



SHRI VASANTRAO BANDUJI PATIL TRUST'S

## APPASAHEB BIRNALE COLLEGE OF ARCHITECTURE, SANGLI

(Approved by AICTE, C.O.A New Delhi, Affiliated to Shivaji University Kolhapur)

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Website- [www.abcasangli.edu.in](http://www.abcasangli.edu.in)

### CRITERION : 2

#### Teaching- Learning and Evaluation

#### Key Indicator 2.3 Teaching –Learning Process



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**2.3.2 Teachers use ICT enabled tools for effective teaching –learning process.  
Write description in maximum of 200 words**

Sr.No.	Teachers use ICT Tools	ICT Tools
1	Teaching Plan	M.S.Word, Power Point
2	Presentation of Theory lecture	M.S.Word, Power Point
3	Graphics and Design software used for Studio Lecture	Auto- cad, canva, Adobe Photoshop
4	Communication Tools	Zoom meeting ,google meet
5	Online Assessment Tools	Google Forms
6	Videos for Visualization of materials and Construction Technology	Youtube,VLC Media player,MX Player
7	Web Browsers for Images	Google Chrome
8	Estimation and costing	M.S. Excel ,Power Point



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# TEACHING PLAN

## Architectural ACOUSTIC T.Y. B.Arch sem-6 2023-24

Architectural Acoustics Teaching Plan 2023-2024						
Course Code : BS & AE - 409						
T.Y. B.Arch. Ar.Pranali Kulkarni						
WEEK	DATE	No hrs	TOPIC	Teaching learning methodology	Cos	Pos Pso
1	03.01.2024	3	<b>Unit 1: Introduction to Acoustics</b> The history of Acoustics, definition and functions of acoustics, various key concepts such as origin of sound, propagation, spherical wave front, wave length, amplitude	<b>PPT,</b> Sketching on Board	To enable students to understand and apply: Basic laws and terminologies related to Acoustics	<b>P.O.1. Purpose of Architectural studies</b>  PSO 01
Sports week						
2	10.01.2024					
3	17.01.2024	3	<b>Unit 5: Acoustical materials types</b> Sound absorbing materials like foam panels, fabric panels, underlayment, partitions, mineral wool, curtains, hanging baffles, acoustic tiles, cotton bats. Sound reflecting materials like marble, granite, clay brick, ceramic tile, smooth concrete, plaster, metal, glass. Velocity, intensity and intensity levels with Decibel scale, properties of sound, characteristics of sound like sound absorption, sound reflection, and sound transmission, defects of sound like sound resonance, Sound reverberation, sound echo, etc., and their remedies; phenomenon in acoustics like directional sound, sound and	<b>ICT-Information and communication technologies</b>  <b>PPT,</b> Sketching on Board	To enable students to understand and apply: Basic laws and terminologies related to Acoustics,	<b>P.O.5. Progressive use of modern tools and techniques</b>  PSO 02
Ar.Design Site visit -Goa						
4	24.01.2024					
5	31.01.2024	3	<b>Unit 2: Behaviour of sound in open and enclosed spaces</b> Sound refraction, sound diffraction, first order reflection, inverse square law. Understanding near field, free field, and reverberant field. Studying absorptive and reflective materials.	<b>PPT,</b> Sketching on Board, market survey by students	To enable students to understand and apply: Urban noise control and its application at site and building level	<b>P.O.5. Progressive use of modern tools and techniques</b>  PSO 01, PSO 2
6	07.02.2024	3	Design considerations for good an acoustical design such as shape, size, occupancy, purpose, geometry for open air amphitheatre, auditorium, recording studios, etc. Defects like sound shadow, dead spots, whispering galleries or sound creep and their remedies.	<b>PPT,</b> Sketching on Board	To enable students to understand and apply: Urban noise control and its application at site and building level	<b>P.O.5. Progressive use of modern tools and techniques</b>  PSO 01, PSO 2
7	14.02.2024	3	<b>Unit 3: Noise Control and Sound Reinforcement Systems</b> To understand noise, its psychological and physiological effects, transmission of sound (air borne and structure borne), sources and methods of insulation of indoor noise, control measures for mechanical noise and its vibrations.	<b>PPT,</b> Sketching on Board, ICT	To enable students to understand and apply: Urban noise control and its application at site and building level	<b>F.O.3. Development of solutions for programme</b>  PSO 01, PSO 2
8	21.02.2024	3	Outdoor noise sources such as traffic noise and their control methods, various types of sound absorbent materials, hollow and composite wall construction, floors and ceilings. Characteristics and components of a good Sound reinforcing system such as microphones, amplifiers and speakers.	<b>PPT,</b> Sketching on Board.	To enable students to understand and apply: Acoustical requirements of a given activity, its calculations and designing of the space.	<b>P.O.9. User friendly</b>  PSO 01, PSO 2
9	28.02.2024	3	<b>Site visit as case study</b>	Field Visit	To enable students to understand and apply: Acoustical requirements of a given activity, its calculations and designing of the space.	<b>P.O.10. Persuasive Communication</b>  PSO 01, PSO 2
10	06.03.2024	3	<b>Unit 4: Acoustical Design Principles and Factors</b> Case studies and at least one design exercise of an auditorium, cinema hall, conference room or recording studio, Discotheque, karaoke bars, home theatre, lecture halls/classrooms.	<b>PPT by students</b>	To enable students to understand and apply: Acoustical requirements of a given activity, its calculations and designing of the space.	<b>P.O.4 Perception of problems</b>  PSO 01, PSO 2
11	13.03.2024	3	Site selection and planning, shape, dimensions, occupancy and seating arrangement, treatment of interior surface, desired reverberation time. Exercise output shall be in the in the form of plan, section, construction details and calculation sheets.	<b>PPT,</b> Sketching on Board, PPT by students	To enable students to understand and apply: Acoustical requirements of a given activity, its calculations and designing of the space.	<b>P.O.2. Programme analysis</b>  PSO 01
12	20.03.2024	3	Question bank and Assignments	Understanding and overview from students		<b>P.O.6. Philanthropy of P.O.7. Environment</b>  PSO 01
13	27.03.2024	3	Unit test			PSO 01
14	03.04.2024	3	<b>Unit 5: Acoustical materials types</b> Absorption and reflection coefficient. Use of materials to reduce, elevate, absorb and divert sound.	<b>PPT,</b> Sketching on Board.	To enable students to understand and apply: Acoustical requirements of a given activity, its calculations and designing of the space.	<b>P.O.4 Perception of problems</b>  PSO 01
TOTAL		36				



