



# Syllabus

## For M.Sc 8<sup>th</sup> Semester Courses in

### Botany

### (June 2020 onwards)

- Contents:
- Theory Syllabus for Courses:
  - SBOT0801 – Archegoniates
  - SBOT0802 – Anatomy and Medicinal Botany
  - SBOT0803 – Ecology
  - SBOT0804 – Plant Development
- Practical Course Syllabus for: SBOT0801PR, SBOT0802PR, SBOT0803PR, SBOT0804PR
- Evaluation and Assessment guidelines.

**M.Sc.-I Botany**  
**Course Title: ARCHEGONIATES**

**Course code: SBOT0801**

**Learning Objectives:**

1. To understand the classification and interrelationships between order of gymnosperms.
2. To know the significance of bryophytes as pioneer plants on land and their role in the origin of pteridophytes.
3. To summarize the role of pteridophytes in the origin of seed plants, and their economic importance

**Number of lectures: 60**

**Unit 1** (15 lectures)

**Pteridophyta I**

Classification of pteridophyta up to orders, study of life cycles of *Osmunda*, *Marsilea*, *Ophioglossum*, and *Azolla*.

**Unit 2** (15 lectures)

**Pteridophyta II**

Heterospory, apospory and apogamy, economic importance of pteridophytes, cultivation and maintenance of ornamental ferns.

**Unit 3** (15 lectures)

**Gymnosperms**

Classification of gymnosperms up to orders; general characters, affinities and interrelationships of Cycadofilicales, Cycadales, Bennettitales, Cordaitales, Coniferales, Ginkgoales and Gnetales. Life cycle of *Araucaria* and *Podocarpus*.

**Unit 4** (15 lectures)

**Paleobotany**

Fossilization Process, early non-vascular plants, ancient lycopods, Pteridospermales, conifers and flowering plants. Study of fossil form genera– *Rhynia*, *Calamites*, *Cordaites*, *Lyginopteris*, *Glossopteris*.

**List of Recommended Reference Books**

1. Smith, Gilbert M; Cryptogamic Botany Bryophyta & Pteridophyta Volume 2; 2nd edition; McGraw-hill book Comp. Tokyo, 1955.
2. Kar, Ashok Kumar; Gangulee, Hirendra Chandra; College botany : Volume II; 2nd edition; Kolkata : New Central Book Agency (P) Ltd , 1989, 2006.
3. Chamberlain, Charles Joseph; Coulter, John Merle; Morphology of Gymnosperms; 2nd edition; Allahabad : Central Book Depot, 1964.
4. Chamberlain, Charles Joseph; Gymnosperms : structure and evolution; 2nd edition; New York : Dover Publications, Inc. , 1966.
5. Chester A. Arnold, Introduction to paleobotany.

**Practical: SBOTPR0801**

- I) Gymnosperms: Study of following types - *Araucaria*, *Cupressus*, *Podocarpus*.
- II) Study of types- *Psilotum*, *Lycopodium*, *Isoetes*, *Osmunda*, *Marsilea*, *Ophioglossum*, *Angiopteris*, *Lygodium*, *Salvinia*, *Azolla*. Study of sori of ferns.
- III) Study of fossil genera– *Rhynia*, *Calamites*, *Sigillaria*, *Lepidodendron*, *Cordaites*, *Stigmaria*, *Sphenophyllum*, *Pentoxylon*.

\*\*\*\*\*

**M.Sc.-I Botany**

**Course code: SBOT0802**

**Course Title: ANATOMY AND MEDICINAL BOTANY**

**Learning Objectives:**

- 1. To differentiate between the different meristems, learn about their locations, functions, and their division.
- 2. To learn the properties, features, protection and treatment of timber wood.
- 3. To know the sources, geographical distribution and phytoconstituents of medicinal plants.
- 4. To practice the methods to determine the quality of crudes.

**Number of lectures: 60**

**Unit 1**

**(15 lectures)**

**Anatomy**

Meristems: Definition, type of meristems; apical cell, histogen, and tunica corpus theory. Tactile sense organs, gravitational and optical sense organs.

