KATHMANDU UNIVERSITY
End Semester Examination
August, 2019

Mark Scored:

Level : B.Sc./B.Pharm./B.Tech.
Year : I

Course : MATH 102
Semester: II

Exam Roll No. :

Time: 30 mins.

F.M. : 20

Registration No.:

Date AUG 2 0 2019

SECTION "A"
[10Q × 1 = 10 marks]

Fill in the blank space (s) by most appropriate word (s) or symbol (s).

1. The listing of all possible values of a random variable and their corresponding probabilities is .....

2. If three coins are tossed simultaneously, than the probability of getting at least two heads, is .....

3. If X is a discrete random variable and $f(x)$ is the probability of X, then the expected value of this random variable is equal to .....

4. If $X \sim N(3,1)$, then the probability density function for X is .....

5. The coefficient of skewness of a normal distribution is .....

6. The $100(1-\alpha)\%$ two-sided confidence interval for difference in population means, $(\mu_1 - \mu_2)$ of two normal populations $X_1 \sim N(\mu_1, {\sigma_1}^2)$ and $X_2 \sim N(\mu_2, {\sigma_2}^2)$ when population variances are equal and unknown is given by .....

7. The range of the correlation determination is .....

8. A computer manufacturer wants to establish that the average time to set up a new desktop computer is greater than 2 hours. The null hypothesis of the corresponding test is: .....

9. A quantity resulting from an experiment that, by chance, can assume different values is called .....

10. In the regression equation $Y = a + bX$, b is .....

SECTION "B"
[10Q. × 1 = 10 marks]

Fill in the blank space(s), **DO NOT TICK**, by selecting the most appropriate answers from among the given ones.

11. In a frequency curve of scores the mode was found to be lesser than the mean. This shows that the distribution is .....
[symmetric; negatively skewed; positively skewed; normal]

12. The value of the finite population correction factor for $n = 10$ and $N = 1000$ is.....
[0.1; 0.991; 0.881; 0.771]

13. Considering sample statistic, if mean of sampling distribution is equal to population mean then sample statistic is classified as .....
[unbiased estimator; biased estimator;
interval estimator; hypothesis estimator]

14. In an paired sample t-test with sample sizes $n_1 = 11$ and $n_2 = 11$, the value of tabulated t should be obtained for: .....
[10 d.f.; 21 d.f; 8 d.f.; 20 d.f.]

15. According to the central limit theorem, the standard deviation of the sampling distribution of the sample mean is .....
[σ; s; $\frac{\sigma}{\sqrt{n}}$; $\frac{s}{\sqrt{n}}$]

16. If S^2 is the variance of a random sample of size n taken from a normal population having the variance σ^2, then the statistics $\frac{(n-1)S^2}{\sigma^2}$ follows ..... with $n - 1$ degrees of freedom.
[Normal distribution; t- distribution;
Chi-square distribution; F-distribution]

17. A fitted least squares regression line .....
[may be used to predict a value of y if the corresponding x value is given;
is evidence for a cause-effect relationship between x and y;
can only be computed if a strong linear relationship exists between x and y;
can only be computed if a weak linear relationship exists between x and y;]

18. A type II error occurs when .....
[the null hypothesis is incorrectly accepted when it is false;
the null hypothesis is incorrectly rejected when it is true;
the sample mean differs from the population mean;
the test is biased]

19. If X_1 and X_2 are independent, $Var(X_1) = 5$ and $\text{Var}(X_2) = 10$, then $Var(X_1 - X_2)$ is .....
[5 -5; 10; 15]

20. If the random variable takes negative values, then the probability of negative values will have:
[Positive values; Negative Values; Zero value; Difficult to tell]

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Level : B.Sc./B.Pharm./B.Tech.
Year : I
Time : 2 hrs. 30 mins.

Course : MATH 102
Semester: II
F.M. : 55

SECTION "C"

[3Q.× 7 = 21 marks]

1. The following data represent the length of life, in seconds, of 50 fruit flies subject to a new spray in a controlled laboratory experiment: [2+2+3]

17	20	10	9	23	13	12	19	18	24
12	14	6	9	13	6	7	10	13	7
16	18	8	13	3	32	9	7	10	11
13	7	18	7	10	4	27	19	16	8
7	10	5	14	15	10	9	6	7	15

i) Construct a double-stem-and-leaf plot for the life span of the fruit flies using the stems 0*, 0+, 1*, 1+, 2*, 2+, and 3* such that stems coded by the symbols '*' and '+' are associated, respectively, with leaves 0 through 4 and 5 through 9.
ii) Set up a relative frequency distribution.
iii) Construct a relative frequency histogram.

