Syllabus
For M.Sc 7th Semester Courses in Botany
(June 2020 onwards)

- Contents:
- Theory Syllabus for Courses:
  - SBOT0701 – Cryptogams
  - SBOT0702 – Plant Taxonomy
  - SBOT0703 – Plant Metabolism
  - SBOT0703 – Molecular Biology

- Practical Course Syllabus for: SBOT0701PR, SBOT0702PR, SBOT0703PR, SBOT0704PR
- Evaluation and Assessment guidelines.

M.Sc.-I Botany **Course code: SBOT0701**
Course Title: CRYPTOGAMS

Learning Objectives:

1. To study the morphology, structure and importance of the organisms.
2. To comprehend the interrelationships between various groups of organisms, and reason behind it.
3. To recognize the applications of algae and bryophytes in different fields.
4. To differentiate the range of structural variation in algae and bryophytes.

Number of lectures: 60

Unit 1 **(15 lectures)**

Algae

Classification of Algae up to orders (G. M. Smith), diversification of habitat, general distribution, thallus organization, origin and evolution, fossil algae. Life cycle study of *Scytonema, Volvox, Ulothrix, Gracillaria, Padina*.

Unit 2 **(15 lectures)**

Applied Phycology

Algal collection and preservation, techniques of culturing algae, concept of photo-bioreactor, algae as biofuel, algae causing biological hazards.

Unit 3 **(15 lectures)**

Bryophyta-I

Classification up to order as per the system proposed by G. M. Smith, ecological and economic importance of Bryophytes. Life cycle study of *Targionia, Porella, Notothallus,* and *Polytrichium.*

Unit 4 **(15 lectures)**

Bryophyta-II

Origin and evolution of Bryophyta with reference to habitat and form. Evolution of the Sporophyte in Bryophyta.

List of Recommended Reference Books

1. Smith, Gilbert M; Cryptogamic Botany Algae & Fungi Volume 1; 2nd edition; McGraw-hill book Comp. Tokyo, 1955.
2. Vasishtha B. R. And A. K. Sinha- Botany for degree students Part 1 ALGAE; S. Chand & Company Ltd, 1st edition, revised 2005.
3. Smith, Gilbert M; Cryptogamic Botany Bryophyta & Pteridophyta Volume 2; 2nd edition; McGraw- hill book Comp. Tokyo, 1955.
4. Vasishtha B. R. And A. K. Sinha- Botany for degree students BRYOPHYTA; S. Chand & Company Ltd, 1st edition, revised 2005.
5. Kar, Ashok Kumar; Gangulee, Hirendra Chandra; College botany: Volume II; 2nd edition; Kolkata: New Central Book Agency (P) Ltd, 1989, 2006.

Practical: SBOTPR0701

I) Study of the following types: *Scytonema, Lyngbya, Anabaena, Volvox, Scenedesmus, Ulothrix, Enteromorpha, Pithophora, Closterium, Nitella, Padina,* and *Gracillaria.*

II) Study of the following types: *Riccia, Targionia, Marchantia, Plagiochasma, Fimbraria, Pellia, Porella, Notothallus, Sphagnum, Polytrichium,* and *Funaria*.

III) Estimation of biomass from suitable algal culture. Study of growth curve of algae.

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M.Sc.-I Botany **Course code: SBOT0702**
Course Title: PLANT TAXONOMY

Learning Objectives:

1. To gain knowledge of classification systems of angiosperms and the basis of their classification.
2. To understand evolution and variation with respect to various taxonomic characters.
3. To learn the distinguishing characters of plants belonging to different families and the economic importance of these families.

Number of lectures: 60

Unit 1 **(15 lectures)**

Concept of characters

Evolution, variation and speciation, concept of species, biosystematics categories, biotypes and ecotypes. Concept of characters: introduction, type, function. values of taxonomic characters – numerical taxonomy, chemotaxonomy, molecular systematic.

