L-2/T-1/URP **Date : 03/09/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 B. Urp. Examinations 2017-2018

Sub : **PLAN 211** (Urban Planning Principles)

Full Marks : 210 Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

There are **FOUR** questions in this Section. Answer any **THREE**.

1. (a) Briefly explain the characteristics of successful town planning according to Keeble. **(5)**

   (b) Discuss the functions of different types of roads in the context of Bangladesh. **(12)**

   (c) Compare between- **(3×6=18)**

   (i) Intelligent city and digital city

   (ii) Megalopolis and conurbation

   (iii) Ribbon development and urban sprawl

2. (a) Suppose, you have been working as an urban planner. Explain the obstacles you might face towards better urban planning. How are you going to overcome those obstacles? **(7+8=15)**

   (b) Suppose you have been appointed to develop a land use plan. Briefly discuss the basic principles of land use planning you would follow for developing a land use plan for DNCC area. **(20)**

3. (a) Give a brief description of the lungs of Dhaka city. **(5)**

   (b) Explain the three sets of land use values in the context of Dhaka. **(6)**

   (c) "Each neighborhood should be planned as a distinct physical unit, which is self-contained in respect of its local need." – Do you agree with the statement? Justify your answer. **(5)**

   (d) Briefly discuss the means to control location of industries. **(12)**

   (e) "The size of a neighborhood is governed by two main factors." – What are these factors? Explain with examples. **(2+5=7)**

4. (a) "The residential areas must be spatially related to each other, to the regional network of employment and commercial centers, and to the open space system." – Do you agree with the statement? Justify your answer. **(5)**

   (b) Give a brief description of the town centres of Dhaka city. Explain the principles you would follow for designing the town centres of Dhaka city. **(5+15=20)**

   (c) Compare between- **(5×2=10)**

   (i) Net residential density and gross residential density.

   (ii) Occupancy density and occupancy rate.

Contd P/2

PLAN 211

SECTION – B

There are **FOUR** questions in this Section. Answer any **THREE** questions.

5. (a) According to Paul Knox, the profession of planning emerges out of a series of crisis and peoples' responses to them – explain with examples. **(10)**

   (b) Compare and discuss concentric zone theory and sector theory. Do you think any one of these theories is applicable to Dhaka – explain your statement? **(14+6=20)**

   (c) Write a short note on "City Beautiful Movement." **(5)**

6. (a) What are the different types of commercial centers – discuss with examples. **(8)**

   (b) A number of issues needs to be considered during the site evaluation phase for a shopping facility, what are these issues? Wrong choice of a site may create traffic congestion and other problems – explain with an example from Dhaka. **(12+6=18)**

   (c) World Heritage Trust has fixed six criteria which makes a site/structure worthy of conservation – Discuss these criteria with examples. **(9)**

7. (a) According to the extent of utility and services rendered by open space, it is broadly grouped into three classes –give a brief description of these classes. **(21)**

   (b) How the urbanization trend of Bangladesh differs from developed countries? **(14)**

8. (a) Distinguish between the terms "Conservation" and "Preservation". **(6)**

   (b) With an example explain that restoration is the toughest form of conservation. **(6)**

   (c) Dhaka and few other major cities accommodate the large share of urban population of Bangladesh – what are the consequences of such trend of urbanization? **(11)**

   (d) Write short notes on the following topics: **(4×3=12)**

   (i) Adaptive use

   (ii) Economic benefit of open space

   (iii) Settlement House Movement.

L-2/T-1/BURP **Date : 12/09/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 B. Sc. Engineering Examinations 2017-2018

Sub : **CE 209** (Construction Materials and Civil Engineering Structures)

Full Marks : 140 Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

There are **FOUR** questions in this Section. Answer any **THREE**.