**Unit 2**

**(15 lectures)**

**Wood anatomy**

Types of wood elements; macroscopical and microscopical features of wood; physical and mechanical properties of wood; protection and treatment of wood.

**Unit 3**

**(15 lectures)**

**Medicinal plants**

Medicinal plants: sources and geographical distribution. Plant constituents in *Vasaka*, *Cinchona*, *Digitalis*, *Glycyrrhiza glabra*, *Dioscorea sps*, *Artemisia*, *Terminalia bellerica*, *Terminalia chebula*, *Citronella*, fennel, and lemon grass.

## **Unit 4**

**(15 lectures)**

### **Quality control of crude drugs**

Exomorphic, endomorphic characters, and chemical tests. Standardization parameters- moisture content, solvent extraction value, bitter value, foaming index, heavy metals detection.

### **List of Recommended Reference Books**

1. Eames, Arthur J.; Mac Daniels, Laurence H.; An introduction to plant anatomy; 2nd edition. Reprint; New Delhi : Tata Mcgraw-Hill Publishing Company Limited, (1978, 2004)
  2. Esau, Katherine; Anatomy of seed plants; 2nd edition; New York : John Wiley & Sons, 1977.
  3. Fahn, A; Plant anatomy; 4th edition. Indian reprint; New Delhi : Aditya Books (P) Ltd., 1997.
  4. Kokate, C.K.;Purohit, A.P.;Gokhale, S.B.; Pharmacognosy; 39th edition; Pune : Nirali Prakashan.
  5. Trease George Edward; A text book of Pharmacognosy; Edn, Bailliere, Tindall & Cox, London, 1957.
  6. Qadry, J.S.; Pharmacognosy; 16th edition; N.A. : Author , 2010.
  7. Trease, George Edward;Evans, William Charles; Pharmacognosy; 11th edition; London : Cassell& Company Ltd., 1978.
  8. Foster, Adriance S.: Practical plant anatomy. (2nd ed. Indian reprint) New Delhi. Affiliated East-West Press Pvt. Ltd., 1965.--(581.4FOS)
- 

### **Practical: SBOTPR0801**

- IV) Study of (a) wood elements in *Annona*, *Michelia*, *Sterculia* and *Thuja*, using the maceration technique,(b) leaf surface characters in *Pistia*, *Ficus*, *Avicennia* and *Peperomia*; (c) photosynthetic system in *Pinus*, *Cyperus*, *Ficus* and *Oxalis*. (d) Pollen morphology- (excluding those covered in UG).
- V) Double staining of sections and making permanent slides (5 different materials)
- VI) Estimation of vitamin C, vitamin E in plant sample.
- VII) Analyze the nutritional value of honey- detection of sugars by chromatography.
- VIII) Identification of exomorphic and endomorphic features of plants studied in theory.
- IX) Determine solvent extractive value, and moisture content of the given plant sample.

\*\*\*\*\*

**M.Sc.-I Botany**

**Course code: SBOT0803**

**Course Title: ECOLOGY**

**Learning Objectives:**

1. To perceive the importance of ecosystem in recycling of nutrients and its benefits.
2. To interpret the effects of climate change on vegetation.
3. To pick up the factors which limit distribution and diversity of plants.
4. To master the population characteristics and its estimation methods, landscape and restoration ecology.

**Number of lectures: 60**

**Unit 1**

**(15 lectures)**

**Ecosystem and nutrient cycling, and elevated CO<sub>2</sub> levels**

Ecosystem importance in recycling of nutrients, nutrient limitation in temperate vs tropical management practices on nutrient recycling (wood logging etc), Positive feedbacks between species composition and nutrient recycling. Global Change: Elevated CO<sub>2</sub> levels on climatic changes and its effect on vegetation, atmospheric N<sub>2</sub> deposition on plant communities, effect on vegetation and community structure.

**Unit 2**

**(15 lectures)**

**Distribution and diversity**

Limiting factors (Abiotic /biotic): distribution, seed dormancy, dispersal, post dispersal, pollination and its factors. Germination: physical and environmental factors, various hypotheses on biogeography including island biogeography, Niche and theory of niche (Grinnelian and Hutchinsons models)

**Unit 3**

**(15 lectures)**

**Population Ecology**

Life history strategies (r-K vs R-C-S), population growth, life history, meta-populations, genetic populations, open-closed populations, various methods to estimate populations and population size, Lotka-Volterra equation, population growth equation, life strategies and their equations.