Unit 2 **(15 lectures)**

Principles of taxonomy

Origin and evolution of angiosperms; Principles of taxonomy and phylogeny of angiosperms for assessment of relationships, delimitation of taxa and attribution of rank: a) criteria, b) guidelines, c) practical considerations, d) use of categories.

Unit 3 **(15 lectures)**

Classification systems

Evolution of classification systems, ancient, modern and current systems of classification (excluding the systems covered at UG level).

Unit 4 (**15 lectures)**

Families

Study of families and their economic importance: Menispermaceae, Portulacaceae, Guttiferae, Passifloraceae, Rhamnaceae, Sapindaceae, Lythraceae, Chenopodiaceae, Cyperaceae, Polygonaceae.

List of Recommended Reference Books

1. Simpson M. G. Plant Systematics 2nd ed., Academic Press, 2010.
2. Sivarajan, V.V. Introduction to the principles of plant taxonomy, Cambridge Univ. Press. 1995.
3. Phillippe Lemey, Macro Salemi, Anne-Mieke Vandamme, Phylogenetic Handbook - A practical approach to phylogenetic analysis and hypothesis testing.
4. Singh Gurucharan, Plant Systematics – Theory and Practice 3rd edition 2010.
5. Subrahmanyam, N.S.; Modern plant taxonomy; New Delhi: 1st edition; Vikas Publishing House Pvt. Ltd., 1995.
6. Lawrence, George H.M.; Taxonomy of Vascular Plants; 1st edition; New Delhi: Oxford &Ibh Publishing Co., 1967.

Practical: SBOTPR0702

I) Study of families: Menispermaceae, Portulacaceae, Guttiferae, Passifloraceae, Rhamnaceae, Sapindaceae, Lythraceae, Chenopodiaceae, Cyperaceae, Polygonaceae,.

II) Identification of genus and species with the help of flora volumes.

III) Field excursion.

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M.Sc.-I Botany **Course code: SBOT0703**

Course Title: PLANT METABOLISM

Learning Objectives:

1. To understand where and how energy is produced, and the requirements for energy production and sources of these requirements.
2. To comprehend the regulation of energy production and energy usage.
3. To study how secondary metabolites are produced from light energy.

Number of lectures: 60

Unit 1 (**15 lectures)**

Photosynthesis

Organization of photosynthetic apparatus, light absorbing pigments, organization of light antenna systems, mechanism of electron transport, proton transport and ATP synthesis in chloroplast. Repair and regulation of photosynthetic machinery, role of carotenoids.

Unit 2 (**15 lectures)**

Assimilation of Nutrients in Plants

Phosphorus, Sulphur, cations and molecular oxygen assimilation in plants. Chemical fertilizers in crop production, foliar nutrition, responses of mineral toxicity, heterotrophic nutrition in higher plants (insectivorous plants)

Unit 3 (**15 lectures)**

Regulation of metabolism in Plants

Regulation of glycolysis, regulation of C3, C4 and CAM pathways.

Unit 4 (**15 lectures)**

Secondary Metabolites

Cutins, waxes and suberin; Secondary metabolites: classes, role, biosynthesis of terpenes, phenolics and alkaloids and other compounds. Major pathways of secondary-metabolite biosynthesis and their inter-relationship with primary metabolism.

List of Recommended Reference Books

1. Salisbury, Frank B.; Ross, Cleon W.; Plant physiology; 3rd edition, Reprint; New Delhi: CBS Publishers & Distributors, 1986 (2001).
2. Kochhar, P. L.; A textbook of Plant Physiology; 7th edition; Delhi: Atma Ram & Sons, 1964.
3. Verma S. K. Textbook of Plant physiology and Biochemistry; 4th edition; S. Chand & Company Ltd, 2003.
4. Sinha, R. K.; Modern plant physiology; 2nd edition; New Delhi: Narosa Publishing House, 2004.
5. S. Mukherjee, Ashim Kumar Ghosh. Plant Physiology. New Central Book Agency; 3rd Revised edition 2009.
6. Hans-Walter Heldt, Birgit Piechulla. Plant Biochemistry. Academic Press; 3rd edition 2004.
7. Lincoln Taiz, Eduardo Zeiger. Plant physiology. Plants Physiology. Oxford University Press Inc.; 3rd Revised edition edition 2002.
8. Bob B. Buchanan, Wilhelm Gruissem, and Russell L. Jones. Plant biochemistry and molecular biochemistry. Wiley; 1st edition 2002.