1. (a) Define the following properties of soil: **(4×2=8)**

   (i) Plastic limit

   (ii) Shrinkage limit

   (iii) Plasticity index

   (iv) Liquidity index

   (b) Write down the differences between the following terms: **(4×3=12)**

   (i) False and flash setting of cement

   (ii) Rapid hardening and quick setting cement

   (iii) Intermittent and continuous kiln for brick burning

   (iv) Segregation and bleeding of concrete

   (c) How does the $\frac{Water}{Cement}$ ratio affect the properties of concrete? **(3⅓)**

2. (a) Provide a comparative analysis of the hydration properties of different mineral constituents of cement such as C_3A, C_3S, C_2S and C_4AF. **(12)**

   (b) Identify three primary factors responsible for the physical properties of steel. Briefly describe their impact on the desirable properties of steel. **(3+5=8)**

   (c) What is the difference between thermo plastic and thermo-setting plastic? **(3⅓)**

3. (a) Briefly describe the different types of field and laboratory tests typically performed for sand. **(8)**

   (b) Draw the cross-section of a Hoffman's kiln and identify the functions of different chambers at a given instant. Briefly describe the operations of a Hoffman's kiln for brick burning. **(4+5=9)**

   (c) Identify three harmful ingredients of brick and write down their detrimental effect on the properties of brick. **(6⅓)**

4. (a) What are some common forms of chemical attacks on concrete? What precautionary measures can be taken to reduce the susceptibility of concrete to these attacks? **(4+8=12)**

Contd P/2

CE 209(BURP)

Contd ... Q. No. 4

(b) What is curing of concrete? How does the curing method vary for concrete structures with small and large surface areas? **(2+6=8)**

(c) Identify some typical uses of fiber glass reinforced plastic (FRP) in civil engineering construction. **(3 ⅓)**

SECTION – B

There are **FOUR** questions in this Section. Answer any **THREE** questions.

5. (a) Write short notes on "Levee & Reservoir". **(6)**

   (b) Describe different types of foundation with neat sketches. **(6)**

   (c) Differentiate between flexible and rigid pavement. **(6)**

   (d) Describe with neat sketches the basic structural elements of rigid pavement. **(5 ⅓)**

6. (a) Write short notes on the following topics: **(3×4=12)**

   (i) Sub-surface irrigation

   (ii) Preservation of timber

   (iii) Evapotranspiration

   (iv) Effective rainfall

   (b) Briefly describe different types of bridges based on structural form. **(5 ⅓)**

   (c) Write down the characteristics and qualities of good building stones. **(6)**

7. (a) Draw a typical layout of an irrigation canal network. **(6)**

   (b) Briefly describe the necessity of irrigation in the context of Bangladesh. **(6)**

   (c) Write down the factors that govern the sharing of surface water and ground water during irrigation in the context of Bangladesh. **(5 ⅓)**

   (d) Briefly describe the geological classification of stones. **(6)**

8. (a) Describe the 'knote' and 'radial shakes' types of defects of trees. **(5 ⅓)**

   (b) Draw a neat sketch of timber section and show different parts of it. **(6)**

   (c) Differentiate between: **(3×4=12)**

   (i) Heart wood and sap wood.

   (ii) Natural seasoning and artificial seasoning.

   (iii) Wild flooding and border-strip flooding.

L-2/T-1/URP **Date : 18/09/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 BURP Examinations 2017-2018

Sub : **PLAN 291** (Statistics for Planners I)

Full Marks : 210 Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

There are **FOUR** questions in this section. Answer any **THREE**.