**Unit 4**

**(15 lectures)**

**Methods to estimate diversity, and Landscape ecology**

Estimating diversity- alpha, beta, gamma (local and regional), density estimation, various estimators. Diversity- stability relationship; measuring biodiversity- species richness, evenness, rarefaction curve, asymptotic estimators. Landscape and Restoration ecology: Concept of scale, models in landscape ecology, cause of landscape patterns, quantifying landscape patterns for planning and conservation- direct, indirect, intermediate.

**List of Recommended Reference Books**

1. Ambasht, R. S. - A text book of plant ecology.

2. Odum, E. P; Fundamental of Ecology (1971): WB Saunders Company.
  3. Jogdand, S. N., 1995. Environmental Biotechnology. Himalaya Publishing House, Mumbai.
  4. Sharma P. D., Ecology and environment; Rastogi publications, Meerut. 7th ed – 2004.
  5. Subrahmanyam N.S., and Sambamurty, A.V.S.S. Ecology- Narosa Publishing House, 2000;
  6. Santra S. C.; Environmental Science; Central Publ. New Delhi.
- 

### **Practical: SBOTPR0803**

- I) To record limiting factors for the coastal (brackish water) to prepare a restoration plan for the area. To determine the diversity and density using sampling techniques suitable for the forest ecosystem. To study the plant community structure by using appropriate methods (quadrat / transect) and quantifying species indicators for the ecosystem. To study the population structure of woodland ecosystem using appropriate sampling techniques.
- II) To compare the biomass and net primary production; Measurement of water quality based on hardness, total alkalinity, total solids and total dissolved solids in water samples.
- III) Problems on Population growth and diversity estimation.

\*\*\*\*\*

**M.Sc.-I Botany**  
**Course Title: PLANT DEVELOPMENT**

**Course code: SBOT0804**

#### **Learning Objectives:**

1. To understand the gene regulating mechanisms in the development of various floral organs.
2. To learn the process of senescence and the metabolic changes taking place in plant cell during senescence.

**Number of lectures: 60**

#### **Unit 1**

**(15 lectures)**

#### **Meristem development**

Organization of root apical meristems; Root development. Transition of flowering; Floral meristems and floral development in *Arabidopsis* and *Antirrhinum*. Floral organs, genes regulating the floral development. floral organ identity genes - MADS box genes, a model for floral evocation; SDP and LDP.

## **Unit 2**

**(15 lectures)**

### **Male gametophyte development**

Sporophyte-gametophyte interaction during micro- and megasporogenesis; interaction of mitochondrial and nuclear genes; male specific cytokinesis; tapetal development and pollen-coat formation; asymmetric division, cell fate and polarity; sperm dimorphism; male germ unit: cytology and 3-d structural organization; pollen biotechnology; manipulation of sperm cells; male-sterility; induction; mechanism of action and breeding; transformation of pollen; embryogenic development of pollen grains.

## **Unit 3**

**(15 lectures)**

### **Female gametophyte development**

Regulation of pistil and ovule development; megasporogenesis and megagametogenesis: developmental pathways, gene function and organization. Pollen-pistil interaction and double fertilization: Pollen tube guidance; recognition and rejection reaction, barriers to gene flow, double fertilization: origin, mechanism and in vitro fertilization; preferential fertilization; pistil activation and ovule penetration. Seed development, fruit growth.

## **Unit 4**

**(15 lectures)**

### **Senescence and programmed cell death**

Programmed cell death (PCD) an overview. Overview of senescence- pigment metabolism, protein metabolism, regulation of metabolic activity during senescence, endogenous PGRs and senescence.