Practical: SBOTPR0703

I) Study Enzyme kinetics: Determination of Km and Vmax of the enzyme amylase.
II) Solvent extraction of chlorophyll a/b, xanthophylls and study of absorption pattern.
III) Study of Hill Reaction.
IV) Detection of tannins, saponins, alkaloids, flavonoids, steroids and triterpenoids, wax, cutin, etc.
V) Estimation of flavonoid content in the given plant sample.
VI) A study of the enzyme polyphenol oxidase from potato peels.
VII) Study of ratio of chlorophyll-a and chlorophyll-b in C3 and C4 plants.
VIII) Quantitative study of diurnal fluctuation in titratable acid number (TAN) in CAM plant.

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M.Sc.-I Botany **Course code: SBOT0704**
Course Title: MOLECULAR BIOLOGY

Learning Objectives:

1. To learn and understand the genetic regulation in cells of living organism.
2. To comprehend how the higher plant organism changes over time and what are the molecular mechanisms underlying these changes.
3. To identify the basic methods and approaches used in molecular biology.
4. To explain the role played by the molecular components of the genetic machinery.

Number of lectures: 60

Unit 1 **(15 lectures)**

Gene Regulation I

Control of gene expression in eukaryotes: Chromatin remodeling, transcriptional control, mRNA processing control, mRNA translocation control, mRNA degradation control, Protein degradation control.

Unit 2 **(15 lectures)**

Gene Regulation II

Genetic control of development in plants: Cell differentiation, function of gene regulation, genes regulated by developmental program, environmental cues, homeobox and homeobox proteins.

Unit 3 (**15 lectures)**

Plant biotechnology

Identification of Molecular markers - RFLP, RAPD, AFLP, STS, ISSR, Microsatellites. Use of YAC, BAC and viral vectors in plants. Viral vectors: General information on SV-40, Vaccinia, Baculovirus and retroviruses. Strategies to create: Transgenic plants with herbicide resistance. Methods of modifying the Diazotrophs (N_2 fixing bacteria)

Unit 4 (**15 lectures)**

Applications of plant biotechnology

Resistance to stress: insect resistance, virus resistance, herbicide, fungi and bacteria, salt and drought. Improvement of nutritional content and quality: Amino acid, lysine, vitamin content, iron, gluten, starch, fruit ripening, Food plant appearance and Plant yield: altering lignin content, increasing oxygen content. Plants as Bioreactors: Plantibodies, vaccines, biopolymers and vitamins.

List of Recommended Reference Books

1. Amon,A., Ploegh,H., Bretscher,A. Martin,K.2016. Molecular Cell Biology. Macmillan Learning.
   Buchanan, B., Gruissem, W. Jones, R. 2015. Biochemistry and Molecular Biology of Plant
2. Biochemistry and molecular biology of plants. Wiley.
3. Glick, B., Pasternak, J. Patten, C. 2010. Molecular Biotechnology: Principles and Applications of Recombinant DNA. ASM Press.
4. Karp, G. 2009. Cell and Molecular Biology: Concepts and Experiments Cell and molecular biology: Concepts and experiments. John Wiley & Sons.
5. Krebs J, Lewin B, Goldstein E, Kilpatrick S. 2014. Lewin's GENES XI. Jones & Bartlett Learning.
6. Russell, P. 2011. IGenetics: A Molecular Approach. Benjamin-Cummings Publishing Company.