  
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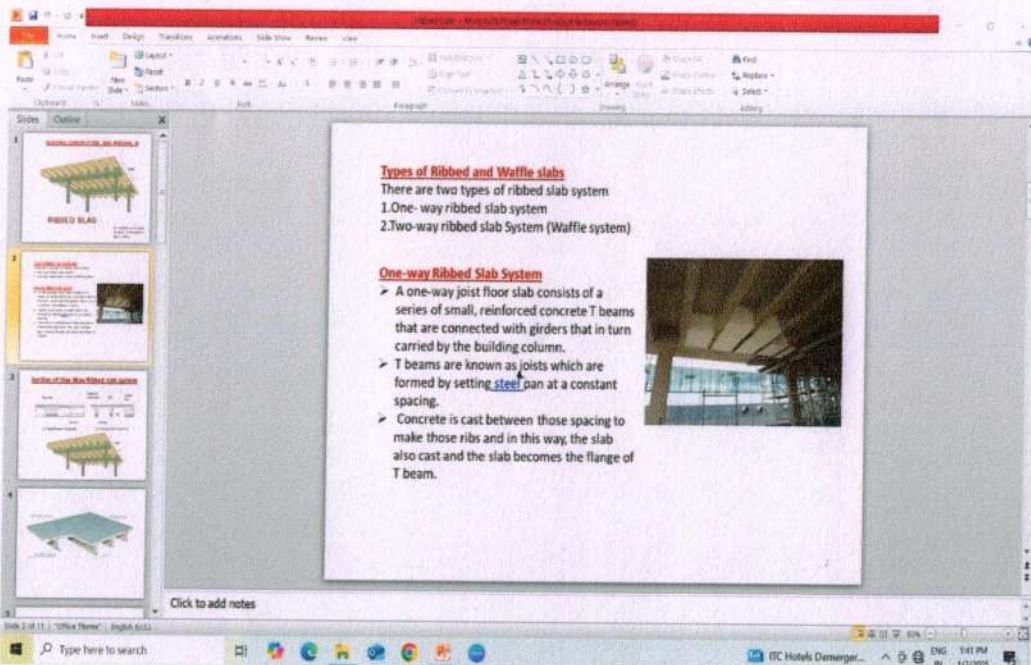
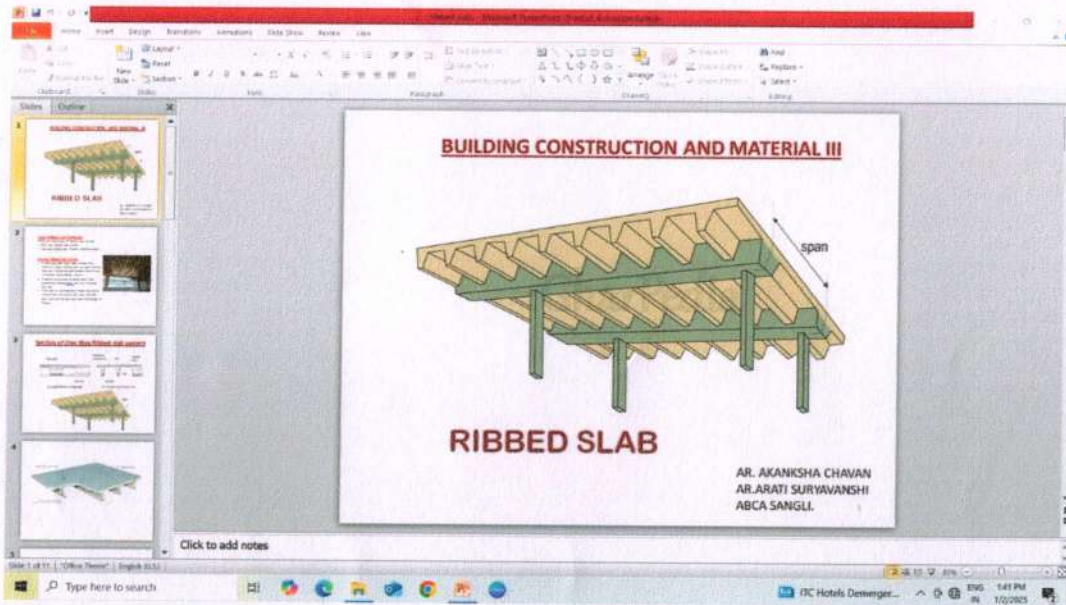
## Building Construction T.Y. B.Arch sem-6 2023-24

