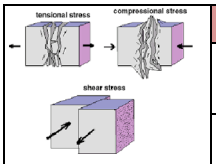
Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore



Course Title: **MECHANICS OF STRUCTURES**		
Scheme (L:T:P) : **4:0:0**	Total Contact Hours: **52**	Course Code: **15AR31T**
Type of Course: **Lectures, Self-Study& Quiz**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks		SEE- 100 Marks

Prerequisites: Applied science and Mathematics

Course Objectives:

The course aims at enabling the students to

1. Define force systems and their role in the stability of the structures.
2. Analyse the stability of the various structural components and calculate the desired parameters to facilitate the design procedure to follow

On successful completion of the course, the students shall be able to:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Define the various types of force systems to study their effects .	***R/U/A***	1,2	12
CO2	Calculate centre of gravity and moment of inertia.	***R/U/A***	1,2,3,10	10
CO3	Calculate the level of stresses developed in simple axially loaded Homogeneous sections and also on composite sections	***R/U/A***	1,2,3,10	06
CO4	Evaluate the effect of temperature on structural components and to account for the effects of temperature.	***R/U/A***	1,2,3,10	06
CO5	Distinguish different types of beams and determine the shear force and bending moment for a loaded beam.	***R/U/A***	1,2,3,10	12
CO6	Determine the crippling load of a column as per the Euler's theory.	***R/A***	1,2,3,10	06
			Total sessions	**52**

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
MECHANICS OF STRUCTURES	3	3	2	1	2	-	-	-	-	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

Course content and blue print of marks for SEE

Unit	Major Topics	Hours Allotted	Questions to be set for SEE						Marks weightage	weightage (%)
			Cognitive Levels							
			R	U	Ap	Ay	C	E		
1	Statics of structures	12	05	05	20				30	**23**
2	Centre of gravity and moment of inertia	10	05	05	20				30	**19**
3	Simple stresses and strains	12	05	05	30				40	**23**
4	Bending moment and shear force	12	05	05	20				30	**23**
5	Columns and struts	06	05		10				15	**12**
Total		52	25	20	100				**145**	**100**

DETAILS OF CONTENTS

UNIT 1: STATICS OF STRUCTURE 12Hrs

Introduction to different force systems, Coplanar and non coplanar, concurrent and non concurrent, parallel forces, Resolution and composition of co planar forces Law of parallelogram of forces and triangle of forces Types of parallel forces, principles of equilibrium and conditions of equilibrium , Lami's theorem – statement, Problems on Resolution and composition of forces. Determining the magnitude and direction of Resultant for a system of concurrent and parallel forces(Bars loaded with only vertical forces)

UNIT 2: CENTRE OF GRAVITY AND MOMENT OF INERTIA 10Hrs

Definition of centre of gravity, Methods of Locating centre of gravity- Location of centre of gravity by geometrical consideration and by moment of area . Problems on locating centre of gravity for simple geometrical sections like 'L' section 'T Section 'I ' Section and 'Z' Section and simple sections of combined forms of rectangle and circular shapes. Moment of inertia - Definition, Expressions for moment of inertia for simple geometrical objects (no derivation) , Theorem of perpendicular axis and parallel axis. Problems on determining moment of inertia of sections like 'L' section 'T Section 'I ' Section and 'Z' Section and simple sections of combined forms of rectangle and circular shapes. Radius of gyration – Definition Expression for radius of gyration

UNIT 3: SIMPLE STRESSES AND STRAINS 12Hrs

Types of stresses and strains- compressive and tensile stresses and strains, Hooke's law Modulus of elasticity- Definition .Expression for determining deformation of an axially loaded member . Simple problems for determining deformation .Bars of varying cross section (Excluding tapering sections) . Composite sections and related problems(Excluding sections subjected to both temperature variation and external loads simultaneously). Temperature stresses and strains and related problems (Excluding composite sections)

UNIT4 : BENDING MOMENT AND SHEAR FORCE 12Hrs

Types of beams : Cantilevers, Simply supported and Overhanging beams .Types of loads - Concentrated , U.D.L and uniformly increasing loads. Calculation of B.M and S.F for simply supported, cantilever and overhanging beams subjected to concentrated loads and UDL only. Point of contraflexture- Definition. Bending moment and shear force diagrams for loaded beams

UNIT5 : COLUMNS AND STRUTS 06Hrs

Concept of columns and struts, behaviour of long and short columns with different end conditions. Buckling in long columns .Effective lengths of columns as per Euler's Theory. Slenderness ratio of long and short columns. Simple problems for determining Buckling loads for columns with different end conditions

REFERENCE BOOKS

1. Strength of materials by Ramamrutham
2. Strength of materials by B.C. Punmia, Ashok Jain and Arun Jain
3. Strength of materials by S.K. Agarwal and P.K. Gupta
4. Strength of materials by R.S. Khurmi
5. Strength of materials by I.B. Prasad
6. Applied mechanics by Ramamrutham
7. Applied mechanics by R.S.Khurmi
8. Applied mechanics by I.B. Prasad

LIST OF LEARNING WEBSITES:

https://en.wikipedia.org/wiki/Structural_mechanics

http://www.engineerstudent.co.uk/stress and **strain.pdf**

http://www.iit.edu/arch/workshops/momentInertia

http://www.freestudy.couk.stress

SUGGESTED LIST OF STUDENT ACTIVITY

1) To locate centre of gravity of a irregular lamina made of card sheet or mount board

2) To prepare the model of columns using suitable material by simulating various end conditions to study its buckling behavior

3)To prepare model of a beam and study its deflection pattern

4) To device a Mechanism for verifying Lami's theorem

5) To develop loading system to determine the young's modulus of a thin wire

Execution Note:

1. Maximum of 2 students in each batch for student activity
2. Any two activities (either from the list given or any similar activities) shall be assigned among different batches; may be assigned by the teacher based on interest of the students.
3. Project activities shall be carried out throughout the semester and present the project report at the end of the semester; concerned teacher is expected to observe and record the progress of students' activities
4. Submit qualitative hand-written report not exceeding 6 pages; one report per batch
5. Each of the activity can be carried out off-class well in advance; however, demonstration/presentation should be done during laboratory sessions
6. Assessment shall be based on quality of work as prescribed by the following **rubrics** table

Example of model of rubrics / criteria for assessing student activity

Dimension	Students score (Group of five students)				
	STUDENT 1	STUDENT 2	STUDENT 3	STUDENT 4	STUDENT 5
Rubric Scale	Unsatisfactory **1**, Developing **2**, Satisfactory **3**, Good **4**, Exemplary5				
1.Literature	5				
2.Fulfill team's roles & duties	2				
3.Conclusion	3				
4.Convensions	4				
Total	14				
Average=(Total /4)	14/4=3.5=4				
Note: Concerned faculty (Course coordinator) must devise appropriate rubrics/criteria for assessing Student activity for 5 marks One activity to attain last CO (course outcome) may be given to a group of FIVE students					

- Note: Dimension should be chosen related to activity and evaluated by the course faculty
-
- **Rubric Model- Example only:**
-

Dimension	Rubric Scale				
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary
1.Literature	Has not included relevant info	Has included few relevant info	Has included some relevant info	Has included many relevant info	Has included all relevant info needed
2. Fulfill team's roles & duties	Does not perform any duties assigned	Performs very little duties	Performs partial duties	Performs nearly all duties	Performs all duties of assigned team roles
3.Communication	Poor	Less Effective	Partially effective	Effective	Most Effective
4.Convensions	Frequent Error	More Error	Some Error	Occasional Error	No Error

Course Delivery:

- The course will be delivered through lectures and Power point presentations/ Video
- Teachers can encourage the students to take case study and make the report of the same

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE	IA	Students	Three test (Average of three tests)	20	Blue books	1,2,3,4,5,6
				Assignment	05	Assignment books	1,2,3,4,5,
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4,5,6
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1,2,3 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4,5&6 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

***S**tudents should do activity as per the list of suggested activities/ similar activities with prior approval of the teacher. Activity process must be initiated well in advance so that it can be completed well before the end of the term.

MODEL QP FOR CIE (TESTS)

Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6th week of sem AM-AM	III SEM	Mechanics of Structures	20
	Year:	Course code:15AR31T	

Name of Course coordinator :
Units:1,2 Co: 1,2
Note: Answer all questions

Question no	Question	CL	CO	PO
1	explain coplanar concurrent, non concurrent and parallel force systems with supporting sketches or Explain resolution and composition of forces	U	1	1,2
2	Determine the magnitude and direction of a system coplanar concurrent force system shown in figure	A	1	1,2 ,3
3	Define moment of inertia with supporting sketch. Or State parallel and perpendicular axis theorem	R	2	1,2
4	Determine the centre of gravity for a angle section measuring 150mmx120mmx30mm	A	2	1,2,3

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	% in Weightage
1	**Understanding**	**30**
2	**Applying the knowledge acquired from the course**	**25**
3	**Analysis**	**30**
4	**Evaluation**	**15**

MODEL QUESTION PAPER

III SEMESTER DIPLOMA EXAMINATION

Mechanics of structures

Time – 3Hrs Max Marks -100

Instructions: Answer any six from part A and any seven from Part B

PART A **6x5 =30marks**

1) explain coplanar concurrent, non concurrent and parallel force systems with supporting sketches

2) State Lami's Theorem along with sketch with proof

3) Define centre of gravity. Explain briefly the methods of locating centre of gravity

4) Explain the terms a) Radius of gyration b) polar moment of inertia

5) define the terms a) elasticity b) plasticity c) compressive stress d) tensile stress

6) Explain the points to be considered for determining the stresses in composite sections

7) Define bending moment and shear force with general sign convention

8) Explain different types of beams with supporting sketches

9) Out line the assumptions made in Euler's columns theory.

PART B **7X10=70**

10) Determine the magnitude and direction of a system coplanar concurrent force system shown in figure

11) Determine the support reaction for a loaded bar shown below

12) Determine the centre of gravity for a angle section measuring 150mmx120mmx30mm

13) Determine the moment of inertia for a "T'' section with its flange measuring 20mmx 100mm and web of 80mmx 30mm

14) A steel bar 50mmthick and 300mm long is subjected to an axial pull of 84KN . Find the change in length , stress and strain in the bar if the young's modulus of the material is $2x\ 10^5$ N/mm^2

15) A steel rod of 20mm Diameter and 6mtrs long is connected to two grips one at each end at a temperature of 120^0c . Find the pull exerted when the temperature falls to 40^0c

a) If end do not yield b) if the ends yield by 2mm. Take $E=2x\ 10^5\ N/mm^2$ and $\alpha = 12x10^{-6}$

16) A reinforced concrete column of size 400mmx 400mm is reinforced with 6 bars of 20mm diameter. The column is carrying an axial load of 400KN. Find the stresses in concrete and steel Take Es=2x 105N/mm2 and EC= $0.14X10^5N/mm^2$

17) A cantilever beam of span 5 mtrs is carrying a UDL 2KN/M for a span of 3mtrs from the fixed end. In addition to this a point load of 6KN is acting at its free end. Calculate SF, BM and also plot SFD and BMD.

18) A simply supported beam of span 6Mtrs is carrying a UDL of 2kN/M throughout its span and Two point loads 5KN and 8KN are placed at 2M and 4M from left support. Calculate shear force and bending moment. Also plot SFD and BMD

19) A strut 2.5Mtrs long ,60mm in diameter is having one end fixed while the other end hinged . Find safe compressive load for the member using Euler 's formula allowing factor of safety of 3.5 Take $E = 2X10^5N/mm^2$

MODEL QUESTION BANK

FOR 5MARKS

Under CO 1

1) Define coplanar concurrent and non concurrent forces with supporting sketches
2) Define moment of a force . Explain the significance of moment
3) Define like and unlike parallel forces
4) State parallelogram of forces. Derive an expression for the resultant of two concurrent forces
5) Explain resolution and composition of forces.

Under CO 2

1) Define centre of gravity and centroid. Locate centre of gravity of a triangle and trapezium
2) List various methods of locating centre of gravity. Explain any one method in detail
3) Define moment of inertia with supporting sketch.
4) Define polar moment of inertia and radius of gyration
5) State parallel and perpendicular axis theorem.

Under CO 3& CO4

1) Define stress. List different types of stresses.
2) Define temperature stress. Give expressions for temperature stress and deformation due to change in temperature.

3) Derive an expression for the deformation
4) State hooks law ,With associated formula
5) Define elasticity limit and young's modulus

Under CO 5

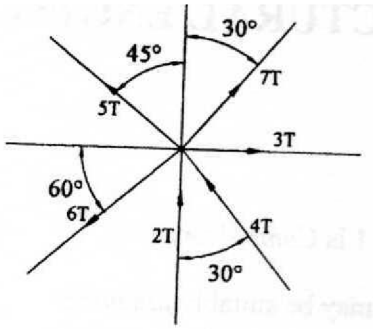
1) Define a beam. Explain different types of beams
2) Explain various types of loads on the beam
3) Define Shear force and Bending moment.

Under CO 6

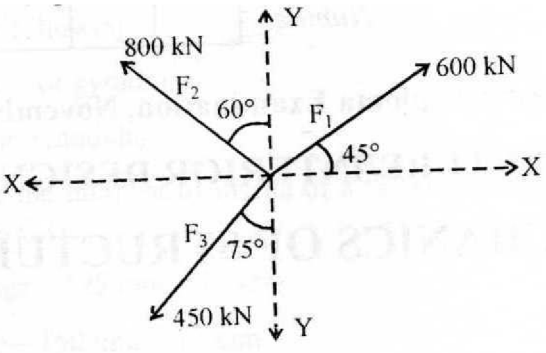
1) Define a column and a strut. Explain the factors affecting their stability.
2) State assumptions made in Euler's column theory.
3) Explain the various end conditions of columns and give their effective lengths as per Euler's theory.
4) What is slenderness ratio. How are columns are classified in respect of slenderness ratio.

FOR 10 MARKS
UNDER CO1

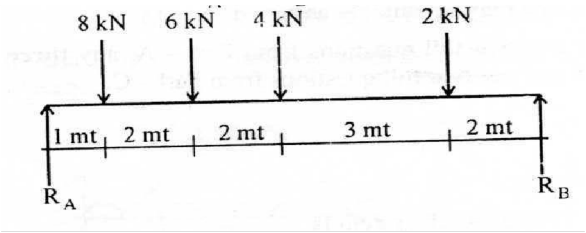
1) Determine the magnitude and direction of the resultant of a concurrent force system given below



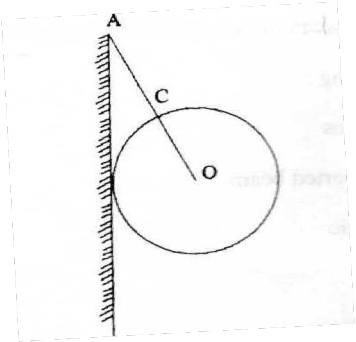
2) Determine the magnitude and direction of the resultant of a concurrent force system given below



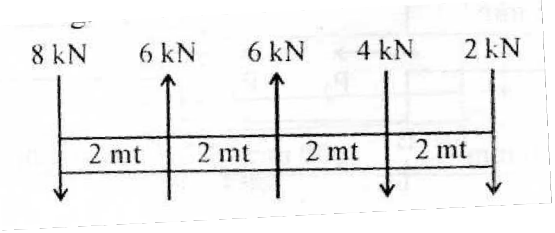
3) Determine the reactions R_A and R_B for a loaded beam shown below



4) A circular roller weighing 75kg and radius 25cms hangs by a string AC=25cms long as shown in the sketch. Find the tension in the string AC and the reaction of the wall



5) Determine magnitude, direction and position of the resultant of a parallel force system shown below.



6) A Weight of 50N is supported from point C through two strings AC and BC as shown below to a wall and the ceiling. Using Lami's theorem or otherwise determine the forces in the strings in AC and BD

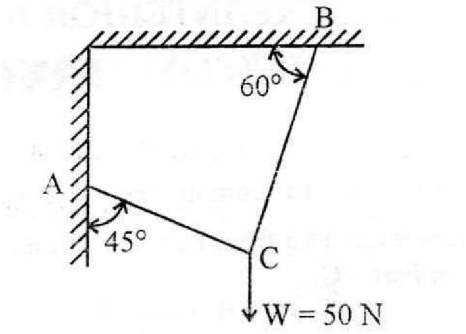
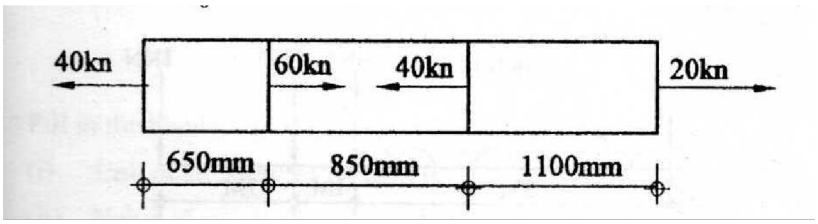


Fig. 2

UNDER CO2

1) A steel bar 30mm Dia ,1.5m long is subjected to an axial push of 65KN. Determine
   i) Intensity of stress
   ii) Deformation
   iii) The strain, Given E= 2.1x 10^5 N/mm^2

2) A bar having cross sectional area of 1000mm^2 is subjected to axial forces as shown in Fig. Find the total change in length of the bar. Take E =1.05x10^5N/mm^2

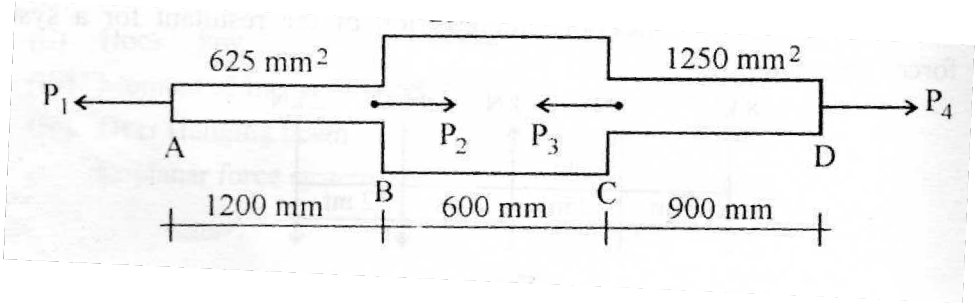


3) A steel rod 20mm Dia and 6M long is connected to two grips one at each end at a temperature of 120^{0}C.Find the pull exerted when the temperature falls to 40^0
   i) If the ends do not yield

ii) If the ends yield by 1.1mm
Take $E = 2x10^5 N/mm^2$ and $\alpha = 1.2X10^{-5}/^0C$

4)A mild steel rod 20mm dia 1M long is subjected to an axial pull of 2000Kgs. Modulus of elasticity of steel is $2x10^6$ Kg/cm^2. Determine a) Tensile stress b) Tensile strain c) The elongation.