Practical: SBOTPR0704

I) Isolation of plasmid. Quantification of DNA.
II) Agarose gel electrophoresis separation for plasmid DNA.
III) Isolation of Plant DNA by CTAB method.
IV) Restriction enzyme digestion and separation of fragments.

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Evaluation and Assessment: SBOT0701, SBOT0702, SBOT0703 and SBOT0704 courses

Evaluation (Theory): Total marks per course - 100.

CIA- 40 marks

CIA 1: Written test -20 marks

CIA 2: Written Test / Assignment / Presentation / Field Trip & Report -20 marks

End Semester Examination – 60 marks

One question from each unit for 15 marks, with internal choice. Total marks per question with choice -20 to 25.

Evaluation of SBOTPR0701, SBOTPR0702, SBOTPR0703, SBOTPR0704 (Practical)
Total marks per Practical course - 50.
End Semester Practical Examination – (SBOTPR0701- 50 marks, SBOTPR0702- 50 marks, SBOTPR0703- 50 marks, SBOTPR0704- 50 marks)

Template for SBOT0701 Course End Semester Examination in Semester 7

UNITS	KNOWLEDGE	UNDERSTANDING	APPLICATION and ANALYSES	TOTAL MARKS- Per unit
1	8	7	0	15
2	8	7	0	15
3	8	7	0	15
4	8	7	0	15
-TOTAL - Per objective	32	28	0	**60**
% WEIGHTAGE	53.33	46.66	0	**100%**

Template for SBOT0702 Course End Semester Examination in Semester 7

UNITS	KNOWLEDGE	UNDERSTANDING	APPLICATION and ANALYSES	TOTAL MARKS- Per unit
1	8	7	0	15
2	8	7	0	15
3	7	8	0	15
4	7	8	0	15
-TOTAL - Per objective	30	30	0	**60**
% WEIGHTAGE	50	50	0	**100%**

Template for SBOT0703 Course End Semester Examination in Semester 7

UNITS	KNOWLEDGE	UNDERSTANDING	APPLICATION and ANALYSES	TOTAL MARKS- Per unit
1	5	5	5	15
2	7	8	0	15
3	7	8	0	15
4	5	5	5	15
-TOTAL - Per objective	24	26	10	**60**
% WEIGHTAGE	40	43.33	16.66	**100%**

Template for SBOT0704 Course End Semester Examination in Semester 7

UNITS	KNOWLEDGE	UNDERSTANDING	APPLICATION and ANALYSES	TOTAL MARKS- Per unit
1	5	10	0	15
2	5	10	0	15
3	5	5	5	15
4	5	5	5	15
-TOTAL - Per objective	20	30	10	**60**
% WEIGHTAGE	33.33	50	16.66	**100%**

St. Xavier's College, Mumbai.

ASSESSMENT OF WRITTEN ASSIGNMENT- TYPE - I

Dept. of Botany; Course Code _____ Date _____ Roll No _____

Name of student: _____ UIDNo _____ Marks _____/ 20

Title of Assignment: _____

Assessment Grid : Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows. In boxes that have more than one set of marks, cancel out the marks that are not applicable and circle the correct marks.