1. (a) What are the three possible cases to consider while constructing a confidence interval for the population mean given that the population standard deviation is not known? **(10)**

   (b) An on-demand bicycle sharing service has recently been launched. 64 randomly selected university students who are potential users of this sharing service were asked how much they would like to be changed for every five minutes. The sample produced a mean of BDT 4.50 and a standard deviation of BDT 1.75 for such service. Determine a 95% confidence interval for the corresponding population mean. **(13)**

   (c) A researcher wants to estimate the proportion of city people who visit neighbourhood parks at least once a week. She wants this estimate to be within 0.01 of the population proportion for a 90% confidence interval. What is the most conservative estimate of the sample size that will limit the margin of error to within 0.01 of the population proportion? **(12)**

2. (a) On average, 20% of the cars passing through a school zone exceed the speed limit by more than 10 mph. Using the Poisson formula, find the probability that in a random sample of 100 cars passing through this school, exactly 25 will exceed the speed limit by more than 10 mph. **(10)**

   (b) A review of emergency room records at Paikgacha Upazilla Health Complex was performed to determine the probability distribution of the number of patients entering the emergency room during a one-hour period. The following table (Table 01) lists the distribution. **(16)**

   Table 01: Probability Distribution of Number of Patients During a One-Hour Period

Patients per hour	0	1	2	3	4	5	6
Probability	0.2725	0.3543	0.2303	0.0998	0.0324	0.0084	0.0023

   Determine the probability that the number of patients entering the emergency room during a randomly selected one-hour period is

   (i) 2 or more (ii) Exactly 5

   (iii) Fewer than 3 (iv) At most 1

   (c) A recent study estimated that air pollution contributed to around 14% of all new diabetes cases globally in 2016. What is the probability that in a random sample of 1500 new diabetes cases in 2016, less than 10% are caused by air pollution? 09 **(10)**

Contd P/2

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3. (a) According to a recent study, nine out of ten people want better landscape design in neighbourhood parks of Dhaka City. If this result is based on a sample of 1000 people, what is the point estimate of the corresponding population proportion? **(5)**

   (b) A sample of 1,500 visitors to a theme park revealed that the mean amount visitors spend per person per day is BDT 1,035. The standard deviation of the amounts spent person per day by all visitors to this park is BDT 355. Construct 90%, 95% and 99% confidence interval for the population mean amount spent per person per day in this theme park. **(25)**

   (c) In a population of 5000 subjects, 800 possess a certain characteristics. A sample of 150 subjects selected from this population contains 20 subjects who possess the same characteristics. Find the sampling error. **(5)**

4. (a) Assume that the number of all school trips generated from different wards of Dhaka North City Corporation are normally distributed with a mean of 118,970 per day and a standard deviation of 4,572 per day. Find the probability that the mean number of school trips generated from a random sample of 25 wards of Dhaka North City Corporation will be between 110,000 and 125,000. **(15)**

   (b) The living spaces of all homes in a city have a mean of 2,300 square feet and a standard deviation of 500 square feet. Find the mean and the standard deviation of the sampling distribution of mean living space for a random sample of 25 homes selected from this city. **(8)**

   (c) Few years back, BUET conducted an in-house study to capture the opinion of the students on the current evaluation process. As part of the study design, some members of the study-committee came up with the idea of applying random sampling method. Some others opined for stratified sampling. However, no one suggested for cluster sampling. **(12)**

   How do you evaluate these suggestion? Given the context, briefly explain, if you have any other suggestion the could potentially be more representative of the population.

SECTION – B

There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) Suppose, a curious mind wanted to measure the relative variation in incomes of planning graduated compared to those of MBA graduates. He/she calculated the mean salary of a group of 100 planning graduates to be Tk. 100,000 and the mean of a group of 300 MBA graduates to be Tk. 240,000. He/she also knew that the standard deviation of the planning salaries was Tk. 10,000 and the standard deviation of the MBA salaries is Tk. 12,000. What is the appropriate statistic to measure relative variation between the two different groups? What conclusion he/she could down based on the given context? **(5+15=20)**

