

ಮಂಗಳೂರು
MANGALORE



ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
UNIVERSITY

ಕ್ರಮಾಂಕ/ No: ಸಂ: ಎಂಯು/ಎಸಿಸಿ/ಸಿಆರ್ 52/2021-22/ಎ8

ಕುಲಸಚಿವರ ಕಛೇರಿ

ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199

Office of the Registrar

Mangalagangothri - 574 199

ದಿನಾಂಕ/Date: ದಿ:29.07.2022

ರಿಗೆ:

ಮಂವಿವಿ. ಸಂಯೋಜನೆಗೊಳಪಟ್ಟ

ಎಲ್ಲಾ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರಿಗೆ

ಮಾನ್ಯರೇ,

ವಿಷಯ: ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ ರಸಾಯನ ಶಾಸ್ತ್ರ (Chemistry) ಕೋರ್ ಕೋರ್ಸ್‌ನ ಪ್ರಾಯೋಗಿಕ ಪರೀಕ್ಷೆಯ

ಕಾರ್ಯಾಯೋಜನೆಯ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: ಪದವಿಮಟ್ಟದ ರಸಾಯನ ಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮಂಡಳಿ ಅಧ್ಯಕ್ಷರ ಇಮೇಲ್ ದಿ: 22.07.2022

ಮೇಲಿನ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಪದವಿಮಟ್ಟದ ರಸಾಯನ ಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮಂಡಳಿ ಅನುಮೋದಿಸಿರುವ ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ ನ ರಸಾಯನ ಶಾಸ್ತ್ರ ಕೋರ್ ಕೋರ್ಸ್‌ನ ಪ್ರಾಯೋಗಿಕ ಪರೀಕ್ಷೆಯ ಮೌಲ್ಯಮಾಪನಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಪರೀಕ್ಷಾ ಕಾರ್ಯಾಯೋಜನೆಯನ್ನು ಮಾಹಿತಿ ಹಾಗೂ ಸೂಕ್ತ ಕ್ರಮಕ್ಕಾಗಿ ಈ ಮೂಲಕ ಕಳುಹಿಸಲಾಗಿದೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ

(ಕರಡು ಕುಲಸಚಿವರಿಂದ ಅನುಮೋದಿಸಲ್ಪಟ್ಟಿದೆ)

ಕುಲಸಚಿವರ ಪರವಾಗಿ 29/7/22

ಪ್ರತಿ: 1.ಕುಲಸಚಿವರು(ಪರೀಕ್ಷಾಂಗ), ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ,ಮಂಗಳಗಂಗೋತ್ರಿ.

2.ನಿರ್ದೇಶಕರು, DUIMS, ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ,ಮಂಗಳಗಂಗೋತ್ರಿ- ವೆಬ್ ಸೈಟ್‌ನಲ್ಲಿ ಪ್ರಕಟಿಸಲು

MANGLORE UNIVERSITY

Scheme of Practical Examinations and Valuation Procedures for B.Sc. Chemistry Practicals as per the New Education Policy

II Semester BSc

Chemistry Practical – II

Duration: 4Hrs

Max. Marks: 25

The practical examination shall consist of the following:

Q.1.Exercise set for procedure writing

5Marks:

Outline of the procedure including calculations to be written within first 15 minutes.

Any one of the following exercises may be given.

1. Determination of distribution coefficient of benzoic acid between Benzene and Toluene.
2. Determination of Carbonate and hydroxide present in a mixture by titrimetry
3. Determination of oxalic acid and sodium oxalate in a given mixture using standard potassium permanganate and sodium hydroxide solution.
4. Determination of chlorine in bleaching powder using iodometric method.
5. Study of variation of Viscosity of sucrose solution with the concentration of solute.
6. Study of variation of surface tension of detergent solution with concentration.

Q.2. Experimental work.

20 Marks

Any one of the following experiments may be set for the actual experimental work.
The distribution of experiments is to be done such that more than four students do not get same experiment.

1. Determination of density and surface tension of the given liquid (specific gravity bottle and stalagmometer to be supplied)
2. Determination of density and Viscosity of the given liquid (specific gravity bottle and viscometer to be supplied)
3. Determination of % of toluene in a mixture of toluene + alcohol by refractometry.
4. Gravimetric estimation of barium as barium sulphate in the given barium chloride solution.
5. Gravimetric estimation of copper as cuprous thiocyanate in the given copper sulphate solution.
6. Gravimetric estimation of Ni as Nickel dimethyl glyoximate in the given nickel ammonium sulphate solution.
7. Gravimetric estimation of iron as ferric oxide in the given ferrous ammonium sulphate solution.

Note: In gravimetric estimations brief procedure is to be given. AR grade Chemicals are to be used for the preparation of solutions for estimations.

Valuation scheme

The Practical Class Records certified by the teacher in charge and head of the chemistry Department should be produced at the time of examination.

1. Procedure writing

: 5 marks

Outline with essential details

: 3 marks

Calculation /graph etc

: 2marks

2. Experiments

: 20 marks

Experiment (1): Density and Surface tension

Density values Surface tension values

Errors upto $\pm 1\%$: 8 mark Errors upto $\pm 8\%$: 8 marks

upto $\pm 2\%$: 6 marks upto $\pm 12\%$: 6 marks

upto $\pm 4\%$: 4 marks upto $\pm 15\%$: 4 marks

upto $\pm 10\%$: 3marks upto $\pm 20\%$: 3 marks

Any other value : 2 marks Any other value : 2 marks
 Calculations : 2+2= 4

Experiment (2): Density and Viscosity

Marking of density values

Errors up to $\pm 1\%$: 8 marks
 up to $\pm 2\%$: 6 marks
 up to $\pm 3\%$: 4 marks
 up to $\pm 5\%$: 3 marks
 Any other value : 2 marks
 Calculations : 2+2= 4

Viscosity values

Errors upto $\pm 8\%$: 8 marks
 up to $\pm 12\%$: 6 marks
 up to $\pm 15\%$: 4 marks
 up to $\pm 20\%$: 3 marks
 Any other value : 2 marks

Experiment (3): Analysis of a liquid Mixture by Refractometry.

a) Graph drawn: 4 marks

Best straight line graph with at least 4 points -4 marks.
 Less than four points -3marks.

b) Percentage composition of the given mixture in the range.

upto $\pm 5\%$:16marks
 upto $\pm 7\%$:12marks
 upto $\pm 9\%$:08 marks
 upto $\pm 12\%$:05marks
 Any other value : 03marks

Standard binary liquid mixtures of known compositions are to be prepared fresh by the candidates. Unknown is given by the examiners.

Experiments (4) to (7) Gravimetric Exercises:

i) Mass of precipitate

16 marks

Error upto $\pm 2\%$ 16marks
 Error upto $\pm 3\%$ 14marks
 Error upto $\pm 4\%$ 10marks
 Error upto $\pm 5\%$ 06marks
 Any other value 04marks

ii) Calculation

04 marks

NOTE: In all the above experiments if the calculation is wrong no marks to be given for calculation part, but the examiners are required to calculate the values and award the marks as per scheme.

Allotment of Internal Assessment Marks

Total Marks to be awarded

:25

Distribution:

1. Class Records :5 Marks
2. Continuous assessment during practicals :5 Marks
3. Internal Practical Examination :15 Marks

Note: 1) Neat Class records with minimum 10 experiments may be awarded full marks.

Marks may be proportionally reduced for lesser number of experiments.

2) Internal practical examination is to be conducted in University Practical Examination model(Max Marks: 25) and then maximum mark is to be reduced to 15.

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