Assessment of Written Assignment: 20 Marks

100%	ASSIGNMENT	80-100% (17-20 Marks)	60-80% (13-16 Marks)	40- 60% (9-12 Marks)	20-40% (5-8 Marks)	0-20% (0-4 Marks)
60 %	**Content** Impression of wide reading (research), good knowledge and comprehensive understanding. Evidence of thoughtful input. Ability to critique, Bibliography mentioned	Excellent	Good	Satisfactory	Poor	Very Poor
12	-------- **Marks** -------	12 / 11 / 10	9 / 8	7 / 6	5 / 4	3 / 2 / 1
30 %	**Organization** Effective presentation, logical format, clear statement of ideas, relevant details, sequence of information and ideas could be easily followed, references / footnotes / endnotes	Effective organization	Few problems	Many problems	Inadequate presentation. Ineffective format, communication of ideas, lack of relevant details – but an attempt	No attempt to organize
06	-------- **Marks** -------	6	5	4	3	2
5%	**Vocabulary**	Richness of vocabulary	Very good range of vocabulary with some errors	Good range of vocabulary with some errors	Small range of vocabulary with errors	Little of no effort to demonstrate vocabulary knowledge
01	-------- **Marks** -------	1	1	0.5	0.5	0
5%	**Grammar, spellings, mechanics**	Grammar, spellings punctuations correct	Very few errors	Some errors	Many errors	No effort
01	-------- **Marks** -------	1	1	0.5	0.5	0

Comments:

Name and Signature of Faculty _____.

St. Xavier's College, Mumbai.

ASSESSMENT OF WRITTEN ASSIGNMENT- TYPE - II

Dept. of Botany; Course Code _____ Date _____ Roll No _____

Name of student: _____ UIDNo _____ Marks _____/ 20

Title of Assignment: _____

Assessment Grid : Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows. In boxes that have more than one set of marks, cancel out the marks that are not applicable and circle the correct marks.

Assessment of Written Assignment: 20 Marks

100%	ASSIGNMENT	80-100% (17-20 Marks)	60-80% (13-16 Marks)	40- 60% (9-12 Marks)	20-40% (5-8 Marks)	0-20% (0-4 Marks)
50 %	**Content** Impression of wide reading (research), good knowledge and comprehensive understanding. Evidence of thoughtful input. Ability to critique, Bibliography mentioned	Excellent	Good	Satisfactory	Poor	Very Poor
10	-------- **Marks** -------	10 / 9	8 / 7	6 / 5	4 / 3	2 / 1
30 %	**Organization** Effective presentation, logical format, clear statement of ideas, relevant details, sequence of information and ideas could be easily followed, references / footnotes / endnotes	Effective organization	Few problems	Many problems	Inadequate presentation. Ineffective format, communication of ideas, lack of relevant details – but an attempt 2	No attempt to organize
06	-------- **Marks** -------	6 / 5	4	3		1
10%	**Vocabulary**	Richness of vocabulary	Very good range of vocabulary with some errors	Good range of vocabulary with some errors	Small range of vocabulary with errors	Little of no effort to demonstrate vocabulary knowledge
02	-------- **Marks** -------	2	1.5	1	1	0.5
10%	**Grammar, spellings, mechanics**	Grammar, spellings punctuations correct	Very few errors	Some errors	Many errors	No effort
02	-------- **Marks** -------	2	1.5	1	1	0.5

Comments:

Name and Signature of Faculty _____.

St. Xavier's College, Mumbai.

ASSESSMENT OF BOTANY FIELD TRIP REPORT

Dept. of Botany; Course Code _____ Date _____ Roll No _____

Name of student: _____ UIDNo _____ Marks _____/ 20

Place of visit _____

Assessment Grid : Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows

(20)	**Field Trip and Report**	**80-100% 17-20 Marks**	**60-80% 13-16 Marks**	**40-60% 09-12 Marks**	**20-40% 05-08 Marks**	**0-20% 0-04 Marks**
30% (06)	**Organization of report** **----Marks----**	Introduction about the location, vegetation, Botanical Names, Family, Local name, Description using Botanical Term, reporting all the species seen, Handwritten or typed. 6	Few mistakes, few species missing from the report 5	Many mistakes 4	Inadequate presentation, ineffective format, lack or relevant detail, but an attempt 3	No attempt to organize 2
50% (10)	**Content** **----Marks----**	Excellent reporting of all the species observed in the field, ecological and morphological data, 10 / 9	Good reporting, species observed in the field but few of them missing in the list 8	Satisfactory, many species or relevant data missing from the report 6	Poor, inadequate and insufficient data or just a list of the species without any data. 5	Very poor, no data 4 / 3
10% (02)	**Conclusion** **----Marks----**	Excellent conclusion based on self observation. Type of forest and vegetation 2	Good conclusion, comments not independent 2 / 1	Satisfactory, but insufficient 1 / 0.5	Poor, irrelevant conclusion 0.5	Very poor, no conclusion 0.5
5% (01)	**References** **----Marks----**	Proper references, in required format 1	Proper references but no format 1	Few references 0.5	Irrelevant references 0	No references 0
5% (01)	**Attendance / participation** **----Marks----**	Attended and participated actively 1	Attended and participated 1	Infrequent Participation 0.5	No participation 0	Absent 0