5)A member A B C D Is subjected to point loads P_1, P_2, P_3 and P_4 as shown in fig . Calculate the force $P_{2\ Necessary}$ for equilibrium If P_1=45KN, P_3=450KNand P_4 =130KN. Determine the total elongation of the member assuming Modulus of elasticity to be 2.1 x $10^5 N/mm^2$



6) A reinforced concrete column 400mmX 400mm in section is reinforced with 6 bars 0f 20mm diameter. The column is carrying an axial compressive load of 400KN. Find the stresses in concrete and steel bar. Take $E_S = 2X10^5 N/mm^2$ and E_C=0.14N/mm^2.

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	Course Title: **BUILDING SERVICES-I**		
	Scheme (L:T:P) : **4:0:0**	Total Contact Hours: **52**	Course Code: **15AR32T**
	Type of Course: **Lectures, Self-Study& Quiz**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks			SEE- 100 Marks

Pre-requisites: Environmental science and Materials of Construction

Course Objectives:

The course is aimed at enabling the students to:

1. To identify the importance of water supply and sanitation in buildings.
2. To demonstrate the importance of lighting systems in buildings.

Upon successful completion of the course, the students shall be able to:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Select suitable sources of water for a water supply scheme for Domestic use.	***R/U/A***	1,2,3,7,10	12
CO2	Identify the systems of water supply distribution.	***R/U/A***	1,2,3,7,10	08
CO3	Explain various types of pipe materials, fixtures and fittings in water supply and sanitary system.	***R/U/A***	1,2,3,6,10	10
CO4	Develop appropriate rural sanitation systems to fulfill feasibility conditions.	***U/A***	1,2,3,5,6,7,10	08
CO5	State the importance, systems and principles of Lighting.	***U/A***	1,2,3,7,10	08
CO6	Identify the Sources and effect of air and water pollution.	***U/A***	1,2,3,6,7,10	06
			Total sessions	**52**

Course	**Programme Outcome**									
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**

	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Lifelong learning
BUILDING SERVICES I	3	3	3	-	1	2	3	-	-	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.
If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3
If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2
If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1
If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

Course content and blue print of marks for SEE

Unit	Major Topics	Hours Allotted	Questions to be set for SEE						Marks weightage	weightage (%)
			Cognitive Levels							
			R	U	Ap	Ay	C	E		
1	**WATER SUPPLY SYSTEMS IN BUILDINGS**	12	**05**	**05**	**30**				40	**23**
2	**WATER DISTRIBUTION SYSTEMS**	08	**05**	**15**	**10**				30	**15**
3	**SANITATION SYSTEMS IN BUILDINGS**	10	**05**	**15**	**10**				30	**19**
4	**RURAL SANITATION**	08		**05**	**10**				15	**15**
5	**LIGHTING SYSTEMS IN BUILDINGS**	08	**-**	**05**	**10**				15	**15**
6	**ENVIRONMENTAL SCIENCE**	06		05	**10**				15	12
Total		52	**15**	**50**	**80**				145	**100**

Legend- R; Remember U: Understand Ap: Application Ay: Analysis C:Creation E: Evaluation

DETAIL OF CONTENTS

UNIT 1: WATER SUPPLY SYSTEMS IN BUILDINGS 12Hrs

Sources of water. Sequence of water supply treatment. Requirement of water for various purposes i) Domestic ii) Industrial purposes iii) fire fighting .Water supply requirements for buildings. Types and sizes of Pipes .Laying and jointing of pipes. Water supply service connection for a Building. Fittings and fixtures. Storage tanks used in residential buildings. Different types of pipes used for conveyance of water. Various types of joints.

UNIT 2: WATER DISTRIBUTION SYSTEM. 08Hrs

Systems of distribution (i) Gravity distribution, (ii) Pumping systems (iii) Combined gravity and pumping system. Methods of water supply. Various systems of distribution layout (i) Grid iron ii) Dead end system (iii)Radial System and iv) Ring systems. functions of appurtenances like i) Sluice valve ii) Check valve or reflex valve iii) Air relief iv) Drain valves or blow-offs v) Fire hydrants vi) Water meter

UNIT 3: SANITATION SYSTEMS IN BUILDINGS 10Hrs

Importance of sanitation. Drainage and sanitary requirements. General principles of house drainage. Technical terms-terms sullage, sewage, sewerage, sewer, garbage. Types and sizes of sewers. Different types of sanitary fixtures used in the buildings.
Types and uses of traps. Systems of plumbing.

UNIT4 : RURAL SANITATION 08Hrs

Introduction to Rural sanitation system. Essentials of rural sanitation. Methods of disposing waste. Soak pit. State their merits and demerits. Septic tanks and their location. Ventilated pit latrines. Surface drains. Biogas plant as a means of treating wastes.

UNIT5: LIGHTING SYSTEMS IN BUILDINGS 08Hrs

Systems of lighting. Openings to afford good natural lighting. Recommended values for illumination. Different types of electrical fitting Protective devices used in building. Planning lighting for different work areas. Preparation of electrical layout for building using symbolic representation as per IS.

UNIT 6: ENVIRONMENT SCIENCE 06Hrs

Definition of air and water pollution. Source of air and water pollution. Effects of air and water pollution Preventive measures for air and water pollution. Rain water harvesting

TEXT BOOKS

1	Water supply and sanitary Engineering	-	G S Birdie
2	Building Construction	-	B C Punmia
3	Building Construction	-	Ahuja and Birdie
4	Basic Electrical Engineering	-	Anwari
5	Electrical Technology	-	H. Cotton
6	Air conditioning and Refrigeration	-	Don Kundwar
7	Air conditioning and Refrigeration Data book	-	Manohar Prasad
8	Environmental engineering	-	V. Thanikachalam
9	Fire and Human Behaviors	-	David Gunter
10	Fire safety in building		Thomas Adam and Charles Black
11	National building Code		

LIST OF LEARNING WEBSITES:

1)http://water.worldbank.org/shw-resouce-guide/infrastructure/menu-technical-options/pit-latrines/

2)http://www.ncbi.nlm.nih.gov/books/NBK11769/
3)https://www.usfa.fema.gov/downloads/pdf/publications/Water_Supply_Systems_Volume_II.pdf/

Course Delivery:

- The course will be delivered through lectures and Power point presentations/ Video
- Teachers can encourage the students to take case study and make the report of the same

Suggested Students activities

1) To make a visit to a water supply plant and to study in detail about the treatment process involved in supplying treated water. Students must also prepare a detail report along with photographs
2) To visit a Building construction site to study on water suppy and drainage system by along with photo documentation of various stages of works involved
3) To study on rural sanitation systems and to prepare report on functioning of leach pits and septic tanks
4) To visit a public building to study on lighting systems employed and prepare report on lighting systems adopted by highlighting the purpose of each lighting system

Course Assessment and Evaluation Scheme:

	What	To who	When/Where (Frequency in	Max Marks	Evidence collected	Course outcomes

			m	the course)			
Direct Assessment	CIE	IA	Students	Three tests (Average of three tests to be computed)	20	Blue books	1,2,3,4,5,6
				Student Activity	05	Assignment sheets	1,2,3,4,5
				End of the course	100	Answer scripts at BTE	1,2,3,4,5,6
	SEE	End Exam					
Indirect Assessment	Student Feedback on course		Students	Middle of the course	Feedback forms	1, 2,3 Delivery of course	
	End of Course Survey					Questionnaires	1,2,3,4,5,6 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	**Bloom's Category**	**% in Weightage**
1	**Understanding**	**30**
2	**Applying the knowledge acquired from the course**	**25**
3	**Analysis**	**30**
4	**Evaluation**	**15**

FORMAT OF I A TEST QUESTION PAPER (CIE)

Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6 th week of sem 10-11 Am	III SEM	BUILDING SERVICES-I	20
	Year:	Course code:15AR32T	
Name of Course coordinator : CO's:____			Units:__

Question no	Question	MARKS	CL	CO	PO
1	List the different sources of water supply or Name the different water supply fittings	05	R	1	
2	List the systems of plumbing and explain any one with a sketch	05	R	1	
3	Explain fire hydrant with sketch.. Or Explain pumping system of distribution with sketch	05	R/U	2	
4	List the systems of plumbing and explain any one with a sketch	05	R/U	2	

Note: Internal choice may be given in each CO at the same cognitive level (CL).

Example of model of rubrics / criteria for assessing student activity

Dimension	Students score

	(Group of five students)				
	STUDENT 1	STUDENT 2	STUDENT 3	STUDENT 4	STUDENT 5
Rubric Scale	Unsatisfactory **1**, Developing **2**, Satisfactory **3**, Good **4**, Exemplary5				
1.Literature	5				
2.Fulfill team's roles & duties	2				
3.Conclusion	3				
4.Convensions	4				
Total	14				
Average=(Total /4)	14/4=3.5=4				
Note: Concerned faculty (Course coordinator) must devise appropriate rubrics/criteria for assessing Student activity for 5 marks One activity to attain last CO (course outcome) may be given to a group of FIVE students					

Note: Dimension should be chosen related to activity and evaluated by the course faculty

Rubric Model- Example only:

Dimension	Rubric Scale				
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary
1.Literature	Has not included relevant info	Has included few relevant info	Has included some relevant info	Has included many relevant info	Has included all relevant info needed
2. Fulfill team's roles & duties	Does not perform any duties assigned	Performs very little duties	Performs partial duties	Performs nearly all duties	Performs all duties of assigned team roles
3.Communication	Poor	Less Effective	Partially effective	Effective	Most Effective
4.Convensions	Frequent Error	More Error	Some Error	Occasional Error	No Error

MODEL QUESTION PAPER

III[rd] SEMESTER DIPOMA EXAMINATION

Building services -I

Time – 3Hrs Max Marks -100

Instructions: Answer any six Questions from part A and any seven from Part B

PART A **6x5=30**

1) Explain the importance of water supply system.

2) Outline the different sources of water supply.

3) Name the different systems of distribution system and explain any one of them

4) State the various methods of pipe layout for water distribution

5) Explain the importance of sanitation.

6) State the characteristics of a good trap

7) Outline the importance of rural sanitation

8) Explain the systems of lighting

9) List the sources of water pollution.

PART B **7x 10 =70**

10) State the water supply requirements.

11) Explain water supply service connection to a residential building with a neat sketch.

12)Explain the various steps involved in pipe laying and joining.

13) Explain with neat sketch combined gravity and pumping system of distribution of water.

14) Name the different systems of distribution layout and explain any two of them.

15) Explain the principles of building drainage systems.

16) Name various systems of plumbing and explain two pipe plumbing system with a sketch17) Explain septic tank with a neat sketch

18) Explain the planning of artificial lighting for living and bed room. 19) Narrate causes and effects of air pollution.

MODEL QUESTION BANK

CO1 - SELECT SUITABLE SOURCES OF WATER FOR A WATER SUPPLY SCHEME FOR DOMESTIC USE.

Level -1. Remembering

1. List the different sources of water supply
2. Name the different water supply fittings
3. Enumerate the types of pipes used in the water supply
4. State the characteristics of traps.

Level -2. Understanding

5. Explain briefly the system of supply of water
6. Explain the various types of joints
7. Write the quantity of water for various domestic purpose
8. Explain briefly the system of supply of water
9. Name the various types of pipe joints and explain any two with sketch
10. Explain the importance of water supply

CO2 - IDENTIFY THE SYSTEMS OF WATER SUPPLY DISTRIBUTION

Level -1. Remembering

1. List the various types of valves used in water supply system
2. List various systems of distribution layout and explain any two with sketch
3. List the systems of plumbing and explain any two with a sketch

Level -2. Understanding

4. Explain fire hydrant with a sketch
5. Explain gravity and pumping system of distribution with sketch

CO3 - EXPLAIN VARIOUS TYPES OF PIPE MATERIALS, FIXTURES AND FITTINGS IN WATER SUPPLY AND SANITARY SYSTEM.

Level -1. Remembering

1. Define the terms used in building sanitation
2. List the various types of sanitary fixtures
3. State the aims of house drainage
4. State the principles of building drainage system

Level -2. Understanding

5. Explain the tub with sketch
6. Explain fire hydrant with a sketch
7. Write the advantages of cement concrete sewers
8. Explain the need of storm water drains
9. Explain the importance of Sanitation

CO4 - DEVELOP APPROPRIATE RURAL SANITATION SYSTEMS TO FULFILL FEASIBILITY CONDITIONS.

Level -1. Remembering

1. What are Methods of disposing waste.
2. State the merits and demerits of soak pit.

Level -2. Understanding

3. Explain the importance of rural sanitation
4. Explain septic tank with sketch
5. Explain soak pit with sketch.

CO5 - STATE THE IMPORTANCE, SYSTEMS AND PRINCIPLES OF LIGHTING.

Level -1. Remembering

1. State the importance of lighting
2. What is earthing, explain with a neat sketch
3. How do you plan lighting for staircase and study room
4. List the protective devices and electrical fittings used in building
5. What are the different types of earthing used in building

Level -2. Understanding

6. Explain systems & principles of lighting
7. Explain the method of providing natural lighting to a basement
8. Explain the planning of artificial lighting for living hall and bed room with a sketch
9. Explain briefly different types of protection devices used in building electrical work
10. Explain general lightings and task lighting

CO6 - IDENTIFY THE SOURCES AND EFFECT OF AIR AND WATER POLLUTION.

Level -1. Remembering

1. State the causes and effects of water pollution
2. State the causes and effect of air pollution

Level -2. Understanding

3. Explain the need of preventing air pollution and water pollution
4. Explain rain water harvesting with a schematic sketch.

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

	Course Title: **Building Construction and Drawing. - I**		
	Scheme (L:T:P) : **2:0:4**	Total Contact Hours: **78**	Course Code: **15AR33D**
	Type of Course: **Lectures, Self-Study & Drawing**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks			SEE- 100 Marks

Pre-requisites: Architectural graphics and Materials of construction .

Course Objectives:

The course aims at enabling the students to

- Study the various building components and their functions.
- Prepare detailed construction drawings of various building components.
- Apply the knowledge of appropriate application of various materials in building construction.

On successful completion of the course, the students will be able to:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Explain the various types of soils, their suitability.	***R/U/A***	1,2,3,7,10	**04**
CO2	Understand various types of foundation and their suitability. Prepare necessary drawings	***R/U/A***	1,2,3,7,10	**14**
CO3	Classify the various types of stone masonry. Prepare necessary drawings	***R/U/A***	1,2,3,6,10	**12**
CO4	Demonstrate the various types of brick masonry bonds. Prepare necessary drawings	***U/A***	1,2,3,5,6,7,10	**20**
CO5	Identify various types of doors and windows and their location. Prepare necessary drawings	***U/Ay/A/C***	1,2,3,7,10	**28**
			Total sessions	**78**

R = Remember U = Understand A = Apply Ay = Analysis
C = Create

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Lifelong learning
	3	3	3	-	1	2	3	-	-	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.
If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3
If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2
If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1
If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed

COURSE CONTENT

Unit No	Unit Name	Hour	Questions to be set for (5marks) PART - A	Questions to be set for (20marks) PART - B	Marks weightage (%)
1	SOIL	04	02	-	6.25
2	FOUNDATIONS	14	02	01	18.75
3	STONE MASONRY	12	02	01	18.75
4	BRICK MASONRY	20	03	01	21.87
5	DOORS AND WINDOWS	28	03	02	34.38
	Total	78	12(60marks)	05(100marks)	100

DETAILS OF CONTENTS

UNIT I: SOIL 04 Hrs

Types of soil and their suitability to construct the structures, SBC of different type of soils, Methods of improving the SBC of Soil

UNIT II: FOUNDATIONS 14 Hrs

Definition and objects of foundation, Types of foundations- detailed study of spread footings and isolated footing. Brief study of deep foundation-detailed study of pile foundation and its types

UNIT III: STONE MASONRY 12 Hrs

Definition and terms used in stone masonry, General Principles of stone masonry, Classification of stone masonry, dressing of stones

UNIT IV: BRICK MASONRY 20 Hrs

Terms used in brick masonry, General Principles of brick masonry construction, Bonding and types of bonds-Stretcher and Header bond, detailed study of English and Flemish bond (One brick thick only),

Composite masonry and their uses, Cavity walls and their uses, Comparison between stone masonry & brick masonry

UNIT 5: DOORS ,WINDOWS AND VENTILATOR 28 Hrs

Doors- definition, Location and sizes of doors, windows and ventilators, Technical terms pertaining to doors and windows, Types of doors-detailed study of Battened, ledged and Braced, Panelled door, Glazed door, Flush door .Fixtures of doors.

Windows- definition, detailed study of casement, corner, and bay window, aluminium sliding window. Fixtures of windows.

Ventilator- Definition and purpose of Ventilator.