Contd P/3

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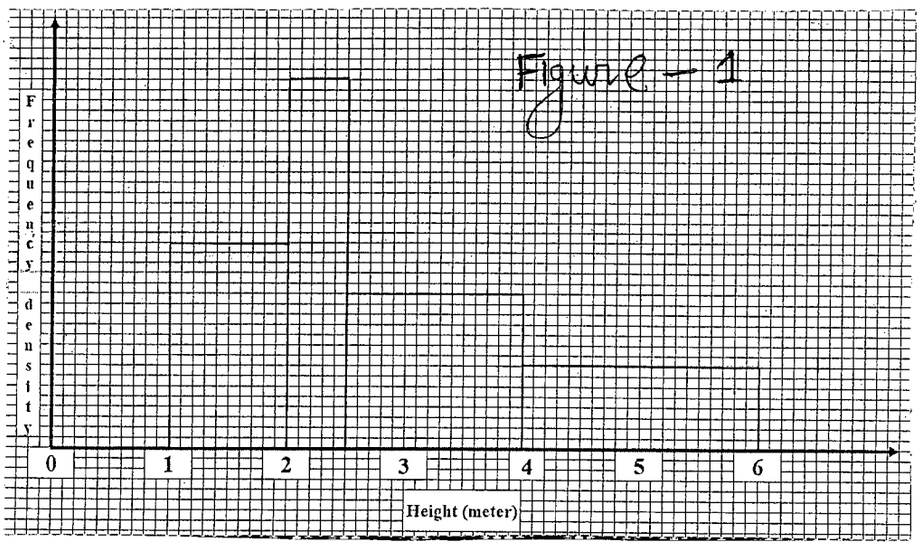
Contd ... Q. No. 5

(b) The following histogram (Figure -1) gives information about the height of 540 plants. Estimate the number of plants with a height greater than 3 meters. **(10)**

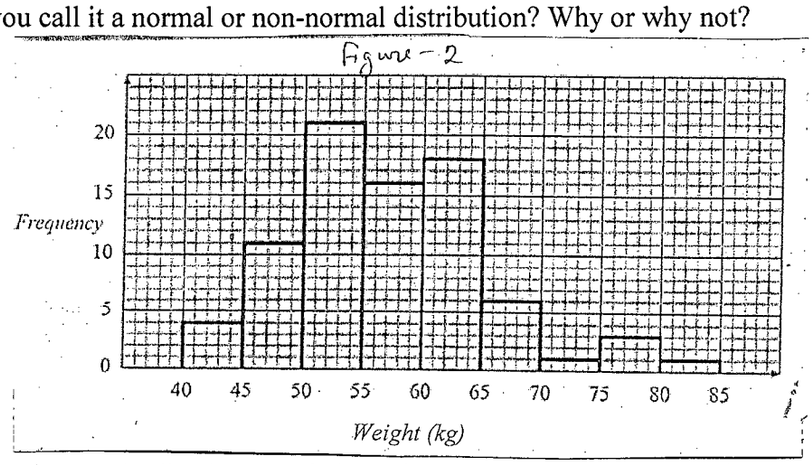


(c) Mention issues needed to take into consideration while evaluating statistical claims. **(5)**

6. (a) Estimate the central tendencies from the histogram provided in Figure 2. **(15)**

(b) Estimate the 3rd quartile and 33rd percentile from the distribution and interpret the corresponding z- scores. **(8+7=15)**

(c) Would you call it a normal or non-normal distribution? Why or why not? **(5)**



7. (a) How does the standardized score of dispersion help in statistical analysis? **(10)**

(b) $S_n = 3n + 3$, series S is defined for all integers n such that $0 < n < 10{,}000$. What is the mean and median of the series S? **(10)**

(c) A set of integers consists of 2, 5, 5, 7, 11, 12, and x. If x increases by 1, the median of the set stays unchanged. However, if x decreases by 1, the median of the set also decreases by 1. What is the value of x? **(10)**

(d) Distinguish between discrete and continuous variable. **(5)**

Contd P/4

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8. (a) The average of seven numbers is 12. The average of the four smallest numbers in this set is 8, while the average of the four greatest number in this set is 20. How much greater is the sum of the three greatest numbers than the sum of the three smallest numbers? **(15)**