Building Construction & Material – VI															
Course Code :BS & AE - 602*															
Semester : VI										Teacher- SN/PJ/PK					
WEEK NO	DATE	Studio	TOPIC	Cos	Pos	PSOs	Teaching Learning Methodology	Theory	TOPIC	Teaching Learning Methodology	Cos	Pos	PSOs		
		Hrs	CONSTRUCTION					Hrs	MATERIAL						
1	02.01.24	3	<b>UNIT 1-Doors and Windows</b> Sliding doors in M.S., Aluminium and I. W.	CO1- To introduce structural concepts of various parts of buildings	PO2	PSO2	Sketching on board, Market study by students, ppt presentations by students.	1	Introduction	Discussion			PO1		
2	16.01.2024	3	T. W. Sliding and folding door				Sketching on board, Data collection from book		<b>Unit 1 - Ceramics, various clay products</b> Tile manufacturing characteristics and types	Market survey by students - ppt by students	CO4- To gain knowledge about Building	PO1, PO2			
3		3	Pivoted glazed door				Sketching on board, Data collection from book								
4	09.01.2024		SPORTS WEEK												
5	30.01.24	3	Aluminium sliding and hinged windows, various options for sliding windows - 2125, 3135, 2145. Various finishes of aluminium windows, UPVC windows	CO3- To explain construction details	PO2	PSO2	Sketching on board, Data collection from book	1	<b>Unit 2 - Glass</b> Classification, composition and properties of glass, Different types of glass, Coloured glass, Available size and thickness of glass, Name of the companies which manufacture the glass	Market survey by students - ppt by students	CO5- To gain knowledge about Market forms of materials	PO1	PSO2		
6	23.01.2024		STUDY TRIP- GOA												
7	04.02.2024	3	<b>Unit 2 - M. S. Roofing</b> Different types of M. S. roof trusses for span up to 25 meters with roofing materials (North light roof truss)	CO1- To introduce structural concepts of various parts of buildings	PO2	PSO2	Sketching on board, Data collection from book	1	<b>Unit 3 - Plastics</b> Historical background, Composition, polymerization, classification, Different type of resins, moulding, compound fabrication properties and	Market survey by students - ppt by students	CO5- To gain knowledge about various synthetic Building materials	PO1	PSO2		
8	20.02.2024	4	Roof covering materials : straight with curved Roof covering materials - G.I., A.C. aluminium, galvalum sheets, accessories of roof coverings.							1		Sketching on board, Data collection from book/market survey by students - ppt by			
9	19.03.2024	4	UNIT TEST												
10	27.02.2024	3	<b>Unit 3 - M. S. Sliding and hinged Gates</b> Rolling shutter Different types of M. S. grills for balcony and staircase Different types of S. S. railing for balcony and staircase	CO1- To introduce structural concepts of various parts of buildings	PO2	PSO2	Sketching on board, Data collection from book, Case study visit	1	<b>Unit 6 - Ferro cement(Const.)</b> Introduction of Ferro cement, casting techniques, uses.	Market survey by students - ppt by students	CO4- To gain knowledge about Building materials	PO1	PSO2		
11	1ST OR 3RD SAT OF FEB 3.02.24 OR 17.02.24		<b>Unit 4 - Sound insulation materials</b> Introduction, types and uses of sound insulating materials.									Expert Seminar/Market material survey by students		PO1	PSO2
12	12.3.2024	3	<b>Unit 4 - Precast construction components</b> Precast Construction Components for Columns, Beams, Staircase, flooring, Partitions, Doors and Window Frames, Compound Wall	CO2- To introduce various construction techniques	PO2	PSO2	Sketching on board, Data collection from book, Case study visit, Industrial visit by students - ppt presentations by students	1	<b>Unit 5 - Partitions (cons.)</b> Partitions : Removable and Folding in timber and aluminium, modular aluminium partitions.	Sketching on board, Data collection from book, Case study visit, Industrial visit by students - ppt presentations by students	CO5- To gain knowledge about Market forms of materials	PO1, PO2			
13	26.03.2024	3	Pre-Final Submission												
14	02.04.2024	4	FINAL SUBMISSION												
Total		29												6	
		35													