TEXT BOOKS

1. Building construction by S.C.Rangwala
2. Building construction by Sushil kumar
3. Building construction by S.S. Bhavikatti
4. Building construction and drawing by W.B.Mckay
5. Building construction and drawing by M.G shah and kale
6. Building construction Illustrated by Francis D K Ching

WEB LINKS

1. https://evrosoriou.files.wordpress.com/.../**construction**-handbook-chudle/
2. https://www.youtube.com/watch?v=9ROrmRYOwf4/

1. PREPARATION OF DRAWINGS COVERING ABOVE CONTENTS

Plate 1- Preparation of a section through wall showing all building components from foundation to parapet wall.

Plate 2- Prepare sectional views of size stone masonry foundation for a load bearing Wall and non load bearing wall

Plate 3- Prepare plan and sectional elevation of Reinforced Concrete column.

Plate 4-Prepare Elevation and section of Coursed rubble masonry, uncoursed rubble Masonry and Rubble masonry.

Plate 5- Prepare plan, elevation, section and isometric view of Header, Stretcher, English, Flemish bond for one brick thick wall.

Plate 6- Prepare elevation and isometric view for one brick thick and one and half Brick piers

Plate 7- Prepare plan, elevation, section and enlarged joinery details (any one) of Battened, ledged and braced door.

Plate 8- Prepare plan, section, and elevation and enlarged joinery details (any one) of Fully panelled door.

Plate 9- Prepare plan, section, elevation and enlarged joinery details (any one) of Flush door.

Plate10- Prepare plan, section, elevation and enlarged joinery details (any one) of Fully glazed door.

Plate11- Prepare plan, section, elevation and enlarged joinery details (any one) of Casement window.

Plate 12- Prepare plan, section, elevation and enlarged joinery details (any one) of Aluminium sliding window.
Plate 13- Prepare plan, section, elevation and enlarged joinery details (any one) of Corner window.
Plate 14- Prepare plan, section , elevation and enlarged joinery details (any one) of Bay window.
Plate 15- Prepare plan, section, elevation and enlarged joinery details (any one) of Ventilator.

Note: Minimum one plate on each topic, site visits to be arranged by studio teacher. Study of material application in the form of portfolio. All the plates on construction and portfolio on material application shall be assessed for progressive marks.

SUGGESTED LIST OF STUDENT ACTIVITIES

1. Each student should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned Teacher and HOD.
2. Each student should conduct different activity and no repeating should occur.

1	Visit to a ongoing construction site and submit a detailed hand written report along with photographs on any one of following topic: a) Foundations b) Stone masonry c) Brick masonry d) Doors and windows
2	Prepare a scale down model of any one type of door.
3	Prepare a hand written report on hardware fixtures along with brochures.

Course Delivery:

- The course will be delivered through lectures and Power point presentations/ Videos.
- Teachers can prepare or download ppt on different topic's of Architectural engineering application, can prepare alternative slides.

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment	CIE	IA	Students	Three IA tests (Average of three tests will be computed)	10	Blue books	1,2,3,4,5
				Graded exercises	15	Sheets	2,3,4,5
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4,5
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1 ,2,3 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4,5 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note: I.A. test shall be conducted for 10 marks. Average marks of three tests shall be rounded off to the next higher digit.

FORMAT OF I A TEST QUESTION PAPER (CIE)			
Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6 th week of sem	III SEM	Building construction & Drawing- I	10
	Year: 2017	15AR33D	
Name of Course coordinator : Units:1&2			CO's : COI & COII

Q.No	Question	MARKS	CL	CO	PO
1	Define safe bearing capacity of soil. List the methods of improving the safe bearing capacity of soil. OR Define soil. List different types of soil based on physical classification	05	R	COI	1,2,3,7,10
2	Define foundation. Discuss the objects of foundation.	05	R	COII	1,2,3,7,10

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as :

Sl. No	**Bloom's Category**	**%Weightage**
1	**Understanding**	**40**
2	**Applying the knowledge**	**30**
3	**Analysis**	**20**
4	**Evaluation**	**10**

Note to IA verifier: ***The following documents to be verified by CIE verifier at the end of semester***

1. Blue books (10 marks)
2. Graded exercise (Portfolio) 15 marks
3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

MODEL QUESTION PAPER
I Semester Diploma Examination
ARCHITECTURE BOARD
BUILDING CONSTRUCTION AND DRAWING-I

Time: 4Hours) **(Max. Marks: 100**

Instructions: (1) Answer any **eight** Questions from **PART-A**.
(2) Answer any **three** Questions from **PART-B**.

PART-A

8X5=40

1. Define safe bearing capacity of soil. List different methods of improving bearing capacity of soil.
2. List the SBC for different types of soils.
3. Define foundation. Discuss the objects of foundation.
4. What is deep foundation? List the different types of pile foundation.
5. Discuss any five general principles of stone masonry.
6. What is dressing of stone? Why it is required?
7. Define Bond. Explain English bond with neat sketch.
8. Explain cavity wall with a neat sketch. Discuss its advantages.
9. List the factors to be considered while locating doors in a building.
10. Compare brick masonry with stone masonry.
11. Explain the structure of a paneled door with a neat sketch.
12. Define ventilator. Explain with a neat sketch.

PART-B

3X20=60

13. Draw Flemish bond for one brick thick wall to a scale of 1:10. Assume necessary data. Draw the following
    a) Plan of odd and even course
    b) Elevation
    c) Isometric view

14. Draw a panelled door for a residential building for an opening 1.0 M width to a scale 1:10.assume necessary data. Draw the following.
    a) Sectional plan
    b) Elevation
    c) Section
    d) One enlarged detail

15. Draw a bay window for a size 1.0 X 1.0 X 1.5 m to a scale 1:10. Assume necessary data. Draw the following.
    a) Sectional plan
    b) Elevation
    c) Section
    d) One enlarged detail

16. Draw footing for a RC column measuring 230X230mm. Assume required data. Show all the reinforcement details.
    Draw the following.
    i. Sectional plan
    ii. Sectional elevation

17. Draw a section through one brick thick wall showing all building components from foundation to parapet wall to a scale of 1:20. Assume required data.

MODEL QUESTION BANK

5 Marks Questions

CO1	Explain the various types of soils, their suitability.

LEVEL 1: Remember

1. Define soil. List different types of soil based on physical classification.
2. Define safe bearing capacity of soil. List the methods of improving the safe bearing capacity of soil.
3. List the SBC for different types of soils

LEVEL 2: Understand

1. Discuss the different types of soils based on IS classification.

CO2	Understand various types of foundation and their suitability. Prepare necessary drawings

LEVEL 1: Remember

1. Define foundation. Discuss the objects of foundation.
2. What are functions of foundation?
3. What is shallow foundation? List the different types of shallow foundation
4. What is deep foundation? List the different types of pile foundation.
5. Define shallow foundation. Explain any one type of shallow foundation with neat sketch

LEVEL 2: Understand

1. Explain briefly Isolated footing for RC column with neat sketch.
2. Explain different types of foundation with neat sketch (any one).
3. Explain pile foundation with neat sketch.
4. Explain briefly any one type of spread footing with neat sketch.

CO3	Classify the various types of stone masonry. Prepare necessary drawings

LEVEL 1: Remember

1. Define technical terms used in stone/brick masonry (any five).
2. Define stone masonry. Discuss its advantages.
3. List different types of random rubble masonry. Sketch uncoursed rubble masonry.
4. List different types of ashlar masonry. Sketch ashlar fine masonry.
5. What is dressing of stone? Why it is required?

LEVEL 2: Understand

1. Differentiate between random rubble masonry and ashlar masonry.

2. Explain briefly any one type of rubble masonry with neat sketch.
3. Explain briefly any one type of ashlar masonry with neat sketch.
4. Discuss the general principles of stone masonry.
5. Explain different types of rubble masonry.
6. Explain two types of ashlar masonry.

CO4	Demonstrate the various types of brick masonry bonds. Prepare necessary drawings

LEVEL 1: Remember

1. Define brick masonry. Discuss its advantages.
2. Define bonding. List the different types of bond.
3. Define Flemish bond . Explain single Flemish bond with neat sketch.

LEVEL 2: Understand

1. Explain briefly English/Flemish bond with neat sketch.
2. Discuss the general principles of brick masonry.
3. Compare stone masonry with brick masonry.
4. Differentiate between English bond and Flemish bond
5. Explain cavity wall and composite wall with neat sketches.

CO5	Identify various types of doors and windows and their location. Prepare necessary drawings

LEVEL 1: Remember

1. Define door/window/ventilator (any one). Sketch a frame section with all details.
2. What are the factors to be considered while locating door in a building?
3. What are the factors to be considered while locating window in a building?
4. Define technical terms pertaining to door (any five).
5. Define technical terms pertaining to window (any five).
6. List the different types of doors.
7. List the different types of windows.
8. List the advantages of window (any one type).
9. Define window. Explain briefly casement window with neat sketch.
10. Define window. Explain briefly Bay window with neat sketch.
11. Define window. Explain briefly corner window with neat sketch.

LEVEL 2: Understand

1. Explain in detail the structure of a door frame with neat sketch.
2. Explain briefly battened, ledged and braced door with neat sketch.
3. Explain briefly panelled door with neat sketch.
4. Explain decorative type of flush door with neat sketch.

Government of Karnataka
Department of Technical Education
Bengaluru

	Course Title: **CAD-I**		
	Scheme (L:T:P) : **0:2:4**	Total Contact Hours: **78**	Course Code: **15AR34P**
	Type of Course: **Tutorial and practice**	Credit **:03**	Core/ Elective: **Core(practice)**
CIE-25 Marks			SEE- 50 Marks

Pre-requisites: Basic computer Skill and Concepts of architectural graphics

Course Objectives:

The course aims at enabling the students to:

1. Create and modify 2D drawings.
2. Apply the appropriate commands in developing and printing 2D drawings of various buildings.

At the end of the course, the students shall be able to:

Course Outcome	
CO1	Apply the knowledge of standard practices drawing management, (compositions of drawings in a sheet).
CO2	Create drawings using annotations and Learning presentation techniques
CO3	Modify and edit drawings quickly.
CO4	Prepare and plot 2D drawings of building with furniture layout compose drawings in different scales.
CO5	Translate manual drawing into CAD drafting style.

COURSE-PO ATTAINMENT MATRIX

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Lifelong learning
	3	3	3	3	-	-	-	3	2	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

COURSE CONTENT

Unit No	Unit Name	Hour
1	Introduction to CAD	3
2	Commands	6
3	2D drawings of building components	24
4	Presentation drawings of buildings	45
	TOTAL	78

COURSE CONTENT

UNIT-I : Introduction to CAD: 03 Hrs

General features of CAD, CAD work station, Hardware and Software requirements, Advantages of using CAD and its application in Architectural Drafting.

UNIT-II: Commands 06 Hrs

Units, limits, Draw tools of all geometrical forms, all Modify tools. Measuring tools: Enquiry commands, drafting settings, drawing organization: Layers, Line types, Line weights, Colors, Hatch, Annotations: Texts and dimensions, Plotting and Presentation: create and insert Blocks. Layouts and plotting/printing 2D drawing to scale.

UNIT-III: 2D drawings of building components 24 Hrs

Draw plan, elevation and section of building components like Spread Footing, Column Footing, Doors, Windows, Lintel and chejja, Roof with Parapet and Steps.

UNIT-IV: Presentation drawings of buildings 45 Hrs

Draw floor plan with furniture layout, elevation and section of a residence with single bed and produce a print out for the same.
Draw floor plans with furniture layout, elevation and section of a residence with two or three bed room with duplex and produce print out for the same.
Draw floor plan with furniture layout, elevation and section of a Restaurant or any other relevant small scale building and produce print out for the same.

SUGGESTED STUDENT ACTIVITIES

Students should select any one of the below or other topics relevant to the subject approved by the concerned faculty and prepare the drawing individually. Report will be evaluated by the faculty as per rubrics. Weightage for 5 marks Internal Assessment shall be as follows:

1. Create blocks of door, window, furniture, footing (1 each).
2. Prepare presentation drawings (plan and 2 sectional elevations) of a living/dining.
3. Prepare presentation drawings (plan and 2 sectional elevations) of a bed room with attached toilet.
4. Prepare presentation drawings (plan and 2 sectional elevations) of a kitchen.
5. Prepare measured drawings of existing building components.

Example of model of rubrics / criteria for assessing student activity

Dimension	Students score (Group of five students)				
	STUDENT 1	STUDENT 2	STUDENT 3	STUDENT 4	STUDENT 5
Rubric Scale	Unsatisfactory **1**, Developing **2**, Satisfactory **3**, Good **4**, Exemplary5				
1.Literature	5				
2.Fulfill team's roles & duties	2				
3.Conclusion	3				
4.Convensions	4				
Total	14				
Average=(Total /4)	14/4=3.5=4				
Note: Concerned faculty (Course coordinator) must devise appropriate rubrics/criteria for assessing Student activity for 5 marks One activity to attain last CO (course outcome) may be given to a group of FIVE students					

Note: Dimension should be chosen related to activity and evaluated by the course faculty

Rubric Model- Example only:

Dimension	Rubric Scale				
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary
1.Literature	Has not included relevant info	Has included few relevant info	Has included some relevant info	Has included many relevant info	Has included all relevant info needed
2. Fulfill team's roles & duties	Does not perform any duties assigned	Performs very little duties	Performs partial duties	Performs nearly all duties	Performs all duties of assigned team roles
3.Communication	Poor	Less Effective	Partially effective	Effective	Most Effective
4.Convensions	Frequent Error	More Error	Some Error	Occasional Error	No Error

Course Delivery

The course will be delivered through lectures and Demonstration and CAD practices.

REFERENCE BOOKS

1. AutoCAD Reference Guide: Everything You Wanted to Know about AutoCAD--Fast! By Dorothy Kent
2. Arshad N Siddique, Zahid Khab, Mukhtar Ahmed- Engineering Drawing with CADD

LIST OF LEARNING WEBSITES:

https://www.youtube.com/watch?v=BAiiV4PIiZ0/

https://www.bing.com/videos/search?q=AutoCAD+2010+Architecture&&view=detail&mid=D3C2F41AD2173F3FBC1DD3C2F41AD2173F3FBC1D&FORM=VRDGAR/

www.cadtutor.net/tutorials/autocad/drawing-objects.php/

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE	IA	Students	Two tests (average of two tests)	10	Blue books	1,2,3,4
				Record	10	CAD exercises	1,2,3,4
				Suggested activity	05	Reports/Presentations	1,2,3,4
	SEE	End Exam		End of the course	50	Answer scripts at BTE	1,2,3,4
Indirect Assessment	Student Feedback on course		Students	Middle of the course	---	Feedback forms	1,2,3 Delivery of course
	End of Course Survey			End of the course	---	Questionnaires	1,2,3,4 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note:

1. I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
2. Rubrics to be devised appropriately by the concerned faculty to assess Mini project/Student activities.

Questions for CIE and SEE will be designed to evaluate the various educational components such as:

Sl. No	**Bloom's Category**	**% Weightage**
1	**Understanding**	**40**
2	**Applying the knowledge acquired from**	**45**
3	**Analysis**	**10**
4	**Evaluation & Creating new knowledge**	**05**

Note to IA verifier*: *The following documents to be verified by CIE verifier at the end of semester

1. Student Blue books 10 marks. Record 10 marks. Reports/Presentations 5 marks.
2. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

SCHEME OF EVALUATION.

1	Record	05 marks
3	Presentation drawing of given 2D problem	30 marks
4	Printout and page setups	10marks
5	Viva-voce	05 marks
	Total	50 marks

Note: The examiner should give the problem in the form of sketch/line diagram and student should develop the same using CAD and produce a print using appropriate scale.

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

	Course Title: **- ARCHITECTURAL DRAWING-I**		
	Scheme (L:T:P) : **0:2:4**	Total Contact Hours: **78**	Course Code: **15AR35P**
	Type of Course: **Tutorial and practice**	Credit **:03**	Core/ Elective: **Core**
CIE- 25 Marks			SEE- 50 Marks

Pre-requisites: Architectural graphics and Visual art and Drawing.

COURSE OBJECTIVE:

The course aims at enabling the students to

1. Introduce the concepts and fundamentals of architectural drawing .
2. Develop representational skills and introduce basics of measured drawing.

COURSE OUTCOMES

On Successful completion of the course, the students shall be able to

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Prepare alternative schematic drawings on the basis of bubble diagram showing interlinking of different spaces.	***R/U/A***	1,2	09
CO2	. Prepare plan showing circulation area and usable area with the help of colour rendering.	***R/U/A***	1,2,3,10	09
CO3	Prepare plan and elevation of Anthropometric data and household gadgets, furniture and vehicles to required scale.	***R/U/A***	1,2,3,10	12
CO4	Prepare plan, elevations, sections and presentation drawings of given building.	***R/U/A***	1,2,3,10	21
CO5	Develop critical, creative thinking, visualization by preparing scale down block model and documentation skills.	***R/U/A***	1,2,3,10	27
			Total sessions	**78**

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
Architectural Drawing I	3	3	2	1	2	-	-	-	2	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

COURSE CONTENT

Unit No	Unit Name	Hour
1	Introduction & Anthropometric requirements (Household and Automobile data)	09
2	Case study	09
3	Residence with single bed room	12
4	Residence with double bed room (single floor)	21
5	Residence with 3 bed room with duplex.	27
	TOTAL	78

DETAILS OF CONTENTS

UNIT 1: Introduction & Anthropometric requirements (Household and Automobile data) 09Hrs

Introduction to planning concept, flow of space, circulation, space requirement standard sizes of furniture. Introduction to climatic condition in design of building. Anthropometric household and vehicle measurements.

UNIT II: Case study **09Hrs**

Prepare a case study report including measured drawing of a residence showing plan, section and elevation to a suitable scale.

UNIT III: Residence with single bed room. **12Hrs**

Prepare schemes using concept of bubble diagram showing interlinking of different spaces

Design and draw site plan, floor plan showing all openings with furniture layout, Elevations and sections.

UNIT IV: Residence with double bed room (single floor) **21Hrs**

Prepare schemes using concept of bubble diagram showing interlinking of different spaces

Design and draw site plan, floor plan showing all openings with furniture layout, Elevations and sections.