(b) A set of seven integers has a range of 2, an average of 3, and a mode of 3. What are the third and fifth number in the set when the numbers are arranged in ascending order? **(10)**

(c) Sample standard deviation is always greater than the population standard, deviation - Do you agree? If yes, why? If you don't, why not? **(5)**

(d) Neatly draw schematic diagram of the followings. **(5)**

(i) Right skewed distribution

(ii) Left skewed distribution

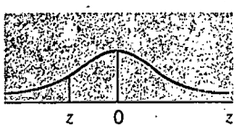
(iii) Leptokurtic distribution

(iv) Mesokurtic distribution

(v) Platykurtic distribution

Standard Normal Distribution Table

The entries in this table give the cumulative area under the standard normal curve to the left of z with the values of z equal to 0 or negative.



z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
−3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
−3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003
−3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
−3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
−3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010	.0010
−2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014	.0014
−2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
−2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027	.0026
−2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
−2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
−2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
−2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
−2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
−2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
−2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
−1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
−1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
−1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
−1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
−1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
−1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
−1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
−1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
−1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
−1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
−0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
−0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
−0.7	.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
−0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
−0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
−0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
−0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
−0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
−0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641

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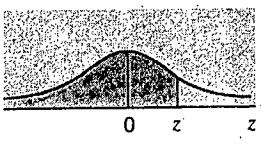
Standard Normal Distribution Table (continued)

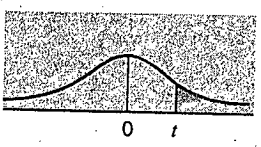
The entries in this table give the cumulative area under the standard normal curve to the left of z with the values of z equal to 0 or positive.



z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
0.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
0.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
0.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
0.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
0.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
0.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

The t Distribution Table

The entries in this table give the critical values of t for the specified number of degrees of freedom and areas in the right tail.



	Area in the Right Tail Under the t Distribution Curve					
df	.10	.05	.025	.01	.005	.001
1	3.078	6.314	12.706	31.821	63.657	318.309
2	1.886	2.920	4.303	6.965	9.925	22.327
3	1.638	2.353	3.182	4.541	5.841	10.215
4	1.533	2.132	2.776	3.747	4.604	7.173
5	1.476	2.015	2.571	3.365	4.032	5.893
6	1.440	1.943	2.447	3.143	3.707	5.208
7	1.415	1.895	2.365	2.998	3.499	4.785
8	1.397	1.860	2.306	2.896	3.355	4.501
9	1.383	1.833	2.262	2.821	3.250	4.297
10	1.372	1.812	2.228	2.764	3.169	4.144
11	1.363	1.796	2.201	2.718	3.106	4.025
12	1.356	1.782	2.179	2.681	3.055	3.930
13	1.350	1.771	2.160	2.650	3.012	3.852
14	1.345	1.761	2.145	2.624	2.977	3.787
15	1.341	1.753	2.131	2.602	2.947	3.733
16	1.337	1.746	2.120	2.583	2.921	3.686
17	1.333	1.740	2.110	2.567	2.898	3.646
18	1.330	1.734	2.101	2.552	2.878	3.610
19	1.328	1.729	2.093	2.539	2.861	3.579
20	1.325	1.725	2.086	2.528	2.845	3.552
21	1.323	1.721	2.080	2.518	2.831	3.527
22	1.321	1.717	2.074	2.508	2.819	3.505
23	1.319	1.714	2.069	2.500	2.807	3.485
24	1.318	1.711	2.064	2.492	2.797	3.467
25	1.316	1.708	2.060	2.485	2.787	3.450
26	1.315	1.706	2.056	2.479	2.779	3.435
27	1.314	1.703	2.052	2.473	2.771	3.421
28	1.313	1.701	2.048	2.467	2.763	3.408
29	1.311	1.699	2.045	2.462	2.756	3.396
30	1.310	1.697	2.042	2.457	2.750	3.385
31	1.309	1.696	2.040	2.453	2.744	3.375
32	1.309	1.694	2.037	2.449	2.738	3.365
33	1.308	1.692	2.035	2.445	2.733	3.356
34	1.307	1.691	2.032	2.441	2.728	3.348
35	1.306	1.690	2.030	2.438	2.724	3.340