  
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## Sample of Presentation of Theory Lecture by Faculty



*Ar. Akanksha Chavan*  
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Microsoft PowerPoint - Project Architecture

Home Insert Design Transitions Animations Slide Show Review View

Clipboard Slides

1 **REINFORCED CONCRETE AND STEEL**

2 **REINFORCED CONCRETE**

3 **Section of One-Way Ribbed slab system**

4

Slide 3 of 11 | Office Theme | English (US)

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### Section of One-Way Ribbed slab system

Labels in diagrams: Floor girder, Joist bars, Slab, Spandrel beam, Ribs, Welded wire reinforcement, Joist bars.

(a) Longitudinal section through joists (b) Transverse section through joists

span

Click to add notes

1 of 24 - Clipboard  
Item not Collected: Delete items to increase available space

Microsoft PowerPoint - Project Architecture

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1 **REINFORCED CONCRETE AND STEEL**

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4

Slide 4 of 11 | Office Theme | English (US)

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Labels: STEEL REINFORCED CONCRETE SLAB WITH REINFORCED 2" PHOSPHOR BRASS, STEEL REINFORCED CONCRETE JOIST WITH REINFORCED 2" PHOSPHOR BRASS AND DEFLECTION CURVES, STEEL JOIST, PNL CONNECTION BETWEEN JOIST AND SLAB.