OR

What do you mean by multiplication theorem on dependent events for two events? In a certain assembly plant, three machines, M_1, M_2, and M_3, make 30%, 45%, and 25%, respectively, of the products. It is known from past experience that 2%, 3%, and 2% of the products made by each machine, respectively, are defective. Now, suppose that a finished product is randomly selected. What is the probability that it is defective? If a product was chosen randomly and found to be defective, what is the probability that it was made by machine M_3? [2+2+3]

2. Explain the confidence interval for differences between two population means. As part of an industrial training program, some trainees are instructed by Method A, which is straight computer-based instruction, and some are instructed by Method B, which also involves the personal attention of an instructor. If random samples of size 10 are taken from large groups of trainees instructed by each of these two methods, and the scores which they obtained in an appropriate achievement test are;
Method A : 71, 75, 65, 69, 73, 66, 68, 71, 74, 68
Method B: 72, 77, 84, 78, 69, 70, 77, 73, 65, 75
Use the 0.05 level of significance to test the claim that method B is more effective. Assume that the populations sampled can be approximated closely with normal distributions having the same variance. [3+4]

3. Raw materials used in the production of a synthetic fiber is stored in a place which has no humidity control. Measurements of the relative humidity (x) in the storage place and the moisture content (y) of a sample of the material (both in percentage) on 8 days yielded the following: [3+4]

X	42	35	50	43	48	62	31	36
Y	12	8	14	9	11	16	7	9

i) Make a scatter plot to verify that it is reasonable to assume that the regression of Y on x is linear.
ii) Compute the coefficient of correlation between the measurements of the relative humidity (x) in the storage place and the moisture content (y) of a sample.

SECTION "D"

[6Q. × 4 = 24 marks]

4. If the probability density of a random variable is given by

$$f(x) = \begin{cases} k(1-x^2) & \text{for } 0 < x < 1 \\ 0 & \text{otherwise} \end{cases}$$

Find the value of k and the probabilities that a random variable having this probability density will take on a value

i) between 0.1 and 0.2;

ii) greater than 0.5.

5. How many times do we have to flip a balanced coin to be able to assert with a probability of at most 0.01 that the difference between the proportion of tails and 0.50 will be at least 0.04?

OR

The mean of a random sample of size $n = 25$ is used to estimate the mean of an infinite population that has standard deviation $\sigma = 2.4$. What can we assert about the probability that the error will be less than 1.2 if we use (a) Chebyshev's theorem; (b) the central limit theorem?

6. The following table gives the probabilities that a certain computer will malfunction 0, 1, 2, 3, 4, 5, or 6 times on any one day

Number of malfunctions, x	0	1	2	3	4	5	6
Probability f(x)	0.17	0.29	0.27	0.16	0.07	0.03	0.01

Use the formulas which define μ and σ to find the mean and standard deviation of this probability distribution.

7. In 64 randomly selected hours of a production, the mean and the standard deviation of the number of acceptable pieces produced by an automatic sampling machine are $\bar{x} = 1{,}038$ and $s = 146$. At the 0.05 level of significance, does this enable us to reject the null hypothesis $\mu = 1{,}000$ against the alternative hypothesis $> 1{,}000$?

8. Draw a box plot from the following numbers of minutes that a person had to wait for a bus to work on 15 working days:

10, 1, 13, 9, 5, 9, 2, 10, 3, 8, 6, 17, 2, 10, 15.

9. Ten bearings made by a certain process have a mean diameter of 0.5060 cm and a standard deviation of 0.0040 cm. Assuming that the data may be looked upon as a random sample from a normal population, construct a 95 % confidence interval for the actual average diameter of bearings made by this process.

SECTION "E"

[5Q. × 2 = 10 marks]

10. Write down the sample space for throwing two dice.

11. How many different samples of size $n = 2$ can be chosen from a finite population of size $N = 7$?

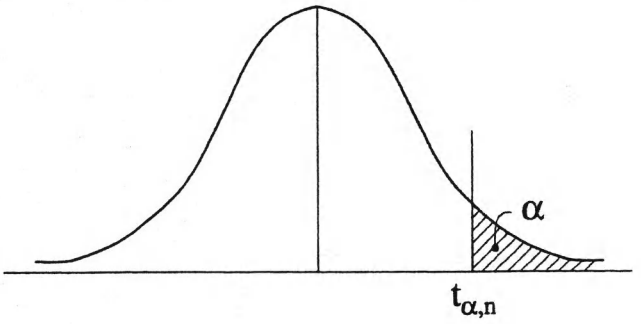
12. X is distributed as a normal variable with mean μ and variance σ^2, find the value of a in terms of σ such that $P(\mu - a \leq X \leq \mu + a) = 0.95$.