Comments:

Name and Signature of Faculty _____.

St. Xavier's College, Mumbai.

ASSESSMENT OF INDIVIDUAL ORAL PRESENTATION -A

Dept. of Botany; Course Code _____ Date _____ Roll No _____

Name of student: _____ UIDNo _____ Marks _____/ 20

Title of oral presentation: _____

Assessment Grid : Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows

Presentation: 30 % (06 marks)

30%	PRESENTATION	80-100%	60-80%	40- 60%	20-40%	0-20%
10 %	**Presentation skills**	Varied rate of delivery, Changed pitch for emphasis, No distracting mannerisms ,good eye contact , Confident body language, Connected with audience	Good but a few weaknesses	Good but a few weaknesses with one pronounced weakness	Several Weaknesses	No speech variation, Distracting mannerisms, no eye contact, dull, and reading from notes/visual aids
2.0	-------- **Marks** -------	2.0	1.5	1.0	1.0	0.5
10 %	**Use of Visuals (Efforts to Aid Presentation)**	Very good, relevant visuals, good font size/ image size, Appropriate number of words and images per slide, good colour schemes	Good but a few weaknesses	Good but a few weaknesses with one pronounced weakness	Several Weaknesses	Very poor visuals, visuals did not contribute to the presentation
2.0	-------- **Marks** -------	2.0	1.5	1.0	1.0	0.5
5%	**Timing and Pace of Talk**	Right length and well paced	Right Length but too slow or too rushed	Long or short ***and*** too slow or too rushed	Too long ***or*** too short	Had to be stopped **or** less than 50% of the allocated time
01	-------- **Marks** -------	1.0	0.5	0.5	0	0
5%	**Audibility and Comprehensibility**	Very clear and very precise	Clear, quite precise	Almost inaudible ***and*** difficult to understand	Almost inaudible ***or*** very difficult to understand	Inaudible **or** completely incomprehensible
01	-------- **Marks** -------	1.0	1.0	0.5	0.5	0

Total marks for presentation: _____ out of 06 marks.

Content: 70% (14 Marks)

70%	CONTENT	80-100%	60-80%	40- 60%	20-40%	0-20%
35%	**Knowledge and Understanding Innovation** Impression of wide reading, good knowledge and complete understanding	Excellent	Good	Satisfactory	Poor	Very Poor
07	-------- **Marks** -------	7.0	6.0 / 5.0	4.0 / 3.0	2.0	1.0
10%	**Structure of Presentation** Logical Structure, Clear Introduction, Body and Relevant Conclusion, sequence of information and ideas could be easily followed , Citation of source material	Excellent	Good	Satisfactory	Poor	Very Poor
02	-------- **Marks** -------	2.0	2.0	1.0	0.5	0.5
5%	**Key Points/ Themes** Identified Key Points, Kept to the points throughout the presentation- did not wander	Excellent	Good	Satisfactory	Poor	Very Poor
01	-------- **Marks** -------	1.0	1.0	0.5	0.5	0
10%	**Ability to answer Questions** Answers accurate and full of confidence	Excellent	Good	Satisfactory	Poor	Very Poor
02	-------- **Marks** -------	2.0	1.5	1.0	0.5	0
10%	**Creation of Interest/ Audience Participation** Created interest in the topic	Excellent	Good	Satisfactory	Poor	Very Poor
02	-------- **Marks** -------	2.0	1.5	1.0	1.0	0.5

Total for content: _____ out of 14; Total marks for oral presentation: _____ out of **20**

Comments:

Name of the Faculty _____.