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## TWO-WAY RIBBED SLAB

- Two-way Ribbed Slab System (Waffle System) The system was designed to decrease the weight of traditional full-concrete slabs.
- The dome-shaped forms create a matrix of voids surrounded by orthogonal ribbing, producing a two-way configuration very suitable for large-spanning slabs.
- Voids between all the domes reduce the dead load as the width of that portion of the slab is less than a flat slab.
- This type of slab is known as waffle slabs because they look like waffles with rows of beams running underneath them.
- Waffle slab shows a ceiling which is suitable to install all the electrical appliances and can give a better outlook thus increasing the aesthetic factor.



Slide 6 of 11 | "Office Theme" | English (US)

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### Advantages of Ribbed and Waffle Slabs

- In this type of slab, the tension stress is eliminated in the tension side of the slab. The strength of concrete in tension is very small and so elimination of much of the tension concrete is done by the use of pan forms.
- Economical where the live loads are fairly small such as apartment houses, hotels.
- Long slab spans can be constructed through ribbed and waffle Slabs. In many cases, long spans are desirable in the building. Ribbed or waffle slabs are an easy solution for this purpose.
- Provide architectural advantages. All the Electrical appliances can be installed easily in the gap of the ribs which can be architecturally aesthetic.
- Slab thickness of ribbed or waffle slabs is less than other slab systems. Therefore the weight of slab is reduced. This saving of weight can change in structural characteristic.
- Lighter and stiffer slab than an equivalent flat slab.
- Reducing the extent of foundations by reducing the ultimate load.
- They provide a very good form where slab vibration is a viable issue.

Slide 7 of 11 | "Office Theme" | English (US)

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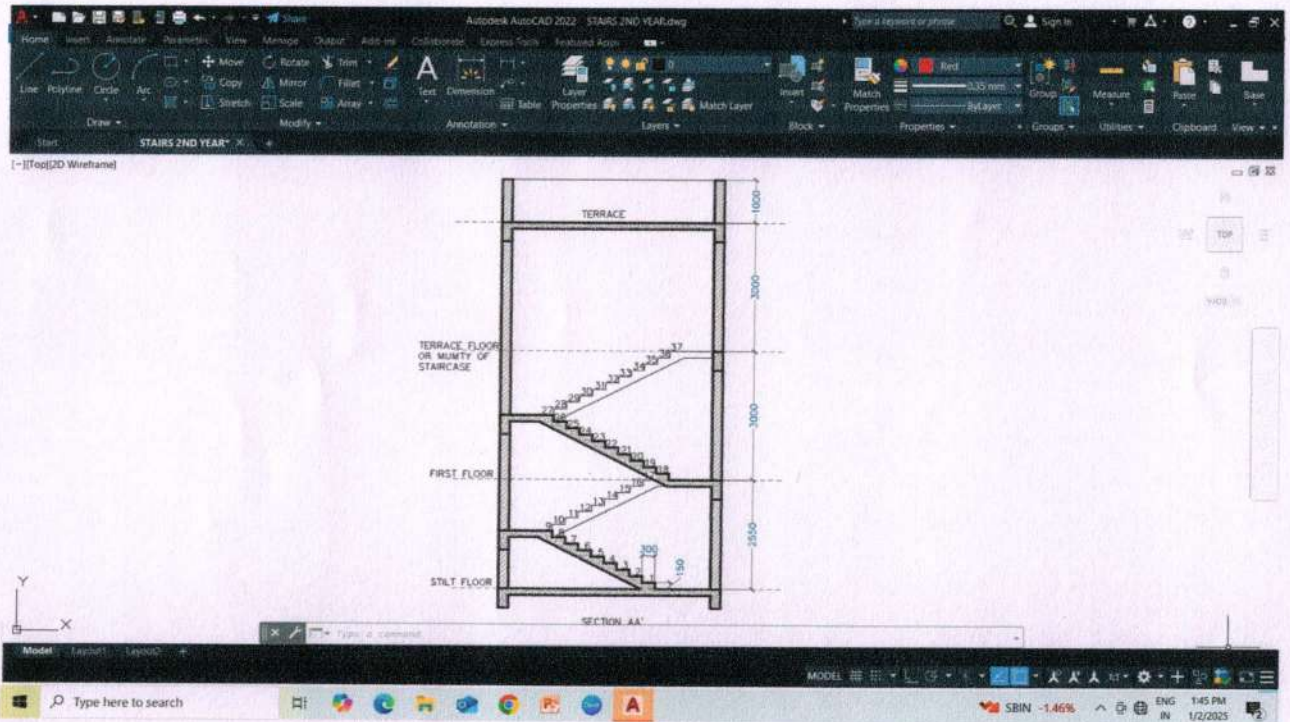


