

- Read the following instructions carefully and act accordingly
- If you have any difficulties in understanding them please contact the co-coordinator of the course unit

Procedure

1. Answer all eight (8) Questions; answers to be written **ONLY** in the space provided (additional sheets / attachments will **NOT** be marked)
2.

Home Assignment (Six (6) pages - applicable **ONLY** this year (2019/2020 - COVID -19)
3. Answer all question with all relevant steps; marks will **NOT** be awarded otherwise.
4. Write down **your registration number, your mailing address**, in block capital letters in the spaces provided overleaf. **Place your signature** in the space provided below and attach this cover page on top of your answer script.
5. Enclose the answer script (+cover page) in an envelope with **“2019/2020-Home Assignment–CYE3200”** written on the top left-hand corner and submit to the chemistry department on or before the deadline date.

Deadline for return

DEADLINE DATE 24. 07. 2020. However, in order to accommodate postal delays, the department would accept assignments received up to seven (07) days later. Please make sure that your assignment is **RECEIVED** by the Chemistry Department not later than 3.30 p.m. on that date. **Assignments received after that time will not be marked.**

Two possible ways of submitting the answer scripts.

- You can drop the envelope containing the answer script in the assignment box at the Department of Chemistry, S&T building.
- You can post the answer script, via registered post, to the following address on or before the deadline.

The Course Coordinator / CYE3200,

Department of Chemistry, The Open University of Sri Lanka, P.O. Box 21, Nawala,

Nugegoda.

The marks of this home assignment will be used in calculating your OCAM.

The answers to the Home assignment are being submitted by me by hand /post.

Signature :

Reg No

Date :

CYE3200/19/20/HA

Registration Number

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Name :

Address

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Integrate the following. **Show all relevant steps.**

$$(1) \int \left(\frac{2}{3x} - \frac{3}{\sqrt{x}} - \frac{1}{2x^3} \right) dx$$

$$(2) \int (\sin^2 2x + 1) dx$$

$$(3) \int \frac{1}{(x^2+1)(x-1)^2} dx$$

(4) $\int x^2 \ln\left(\frac{1}{3x}\right) dx$

(5) Evaluate B $\int_1^2 B(2x - 1)^2 dx = 62$

Reg. No

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6. (a) In an attempt to measure the effects of acid rain, researchers measured the amount of rain fall **(in mm of water)** collected from rain in a certain region.

15.47, 15.37, 15.38, 14.63, 15.37, 13.74, 13.71, 14.96, 14.64, 15.11, 14.87

With appropriate rearrangements and tabulation of data,

Calculate the,

(i) sample mean

(ii) median

(iii) mode

(iv) standard deviation, S

7. (a) Calculate the following probabilities that on a throw of two dice [The die (a cube) has six sides numbered 1-6 each side]. Relevant table required for the calculation must be shown.
- (i) the total would be odd
- (ii) both dice would have the same number
8. With the aid of the relevant expansion, determine the number of ways one may appoint a committee of 6 people from a group of 11 people?

Registration Number

Sinhala translation of questions 07 and 08.

7. සමාන දාදු කැට 2ක් උඩ දැමීම පිළිබඳ පහත සම්භාවිතා ගණනය කරන්න(සනක හැඩති දාදු කැට 2හි ඉලක්කම් 1 සිට 6 දක්වා අංකනය කරන ලද පැති 6 කි) ගණනයන් සඳහා භාවිතා කරන ලද අගය වගුව ඉදිරිපත් කළයුතුය.

(i) දාදු කැට 2හි ඉලක්කම් වල එකතුව ඔත්තේ සංඛ්‍යාවක් වීම

(ii) දාදු කැට 2හි ඉලක්කම් සමාන වීම

8 අදාළ ප්‍රසාරණය භාවිතා කරමින් පුද්ගලයින් 11 දෙනෙක් මගින් 6 දෙනෙකුගෙන් යුත් කමිටුවක් සෑදිය හැකි ක්‍රම ගණන ගණනය කරන්න.

Tamil translation of questions 07 and 08.

7. இரு தாயக்கட்டைகளை ஒன்றாக வீசும் போது பின்வரும் நிகழ்வுகள் நடைபெறுவதற்கான நிகழ்தகவுகளை தருக [தாயக்கட்டையானது (ஓர் சதுரமுகி) 1 முதல் 6 வரை இலக்கமிடப்பட்டுள்ளது]. கணிப்பீட்டுடன் சம்மந்தப்பட்ட அட்டவணை காட்டப்படுதல் வேண்டும்.

(i) மொத்த கூட்டுத்தொகை ஒற்றைப்படையாக இருத்தல்.

(ii) இரு தாயக்கட்டைகளிலும் ஒரே எண் இருத்தல்.

8. பொருத்தமான சமன்பாட்டின் உதவியுடன், 11 நபர்களை கொண்ட ஓர் தொகுதியில் இருந்து 6 நபர்களை தெரிவு செய்து ஓர் குழுவை அமைப்பதற்கு எத்தனை வழிமுறைகள் உள்ளன என துணிக?