UNIT V: Residence with 3 bed room with duplex. **27Hrs**

Prepare schemes using concept of bubble diagram showing interlinking of different spaces

Design and draw site plan, floor plans showing all openings with furniture layouts, Elevations and sections. Detail drawing of Steps and railing .

Note: 1.Above drawings should be covered through manual drafting.

2. Students should submit minimum 10 number of plates covering the above topics for Considering internal assessment marks.
3. Students should submit case study report and conceptual block models.

Suggested students activity

1) To visit an existing Residential building and study about various units and to carryout measurements for preparing measured drawing. The measured drawing is to be prepared for revealing construction details in plan, section and elevation
2) To visit an existing public building ad study about various units and to carryout measurements for preparing measured drawing. The measured drawing is to be prepared for revealing construction details in plan, section and elevation

Execution Note:

1. Maximum of 2 students in each batch for student activity
2. Any two activities (either from the list given or any similar activities) shall be assigned among different batches; may be assigned by the teacher based on interest of the students.
3. Project activities shall be carried out throughout the semester and present the project report at the end of the semester; concerned teacher is expected to observe and record the progress of students' activities
4. Submit qualitative hand-written report not exceeding 6 pages; one report per batch
5. Each of the activity can be carried out off-class well in advance; however, demonstration/presentation should be done during laboratory sessions
6. Assessment shall be based on quality of work as prescribed by the following **rubrics** table

Model of rubrics for assessing student activity (for every student)

Dimension	Scale					Marks (Example)
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary	
1. Research and gathering information	Does not collect information relate to topic	Collects very limited information, some relate to topic	Collects basic information, most refer to the topic	Collects more information, most refer to the topic	Collects a great deals of information, all refer to the topic	3
2. Full-fills team roles and duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs almost all duties	Performs all duties of assigned team roles	2
3. Shares work equality	Always relies on others to do the work	Rarely does the assigned work, often needs reminding	Usually does the assigned work, rarely needs reminding	Always does the assigned work, rarely needs reminding.	Always does the assigned work, without needing reminding	5
4. Listen to other team mates	Is always talking, never allows anyone to else to speak	Usually does most of the talking, rarely allows others to speak	Listens, but sometimes talk too much,	Listens and talks a little more than needed.	Listens and talks a fare amount	3
					Total marks	(13/4)= 4

Course Assessment and Evaluation:

Method	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
DIRECT ASSESSMENT	CIE (Continuous Internal Evaluation)	Drawing sheets	Students	Average of marks of all graded exercises	20	Drawing sheets	1,2,3,4,5
				Student activity	05	Report/portfolio	1,2,3,4,5
				TOTAL	25		
	SEE (Semester End Examination)	End Exam		End of the course	50	Drawing sheets	1,2,3,4,5
INDIRECT ASSESSMENT	Student Feedback on course		Students	Middle of the course		Feedback forms	1,2,3 Delivery of course
	End of Course Survey			End of the course		questionnaire	1,2,3,4,5 Effectiveness of Demonstrations& Assessment Methods

Note : Student activity to be assessed by the faculty in charge by appropriate rubrics.

Questions for CIE and SEE will be designed to evaluate the various educational components such as:

1	Remembering and Understanding :	- 10% weightage
2	Applying the knowledge acquired from the course :	-50% weightage
3	Analysis :	- 10% weightage
4	Evaluation :	- 10% weightage
5	Creating new knowledge :	- 20% weightage

TEXT BOOKS

1. Building Drawing – Shah M G, Tata McGraw – Hill, 1992.
2. Building Planning & Drawing – Kumaraswamy N., Kameswara Rao A., Charotar Publishing
3. Time savers standards for architectural design data by John Hancock
4. Neufert's standards
5. Form, Space & Order by Francis DK Ching.

Web links

https://**en.wikipedia.org**/wiki/**Architectural_drawing/**

https://www.bing.com/videos/search?q=architectural+drawing+&&view=detail&mid=B19C818345A066919125B19C818345A066919125&FORM=VRDGAR/

https://www.bing.com/videos/search?q=Floor+Plans&&view=detail&mid=39E9A2D856D40FB4BEE039E9A2D856D40FB4BEE0&FORM=VRDGAR/

https://www.bing.com/videos/search?q=Floor+Plans&&view=detail&mid=DEA8EC5DFCDBEA7E3CDDDEA8EC5DFCDBEA7E3CDD&rvsmid=39E9A2D856D40FB4BEE039E9A2D856D40FB4BEE0&FORM=VDQVAP&fsscr=0/

http://www.designingbuildings.co.uk/wiki/Concept_architectural_design/

https://www.youtube.com/watch?v=YeKPt1oVjVE
https://www.youtube.com/watch?v=vmHoGicPQQQ
https://www.youtube.com/watch?v=BjyGHjAwuP0/

In the end of the examination simple one bed room dwelling unit should be drawn with given line diagram.

SCHEME OF EVALUATION FOR SEE

SL NO	DESCRIPTION	MARKS
1	Floor plan with furniture	15
2	Elevation and section	10
3	Rendering	05
3	Sessional works	15
4	Viva-voce	5
	Total	**50**

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

Course Title: **BASIC DESIGN**		Course Code	: **15AR36 P**
Semester	: **III**	Course / Elective	: **Core**
Teaching Scheme (L:T:P)	: **0:2:4**	Credits	: **3 Credits**
Type of course	: **Tutorial and Practice**	Total Contact Hours	: **78**
CIE	: **25 Marks**	SEE	: **50 Marks**

Prerequisites: Basic knowledge of drawing, sketching and materials.

Course Objectives:

1. Basic Design provides the framework for understanding Design as a new language by sensitizing students to the conceptual, visual and perceptual issues involved in the design process.

2. To impart an understanding of design process and provide knowledge of the principles of design and elements. Exercises should complement tutorials and ensure the students learn to develop a series of compositions in two dimensions.

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Define various forms of design – Architectural, Interior, Furniture, Graphic, Exhibition. Explain materials and processes. Aesthetics. Illustrate elements and principles of design	***R/U/A***	1,2,3,7,10	**12**
CO2	Apply knowledge of elements and principles of design to solve two-dimensional design Problems.	***R/U/A***	1,2,3,7,10	**21**
CO3	Compose two-dimensional layouts in colour to communicate concepts of elements and principles of design.	***R/U/A***	1,2,3,6,10	**15**
CO4	Prepare compositions in complementary, analogous, triadic, warm and coluor schemes.	***U/A***	1,2,3,5,6,7,10	**30**

Total	**78**

	Programme Outcomes									
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
Basic Design	3	3	2	-	1	2	-	-	2	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

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Course Contents:

Tutorials

UNIT- I: **(12Hours)**

Definition of various forms of Design. Materials and process. Aesthetics. Design problem solving. Elements of Design: Line - Types of lines, line direction, contour and gesture, line quality, line as value and texture. Shape and Form. Space - limited space, unlimited space, conceptual space, visual space. Color - Light spectrum and optical color circle. Additive and Subtractive mixing, primary, secondary and tertiary colors. Complimentary colors. Cool and Warm colors, color schemes - Monochromatic, Analogous, Triadic. Texture: Visual texture, tactile texture, texture as pattern. Principles: Unity - Proximity, repetition, continuation, unity with variety. Proportion and Scale. Balance - Symmetrical, Asymmetrical and Radial Balance, Rhythm - Rhythm and motion. Focal point/Emphasis - Emphasis by contrast.

Graded exercises

UNIT- II: **(21 Hours)**

Graded Exercises: Represent movement, rest, softness, hardness using various line types and medium. Represent

a) Contrasts using point,

b) Contrasts by line,

c) Contrasts by plane, volume, light, tone / value, texture etc.

UNIT- III: **(15 Hours)**

COLORS

Analyze and interpret natural forms as geometrical forms. Exercises based on theory of colors.

a) Prepare a color wheel and label
b) Primary,
c) Secondary
d) Tertiary colors.

UNIT- IV: **(30 Hours)**

COMPOSITION OF TWO DIMENTIONAL COLOR SCHEME.

A) Prepare a color layout in complementary color scheme.

B) Prepare a color layout in analogous color scheme.

C) Prepare a colour layout in triadic colour scheme.

D) Prepare a colour layout in warm colour scheme.

E) Prepare a colour layout in cool colour scheme.

Resources:

a. References Books:

1. Principles of Two-Dimensional Design by Wucius Wong.

2. Design by Philip Rawson.
3. Design Basics by David Lauer.
4. Design through Discovery by Marjorie Elliott Bevlin.

b. Web links:

1. http://www.designcoding.net/
2. https://www.youtube.com/watch?v=t3kEwrNiNCQ
3. https://www.youtube.com/watch?v=62r3UPrOS9k

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE*	IA	Students	Graded Exercises (Average marks allotted for each graded exercise)	25	Drawing Sheets	1,2,3,4
	SEE*	End Exam		End of the course	50	Answer scripts at BTE	1,2,3,4
Indirect Assessment method	Student Feedback on course		Students	Middle of the course		Feedback forms	1, 2 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Weightage of Marks

Unit No	Hour	Questions to be set for (10marks) Graded exercises
I	12	---
II	21	1
III	15	1

IV	30	1
TOTAL	**78**	

Scheme of Evaluation for End Exam

Sl. No.	Scheme	Max. Marks
1	Concept	5
2	Development	5
4	Final Layout	20
5	Internal Work (Portfolio)	15
6	Viva voce	5
Total		**50**

MODEL QUESTION PAPER

Third semester Diploma in ARCHITECTURE

Course Title**: BASIC DESIGN** Course Code**: 15AR36P**

Time: **4 Hours**] [Max. Marks: **50**

1. Prepare a 2D Layout using representation of contrast of shapes. 30
2. Internal work (Portfolio). 15
3. Viva-voce. 5

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

	Course Title: **SURVEYING PRACTICE**		
	Scheme (L:T:P)**: 0:2:4**	Total Contact Hours: **78**	Course Code: **15AR37P**
	Type of Course: **Tutorial and practice**	Credit **:03**	Core/ Elective: **Core**
CIE- 25 Marks			SEE- 50 Marks

Prerequisites: Applied science and Mathematics.

Course Objectives:

1. Explain different types of surveys and to compare the same with other types.
2. Choose the appropriate type of survey to generate ground information parameters which help in preparing maps, topo sheets .

On successful completion of the course, the students will be able to:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Explain the different types of surveys conducted to facilitate linear and angular measurement for establishing control points on the ground.	***U/A***	1,2,4,10	12
CO2	Distinguish between various survey instruments which are used in the field for carrying out linear and angular measurements.	***U/A***	1,2,3,4,8,10	12
CO3	Compute areas of land with irregular boundary by conducting chain and compass traverse.	***U/A***	1,2,3,4,5,8,10	12
CO4	Apply the technique in angular measurement for carrying out compass traverse for preparing maps of existing areas.	***U/A***	1,2,3,4,5,6,8,10	09
CO5	Determine the relative vertical distances between various identified points above, on or below the ground.	***U/A***	1,2,3,4,6,8,9,10	18
CO6	Prepare contour maps which help in planning and designing of construction projects.	***U/A***	1,2,3,4,5,6,7,8,9,10	15
			Total sessions	**78**

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
SURVEYING PRACTICE	03	03	03	02	02	02	01	3	02	03

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

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COURSE CONTENT

UNIT 1: CHAIN SURVEY 24 Hours

Study of instruments required for chain surveying. Ranging and chaining a line
Setting out perpendicular offsets from a point on a chain line and from external point to the chain line , using chain and tape , using cross staff, optical square and prism square. Construction of regular figures like triangle, rectangle , parallelogram ,pentagon and hexagon and to determine area of figures. Cross staff survey for determining area of field with irregular boundary

UNIT 2: COMPASS SURVEY 21 Hours

Study of prismatic compass and surveyors compass .Taking bearings and findings the included angles by using prismatic compass. Construction of triangles using prismatic compass Given bearings and included angles. setting out regular polygons (Pentagon & Hexagon by deflection angle method) .Conducting closed traverse and plotting for a given data (Pentagon & Hexagon)Taking fore bearing and back bearing of open traverse and closed traverse (to know the effect of local attraction).

UNIT 3: LEVELLING 27 Hours

Study of dumpy level and temporary adjustment of dumpy level. Taking level of various points and recording it in a level book. Find the difference in levels between the two points by . Plane

of collimation method (Height of Instrument method)and and Rise and fall method . RL of chajja or canopy with respect to RL of given bench mark .
Longitudinal and Cross Sectional leveling. Locating the contour points by direct method .Conducting block levels of an area & plotting the same to draw contours (not for examination)

UNIT 4: MODERN SURVEY 06 Hours

Total Station- Introduction to techniques of measuring horizontal ,vertical distances and included angles using Total station.
GPS- Introduction to GPS, Application of GPS

GRADED EXCERCISES

1.0 CHAIN SURVEYING

1 Study of instruments required for chain surveying
2 Ranging and chaining a line
3 Setting out perpendicular from a point on a chain line :
  a) By using chain and tape only
  b) By using cross staff, optical square and prism square
4 To drop a perpendicular to a chain line from a point outside:
  a) By using chain and tape only
  b) By using cross staff, optical square and prism square
5 Construction of triangles and computation of area
6 Construction & area Computation of :
  i) Quadrilateral ii) Parallelogram
7 Construction of regular polygon and computation of areas
  i) Pentagon ii) Hexagon
8 Conducting closed traverse (cross staff survey) and recording in field book , plotting the same in a drawing sheet and determine the area

2.0 COMPASS SURVEYING

9 Study of prismatic compass and surveyors compass
10 Taking bearings and findings the included angles by using prismatic compass
11 Construction of triangles using prismatic compass
12 Given bearings or include angles setting out regular polygon (Pentagon & Hexagon by deflection angle method)
13 Conducting closed traverse and plotting for a given data (Pentagon & Hexagon)
14 Taking fore bearing and back bearing of open traverse and closed traverse (to know the effect of local attraction)

3.0 LEVELLING

15 Study of dumpy level and temporary adjustment of dumpy level
16 Taking level of various points and recording it in a level book
17 Find the difference of levels between the two points by :
  i) Plane of collimation method (Height of Instrument method)

ii) Rise and fall method

18 Finding RL of chejja or canopy with respect to RL of given bench mark

19 Longitudinal and Cross Sectional leveling (Demo)

REFERENCES

1. Surveying & Leveling (Part-I) by TP Kanetkar & SV Kulkarni
2. Surveying & Leveling (Part-I) by BC Punmia
3. Surveying by Hussain & Nagraj
4. Surveying & Leveling by Agor
5. Surveying & Leveling by NN Basak
6. Surveying-I by TTTI, Chennai
7. Remote Servicing Principles and applications- Patel. A.N
8. AICTE C.E Module on GIS proposed by NITTTR Chennai

Web links

1) https://en.wikipedia.org/wiki/Total_station
2) http://www.ehow.com/how_2097192_use-surveyors-chain-measurements.html
3) http://srividyaengg.ac.in/elearn1/coursematerial/Civil/103362.pdf
4) http://media.humanities.manchester.ac.uk/humanities/flash/HumeL046 _FionaSmyth_SED_2/surveying/surveying.html

Suggested students activity

1) Given the plan of a residential building along with trench plan, to give the mark out for foundation trench.

2) To conduct block leveling of the shown field, and prepare contour map for the same

Execution Note:

1. Maximum of 2 students in each batch for student activity
2. Any two activities (either from the list given or any similar activities) shall be assigned among different batches; may be assigned by the teacher based on interest of the students.
3. Project activities shall be carried out throughout the semester and present the project report at the end of the semester; concerned teacher is expected to observe and record the progress of students' activities
4. Submit qualitative hand-written report not exceeding 6 pages; one report per batch
5. Each of the activity can be carried out off-class well in advance; however, demonstration/presentation should be done during laboratory sessions
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4. Listen to other team mates	Is always talking, never allows anyone to else to speak	Usually does most of the talking, rarely allows others to speak	Listens, but sometimes talk too much,	Listens and talks a little more than needed.	Listens and talks a fare amount	3
					Total marks	ceil(13/4)= 4

Course Assessment and Evaluation:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE	IA	Students	Two tests (Average of two tests)	10	Blue books	1,2,3,4
				Record (Average marks of each exercise to be computed)	10	Record	1,2,3,4,5,6
				Field activity	05	Report	1,2,3,4
	SEE	End Exam		End of the course	50	Answer scripts at BTE	1,2,3,4
Indirect Assessment	Student Feedback on course		Students	Middle of the course	---	Feedback forms	1,2,3 Delivery of course
	End of Course Survey			End of the course	---	Questionnaires	1,2,3,4 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note:

1. I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
2. Rubrics to be devised appropriately by the concerned faculty to assess Field activity.

SCHEME OF EVALUATION

Max. Marks : 50 Time : 3Hrs

In the examination student should present / submit the graded exercises/experiments in the form of record. The examiner should give the problem among the practiced graded exercises with required relevant data. Students should conduct the same using required instruments.