*Anatya*

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# Sample of Auto Cad Drawing by Faculty

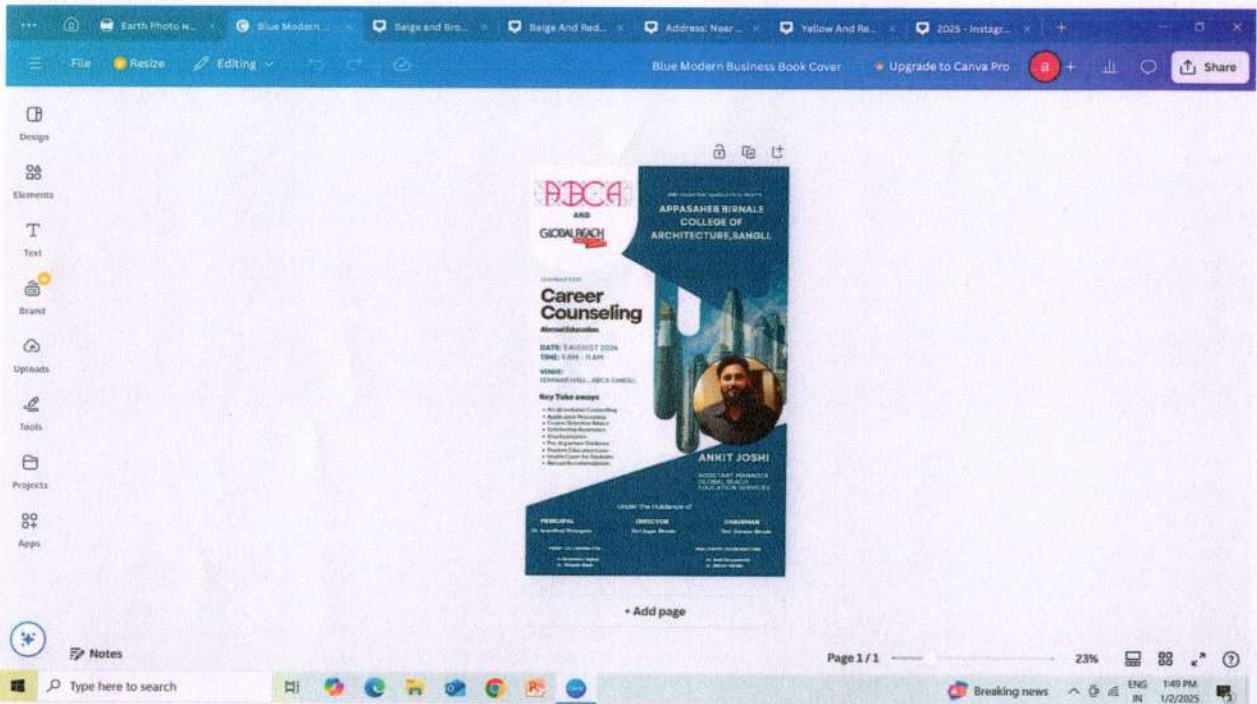
## Building Construction sem III



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# Sample of canva used for presentation by Faculty



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