The t Distribution Table (continued)

	Area in the Right Tail Under the t Distribution Curve					
df	.10	.05	.025	.01	.005	.001
36	1.306	1.688	2.028	2.434	2.719	3.333
37	1.305	1.687	2.026	2.431	2.715	3.326
38	1.304	1.686	2.024	2.429	2.712	3.319
39	1.304	1.685	2.023	2.426	2.708	3.313
40	1.303	1.684	2.021	2.423	2.704	3.307
41	1.303	1.683	2.020	2.421	2.701	3.301
42	1.302	1.682	2.018	2.418	2.698	3.296
43	1.302	1.681	2.017	2.416	2.695	3.291
44	1.301	1.680	2.015	2.414	2.692	3.286
45	1.301	1.679	2.014	2.412	2.690	3.281
46	1.300	1.679	2.013	2.410	2.687	3.277
47	1.300	1.678	2.012	2.408	2.685	3.273
48	1.299	1.677	2.011	2.407	2.682	3.269
49	1.299	1.677	2.010	2.405	2.680	3.265
50	1.299	1.676	2.009	2.403	2.678	3.261
51	1.298	1.675	2.008	2.402	2.676	3.258
52	1.298	1.675	2.007	2.400	2.674	3.255
53	1.298	1.674	2.006	2.399	2.672	3.251
54	1.297	1.674	2.005	2.397	2.670	3.248
55	1.297	1.673	2.004	2.396	2.668	3.245
56	1.297	1.673	2.003	2.395	2.667	3.242
57	1.297	1.672	2.002	2.394	2.665	3.239
58	1.296	1.672	2.002	2.392	2.663	3.237
59	1.296	1.671	2.001	2.391	2.662	3.234
60	1.296	1.671	2.000	2.390	2.660	3.232
61	1.296	1.670	2.000	2.389	2.659	3.229
62	1.295	1.670	1.999	2.388	2.657	3.227
63	1.295	1.669	1.998	2.387	2.656	3.225
64	1.295	1.669	1.998	2.386	2.655	3.223
65	1.295	1.669	1.997	2.385	2.654	3.220
66	1.295	1.668	1.997	2.384	2.652	3.218
67	1.294	1.668	1.996	2.383	2.651	3.216
68	1.294	1.668	1.995	2.382	2.650	3.214
69	1.294	1.667	1.995	2.382	2.649	3.213
70	1.294	1.667	1.994	2.381	2.648	3.211
71	1.294	1.667	1.994	2.380	2.647	3.209
72	1.293	1.666	1.993	2.379	2.646	3.207
73	1.293	1.666	1.993	2.379	2.645	3.206
74	1.293	1.666	1.993	2.378	2.644	3.204
75	1.293	1.665	1.992	2.377	2.643	3.202
∞	1.282	1.645	1.960	2.326	2.576	3.090

L-2/T-1/URP **Date : 24/09/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 BURP Examinations 2017-2018

Sub : **PLAN 217** (Site and Area Planning)

Full Marks : 210 Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

There are **FOUR** questions in this Section. Answer any **THREE**.