1. Instruments list & Writing Procedure : 10
2. Conducting, Observation and entry (field work) : 15
3. Calculation & Results : 10
4. Oral/Viva : 05
5. Record : 10

Total : **50**

3ನೇ ಸೆಮಿಸ್ಟರ್ ಕನ್ನಡ–1 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)

3rd Semester	**Course: Kannada Kali-1**	**Course Code:15KA3NT** (2016-17)
	No. of Credits:02	**No. of teaching hours/week:02** No. of teaching hours/Semester:26
	Mode of Assessment and Evaluation: Continuous Internal Evaluation (CIE)only. I.A Tests:30 Marks (3 Tests) Student activities: 20 Marks	**Maximum Marks: 50 (CIE only) Minimum Passing marks:20** (IA Tests + Student activities)

ಉದ್ದೇಶ:

1. ಕೇಳುವುದು, ಗ್ರಹಿಸುವುದು, ನಿರರ್ಗಳವಾಗಿ ಮತ್ತು ಸ್ಪಷ್ಟವಾಗಿ ಓದುವ ಮತ್ತು ಮಾತನಾಡುವ (ಅಭಿವ್ಯಕ್ತಿಸುವ) ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಸುವುದು.
2. ಜ್ಞಾನಾರ್ಜನೆ, ಸಾಹಿತ್ಯಾಭಿರುಚಿ, ಚಿಂತನೆ ಮತ್ತು ಆನಂದಕ್ಕಾಗಿ ಸ್ವತಂತ್ರವಾಗಿ ಓದಲು, ಬರೆಯಲು ಮತ್ತು ಮಾತನಾಡಲು ಸಮರ್ಥರಾಗುವಂತೆ ಮಾಡುವುದು.
3. ಪದ ಸಂಪತ್ತನ್ನು ಹೆಚ್ಚಿಸಿಕೊಂಡು ಸ್ಪಷ್ಟ ಉಚ್ಚಾರಣೆಯೊಡನೆ ಲಿಖಿತ ಮತ್ತು ಮೌಖಿಕ ಚಟುವಟಿಕೆಗಳನ್ನು ಮಾಡಿಸಿ, ಸ್ವತಂತ್ರವಾಗಿ ಭಾಷೆಯ ಬಳಕೆ ಮಾಡುವುದು.
4. ನಾಡು–ನುಡಿ, ಸಂಸ್ಕೃತಿ ಮತ್ತು ಸಾಹಿತ್ಯಗಳ ಪರಿಚಯ ಮತ್ತು ಆತ್ಮೀಯ ಭಾವಾಭಿಮಾನವನ್ನು ಬೆಳೆಸುವುದು.
5. ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆಗಳಿಂದ ಭಾಷಾ ಕೌಶಲ್ಯದ ಸರಳ ಪ್ರಯೋಗ ಮಾಡಿಸುವುದು./ಕಲಿಸುವುದು.
(ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆ ಎಂದರೆ, ವರ್ಣಮಾಲೆ ಪರಿಚಯ, ವ್ಯಾಕರಣದ ಸರಳ ಪರಿಚಯ, ಗುಣಿತಾಕ್ಷರ, ಸಂಯುಕ್ತಾಕ್ಷರಗಳು, ನಾಮಪದ, ಲಿಂಗ, ವಚನ, ಪ್ರತ್ಯಯಗಳು, ವಾಕ್ಯರಚನೆ (ಕರ್ತೃ, ಕರ್ಮ, ಕ್ರಿಯಾಪದ) ಇತ್ಯಾದಿ)

ಪಠ್ಯಕ್ರಮ ಮತ್ತು ಸರಳ ಭಾಷಾ ಕೌಶಲ್ಯ

(ಕನ್ನಡ ಕಲಿ–ಪಠ್ಯಪುಸ್ತಕ –ಶ್ರೀ ಲಿಂಗದೇವರು ಹಳೇಮನೆ – ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ ಪ್ರಕಾಶನ)

ಭಾಗ–1

ಪಾಠಗಳ ಕ್ರಮಾಂಕ Lesson No	ಪಠ್ಯವಸ್ತುವಿನ ವಿವರ – Curriculum Content	ಸೆಮೆಸ್ಟರ್ ಬೋಧನ ಅವಧಿ Total no.of Classes /Sem
	ಕನ್ನಡ ಭಾಷೆಯ ಪರಿಚಯ/ವರ್ಣಮಾಲೆ/'ಕನ್ನಡ ಕಲಿ'ಯುವ ವಿಧಾನ ಕುರಿತ ಮಾಹಿತಿ	**02**
1	Introducing each other Personal Pronouns, Possessive forms and Interrogative words 1. ನಾವು ಮತ್ತು ಭಾಷೆ 2. ಅಕ್ಷರಗಳಿಂದ ಪದಗಳು	03
2	Introducing each other Personal Pronouns, Possessive forms – Yes/No Type Interrogative	02
3	About Ramayana. Possessive forms of nouns, dubitive question, Relative nouns. ಪದಗಳಿಂದ ವಾಕ್ಯಗಳು	02
4	Enquiring about college. Qualitative and quantitative adjectives.	02
5	Enquiring about room. Predicative forms,	02

	locative case.	
6	Vegetable Market. Dative case, basic numerals.	02
7	About Medical college. Ordinal numerals, plural markers.	02
8	In a cloth shop. Color adjectives, defective verbs	02
9	Plan to go for picnic - imperative, permissive and hortative	02
10	Enquiring about one's family, Verb iru, and corresponding negation ಕನ್ನಡ ಚಿತ್ರಪಟಗಳಲ್ಲಿನ ಅಕ್ಷರಗಳನ್ನು ಗುರುತಿಸಿ ಓದಿ ದಿನಪತ್ರಿಕೆ ಓದುವ ಹವ್ಯಾಸ--ಸಂವಹನ ಮಾಧ್ಯಮದ ಬಗ್ಗೆ ಪರಿಚಯ	02
	ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು	03
	ಒಟ್ಟು ಗಂಟೆಗಳು	**26**

ಸೂಚನೆಗಳು:

- ಈ ಪಠ್ಯದ ಮೂಲ ಉದ್ದೇಶ ಕನ್ನಡೇತರ ವಿದ್ಯಾರ್ಥಿಗಳು ಸರಳ ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ವ್ಯವಹರಿಸುವಂತೆ ಮಾಡುವುದಾಗಿದೆ. **"ಕನ್ನಡ ಕಲಿ"** ಪುಸ್ತಕದ ಮೇಲಿನ ಪಾಠಗಳ ಜೊತೆಗೆ **"ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆ"**ಯಿಂದ ಗಳಿಸುವ ಅಕ್ಷರ ಜ್ಞಾನದಿಂದ ಪದ ಸಂಪತ್ತು ಹೆಚ್ಚಿಸಿ, ಪದಗಳಿಂದ ಸ್ವಂತ ವಾಕ್ಯಗಳ ರಚನೆ ಮಾಡಿಸುವುದು. (ಅಮ್ಮ, ಮೊಬೈಲ್, ಕನ್ನಡ ಭಾಷೆ, ಕವಿಗಳು, ನಾಟಕ, ಜನಪದ ಕಲೆ, ನಾಡಿನ ಪ್ರಸಿದ್ಧ ವ್ಯಕ್ತಿಗಳು, ಸಹೋದರ, ಸ್ನೇಹಿತ, ತರಕಾರಿ, ದೋಸೆ, ತಿಂಡಿ, ನಿದ್ದೆ, ಬಿಸಿ, ಚಳಿ, ಆಕಾಶ, ಓದು, ಇತ್ಯಾದಿ ನಿತ್ಯ ಬಳಕೆಯ ಸರಳ ಪದಗಳಿಂದ ವಾಕ್ಯರಚನೆ ಮತ್ತು 25–50 ಪದಗಳ ಕಿರು ಲೇಖನ ರಚನೆ).
- **ತರಗತಿ ಚಟುವಟಿಕೆಗಳ ಪುಸ್ತಕದಲ್ಲಿ (ಕ್ಲಾಸ್ ಅಸೈನ್‌ಮೆಂಟ್) ಕನ್ನಡ ವರ್ಣಮಾಲೆಯ ಸ್ವರ, ವ್ಯಂಜನಗಳ ಅಕ್ಷರಗಳ ಬರವಣಿಗೆ ಅಭ್ಯಾಸ, ವ್ಯಂಜನಗಳಿಗೆ ಸ್ವರಗಳನ್ನು ಸೇರಿಸುವಿಕೆ, ಅಕ್ಷರಗಳಿಂದ ಪದರಚನೆ, ಪದಗಳಿಗೆ ಪ್ರತ್ಯಯಗಳನ್ನು ಸೇರಿಸುವುದು(ಗೆ, ಯಿಂದ, ಅನ್ನು, ಅಲ್ಲಿ, ಗಳು, ಎಂದು.....ಇತ್ಯಾದಿ ಪಠ್ಯದಲ್ಲಿ ಬರುವ ಪದಗಳಿಗೆ ನಿತ್ಯ ಬಳಕೆಯ ಪ್ರತ್ಯಯಗಳನ್ನು ಸೇರಿಸುವುದು) ಪದಗಳಿಂದ ವಾಕ್ಯ ರಚನೆ. ಮಾಡುವುದು. ಮತ್ತು ಪಾಠ 1–10ರ ಪಠ್ಯಾಂತ್ಯದಲ್ಲಿ ಬರುವ ಅಭ್ಯಾಸಗಳಲ್ಲಿ ಆರಿಸಿದ ಅಭ್ಯಾಸ ಭಾಗಗಳನ್ನು ಬರೆಸುವುದು. ಮತ್ತು ಪಾಠ–20 ರ ಸ್ಕ್ರಿಪ್ಟ್– ಅನ್ನು ಆಧಾರವಾಗಿಟ್ಟುಕೊಂಡು ಅಭ್ಯಾಸ ಮಾಡಿಸುವುದು.**

ಆಕರ ಗ್ರಂಥಗಳು:

1. **ಕನ್ನಡ ಕಲಿ–ಶ್ರೀ ಲಿಂಗದೇವರು ಹಳೇಮನೆ – ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.**
2. ಪ್ರಾಥಮಿಕ ಶಾಲೆಯ ಕನ್ನಡ ಪಠ್ಯಪುಸ್ತಕಗಳು
3. ಸರಳ ಕನ್ನಡ ವ್ಯಾಕರಣ ಪುಸ್ತಕಗಳು– ಎಂ.ವಿ ನಾಗರಾಜರಾವ್/ಇತರೆ ಲೇಖಕರು.
4. ಪ್ರಯೋಗ ಪ್ರಣತಿ–ಪ್ರಥಮ ಪಿಯುಸಿ ಪೂರಕ ಪಠ್ಯ.
5. ಸರಳ ಪತ್ರವ್ಯವಹಾರದ ಪುಸ್ತಕಗಳು

ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ವಿಧಾನ (3ನೇ ಸೆಮಿಸ್ಟರ್)

ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ– Continuous Internal Evaluation (CIE) only.

ಕ್ರ.ಸಂ.	ಚಟುವಟಿಕೆಗಳು	ವಿವರ	ಗರಿಷ್ಠಾಂಕ	ಉತ್ತೀರ್ಣತೆಗೆ ಕನಿಷ್ಠಾಂಕ
01	**ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ (I A Tests)**	**ಮೂರು ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು (ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)**	**30**	
02	**ಕನ್ನಡ ಭಾಷಾ ಕೌಶಲ್ಯಾಭಿವೃದ್ಧಿ ಚಟುವಟಿಕೆಗಳು (Student Activities)**	**ಮೂರು ಚಟುವಟಿಕೆಗಳು (ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)**	**20**	
		ಒಟ್ಟು ಅಂಕಗಳು	**50**	**20**

Course outcome:

1. Developing listening and speaking skills.
2. Easy Interaction with peers.
3. Students can use the language at ease in daily life situations

ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳ ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಗಳು:

ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳಿಗೆ ಈ ಕೆಳಗಿನ ಮಾದರಿಯಲ್ಲಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ಸಿದ್ಧಪಡಿಸಿ ನಡೆಸುವುದು ಮತ್ತು "ಕನ್ನಡ ಕಲಿ" ಪಠ್ಯದ ಕಲಿಕೆ ವಿವರಣೆ (ಭಾಷಾಭ್ಯಾಸ) ಸಂಭಾಷಣಾ ಭಾಗಗಳು ಮತ್ತು ಅಂತ್ಯದಲ್ಲಿ ಅಭ್ಯಾಸ ಪುಸ್ತಕದಲ್ಲಿ ಬರುವ ಪ್ರಶ್ನೆಗಳ ವಿಧಾನವನ್ನು ಪರ್ಯಾಯವಾಗಿ ಬಳಸಿಕೊಂಡು ಪ್ರಶ್ನೆಪತ್ರಿಕೆಗಳನ್ನು ತಯಾರಿಸಿಕೊಳ್ಳಬಹುದು.

ಡಿಪ್ಲೋಮಾ 3ನೇ ಸೆಮಿಸ್ಟರ್–ಕನ್ನಡ ಕಲಿ–1 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)

ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆ

ಸಮಯ: 60 ನಿಮಿಷಗಳು ಅಂಕ: 30

I. Fill in the blanks using the appropriate words.(Any FOUR) 1X4=04

i) nimma raajya.....?
ii) adu.....pustaka?
iii) avana ..... hesaru suratkal injiniyaring kaaleju.
iv) ondu ruupaayige.....paise.
v) aval.ige hindustaani sanita tumba.....
vi) nanage ninna sahavaasa khanDitaa.....
vii) avanu nimma ....?

II. Use the following words (any FOUR) in your own sentences. 1X4=04

1.adhyaapaki 2.snehita 3. Vyaapaara 4.keTTa 5. Hasiru 6.angadi 7.taaja

III. Answer the following questions (any FOUR) 1X4=04

(a) nimma uuru yaavudu?
(b) nivu diploma vidyaarthinaa?
(c) nimma pennige estu ruupaaye?
(d) nimma maatrubhaashe yaavudu?
(e) nimage tingalige eshtu ruupaayi beeku?
(f) nimma mane/ruumu elli ide?

IV. Translate the following sentence in Kannada. (any FOUR) 4X2=08

1. Kannada is the language of Karnataka.
2. My book is in my house.
3. We have two houses in Bangalore.
4. How much is this Pumpkin weighs?
5. I want two packets of biscuits.
6. How much do you pay rent for your room?
7. What else do you want?

V. ಕೆಳಗಿನವುಗಳನ್ನು ಹೊಂದಿಸಿ ಬರೆಯಿರಿ. (Match the following) 1X4=04

1. ನೀವು ಯಾವಾಗ ಮನೆಯಲ್ಲಿ	1.ಇದೆ
2. ಪುಸ್ತಕ ಮೇಜಿನ ಮೇಲೆ	2.eldest son
3. Jaaga-ಜಾಗ	3.ಇತ್ತೀರಿ
4. Hiri maga	4.space

VI. (1) Change into interragative using the underlined word. (Any Three) 1X3=03

1. Ivattu guruvaara.
2. evattu hattanee taariku
3. Aval hesaru liila.
4. Avara maatrabhaashe telagu alla.
5. Vavige ippttaydu ruupaayei beeku.
6. Adu maalatiya mane.

(2) change into Interrogate. (Any THREE) 1X3=03

1.ಹೌದು, ಇದು ಪುಸ್ತಕ.
2. ಆಗಲಿ, ಹೋಗೋಣ.
3. ಈಗ ಒಂದೂವರೆ ಗಂಟೆ.
4. ಅವರು ಮನೆಗೆ ಬರುತ್ತಾರೆ.
5. ನಾವಿ ಮನೆಗೆ ಹೋಗೋಣ.
6. ಅವರು ಮನೆಗೆ ಹೋಗಲಿ.

ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನಾ ಸಮಿತಿ

- **ಸಂಪಾದಕೀಯ ಸಮಿತಿ:**

1. ಶ್ರೀ ಟಿ ಎಲ್ ರವೀಂದ್ರ, ಉಪನ್ಯಾಸಕರು, ಸರ್ಕಾರಿ ಜಿ.ಆರ್.ಐ.ಸಿ.ಪಿ ಬೆಂಗಳೂರು.
2. ಶ್ರೀ ಟಿ. ತಿಮ್ಮಪ್ಪ, ಉಪನ್ಯಾಸಕರು(ಆಯ್ಕೆ ಶ್ರೇಣಿ), ಯಾಂತ್ರಿಕ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಪಾಲಿಟೆಕ್ನಿಕ್, ತುಮಕೂರು.

- **ಸಲಹಾ ಸಮಿತಿಯ ಬಾಹ್ಯ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು.**

1. ಪ್ರೊ. (ಡಾ.) ಡಿ. ಪಾಂಡುರಂಗ ಬಾಬು, ಕುಲಸಚಿವರು, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
2. ಪ್ರೊ. (ಡಾ.) ಅಶೋಕ್ ಕುಮಾರ್ ರಂಜರೆ, ಪ್ರಾಧ್ಯಾಪಕರು, ಪ್ರಸಾರಾಂಗ ವಿಭಾಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
3. ಪ್ರೊ. (ಡಾ.) ಕೆ ವೈ ನಾರಾಯಣ ಸ್ವಾಮಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಸ್ನಾತಕೋತ್ತರ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಬೆಂಗಳೂರು.
4. ಪ್ರೊ. (ಡಾ.) ಜೆ ಬಾಲಕೃಷ್ಣ, ಪ್ರಾಧ್ಯಾಪಕರು ಹಾಗು ಮುಖ್ಯಸ್ಥರು, ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ವಿಭಾಗ, ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, (ಜಿಕೆವಿಕೆ) ಹೆಬ್ಬಾಳ, ಬೆಂಗಳೂರು.

KARNATAKA STATE BOARD OF TECHNICAL EXAMINATION, BENGALURU.														
TEACHING AND EXAMINATION SCHEME FOR KANNADA COURSE IN DIPLOMA PROGRAME														
SEMESTER: III			COMMON TO ALL DIPLOMA PROGRAMMES											C-15 Curriculum
SL.N0	COURSE NAME	Teaching Department	COURSE /QP CODE	Teaching scheme					Examination scheme					
				Contact hours										
				TH	TU	PR	TOTAL	Credit	Exam paper duration in Hrs	End exam		Maximum CIE Marks (IA+SA)	Minimum Marks for passing. (IA + SA)	
										Max marks	Min marks			
	THEORY													
1	KANNADA KALI-1	KA	15KA3NT	2	-	-	2	2	-	-	-	50	20	
2	TANTRIKA KANNADA -1	KA	15KA3KT	2	-	-	2	2	-	-	-	50	20	

CIE- Continuous Internal Examination: SEE-Semester End Examination: IA-Internal Assessment Tests: SA- Student Activity.