13. Find the probability of getting five multiple-choice questions answered correctly, if for each question the probability of answering it correctly is $\frac{1}{3}$.

14. Write short notes on poisson distribution.

MATH - 102
Table

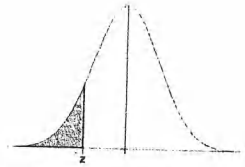
STUDENT'S *t*-DISTRIBUTION



VALUES OF $t_{\alpha,n}$

df	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	*df*
1	1.000	1.376	1.963	3.078	6.314	12.706	31.821	63.657	1
2	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	2
3	0.765	0.978	1.350	1.638	2.353	3.182	4.541	5.841	3
4	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	4
5	**0.727**	**0.920**	**1.156**	**1.476**	**2.015**	**2.571**	**3.365**	**4.032**	**5**
6	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	6
7	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	7
8	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	8
9	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	9
10	**0.700**	**0.879**	**1.093**	**1.372**	**1.812**	**2.228**	**2.764**	**3.169**	**10**
11	0.697	0.876	1.088	1.363	1.796	2.201	2.718	3.106	11
12	0.695	0.873	1.083	1.356	1.782	2.179	2.681	3.055	12
13	0.694	0.870	1.079	1.350	1.771	2.160	2.650	3.012	13
14	0.692	0.868	1.076	1.345	1.761	2.145	2.624	2.977	14
15	**0.691**	**0.866**	**1.074**	**1.341**	**1.753**	**2.131**	**2.602**	**2.947**	**15**
16	0.690	0.865	1.071	1.337	1.746	2.120	2.583	2.921	16
17	0.689	0.863	1.069	1.333	1.740	2.110	2.567	2.898	17
18	0.688	0.862	1.067	1.330	1.734	2.101	2.552	2.878	18
19	0.688	0.861	1.066	1.328	1.729	2.093	2.539	2.861	19
20	**0.687**	**0.860**	**1.064**	**1.325**	**1.725**	**2.086**	**2.528**	**2.845**	**20**
21	0.686	0.859	1.063	1.323	1.721	2.080	2.518	2.831	21
22	0.686	0.858	1.061	1.321	1.717	2.074	2.508	2.819	22
23	0.685	0.858	1.060	1.319	1.714	2.069	2.500	2.807	23
24	0.685	0.857	1.059	1.318	1.711	2.064	2.492	2.797	24
25	**0.684**	**0.856**	**1.058**	**1.316**	**1.708**	**2.060**	**2.485**	**2.787**	**25**
26	0.684	0.856	1.058	1.315	1.706	2.056	2.479	2.779	26
27	0.684	0.855	1.057	1.314	1.703	2.052	2.473	2.771	27
28	0.683	0.855	1.056	1.313	1.701	2.048	2.467	2.763	28
29	0.683	0.854	1.055	1.311	1.699	2.045	2.462	2.756	29
30	**0.683**	**0.854**	**1.055**	**1.310**	**1.697**	**2.042**	**2.457**	**2.750**	**30**
∞	0.674	0.842	1.036	1.282	1.645	1.960	2.326	2.576	∞

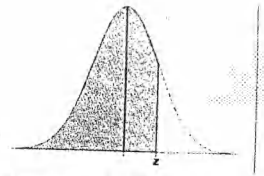
Standard Normal Cumulative Probability Table



Cumulative probabilities for NEGATIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641

Standard Normal Cumulative Probability Table



Cumulative probabilities for POSITIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998

काठमाडौं विश्वविद्यालय
सत्रान्त परीक्षा
अगस्त, २०१९

प्राप्ताङ्क:

तह : B.Arch.
वर्ष : I

विषय : NEPT 101
सेमेष्टर: II

परीक्षा रोलनम्बर :

समय: ३० मिनेट

पूर्णाङ्क : १०

रेजिष्ट्रेशन नम्बर :

मिति : AUG 16 2019

खण्ड "क"
(वस्तुगत)