1. (a) Explain in brief the basic concept and social implications of house grouping. **(4+6=10)**

   (b) What kind of impacts neighborhood traffic calming measures can have on the movement of pedestrians and cyclists? Explain with examples in the context of Bangladesh. **(15)**

   (c) Between cesspools and septic tanks, which one is preferable for residential sanitary sewerage system? Explain your answer. **(10)**

2. (a) 'Detached houses are preferable to semi-detached houses in sub division planning' – do you agree with this statement? Give reasons in support of your answer. **(4+3+3=10)**

   (b) Explain with necessary diagrams, what do you understand by the following terms: (i) Principal building and Accessory structure (ii) Neighborhood (iii) Ground coverage. **(6+9=15)**

   (c) Assume that you have been given an area for land subdivision planning. You can divide the land for plots having width of 60 feet and 80 feet. Determine what will be the minimum and maximum depth of plots in that land and show in sketches. **(6+8=14)**

   (d) Between gridiron and loop streets, which one has more practical advantage and why? **(5)**

3. (a) You have been assigned with the task of land subdivision planning for a neighborhood. The land has irregular topology and steep slope. You are required to address the concern of traffic safety in the neighborhood. Consider the following cases: (i) You are required to maximize the number of plots in the neighborhood (ii) You do not have any obligation for the number of plots but need to ensure privacy to the dwellings.

   Explain with neat sketches which subdivision layout pattern(s) would you adopt in these cases. What are the advantages and disadvantages of your chosen layout patterns(s)? Explain in brief. **(17+6+6=29)**

   (b) What are the advantages of common courtyard in group housing? **(6)**

4. (a) You are working on a residential land development project where you need to develop a sewerage system plan. What will be your first step to handle the sewerage problem and Why? **(4)**

   (b) Write down the advantages and disadvantages of cul-de-sacs. **(4+4=8)**

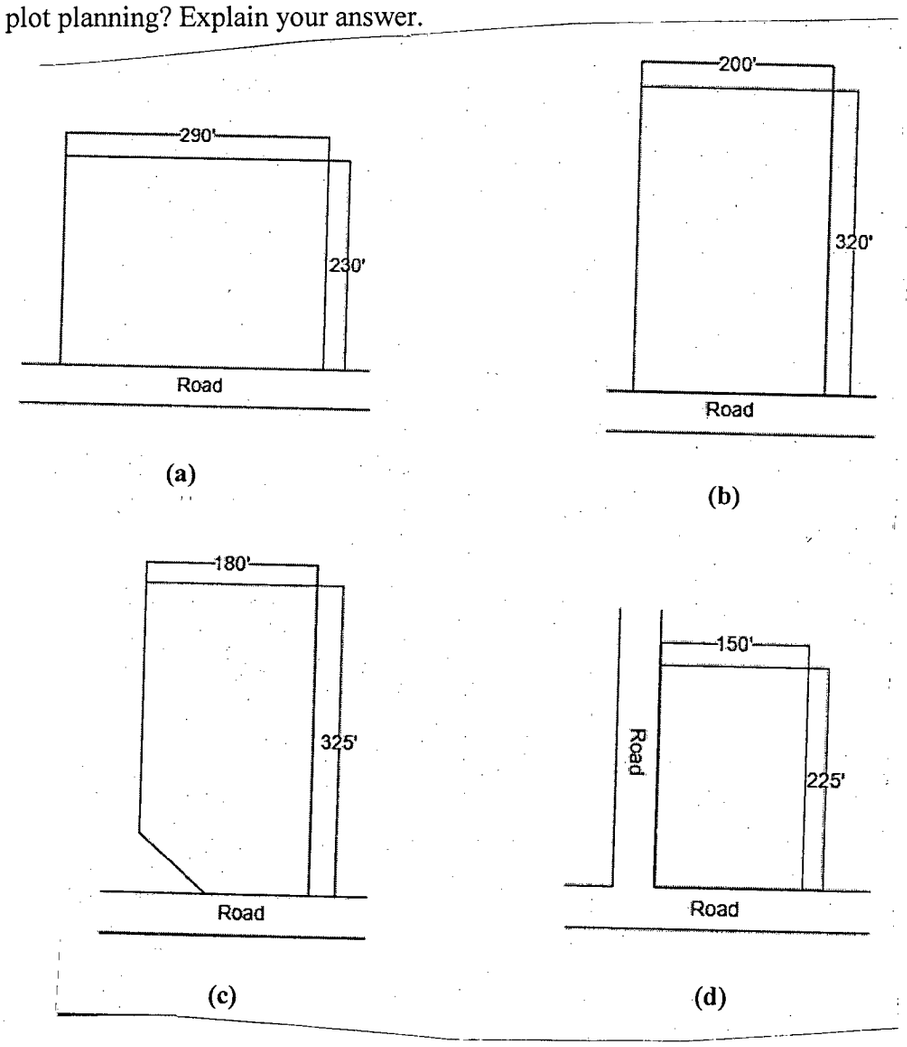
   (c) Between individual wells and community system. Which one would you prefer for residential water supply system and why? **(5)**