Note: 1. Candidates studied Kannada as one subject in 10th standard shall take Tantrika Kannada 1 &2. Others may take “Kannada Kali-1&2”.

2. In 3rd Semester- Assessment is only by CIE and no SEE. Average marks of three I A tests shall be rounded off to the next higher digit. Rubrics to be devised appropriately to assess student activity.

KARNATAKA STATE BOARD OF TECHNICAL EXAMINATION, BENGALURU.														
TEACHING AND EXAMINATION SCHEME FOR KANNADA COURSE IN DIPLOMA PROGRAME														
SEMESTER: IV			COMMON TO ALL DIPLOMA PROGRAMMES											C-15 Curriculum
SL.N0	COURSE NAME	Teaching Department	COURSE /QP CODE	Teaching scheme					Examination scheme					
				Contact hours										
				TH	TU	PR	TOTAL	Credit	Exam paper duration in Hrs	Sem End Exam		Maximum CIE Marks (IA+SA)	Minimum Marks for passing. (IA + SA)	
										Max Exam Marks	Min Passing Marks			
	THEORY													
1	KANNADA KALI-2	KA	15KA4NT	2	-	-	2	2	2	50	20	-	-	
2	TANTRIKA KANNADA -2	KA	15KA4KT	2	-	-	2	2	2	50	20	-	-	

CIE- Continuous Internal Examination: SEE-Semester End Examination: IA-Internal Assessment Tests: SA- Student Activity.

Note: In 4th Semester- Assessment is only by SEE and no CIE. To award diploma certificate, passing in Kannada course is mandatory. However Kannada course is not included in the eligibility criteria for promotion to the higher semester.

ಡಿಪ್ಲೋಮಾ–ತಾಂತ್ರಿಕ ಕನ್ನಡ–1 (ಕನ್ನಡ ಬಲ್ಲವರಿಗಾಗಿ)

3ನೇ ಸೆಮಿಸ್ಟರ್ – ತಾಂತ್ರಿಕ ಕನ್ನಡ –1 (ಸಾಹಿತ್ಯ ಮತ್ತು ಭಾಷಾ ಕೌಶಲ್ಯ ಪ್ರಯೋಗ)

ಪಠ್ಯಕ್ರಮ

3rd Semester	**Course:** **ತಾಂತ್ರಿಕ ಕನ್ನಡ –1**	**Course Code:15KA3KT** (2016-17)
	No. of Credits:02	**No. of teaching hours/week:02** No. of teaching hours/Semester:26
	Mode of Assessment and Evaluation: Continuous Internal Evaluation (CIE)only. I.A Tests:30 Marks (3 Tests) Student activities: 20 Marks	**Maximum Marks: 50 (CIE only)** **Minimum Passing marks:20** (IA Tests + Student activities)

ಪಠ್ಯ ಪ್ರಕಾರ	ಪಾಠ	ಪಠ್ಯದ ಹೆಸರು/ಲೇಖಕರು/ಪ್ರಕಟಣೆ	ಸೆಮಿಸ್ಟರ್ ಬೋಧನಾವಧಿ ಗಂಟೆಗಳು
ಇತಿಹಾಸ	1	'ಸಂಸ್ಕೃತಿ'– ದೇ.ಜೆ.ಗೌ (ನಾಟ್ಯ ಸಂಸ್ಕೃತಿ–ದೇ.ಜೆ.ಗೌ)	02
ಸಂಸ್ಕೃತಿ	2	ನಮಗೆ ಬೇಕಾಗಿರುವ ಇಂಗ್ಲಿಷ್– ಕುವೆಂಪು	02
ಪರಿಸರ	3	ಆನೆ ಹಳ್ಳದಲ್ಲಿ ಹುಡುಗಿಯರು – ಬಿ ಜಿ ಎಲ್ ಸ್ವಾಮಿ	02
ಕ್ರೀಡೆ/ಜೀವನಕಲೆ	4	ಸೋಲೆಂಬುದು ಅಲ್ಪವಿರಾಮ – ನೇಮಿಚಂದ್ರ	02
ಯಶೋಗಾಥೆ/ವ್ಯಕ್ತಿಚಿತ್ರಣ	5	ಬದುಕನ್ನು ಪ್ರೀತಿಸಿದೆ ಸಂತ – ಎಚ್.ಆರ್.ರಾಮಕೃಷ್ಣ (ಕಲಾಂರ ವ್ಯಕ್ತಿ ಚಿತ್ರ)	02
ತಂತ್ರಜ್ಞಾನ	6	ಮಂಗಳನ ಅಂಗಳದಲ್ಲಿ – ಜೆ.ಬಾಲಕೃಷ್ಣ	02
ಭಾಷಾ ಕೌಶಲ್ಯ ಚಟುವಟಿಕೆಗಳು	7	*<u>ಮೌಖಿಕ ಅಭಿವ್ಯಕ್ತಿ:</u> ಸಹಜ ಭಾಷಾ ಬಳಕೆ: <u>.ಆಶು ಭಾಷಣ</u>> ವಿವಿಧ ರಚನಾತ್ಮಕ/ದೈನಂದಿನ ಬಳಕೆ ವಸ್ತು, ವ್ಯಕ್ತಿ, ಭಾವನೆಗಳ ಮೇಲೆ. ಒಂದು ಸಣ್ಣ ಏಕಾಂಕ (5–10 ನಿಮಿಷ) ನಾಟಕ. ಮಾದರಿ ಸಂದರ್ಶನ (ನೇಮಕಾತಿಗಾಗಿ ಸಂದರ್ಶನ)	06
ಲಿಖಿತ ಚಟುವಟಿಕೆಗಳು	8	**ವಿಸ್ತರಣೆ:** ನುಡಿಗಟ್ಟುಗಳು–ಪದಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಸಣ್ಣ ವಾಕ್ಯಗಳ ರಚನೆ ಪರ್ಯಾಯ ಪದಗಳನ್ನು ಬರೆಯುವುದು(ಉದಾ: ಬಳಸು=ಉಪಯೋಗಿಸು, ಕಾಯು= ನಿರೀಕ್ಷಿಸು, ಚಿಂತಿಸು=ಯೋಚಿಸು, ಕೂಡಿಸುವಿಕೆ=ಸೇರಿಸುವಿಕೆ.....ಇತ್ಯಾದಿ)	06
		ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು	02
		ಒಟ್ಟು ಗಂಟೆಗಳು	26

ತಾಂತ್ರಿಕ ಕನ್ನಡ–1

3ನೇ ಸೆಮಿಸ್ಟರ್ ಡಿಪ್ಲೋಮಾದ ಕನ್ನಡ ಪಠ್ಯ (ಕನ್ನಡ ಬಲ್ಲವರಿಗಾಗಿ)

1. ಪಠ್ಯರಚನಾ ಸಮಿತಿ
2. ನಿರ್ದೇಶಕರ ಮುನ್ನುಡಿ
3. ಪಠ್ಯ ರಚನಾ ಸಮಿತಿ ಮಾತುಗಳು
4. ಪಠ್ಯಕ್ರಮ

ಪರಿವಿಡಿ

<u>ಗದ್ಯ ವಿಹಾರ</u>

1. ನಾಟ್ಯ ಸಂಸ್ಕೃತಿ (ಇತಿಹಾಸ) – ದೆ.ಜೆ.ಗೌ
2. ನಮಗೆ ಬೇಕಾಗಿರುವ ಇಂಗ್ಲಿಷ್ (ಸಂಸ್ಕೃತಿ) – ಕುವೆಂಪು
3. ಸೋಲೆಂಬುದು ಅಲ್ಪವಿರಾಮ (ಕ್ರೀಡೆ/ಜೀವನಕಲೆ) – ನೇಮಿಚಂದ್ರ
4. ಆನೆ ಹಳ್ಳದಲ್ಲಿ ಹುಡುಗಿಯರು (ಪರಿಸರ) – ಬಿ.ಜಿ.ಎಲ್.ಸ್ವಾಮಿ
5. ಬದುಕನ್ನು ಪ್ರೀತಿಸಿದ ಸಂತ (ಯಶೋಗಾಥೆ/ವ್ಯಕ್ತಿಚಿತ್ರಣ) – ಎಚ್.ಆರ್.ರಾಮಕೃಷ್ಣ
6. ಮಂಗಳನ ಅಂಗಳದಲ್ಲಿ..... – ಡಾ:ಜೆ.ಬಾಲಕೃಷ್ಣ

<u>ಭಾಷಾ ಕೌಶಲ್ಯ–ಚಟುವಟಿಕೆಗಳು</u>

7. ಮೌಖಿಕ ಅಭಿವ್ಯಕ್ತಿ ಚಟುವಟಿಕೆಗಳು
8. ಲಿಖಿತ ಅಭಿವ್ಯಕ್ತಿ ಚಟುವಟಿಕೆಗಳು

Course outcome:
1. Developing listening and speaking skills.
2. Easy Interaction with peers.
3. Students can use the language at ease in daily life situations

ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ವಿಧಾನ (3ನೇ ಸೆಮಿಸ್ಟರ್)

ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ– Continuous Internal Evaluation (CIE) only.

ಕ್ರ.ಸಂ.	ಚಟುವಟಿಕೆಗಳು	ವಿವರ	ಗರಿಷ್ಠಾಂಕ	ಉತ್ತೀರ್ಣತೆಗೆ ಕನಿಷ್ಠಾಂಕ
01	**ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ (I A Tests)**	**ಮೂರು ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು (ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)**	**30**	
02	**ಕನ್ನಡ ಭಾಷಾ ಕೌಶಲ್ಯಾಭಿವೃದ್ಧಿ ಚಟುವಟಿಕೆಗಳು (Student Activities)**	**ಮೂರು ಚಟುವಟಿಕೆಗಳು (ತಾಂತ್ರಿಕ ಪ್ರಬಂಧ/ಅಶುಭಾಷಣ/ಚರ್ಚೆ/ತಾಂತ್ರಿಕ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಅವಿಷ್ಕಾರಗಳ ಬಗ್ಗೆ ವಿಶ್ಲೇಷಣೆ ಇತ್ಯಾದಿ.) (ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)**	**20**	
		ಒಟ್ಟು ಅಂಕಗಳು	**50**	**20**

ಸೂಚನೆ:
ಭಾಷಾ ಚಟುವಟಿಕೆಗಳಿಗಾಗಿ ತರಗತಿ ಚಟುವಟಿಕೆಗಳ ಪುಸ್ತಕದಲ್ಲಿ (ತರಗತಿಯ ಪ್ರಗತಿಪರ ಮೌಲ್ಯಮಾಪನ). ಗಾದೆಗಳ ವಿಸ್ತರಣೆ, ನುಡಿಗಟ್ಟುಗಳು, ಸಂಭಾಷಣೆ ಮಾದರಿಗಳು ಮತ್ತು ಪಠ್ಯದ ಸಾಹಿತ್ಯ ಭಾಗದ ಪಾಠಗಳ ಮೇಲೆ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರ–ಟಿಪ್ಪಣಿ ಮತ್ತು ಶಬ್ದಾರ್ಥದಲ್ಲಿ ಬರುವ ಪದಗಳಿಂದ ವಾಕ್ಯ ರಚನೆ ಮಾಡಿಸುವುದು.

- **ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆ**

3ನೇ ಸೆಮಿಸ್ಟರ್– ತಾಂತ್ರಿಕ ಕನ್ನಡ–1 (ಕನ್ನಡಬಲ್ಲ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ)

ಸಮಯ: 1.00 ಗಂಟೆ ಅಂಕಗಳು:30

ಸೂಚನೆ: ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸೂಚನೆಗಳ ಪ್ರಕಾರ ವ್ಯಾಕರಣದೋಷವಿಲ್ಲದಂತೆ ಉತ್ತರಿಸಿ.

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1. ಈ ಕೆಳಗಿನ 04 ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದು ಪೂರ್ಣ ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿ. 1*4=04

(ಅ) ನಾಟ್ಯ ಯಾವಾಗ ಹುಟ್ಟಿಕೊಂಡಿತು?
(ಆ) ಆನೆ ಹಳ್ಳದ ಕಾಡಿನಲ್ಲಿ ನಾಪತ್ತೆಯಾದ ಹುಡುಗಿಯರ ಹೆಸರುಗಳನ್ನು ತಿಳಿಸಿ.
(ಇ) ರಾಷ್ಟ್ರಪತಿಯಾಗಿ ಆಯ್ಕೆಯಾದಾಗ ಕಲಾಂ ಅವರು ಮೊದಲು ಹೇಳಿದ ಮಾತುಗಳೇನು?
(ಈ) ಮಂಗಳನ ಅಂಗಳ ತಲುಪಿದ ಮೊದಲ ಅಂತರಿಕ್ಷ ನೌಕೆ ಯಾವುದು?
(ಉ) 'ಹಗಲುಗನಸು' ನುಡಿಗಟ್ಟನ್ನು ಬಳಸಿ ಸ್ವಂತ ವಾಕ್ಯವನ್ನು ರಚಿಸಿ.
(ಊ) 'ಸಿಹಿಕಹಿ' ಜೋಡುಪದವನ್ನು ಒಂದು ವಾಕ್ಯದಲ್ಲಿ ಬಳಸಿ.

2. ಕೆಳಗಿನ ಯಾವುದೇ ನಾಲು ಪ್ರಶ್ನೆಗಳಿಗೆ ಕನಿಷ್ಟ ಐದಾರು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. 4*4=16

(1) ಕುವೆಂಪು ಅವರು ಇಂಗ್ಲಿಷ್ ಕಲಿಯುವವರನ್ನು ಎಷ್ಟು ವಿಭಾಗವಾಗಿ ಹೇಗೆ ವಿಂಗಡಿಸಿದ್ದಾರೆ?
(2) ಕಲಾಂ ಅವರ ಯಶಸ್ಸಿನ ಮಂತ್ರಗಳೇನು?
(3) ಗಾದೆಗಳ ಮಹತ್ವವೇನು? ನಿಮಗೆ ಗೊತ್ತಿರುವ ಯಾವುದೇ ಎರಡು ಗಾದೆಗಳನ್ನು ಹೆಸರಿಸಿ.
(4) ಸಂವಹನ ಸಂದರ್ಭದಲ್ಲಿ ಬಳಸುವ ಭಾಷೆ ಹೇಗಿರಬೇಕು?
(5) ನೇಮಿಚಂದ್ರರ 'ಸಾವಿನತ್ತ ಒಂದು ಹೆಜ್ಜೆ ' ಕತೆ ಓದಿದ ಹುಡುಗಿ ತನ್ನ ಸೋಲಿನಿಂದ ಹೊರಗೆ ಬಂದದ್ದು ಹೇಗೆ?
(6) ಸಂದರ್ಶನ ಎಂದರೇನು? ವಿವರಿಸಿ.

3. ಯಾವುದೆ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. 2*5=10

(1) ನಾಟ್ಯಕಲೆಯಲ್ಲಿ ಯಕ್ಷಗಾನ ಕಲೆ ಪ್ರಮುಖವಾದುದು. ಇದರ ಹುಟ್ಟು ಮತ್ತು ವ್ಯಾಪ್ತಿ ಬಗ್ಗೆ ತಿಳಿಸಿ.
(2) ಮಂಗಳಯಾನದ ಮುಖ್ಯ ಉದ್ದೇಶಗಳೇನು?
(3) 'ಮಾನವೀಯ ಮೌಲ್ಯಗಳು', ಅಂತರಜಾಲ – ಎರಡರಲ್ಲಿ ಒಂದಕ್ಕೆ ಸುಮಾರು ಒಂದು ಪುಟದಷ್ಟು ಪ್ರಬಂಧ ಬರೆಯಿರಿ.
(4) ಉದ್ಯೋಗದ ಸಂದರ್ಶನಕ್ಕೆ ಹೋಗುವಾಗ ಮಾಡಿಕೊಳ್ಳಬೇಕಾದ ಪೂರ್ವಸಿದ್ಧತೆಗಳೇನು?.

ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನಾ ಹಾಗು ಪಠ್ಯಪುಸ್ತಕ ಸಮಿತಿ

- **ಸಂಪಾದಕೀಯ ಸಮಿತಿ:**

1. ಶ್ರೀ ಟಿ ಎಲ್ ರವೀಂದ್ರ, ಉಪನ್ಯಾಸಕರು, ಸರ್ಕಾರಿ ಜಿ.ಆರ್.ಐ.ಸಿ.ಪಿ ಬೆಂಗಳೂರು.
2. ಶ್ರೀ ಟಿ. ತಿಮ್ಮಪ್ಪ, ಉಪನ್ಯಾಸಕರು(ಆಯ್ಕೆ ಶ್ರೇಣಿ), ಯಾಂತ್ರಿಕ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಪಾಲಿಟೆಕ್ನಿಕ್, ತುಮಕೂರು.

- **ಸಲಹಾ ಸಮಿತಿಯ ಬಾಹ್ಯ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು.**

1. ಪ್ರೊ. (ಡಾ.) ಡಿ. ಪಾಂಡುರಂಗ ಬಾಬು, ಕುಲಸಚಿವರು, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
2. ಪ್ರೊ. (ಡಾ.) ಅಶೋಕ್ ಕುಮಾರ್ ರಂಜರೆ, ಪ್ರಾಧ್ಯಾಪಕರು, ಪ್ರಸಾರಾಂಗ ವಿಭಾಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
3. ಪ್ರೊ. (ಡಾ.) ಕೆ ವೈ ನಾರಾಯಣ ಸ್ವಾಮಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಸ್ನಾತಕೋತ್ತರ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಬೆಂಗಳೂರು.
4. ಪ್ರೊ. (ಡಾ.) ಜೆ ಬಾಲಕೃಷ್ಣ, ಪ್ರಾಧ್ಯಾಪಕರು ಹಾಗು ಮುಖ್ಯಸ್ಥರು, ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ವಿಭಾಗ, ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, (ಜಿಕೆವಿಕೆ) ಹೆಬ್ಬಾಳ, ಬೆಂಗಳೂರು.