Signature of the Faculty _____

St. Xavier's College, Mumbai.

ASSESSMENT OF INDIVIDUAL ORAL PRESENTATION -B

Dept. of Botany; Course Code _____ Date _____ Roll No _____

Name of student: _____ UIDNo _____ Marks _____/ 20

Title of oral presentation: _____

Assessment Grid : Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows

Presentation: 40 % (8 marks)

40%	PRESENTATION	80-100%	60-80%	40- 60%	20-40%	0-20%
15 %	**Presentation skills**	Varied rate of delivery, Changed pitch for emphasis, No distracting mannerisms ,good eye contact , Confident body language, Connected with audience	Good but a few weaknesses	Good but a few weaknesses with one pronounced weakness	Several Weaknesses	No speech variation, Distracting mannerisms, no eye contact, dull, and reading from notes/visual aids
03	-------- **Marks** -------	3.0	2.5	2.0	1.5	1.0
15 %	**Use of Visuals (Efforts to Aid Presentation)**	Very good, relevant visuals, good font size/ image size, Appropriate number of words and images per slide, good colour schemes	Good but a few weaknesses	Good but a few weaknesses with one pronounced weakness	Several Weaknesses	Very poor visuals, visuals did not contribute to the presentation
03	-------- **Marks** -------	3.0	2.5	2.0	1.5	1.0
5%	**Timing and Pace of Talk**	Right length and well paced	Right Length but too slow or too rushed	Long or short ***and*** too slow or too rushed	Too long ***or*** too short	Had to be stopped **or** less than 50% of the allocated time
01	-------- **Marks** -------	1.0	1.0	0.5	0.5	0
5%	**Audibility and Comprehensibility**	Very clear and very precise	Clear, quite precise	Almost inaudible ***and*** difficult to understand	Almost inaudible ***or*** very difficult to understand	Inaudible **or** completely incomprehensible
01	-------- **Marks** -------	1.0	1.0	0.5	0.5	0

Total marks for presentation: _____ out of 08 marks.

Content: 60% (12 Marks)

60%	CONTENT	80-100%	60-80%	40- 60%	20-40%	0-20%
25%	**Knowledge and Understanding Innovation** Impression of wide reading, good knowledge and complete understanding	Excellent	Good	Satisfactory	Poor	Very Poor
05	-------- **Marks** -------	5.0	4.0	3.0	2.0	1.0
10%	**Structure of Presentation** Logical Structure, Clear Introduction, Body and Relevant Conclusion, sequence of information and ideas could be easily followed , Citation of source material	Excellent	Good	Satisfactory	Poor	Very Poor
02	-------- **Marks** -------	2.0	1.5	1.0	0.5	0.5
5%	**Key Points/ Themes** Identified Key Points, Kept to the points through out the presentation- did not wander.	Excellent	Good	Satisfactory	Poor	Very Poor
01	-------- **Marks** -------	1.0	1.0	0.5	0.5	0
10%	**Ability to answer Questions** Answers accurate and full of confidence	Excellent	Good	Satisfactory	Poor	Very Poor
02	-------- **Marks** -------	2.0	1.5	1.0	0.5	0
10%	**Creation of Interest/ Audience Participation** Created interest in the topic.	Excellent	Good	Satisfactory	Poor	Very Poor
02	-------- **Marks** -------	2.0	1.5	1.0	0.5	0

Total for content: _____ out of 12; Total marks for oral presentation: _____ out of **20**

Comments:

Name of the Faculty _____.

Signature of the Faculty _____