Contd P/2

PLAN 217

Contd ... Q. No. 4

(d) Take a look at the diagrams below. Which one would you prefer the most from the subdivision plot planning? Explain your answer. **(13)**



(e) Explain in brief, with examples the advantages of FAR?

SECTION – B

There are **FOUR** questions in this Section. Answer any **THREE** questions.

5. (a) Define site planning. State the steps followed in site planning process. **(5+10)**

   (b) " Analysis of a site shall consider all existing features in order to determine those inherent qualities that give a site its personality" – Explain the statement. **(20)**

6. (a) Briefly discuss the air movement in different types of site. **(20)**

   (b) Give a short description on heat exchange of a site. **(15)**

7. (a) What do you understand by 'cut' and 'fill'? Explain with neat diagram. **(15)**

   (b) Illustrate the principles of site planning for an industrial district.

8. Write short notes on the following topics: **(35)**

   (a) Shadow (b) Noise control measures (c) Landscaping of a site.

L-2/T-1/URP **Date : 30/09/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 BURP Examinations 2017-2018

Sub : **HUM 179** (Sociology)

Full Marks : 210 Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

There are **FOUR** questions in this Section. Answer any **THREE**.

1. (a) Why is social research different from scientific research? Describe the stpes of scientific research that are usually followed by social scientists. **(20)**

   (b) What do you mean by sociological imagination? Illustrate the steps of sociological imagination with a suitable example. **(15)**

2. (a) Explain cultural lag and cultural hegemony. **(15)**

   (b) Define socialization. Discuss the agents of socialization for the members of a society. **(10)**

   (c) Describe the social class system existing in your society. **(10)**

3. (a) What do you mean by electronic communication? Discuss the advantages and disadvantages of social media in Bangladesh. **(15)**

   (b) How does globalization promote cultural diffusion and cultural innovation? **(10)**

   (c) What do you mean by absolute poverty? Describe some important measures that should be taken to reduce poverty from Dhaka city. **(10)**

4. Write short notes on any THREE of the following: **(35)**

   (a) Modernization (b) Horizontal social mobility (c) Role sign (d) Role set

SECTION – B

There are **FOUR** questions in this Section. Answer any **THREE**.

5. (a) Define human ecology and environment. What do you know about man-made environment? **(8)**

   (b) How can we save the environment and make it greener? **(12)**

   (c) Briefly discuss the negative impact of global warming. **(15)**

6. (a) Write down the characteristics of pre-industrial cities, industrial cities and post-industrial cities. **(12)**

Contd P/2

HUM 179
Contd ... Q. No. 6

(b) 'Private property is the terra firma of capitalism.' – Explain this statement on the basis of the nature of capitalism. **(12)**

(c) What are the factors that influence a city's growth? Discuss in detail. **(11)**

7. (a) What do you understand by social change? Briefly describe the sources of social change. **(15)**

(b) Define deviance and juvenile delinquency. What are the causes of juvenile delinquency? Discuss. **(20)**

8. Write short note on any THREE of the following: **(35)**

(a) Positive and negative consequences of capitalism

(b) Types of crime

(c) Refuse, reduce, reuse, recycle (4R's)

(d) Social consequences of industrial revolution.