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

Course Title: **PROFESSIONAL ETHICS & INDIAN CONSTITUTION**		
Scheme (L:T:P) : **4:0:0**	Total Contact Hours: **52**	Course Code: **15CE44T**
Type of Course: **Lectures, Self Study& Quiz**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks		SEE- 100 Marks

Prerequisites: Enthusiasm to learn the subject

Course Objectives:

1. To create an awareness on Engineering Ethics and Human Values.
2. To instill Moral and Social Values and Loyalty.
3. Create awareness among engineers about their social responsibilities
4. Appreciate the Ethical issues
5. To Know the Human rights and concept of women empowerment
6. To know features of our constitution.

Course Outcomes:

7. *On successful completion of the course, the students will be able to attain CO:*
8:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Practice the moral values that ought to guide the Engineering profession.	***R/U***	5,6,7,8,10	**10**
CO2	Discover of the set of justified moral principles of obligation, ideals that ought to be endorsed by the engineers and apply them to concrete situations	***U/A***	5,7,8,10	**09**
CO3	Know the definitions of risk and safety also discover different factors that affect the perception of risk	***R/U***	5,6,7,10	**05**
CO4	Appreciate the Ethical issues and Know the code of ethics adopted in various professional body's and industries	***R/U***	5,6,7,10	**06**
CO5	Justify the need for protection of human rights and to know about concept of women empowerment	***R/U***	5,6,7,8,10	**8**
CO6	Know the successful functioning of democracy in India	***R/U***	5,6,7,9,10	**14**
		Total sessions		**52**

Legend: R; Remember, U: Understand A: Application

COURSE-PO ATTAINMENT MATRIX

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
PROFESSIONAL ETHICS & INDIAN CONSTITUTION	-	-	-	-	**3**	**3**	**3**	**3**	**2**	**3**

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.
If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3
If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2
If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1
If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

COURSE CONTENT AND BLUE PRINT OF MARKS FOR SEE

Unit No	Unit Name	Hour	Questions to be set for SEE			Marks weightage	weightage (%)
			R	U	A		
1	HUMAN VALUES	10	15	15	-	30	21
2	ENGINEERING ETHICS	09	10	15	-	25	17
3	SAFETY, RESPONSIBILITIES OF ENGINEERS	05	05	-	10	15	11
4	ETHICAL ISSUES IN ENGINEERING PRACTICE	06	05	05	5	15	11
5	HUMAN RIGHTS	8		15	5	20	13
6	INDIAN CONSTITUTION	14		25	15	40	27
	Total	52	35	75	35	145	100

Legend: R; Remember, U: Understand A: Application

UNITI: HUMAN VALUES 10Hrs

Professional Ethics-Objectives of study of professional ethics-Human values- Definition of Morals and Ethics-Difference between Morality and Ethics-Values-Definition-Types of values- Definition of Integrity- Concept of Work Ethic- Service Learning- Definition Virtues-Definition-Civic Virtue-Duties and Rights - Respect for Others – Attitude and values, opinions-changing attitude-beliefs-Reliability-Living Peacefully-Means to be adopted for leaving peacefully-Caring-Sharing-Honesty-ValuingTime-Co-operation-Commitment-Empathy-Self-Confidence-Spirituality.

UNTII: ENGINEERING ETHICS 09Hrs

Engineering ethics-Definition-Approach-Senses of Engineering Ethics-variety of moral issues– Inquiry-Types-Moral dilemmas-Steps to solve dilemma-Moral autonomy –Definition-consensus & controversy –Profession-Definition–Ethical theories-Theories about right action Personality–Self control- Self-interest –Self respect.

UNITIII: SAFETY, RESPONSIBILITIES OF ENGINEERS 05Hrs

Safety and risk-definition- - assessment of safety and risk - risk benefit analysis and reducing risk –Personal risk-Public risk-Reducing risk-Voluntary Risk-Collegiality and loyalty–Authority-Types- collective bargaining -occupational crime –Responsibility of engineers–Types-Social responsibility-Professional responsibility-confidentiality-conflicts of interest-liability

UNIT IV:ETHICAL ISSUES IN ENGINEERING PRACTICE 06Hrs

Ethical issues–Industrial standards-Environmental ethics –Plastic waste disposal-E-Waste Disposal-Semi conductor waste Disposal-Industrial waste disposal-Human centred environmental ethics- computer ethics –Types of issues-Computer as the Instrument and Object of Unethical Acts -Engineers as managers-Codes of ethics-Sample code of Ethics like -Institution of Engineers(India)-Institute of Electrical & Electronics engineers- Institute of Electronics & Telecommunication Engineers - Indian Institute of Materials Management.

UNIT V: HUMAN RIGHTS 8 Hrs

Human Rights-Definition-constitutional provisions-right to life and liberty-Human Rights of Women-Discrimination against women- steps that are to be taken to eliminate discrimination against women in Education, employment, health care, Economic and social life, Women in rural areas- Status of Women in India - Constitutional Safeguards - Dowry Prohibition act 1961- Domestic violence act 2005- Sexual harassment at work place bill 2006-Human Rights of Children- Who is a child- list the Rights of the Child- Right to education--Protection of Children from Sexual Offences Act(POCSO)-2012- National Human Rights Commission-Constitution- Powers and function of the Commission-Employee rights- Provisions made-Contractual-Non contractual employee rights-Whistle blowing-definition-Aspects-Intellectual Property Rights (IPR)–Meaning-Need for protection- Briefly description of concept of patents, Copy right, Trade mark.

UNIT VI: INDIAN CONSTITUTION 14Hrs

Introduction to constitution of India-Formation and Composition of the Constituent Assembly-Salient features of the Constitution-Preamble to the Indian Constitution Fundamental Rights- Fundamental Duties-Directive principles of state policy.
Parliamentary system of governance- Structure of Parliament- Lokhasabha and Rajyasabha - Functions of parliament- Legislative ,Executive, Financial Function, Powers of Loksabha and Rajya Sabha- Procedure followed in parliament in making law-Structure of union executive-Power and position of President, Vice President, Prime minister and council of ministers. Structure of the judiciary: Jurisdiction and functions of Supreme Court, high court, and subordinate courts
Federalism in the Indian constitution, Division of Powers- Union list, State list and concurrent list, Structure of state legislation, Legislative assembly and Legislative council, Functions of state legislature, Structure of state executive-Powers and positions of Governor, ,Speaker, Deputy Speaker, Chief Minister and council of minister.
Local self government- meaning-Threetiersystem-Villagepanchayath-Talukpanchayath-Zillapanchayath-Local bodies-Municipalities and Corporations, Bruhath mahanagara Palike.
Functions of Election commission, UPSC, KPSC.

TEXT BOOKS

1. Naagarazan, R.S. , "Professional Ethics and Human Values " New age International http://www.imd.inder.cu/adjuntos/article/524/Professional%20Ethics%20and%20Human%20Values.pdf
2.Charles D. Fleddermann, "Engineering Ethics", Pearson Education / Prentice Hall,

3.NCERT_Indian_Constitution_at_Work_Political_Science_Class_11_www.upscportal.com (1)

REFERENCES

1.Govindarajan M, Natarajan S, Senthil Kumar V. S, "Engineering Ethics", Prentice HallofIndia,NewDelhi,2004.
2. Charles E Harris, Michael S. Protchard and Michael J Rabins, "Engineering Ethics - Concepts and Cases", Wadsworth Thompson Learning, United States, 2000
3. John R Boatright, "Ethics and the Conduct of Business", Pearson Education, New Delhi,2003.
4. Edmund G Seebauer and Robert L Barry, "Fundamentals of Ethics for Scientists and Engineers", Oxford University Press, Oxford, 2001
5.Mike Martin and Roland Schinzinger, "Ethics in Engineering", McGraw-Hill, New York, 1996.
6. Introduction to the Constitution of India- Dr.Durga Das Basu
7. Empowerment of rural women in India-Hemalatha H.M and RameshwariVarma,HemaPrakashana.

LIST OF LEARNING WEBSITES:

1. http://www.imd.inder.cu/adjuntos/article/524/Professional%20Ethics%20and%20Human%20Values.pdf
2. http://www.course.sdu.edu.cn/G2S/eWebEditor/uploadfile/20131017113401956.pdf

SUGGESTED LIST OF STUDENT CASE STUDY

Note: The following or similar Case study related for assessing CIE (IA) for 10 marks

1	Teacher form the group of 5- 6 students, Ask to think by each student, about an important value acquired from their child hood and the value still retained with them and value they rejected. Ask to share the values retained and explore what has made to reject some values. Make report
2	The construction company wants to make a feasibility study of a proposed ring road near your city. It hires Civil engineer for this purpose. The engineer learns that the project would have a very negative impact in term of pollution, economy, and lives of low income rural population. The Engineer had no intention of divulge the information during public hearings. What should the Engineer as Adviser to do? Make report
3	The computer engineer develops a computer program used as a tool in developing other programs assigned to him. He uses the facilities of the company to develop the program. He changes jobs and takes the only copy of the first program with him for use in his new job. Will it be a violation of the employer's right? Does he require previous employer's permission before using it on the new job? Make report
4	A manufacturing enterprise pays their Technicians Trainees overtime salary and a handsome bonus to work during a strike period. The strike was organized by the union against the unsafe working conditions of the plant. You, considered as a Technician trainee, believe that the conditions may be unsafe even though no government regulations apply. What will you do? Make report Options: 1. Refuse to work, because thinking that the allegations of the union have merit 2. Refuse to work because believing that breaking the strike is unethical. 3. Continue to work, because he feels this is an obligation to the employees 4. Continue to work because it will help clear some of his pending commitments 5. Work, because otherwise Management is likely to be fired and cannot get alternate job.
5	A woman who was driving a car was involved in an accident. The vehicle dashed against the divider. She had fallen unconscious. You are passing by your vehicle. She is known to you, alive and stable. You are going to appear for an interview for Air Force recruitment. Is it (or) is it not your duty to save her from suffering? You are likely to fulfill a duty of protecting the country. What you will do .Apply Ethical theory on this situation. Make report
6	Teacher form the group of 5- 6 students, Ask to Visit local general hospital/leading Nursing homes. Ask them to observe how their hospital wastes being disposed. Will they follow the safe disposable measures? Assess how it will violate their environmental ethics. Make report

MORE SUGGESTED CASE STUDY FOR UNDERSTANDING THE COURSE

Case Studies: Study the cases given in text book *Vide page number 120 to page number 138*: *Naagarazan, R.S "Professional Ethics and Human Values* "New age International (E-link :http://www.imd.inder.cu/adjuntos/article/524/Professional%20Ethics%20and%20Human%20Values.pdf) and analyzes the ethical issues and comment on what one should do. State ethical principles, codes of ethics of professional societies, to support your comments.

Course Delivery:

- The course will be delivered through lectures and Power point presentations/ Video
- Teachers can encourage the students to take case study and make the report of the same.

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment	CIE	IA	Students	Three tests (Average of three tests to be computed)	20	Blue books	1,2,3,4,5,6
				One Case study	05	Report	1,2,3,4,5,6
				Total	25		
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4,5,6
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1 & 2,3 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4,5,6 Effectiveness of Delivery of instructions & Assessment Methods

Note: I.A. test shall be conducted for 20 marks. After taking average of three tests marks, any decimals shall be rounded off to the next higher digit.

Example only: RUBRICS/CRITERIA FOR ASSESSING STUDENT's CASE STUDY (5 Students in a group).

Dimension	Scale					Students Score				
	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	1	2	3	4	5
1. Research and gather data information	Does not collect information relate to topic	Collects very limited information, some relate to topic	Collects basic information, most refer to the topic	Collects more information, most refer to the topic	Collects a great deals of information, all refer to the topic	3				
2.Full fills teams roles and data interpretation	Does notable to interpret data perform any duties assigned to the team role	slightly able to interpret data and Performs very little duties	Not precisely able to interpret data and Performs nearly all duties	Precisely Able to interpret Data and Performs almost all duties	Excellent in interpreting data and Performs all duties of assigned team roles	4				
3.Shares work equally	Always relies on others to do the work	Rarely does the assigned work, often needs reminding	Usually does the assigned work, rarely needs reminding	Always does the assigned work, rarely needs reminding.	Always does the assigned work, without needing reminding	5				
4. Listen to other team mates and able to conclude	Is always talking, never allows anyone to else to speak not able to infer	Usually does most of the talking, rarely allows and the others to speak and slightly able to infer	Listens, but sometimes talk too much and able to infer	Listens and talks a little more than needed and able to precisely conclude	Listens and talks a fare amount and excellently conclude this opinion	2				
					Grand Average/Total	14/4=3.5 ~ 4				

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	**Bloom's Category**	**% in Weightage**
1	**Remembering**	**35**
2	**Understanding**	**50**
3	**Application**	**10**
4	**Analysis (activities)**	**05**

FORMAT OF I A TEST QUESTION PAPER (CIE)

Test/Date and Time	**Semester/year**	**Course/Course Code**	**Max Marks**
Ex: I test/6 th weak of sem 10-11 Am	I/II SEM	**PROFESSIONAL ETHICS & INDIAN CONSTITUTION**	20
	Year:	**15CE44T**	
Name of Course coordinator : CO's:____			Units:__

Question no	**Question**	MARKS	**CL**	**CO**	**PO**
1					
2					
3					
4					

Note: Internal choice may be given in each CO at the same cognitive level (CL).

MODEL QUESTION PAPER (CIE)

Test/Date and Time	**Semester/year**	**Course/Course Code**	**Max Marks**
Ex: I test/6 th weak of sem 10-11 Am	IV SEM	**PROFESSIONAL ETHICS& INDIAN CONSTITUTION**	20
	Year: 2015-16	Course code: **15CE44T**	
Name of Course coordinator :			Units:1,2 and CO: 1,2

Note: Answer all questions and carry equal marks

Question no	**Question**	**CL**	**CO**	**PO**
1	List the factors for one to work peacefully.	R	1	5,6,7
2	Illustrate the ethical aspect principle of caring or sharing, with an example? OR Explain various actions of an engineer leading to dishonesty?	A	1	5,6,7
3	State the specific virtues relating to honesty? OR List the situations when moral dilemmas arise?	R	2	5,7,8
4	Explain the relation between autonomy and authority?	A	2	5,7,8

MODEL QUESTION PAPER

4- Semester Diploma Examination

PROFESSIONAL ETHICS & INDIAN CONSTITUTION

Time: **3 Hours**] [Max Marks**: 100**

Note: *Answer any SIX from Part A and any SEVEN from Part B*

PART-A 6x5=30 marks

1. Distinguish between 'morality' and 'ethics'
2. Explain the terms, 'Profession', 'Professional', and 'Professionalism'?
3. Name a few techniques (steps) to reduce risks?
4. List the ill effects of E waste disposal on environment?
5. Explain the role of computers as object of Unethical Acts?
6. State various provisions under 'human rights?
7. Differentiate between 'Patent' and 'Trade secret'?
8. State the function of Governor?
9. Write Note on gram panchayaths?

PART-B 7x10=70 marks

10. Illustrate the ethical aspect principle of caring or sharing, with an example?
11. Explain various actions of an engineer leading to dishonesty?
12. List the situations when moral dilemmas arise?
13. Distinguish between 'corporate responsibility' and 'corporate accountability?
14. Explain Occupational crime?
15. Explain code of Ethics followed in Institution of Engineers?
16. Explain Sexual harassment at work place bill 2006?
17. Explain the basic structure of Parliament?
18. Explain the formation and functions of state high Court?
19. State the role of following members in Rajyasabha?:
    a) Chairman
    b) Leader of the house
    c) Opposition leader

MODEL QUESTION BANK

4th Semester

Course title: PROFESSIONAL ETHICS & INDIAN CONSTITUTION

CO1: PRACTICE THE MORAL VALUES THAT OUGHT TO GUIDE THE ENGINEERING PROFESSION.

Level-1: Remember

1. Define Engineering Ethics?
2. State the two approaches to Engineering ethics?
3. List different meanings of 'ethics'.
4. List the key trends in engineering ethics?
5. Distinguish between 'morality' and 'ethics'?
6. List different types of values and give a few examples in each?
7. List the civic virtues one should develop?
8. List the types of virtues, with an example for each
9. List the factors for one to work peacefully?
10. List different ways the honesty reflects?
11. List the benefits of empathy?
12. Define 'character'. and 'spirituality'?

Level-2: Understand

13. How do the human values evolve?
14. Explain the term 'respect for others' with suitable example?
15. Explain what should one do or not to do live peacefully?
16. Distinguish between 'caring' and 'sharing'?
17. What are the impediments to proper co-operation?
18. Explain the factors that shape self-confidence in a person?
19. Explain two methods of developing self-confidence?
20. Illustrate the ethical aspect principle of caring or sharing, with an example?
21. Explain various actions of an engineer leading to dishonesty?
22. Explain Service Learning and discuss on its components?
23. Explain any two Human values in detail?

CO2: DISCOVER OF THE SET OF JUSTIFIED MORAL PRINCIPLES OF OBLIGATION, IDEALS THAT OUGHT TO BE ENDORSED BY THE ENGINEERS AND APPLY THEM TO CONCRETE SITUATIONS

Level-1: Remember

1. List the objectives of this course 'professional ethics'?
2. Define the term, 'moral dilemma'?
3. List the situations when moral dilemmas arise?
4. List the steps in confronting moral dilemma?
5. State the five characteristics of professionals?
6. State the specific virtues relating to honesty?
7. Define 'corporate responsibility'
8. Define 'corporate accountability?
9. List the skills required to handle moral problems/issues in engineering ethics?

Level-2: Understand

10. Why do people behave unethically?
11. Why and how do moral problems arise in a profession?
12. Explain the moral dilemma
13. Explain the difficulties in solving moral problems?