अ) तल दिइएको लेख पढी सोधिएका प्रश्नहरूको उत्तर दिनुहोस् । **(१ ×५ = ५ अङ्क)**

छानाको भार वहन गर्न टुँडाल राख्ने गरिन्छ । छानाको टुँडालमा प्रायः अग्राठ काठ प्रयोग गरिन्छ । अग्राठ काठ अन्य काठको तुलनामा बढी भारवहन गर्ने क्षमता भएकोले यसको प्रयोग गरिएको हो । तर एक तले पाटी र छानाको तलतर्फ लम्बाइ कम निस्केका घरभवनहरूमा भार कम पर्ने भएकोले अन्य काठ प्रयोग भएको पनि पाइन्छ । तर ठूलाठूला भवन, मन्दिरहरूका छानामा अग्राठ नै प्रयोग गरिन्छ । टुँडालहरूको लम्बाइ चौडाइ छानाको आकारमा निर्भर गर्दछ । टुँडालमा विभिन्न देवदेवी लगायत सामाजिक परिवेशका चित्रहरू र बुट्टाहरू कुँदी राख्ने परम्परा भएको हुँदा यिनमा कुँदिने कलाकारिता धार्मिक र सामाजिक महत्वका विषयवस्तु रहन्छन् । साथै मन्दिरमा राखिने टुँडालहरू सो मन्दिरको मूलदेवतासँग सम्बद्ध रहेको पाइन्छ । तसर्थ टुँडाल हराएको अवस्थामा नयाँ राख्दा आमनाय थाहा पाउनु पर्दछ । सो थाहा पाउन सकिएन भने सादा टुँडाल राख्नु पर्दछ । छानाको सुरमा राखिने टुँडाललाई नेवारी भाषामा कुँराल भनिन्छ जसको अर्थ Corner Horse भन्ने लाग्दछ । यी Lion, Ram horn lion, Goat horn lion र Garuda faced lion गरी चार प्रकारका हुन्छन् । कुनामा राखिने हुनाले कुँराल अन्य टुँडालभन्दा बढी चौँडाइ र लम्बाइका हुन्छन् ।

टुँडालहरू सकेसम्म पुरानै मर्मत गरी संरक्षण गर्नु पर्दछ । भारवहन गर्न नसक्ने अवस्थाका टुँडालहरू रसायन गरी पुनः जडान गर्नु पर्दछ । भारवहन क्षमता अभिवृद्धि गर्न टुँडालको पछाडिपट्टी नदेखिने गरी स्टिल रड वा टुँडालको दायाँ-वायाँ नयाँ काठ पनि राख्न सकिन्छ ।

प्रश्नहरू:

क) निर् उपसर्ग लागेर बनेको र आइ प्रत्यय लागेर बनेको एकएक ओटा शब्दहरू खोजी लेख्नुहोस् ।

.....

ख) पुराना टुँडालहरूको भारवहन क्षमता कसरी वृद्धि गर्न सकिन्छ ?

.....

ग) टुँडाल किन प्रयोग गरिन्छ ?

.....

घ) कस्ता भवनहरूमा अन्य काठका टुँडालहरूको प्रयोग गरिन्छ ?

.....

ङ) अग्राठ काठको प्रयोग किन गरिन्छ ?

.....

आ) सर्वोपयुक्त विकल्पमा रेजा (✓) चिन्ह लगाउनुहोस् । (१० × ०.५ = ५ अङ्क)

१. संक्षिप्त प्रतिवेदन लेखन कस्तो किसिमको रचना हो ?
क) व्याख्यात्मक ख) विवरणात्मक ग) समालोचनात्मक घ) प्रयोगात्मक

२. 'निनाल'(नेवारी) शब्दको अर्थ ..... हो ।
क) बिम ख) टुँडाल ग) फर्लैंचा घ) ढोका

३. 'ध्वजः'(संस्कृत) शब्दको अर्थ के हो ?
क) धरा ख) पिल्लर ग) झन्डा घ) दलिन

४. समास प्रक्रियाबाट बनेको शब्द कुन हो ?
क) झरना ख) झझल्को ग) रामदेव घ) घरघडेरी

५. 'परम्परागत छानो छाउने, एकातर्फ अड्कने ढल भएको टायल' लाई कुन शब्दले चिनाउन सकिन्छ ?
क) टुँडाल ख) टायल ग) झिँगटी घ) चुना

