any three (03) questions from Part II. Calculators could be used for basic mathematical calculations.

PART - I

01. Define the concept of "Educational Measurement".

02. Differentiate "Formative and Summative Evaluations" by citing one example for each.

03. Briefly explain **four (04)** uses of Educational Evaluation in the teaching learning process of Science/Mathematics.

04. State **four (04)** factors that affect Psychomotor Development of a student.

05. i. What are **three (03)** measures that indicate central tendency?

    ii. Briefly explain **one (01)** of them.

06. i. What is meant by a norm table?

    ii. Explain one of the norm tables, citing a suitable example.

07. Briefly explain any **three (03)** areas subject to measurement in the cognitive domain.

08. Briefly describe the importance of graphical representation of a frequency distribution.

(5 x 8 = 40 marks)

PART - II

09. i. Briefly explain the features of "Objective Type Tests".

(04 marks)

ii. Discuss the advantages and disadvantages of objective type tests by citing suitable examples.

(06 marks)

iii. Provide **one (01)** example for each objective type test item given below based on the subject you teach.

- Supply Type
- Choice Type
- Multiple Choice Type
- Matching Type

(06 marks)

iv. "The objective type tests were introduced to overcome the weaknesses of open and structure essay tests". Do you agree with above statement? Justify your answer with reasons.

(04 marks)

10. Followings are the marks obtained by 40 students in a class at an year end examination for the subject Mathematics.

52	40	27	34	49	46	45	58
82	66	54	42	49	72	52	42
37	68	40	55	46	34	69	83
46	29	20	18	76	89	18	22
66	48	47	66	47	73	49	76

i. Prepare a frequency distribution for the above set of marks taking (40-49) as one of the class intervals.

(03 marks)

ii. Calculate the mode and median of this distribution of marks.

(05 marks)

iii. Taking assumed mean to be in the class interval (40-49), calculate the arithmetic mean.

(06 marks)

iv. Calculate the standard deviation of this distribution.

(06 marks)

11. i. State **three (03)** main characteristics of a normal probability curve.

(03 marks)

Marks obtained by 1500 students in a Science Test are distributed according to a normal probability curve. The arithmetic mean and the standard deviation of these marks are 45 and 10 respective.

ii. Find the number of students who scored between 30-60 marks.

(05 marks)

iii. If the best 10% of the students are expected to award "A" grades, what is the minimum mark required for an "A" grade?

(06 marks)

iv. If the minimum mark required for a pass is 40, how many students would have passed this test?

(06 marks)

12. i. "What is the importance of correlation?" Explain by citing **two (02)** examples.

(05 marks)

ii. Marks obtained by 10 students for the subjects Mathematics and Music are given below.

	A	B	C	D	E	F	G	H	I	J
Mathematics	35	70	51	52	78	60	66	45	70	32
Music	30	70	46	51	80	61	61	43	61	42

a. Calculate the Rank Difference Correlation Coefficient between marks of these two subjects.

(12 marks)

b. Write your comments on the results.

(03 marks)

13. i. What is meant by "Affective Development"?

(03 marks)

ii. Briefly explain the importance of measuring attitudes citing **two (02)** examples.

(05 marks)

iii. Describe **two (02)** techniques of attitude measurement with appropriate examples.

(06 marks)

iv. Briefly explain why it is difficult the evaluation attitudes, citing examples.

(06 marks)

14. i. What is meant by a "Table of Specifications"?

(02 marks)

ii. Briefly explain the steps that should be followed in preparing a table of specifications.

(06 marks)

iii. Prepare a model table of specifications for a term test paper related to the subject Mathematics or Science.

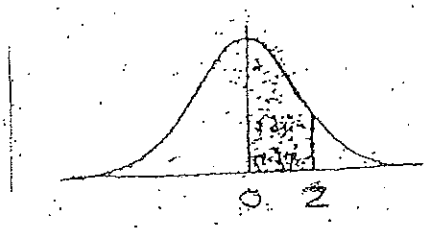
(06 marks)

iv. Explain **two (02)** advantages of using a table of specifications in setting a test paper, citing examples.

(06 marks)

ශ්‍රී ලංකා විවෘත විශ්වවිද්‍යාලය
இலங்கை திறந்த பல்கலைக்கழகம்
The open university of Sri Lanka

සම්මත ප්‍රමිත වක්‍රය යට ක්ෂේත්‍රවල - (0 සිට Z දක්වා)
நியம வளையி இன் பரப்பளவுகள் - 0 முதல் Z வரை
Areas Under the Standard Normal Curve – from 0 to z



Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3.1	0.4990	0.4991	0.4991	0.4991	0.4992	0.4992	0.4992	0.4992	0.4993	0.4993
3.2	0.4993	0.4993	0.4994	0.4994	0.4994	0.4994	0.4994	0.4995	0.4995	0.4995
3.3	0.4995	0.4995	0.4995	0.4996	0.4996	0.4996	0.4996	0.4996	0.4996	0.4997
3.4	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4998
3.5	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998
3.6	0.4998	0.4998	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.7	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.8	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.9	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000