### **List of Recommended Reference Books**

1. Bob B. Buchanan (Editor), Wilhelm Gruissem (Editor), Russell L. Jones (Editor), Biochemistry and Molecular Biology of Plants, 2nd Edn. Wiley Blackwell.
  2. Lincoln Taiz, Eduardo Zeiger, Ian Max Meller, Angus Murphy, Plant Physiology and Development, 6th Edn, Sinauer Associates Publications.
  3. Raghavan V, (1997) Molecular Embryology of Flowering Plants, Cambridge Univ. Press. 6.
  4. Raghavan V, (2000) Developmental Biology of Flowering Plants, Springer Verlag, New York.
  5. Russell Jones, Helen Ougham, Howard Thomas and Susan Waaland, Molecular Biology of plants, John Wiley & Sons, 2012
  6. Shivanna K. R., and Johri B. M., (1985) The Angiosperm Pollen: Structure and Function. New Delhi, India: Wiley-Eastern.
  7. Shivanna K. R., and Rangaswamy N. S., (1992) Pollen Biology: A Laboratory Manual, SpringerVerlag, Berlin.
  8. Shivanna K. R., (2003) Pollen Biology and Biotechnology. Enfield, New Hampshire, U.S.A.: Science Publishers.
-

**Practical: SBOTPR0804**

- I) Estimation of carotenoids in the young, mature and senescent leaves.
- II) Study of morphology of the pollens.
- III) Study of pollen viability.
- IV) Study of meiosis in *Tradescantia* buds.
- V) Study of meristems through permanent slides and photographs.
- VI) Determination of total proteins in plant tissue extracts (control and GA3 treated grains).

\*\*\*\*\*

**Evaluation and Assessment: SBOT0801, SBOT0802, SBOT0803 and SBOT0804 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 SBOTPR0801, SBOTPR0802, SBOTPR0803, SBOTPR0804 (Practical)**

**Total marks per Practical course - 50.**

**End Semester Practical Examination – (SBOTPR0801- 50 marks, SBOTPR0802- 50 marks, SBOTPR0803- 50 marks, SBOTPR0804- 50 marks)**

**Template for SBOT0801 Course End Semester Examination in Semester 8**

UNITS	KNOWLEDGE	UNDERSTANDING	APPLICATION and ANALYSES	TOTAL MARKS- Per unit
<b>1</b>	8	7	0	15
<b>2</b>	8	7	0	15
<b>3</b>	8	7	0	15
<b>4</b>	5	5	5	15
<b>-TOTAL - Per objective</b>	29	26	5	<b>60</b>
<b>% WEIGHTAGE</b>	48.33	43.33	8.33	<b>100%</b>



**Template for SBOT0802 Course End Semester Examination in Semester 8**

<b>UNITS</b>	<b>KNOWLEDGE</b>	<b>UNDERSTANDING</b>	<b>APPLICATION and ANALYSES</b>	<b>TOTAL MARKS- Per unit</b>
<b>1</b>	8	7	0	15
<b>2</b>	6	6	3	15
<b>3</b>	6	6	3	15
<b>4</b>	6	6	3	15
<b>-TOTAL - Per objective</b>	26	25	9	<b>60</b>
<b>% WEIGHTAGE</b>	43.33	41.66	15	<b>100%</b>

**Template for SBOT0803 Course End Semester Examination in Semester 8**

<b>UNITS</b>	<b>KNOWLEDGE</b>	<b>UNDERSTANDING</b>	<b>APPLICATION and ANALYSES</b>	<b>TOTAL MARKS- Per unit</b>
<b>1</b>	8	7	0	15
<b>2</b>	5	5	5	15
<b>3</b>	5	5	5	15
<b>4</b>	5	5	5	15
<b>-TOTAL - Per objective</b>	23	22	15	<b>60</b>
<b>% WEIGHTAGE</b>	38.33	36.66	25	<b>100%</b>

**Template for SBOT0804 Course End Semester Examination in Semester 8**

<b>UNITS</b>	<b>KNOWLEDGE</b>	<b>UNDERSTANDING</b>	<b>APPLICATION and ANALYSES</b>	<b>TOTAL MARKS- Per unit</b>
<b>1</b>	6	6	3	15
<b>2</b>	6	6	3	15
<b>3</b>	7	8	0	15
<b>4</b>	5	5	5	15
<b>-TOTAL - Per objective</b>	24	25	11	<b>60</b>
<b>% WEIGHTAGE</b>	40	41.66	18.33	<b>100%</b>