६. 'वनवास' कुन प्रक्रियाबाट बनेको शब्द हो ?
क) सर्ग ख) समास ग) सन्धि घ) द्वित्व

७. प्रो. चन्द्रकुमारले केले आफ्नी प्रेमिकाको फोटो जलाए ? (खरानीको शीशी)
क) श्रीखण्डको काठले ख) पेट्रोलले ग) मट्टितेलले घ) कागजले

८. साधारणतया बैठकको निर्णय पुस्तिका तयार पार्ने काम कसले गर्दछ ?
क) अध्यक्षले ख) उपाध्यक्षले ग) सचिवले घ) कोषाध्यक्षले

९. 'रहर' कविताका रचनाकार को हुन् ?
क) कालीप्रसाद रिजाल ख) माधवप्रसाद घिमिरे
ग) हरिभक्त कटुवाल घ) भानुभक्त आचार्य

१०. सन्धि प्रक्रियाबाट निर्मित शब्द कुन हो ?
क) महेश ख) लामखुट्टे ग) खर्चबर्च घ) सैनिक

काठमाडौं विश्वविद्यालय
सत्रान्त परीक्षा
अगस्त, २०१९

AUG 1 6 2019

तह : B.Arch.
वर्ष : I
समय: २ घण्टा ३० मिनेट

विषय : NEPT 101
सेमेष्टर: II
पूर्णाङ्क : ४०

खण्ड "ख"
(विषयगत)

(८ × ५ = ४० अङ्क)

तलका मध्ये *कुनै आठ* वटा प्रश्नहरूको उत्तर दिनुहोस् ।

१. तलका शब्दहरूको अर्थ प्रष्ट हुनेगरी एक एक वटा वाक्य निर्माण गर्नुहोस् ।
टुँडाल, चुकुल, सुर्खी, अष्टमङ्गल, चँदुवा

२. दिइएको गद्यांशलाई उपयुक्त लेख्य चिन्ह तथा वर्णहरूको प्रयोग गरी शुद्धसँग पुनर्लेखन गर्नुहोस् ।
इन्जिनियरिङ प्रविधि सम्बन्धि ग्यान दिने शिक्षा इन्जिनियरिङ शिक्षा हो । यो शिक्षा मूलभुत रुपमा भौतिकशास्त्र रसायनशास्त्र र गनितमा आधारित हुन्छ । विज्ञानको लक्ष ज्ञान प्राप्ति हो । भने इन्जिनियरिङ शिक्षाको लक्ष्य निर्माण हो । वैज्ञानिकले खोजीको बिषय आफै रोज्दछ भने इन्जिनियरले मौजुदा समस्यालाई शमाधान गर्दछ ।

३. तलका मध्ये कुनै एक विषयमा बैठक सञ्चालन गरी तयार गरिएको निर्णय पुस्तिकाको नमूना तयार गर्नुहोस् ।
क) टोल सरसफाइ सम्वन्धमा
ख) वास्तुकला बारेमा सचेतना कार्यक्रम

४. कुनै एक विषयमा राष्ट्रिय पत्रिकाका सम्पादकलाई चिठी लेख्नुहोस् ।
क) शैक्षिक संस्थामा राजनीति र यसको प्रभाव
ख) प्राविधिक सल्लाहविना निर्मित आवास र जनताको सुरक्षा

५. दिइएका मध्ये कुनै एक विषयमा सङ्क्षिप्त टिप्पणी लेख्नुहोस् ।
क) वर्तमान नेपाली निर्माण जगतमा वास्तुकलाको प्रयोग र आकर्षण
ख) भ्रष्टाचार र मानवअधिकार

६. वास्तुविद्को सल्लाह अनुसार भवन निर्माण गर्न सुझाव दिँदै नयाँ आवासीय भवन निर्माण गर्न तयारी गरिरहनु भएकी आफ्नी माइजूलाई चिठी लेख्नुहोस् ।

७. आफू अध्ययनरत विश्वविद्यालयले आयोजना गरेको 'नयाँ विद्यार्थी स्वागत कार्यक्रम' को एक सङ्क्षिप्त प्रतिवेदन तयार गर्नुहोस् ।

८. कालीप्रसाद रिजालद्वारा रचित 'स्वदेशको गौरव' कविताको सङ्क्षिप्त समीक्षा लेख्नुहोस् ।

९. भीमनिधि तिवारीद्वारा लिखित 'खरानीको शीशी' कथाका पात्र चन्द्रकुमारको चरित्र चित्रण गर्नुहोस् ।

समाप्त