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)	<b>Organization of report</b>  -----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)	<b>Content</b>  -----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)	<b>Conclusion</b>  -----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)	<b>References</b>  -----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)	<b>Attendance / participation</b>  -----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 %	<b>Presentation skills</b>	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 %	<b>Use of Visuals ( Efforts to Aid Presentation)</b>	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%	<b>Timing and Pace of Talk</b>	Right length and well paced	Right Length but too slow or too rushed	Long or short <i>and</i> too slow or too rushed	Too long <i>or</i> too short	Had to be stopped <i>or</i> less than 50% of the allocated time
01	----- Marks -----	1.0	0.5	0.5	0	0
5%	<b>Audibility and Comprehensibility</b>	Very clear and very precise	Clear, quite precise	Almost inaudible <i>and</i> difficult to understand	Almost inaudible <i>or</i> very difficult to understand	Inaudible <i>or</i> 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%	<b>Knowledge and Understanding Innovation</b> Impression of wide reading, good knowledge and complete understanding 07 ----- Marks -----	Excellent 7.0	Good 6.0 / 5.0	Satisfactory 4.0 / 3.0	Poor 2.0	Very Poor 1.0
10%	<b>Structure of Presentation</b> Logical Structure, Clear Introduction, Body and Relevant Conclusion, sequence of information and ideas could be easily followed , Citation of source material 02 ----- Marks -----	Excellent 2.0	Good 2.0	Satisfactory 1.0	Poor 0.5	Very Poor 0.5
5%	<b>Key Points/ Themes</b> Identified Key Points, Kept to the points throughout the presentation- did not wander 01 ----- Marks -----	Excellent 1.0	Good 1.0	Satisfactory 0.5	Poor 0.5	Very Poor 0
10%	<b>Ability to answer Questions</b> Answers accurate and full of confidence 02 ----- Marks -----	Excellent 2.0	Good 1.5	Satisfactory 1.0	Poor 0.5	Very Poor 0
10%	<b>Creation of Interest/ Audience Participation</b> Created interest in the topic 02 ----- Marks -----	Excellent 2.0	Good 1.5	Satisfactory 1.0	Poor 1.0	Very Poor 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 %	<b>Presentation skills</b>	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 %	<b>Use of Visuals ( Efforts to Aid Presentation)</b>	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%	<b>Timing and Pace of Talk</b>	Right length and well paced	Right Length but too slow or too rushed	Long or short <i>and</i> too slow or too rushed	Too long <i>or</i> too short	Had to be stopped <i>or</i> less than 50% of the allocated time
01	----- Marks -----	1.0	1.0	0.5	0.5	0
5%	<b>Audibility and Comprehensibility</b>	Very clear and very precise	Clear, quite precise	Almost inaudible <i>and</i> difficult to understand	Almost inaudible <i>or</i> very difficult to understand	Inaudible <i>or</i> 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%	<b>Knowledge and Understanding Innovation</b> Impression of wide reading, good knowledge and complete understanding ----- Marks -----	Excellent	Good	Satisfactory	Poor	Very Poor
05		5.0	4.0	3.0	2.0	1.0
10%	<b>Structure of Presentation</b> Logical Structure, Clear Introduction, Body and Relevant Conclusion, sequence of information and ideas could be easily followed , Citation of source material ----- Marks -----	Excellent	Good	Satisfactory	Poor	Very Poor
02		2.0	1.5	1.0	0.5	0.5
5%	<b>Key Points/ Themes</b> Identified Key Points, Kept to the points through out the presentation- did not wander. ----- Marks -----	Excellent	Good	Satisfactory	Poor	Very Poor
01		1.0	1.0	0.5	0.5	0
10%	<b>Ability to answer Questions</b> Answers accurate and full of confidence ----- Marks -----	Excellent	Good	Satisfactory	Poor	Very Poor
02		2.0	1.5	1.0	0.5	0
10%	<b>Creation of Interest/ Audience Participation</b> Created interest in the topic. ----- Marks -----	Excellent	Good	Satisfactory	Poor	Very Poor
02		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 \_\_\_\_\_