14. Explain the relation between autonomy and authority?
15. Highlight the principle of 'pre-conventional level' of moral development?
16. Explain the terms, 'Profession', 'Professional', and 'Professionalism'?
17. Describe the virtues fulfilled under professional responsibility?
18. Distinguish between 'corporate responsibility' and 'corporate accountability?
19. What is moral integrity? Write on its significance?
20. Differentiate between self-respect and self-esteem.?
21. Distinguish between causal responsibility, moral responsibility and Legal responsibility?
22. What is meant by Professional Responsibility?
23. Where and how do moral problems arise in engineering practice? Justify the safety and other obligations of professional engineers?

CO3: KNOW THE DEFINITIONS OF RISK AND SAFETY ALSO DISCOVER DIFFERENT FACTORS THAT AFFECT THE PERCEPTION OF RISK

Level-1: Remember

1. Name the factors that influence the perception of risk?
2. List the factors that affect the risk acceptability?
3. Name a few techniques (steps) to reduce risks?
4. List various aspects of collegiality?
5. List factors/principles to justify 'confidentiality'?
6. State the difference between 'bribe' and 'gift'?

Level-2: Understand

7. What is meant by 'safe exit', in the study of safety?
8. Describe 'institutional authority' with an example?

Level-3: Application

9. Explain 'collective bargaining with example?
10. Explain briefly ''institutional authority?
11. Explain Occupational crime?

CO4: APPRECIATE THE ETHICAL ISSUES AND KNOW THE CODE OF ETHICS ADOPTED IN VARIOUS PROFESSIONAL BODY'S AND INDUSTRIES

Level-1: Remember

1. List the ill effects of E waste disposal on environment?
2. Define 'computer ethics'? List the issues in 'computer ethics'?
3. Name different types of problems in 'computer ethics'?
4. List the ethical problems by computers in workplace?
5. List the ethical features involved in computer crime?

Level-2: Understand

6. Describe briefly on code of ethics?
7. Write note on Industrial standards?
8. What are the duties of an engineer as an experimenter, in environmental ethics?
9. How the plastic waste disposals create havocs?
10. Discuss on Industrial waste disposal creating disasters on environment?

Level-3: Application

11. Explain 'environmental ethics'?

12. Explain human centred environmental ethics?
13. Explain the role of computers as instruments?
14. Explain the role of computers as object of Unethical Acts?
15. Explain the role of engineers as managers?
16. Explain code of Ethics followed in Institution of Engineers?
17. Explain code of Ethics followed in engineering council of India?
18. Explain code of Ethics followed in TATA group?
19. Explain code of Indian Institute of Materials Management?

CO 5: JUSTIFY THE NEED FOR PROTECTION OF HUMAN RIGHTS AND TO KNOW ABOUT CONCEPT OF WOMEN EMPOWERMENT

Level-1: Remember

1. State various provisions under 'human rights?
2. List the features of 'international human rights?
3. State the provisions under professional rights?
4. State the features of the employee rights?
5. List the principles of *conflict resolution?*
6. List the ethical responsibilities of consulting engineers?
7. List the various Special Programs for Women's Development from government?

Level-2: Understand

8. Describe briefly 'trademark'?
9. Differentiate between 'Patent' and 'Trade secret'?
10. Describe briefly 'right of conscientious refusal'?
11. Describe 'right to due processes?
12. Describe 'intellectual property rights?

Level-3: Application

13. Explain briefly the 'copyright'?
14. Explain briefly about patents?
15. Explain on the participation in professional societies? `
16. Explain the concept of women empowerment?
17. Explain woman and Development?
18. Explain Dowry Prohibition act 1961?
19. Explain POCSO act 2012?
20. Explain domestic violence act 2005?
21. Explain Sexual harassment at work place bill 2006?

CO6: KNOW THE SUCCESSFUL FUNCTIONING OF DEMOCRACY IN INDIA

Level-1: Remember

1. List the function and powers of parliament?
2. State the positions and powers of the Governor?
3. State the powers and Functions of the Chief Minister?
4. State the functions of Taluk panchayaths?
5. State the functions of Zilla panchayaths?
6. List the functions of urban local bodies?
7. State the powers of the president?
8. State the functions of the president?

9. State the powers and Functions of the prime minister?

Level-2: Understand

10. Describe briefly about Indian constitution?
11. Write about structure of Parliament?
12. What are the Procedure followed in parliament in making law?
13. Describe the role of gram panchayaths in community upliftment?
14. Describe the role of: a) Chairman b) Leader of the house c) Opposition leader in Rajyasabha?
15. Describe importance of Judiciary?
16. Describe the Structure of state legislation
17. Describe the Jurisdiction of Supreme court,
18. Describe the Jurisdiction high court?

Level-3: Application

19. Explain theFormation & Composition of constituent assembly?
20. Explain preamble and its main objectives of Indian constitution?
21. Explain the fundamental Rights of Every citizen?
22. Explain the fundamental Duties of Every citizen?
23. Explain salient features of Indian constitution?
24. Explain the basic structure of Parliament?
25. Explain the composition of Lokasabha?
26. Explain the composition of Rajyasabha?
27. Explain the Directive principles of state policy?
28. Explain the Structure Of The Judiciary?
29. Explain the Powers of Rajya Sabha and Loksabha ?
30. Describe briefly about, Division of Powers- Union list, State list and concurrent list,
31. Explain the federalism in the Indian constitution ?
32. Explain the role of vice president?
33. Explain the role of State council of ministers?
34. Explain the functions of Zilla panchayaths?
35. Explain the formation and functions of Supreme Court?
36. Explain the formation and functions of state high Court?
37. Explain the formation and functions of subordinate courts?
38. Explain the formation of three tier system for local self government?

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

	Course Title: **BUILDING SERVICES - II**		
	Scheme (L:T:P) : **4:0:0**	Total Contact Hours: **52**	Course Code: **15AR41T**
	Type of Course: **Lectures, Self-Study& Quiz**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks			SEE- 100 Marks

Pre-requisites: Environmental Science**,** Materials of Construction and Applied science

Course Objectives:

The course is aimed at enabling the students to:

1. To identify the importance of ventilation and acoustics.
2. To identify the importance of fire protection and thermal insulation.
3. To demonstrate the importance of vertical transportation and building automation.

At the end of the course, the student shall be able to:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Classify the need of various types of ventilation and air conditioning	***R/U/A***	1,2,3,7,10	12
CO2	Explain the importance of fire protection in Buildings	***R/U/A***	1,2,3,7,10	10
CO3	Describe the necessity of acoustics	***R/U/A***	1,2,3,6,10	12
CO4	Identify the importance of lifts and escalators	***U/A***	1,2,3,5,6,7,10	08
CO5	Understand thermal insulation and its application	***U/A***	1,2,3,7,10	06
CO6	Understand the need for Building Automation	***U/A***	1,2,3,6,7,10	04
			Total sessions	**52**

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
BUILDING SERVICES I	3	3	3	-	1	2	3	-	-	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

COURSE CONTENT

Unit No	Unit Name	Hour	Questions to be set for (5marks) PART - A	Questions to be set for (20marks) PART - B
1	Ventilation and air conditioning	12	02	3
2	Fire protection in buildings	10	02	1
3	Acoustics	12	02	3
4	Lifts and escalators	08	01	2
5	Thermal insulation	06	01	1
6	Building automation systems	04	01	-
	Total	52	9(45marks)	10(100marks)

Details of content

UNIT 1: VENTILATION AND AIR CONDITIONING 12

Definition of ventilation, Purpose of ventilation Functional requirements of ventilation, Classification of ventilation . Different types of Natural ventilation .Different types of artificial ventilation Air Conditioning- Purpose of Air conditioning, Summer and

winter air conditioning Air distribution system Systems of air conditioning Preparation of A/C duct layout

UNIT 2: FIRE PROTECTION IN BUILDINGS	10

Purpose of Fire protection, Fire safety standards for building. Causes of fire in building. Classification of fire hazards. Fire zoning. Fire resisting materials .Fire protection of structural components .Fire fighting methods and alarm equipments

UNIT3 : ACOUSTICS	12

Definition of acoustics. Factors affecting acoustics. Sound and its measurement. Echo and reverberation. Acoustical defects. Sources, type, and effect of noise. Acceptable noise levels Sound absorbent materials and their classification. Sound insulation-methods .Acoustical design requirements for a Hall

UNIT4 : LIFTS AND ESCALATORS	08

Definition and Components . Application, location . Types of lifts . working Principles of lifts and escalators .Service requirements . Safety regulations

UNIT5 : THERMAL INSULATION	06

Definition and purpose of insulation General principles. Study of heat insulating materials, Methods of thermal insulation for buildings

UNIT6: BUILDING AUTOMATION SYSTEMS	04

Definition and purpose of Building Automation. Study of different building Automation Equipments and their implementation and use

TEXT BOOKS

1	Water supply and sanitary Engineering	-	G S Birdie
2	Building Construction	-	B C Punmia
3	Building Construction	-	Ahuja and Birdie
4	Basic Electrical Engineering	-	Anwari
5	Electrical Technology	-	H. Cotton
6	Air conditioning and Refrigeration	-	Don Kundwar
7	Air conditioning and Refrigeration Data book	-	Manohar Prasad
8	Environmental engineering	-	V. Thanikachalam
9	Fire and Human Behaviors	-	David Gunter
10	Fire safety in building	-	Thomas Adam and Charles Black
11	National building Code		

LIST OF LEARNING WEBSITES:

1) http://www.air-conditioning-and-refrigeration-guide.com/air-conditioning-and-hvac-basics.html
2) en.wikipedia.org/wiki/Air_conditioin
3) www.multi-science.co.uk/buildaco.htm
4) www.designing**buildings**.co.uk/wiki/**Insulation** specification
5) https://en.wikipedia.org/wiki/**Escalator**
6) https://en.wikipedia.org/wiki/**Fire protection**
7) https://www.youtube.com/watch?v=ILzqUE6-gE0

Course Delivery:

- The course will be delivered through lectures and Power point presentations/ Video
- Teachers can encourage the students to take case study and make the report of the same

Suggested activities

1) To make a visit to a public building and study the air conditioning system, submit h report with supporting sketches
2) To visit a public building and to study fire protection arrangements. Students must also prepare a detail report along with photographs
3) To visit a community hall, auditorium or a theatre to study on acoustical treatment And to prepare a report with appropriate photographs
4) To visit a public building to study on lifts and escalators and prepare a report with photographs
5) To search for the information on building automation and submit a report of the same

Note: students must submit hand written report only

Example of model of rubrics / criteria for assessing student activity

Dimension	Students score (Group of five students)				
	STUDENT 1	STUDENT 2	STUDENT 3	STUDENT 4	STUDENT 5
Rubric Scale	Unsatisfactory 1, Developing 2, Satisfactory 3, Good 4, Exemplary5				
1.Literature	5				
2.Fulfill team's roles & duties	2				
3.Conclusion	3				
4.Convensions	4				
Total	14				
Average=(Total /4)	14/4=3.5=4				

Note: Concerned faculty (Course coordinator) must devise appropriate rubrics/criteria for assessing Student activity for 5 marks One activity to attain last CO (course outcome) may be given to a group of FIVE students

Note: Dimension should be chosen related to activity and evaluated by the course faculty

Rubric Model- Example only:

Dimension	Rubric Scale				
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary
1.Literature	Has not included relevant info	Has included few relevant info	Has included some relevant info	Has included many relevant info	Has included all relevant info needed
2. Fulfill team's roles & duties	Does not perform any duties assigned	Performs very little duties	Performs partial duties	Performs nearly all duties	Performs all duties of assigned team roles
3.Communication	Poor	Less Effective	Partially effective	Effective	Most Effective
4.Convensions	Frequent Error	More Error	Some Error	Occasional Error	No Error

MODEL QP FOR CIE (TESTS)

Test/Date and Time	**Semester/year**	**Course/Course Code**	**Max Marks**
Ex: I test/6 th week of sem	**IV SEM**	**Building Services II**	**20**
	Year:	**Course code:15AR41T**	

Name of Course coordinator :
Units:1,2 Co: 1,2
Note: Answer all questions

Question no	**Question**	**CL**	**CO**	**PO**
1	State the purpose of ventilation or Define ventilation and list the types of ventilation system	**R**	**1**	1,2,3,7,10
2	Explain the types of ventilation systems	**A**	**1**	1,2,3,7,10
3	List the causes of fire in buildings Or State the purpose of fire protection in buildings	**A**	**2**	1,2,3,7,10
4	Explain the various methods of fire protection	**U**	**2**	1,2,3,7,10

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE	IA	Students	Three tests (Average of three tests)	20	Blue books	1,2,3,4,5,6
				Assignment/student activity	05	Assignment books/charts/report	1,2,3,4,5,6
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4,5,6
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1, 2,3 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4,5and6 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components such as

Sl no	Bloom's Category	% weightage
1	Remembering and Understanding	30
2	Applying the knowledge acquired from the course	50
3	Analysis	10
	Evaluation and Creating new knowledge :	10

Note: Following documents to be verified by CIE verifier at the end of semester

1) Blue books (20marks)
2) Student suggested activity report (5 marks)
3) Student feedback on course regarding effectiveness of instructions and assessment methods

MODEL QUESTION PAPER

IVth SEMESTER DIPLOMA EXAMINATION

Building services-II

Time – 3Hrs Max Marks -100

Instructions: Answer any six from part A and any seven from Part B

PART A **6x5 =30marks**

1 State the purpose of ventilation

2. Explain the types of ventilation systems

3 List the causes of fire in buildings

4 Explain the purpose of fire protection in buildings

5 Briefly explain echo and reverberation

6 Write the requirements of a good absorbent material

7 Explain the working principles of an escalator

8 Enumerate the heat insulating materials

9 State the essentials of building automation

PART B **7x10=70Marks**

10 Explain types of natural ventilation with sketch

11 Explain the summer and winter air conditioning with flow diagram

12 State and explain functional requirement of ventilation system

13 Narrate the various methods of fire protection

14 State and explain acoustical defects

15 Explain various methods of sound insulation

16 State and explain the factors to be considered in acoustical design of an auditorium

17 Explain a passenger lift with a neat sketch and label the parts

18 State and explain various types of lifts

19 Explain how you would achieve thermal insulation of roofs.

Model Question Bank

IV Semester Diploma in Architecture

Course Title: BUILDING SERVICES -II **Code: 15AR42T**

CO -1 IDENTIFY THE NEED OF VARIOUS TYPES OF VENTILATION AND AIR CONDITIONING

Level – 1. Remembering.

1. State the purpose of ventilation
2. Define ventilation and list the types of ventilation system

Level – 2. Understanding.

1. Explain the types of ventilation systems
2. Explain types of natural ventilation with sketch
3. Explain the summer and winter air conditioning with flow diagram
4. Explain functional requirement of ventilation system

CO-2 EXPLAIN THE IMPORTANCE OF FIRE PROTECTION IN BUILDINGS

Level – 1. Remembering.

1. List the causes of fire in buildings
2. State the purpose of fire protection in buildings

Level – 2. Understanding.

1. Explain the various methods of fire protection
2. Explain the classification of fire hazards
3. Explain the fire resistance properties of building materials.
4. Explain the fire fighting methods and alarm equipments

CO-3 DESCRIBE THE NECESSITY OF ACOUSTICS

Level – 1. Remembering.

1. Define echo and reverberation
2. Write the requirements of a good absorbent material
3. Define Sound and its measurement.

Level – 2. Understanding.

1. State and explain acoustical defects
2. Explain various methods of sound insulation
3. Explain the factors to be considered in acoustical design of an auditorium

CO-4 KNOW THE IMPORTANCE OF LIFTS AND ESCALATORS

Level – 1. Remembering.

1. State the Service requirements of an elevator
2. What are the Safety regulations use an elevator.
3. Define elevator and its classifications.

Level – 2. Understanding.

1. Explain a passenger lift with a neat sketch and label the parts
2. State and explain various types of lifts
3. Explain the working principles of an escalator

CO-5 DEFINE THERMAL INSULATION AND ITS APPLICATION

Level – 1. Remembering.

1. Enumerate the heat insulating materials
2. Define thermal insulation and the purpose of insulation

Level – 2. Understanding.

1. Explain how you would achieve thermal insulation of roofs.
2. Briefly explain the Methods of thermal insulation for buildings

CO-6 UNDERSTAND THE NEED FOR BUILDING AUTOMATION

Level – 1. Remembering.

1. State the essentials of building automation

Level – 2. Understanding.

1. Explain different building Automation Equipments and their implementation.

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

Course Title: ESTIMATING & COSTING-I		
Scheme (L:T:P) : **4:0:0**	Total Contact Hours: **52**	Course Code: **15AR42T**
Type of Course: **Lectures & Self-Study**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks		SEE- 100 Marks

Prerequisites: Materials of construction and Architectural Drawing

Course Objectives:

1. The course is aimed at learning various methods of preparing cost estimate for a proposed building project.
2. To analyze from first principle, the rates of various items of a building.
3. To prepare cost estimate of a proposed building given the detailed specification of the materials and the drawings.

COURSE OUTCOME :

At the end of the course, the students shall be able to –

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Explain different types and methods of estimating.	***R/U/A***	1,2	10
CO2	Acquire knowledge on various building items and explain in detail the specification of each item of work.	***R/U/A***	1,2,3,10	09
CO3	Analyse the rates of various building items from first principle by considering the prevailing rates of material and labour	***R/U/A***	1,2,3,10	09
CO4	Imagine the construction details of a building and facilitate the preparation of detailed estimate of quantities.	***R/U/A***	1,2,3,10	12
CO5	Identify the suitable method of estimating quantities to suit the given building plan.	***R/U/A***	1,2,3,10	12
			Total sessions	**52**

Course-PO Attainment matrix

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
Estimating and costing I	3	3	2				1			3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed

COURSE CONTENT

Unit No	Unit Name	Hour	Questions to be set for (5marks) PART - A	Questions to be set for (10marks) PART - B	Questions to be set for (15marks) PART - C
1	Introduction to estimation	10	02	-	-
2	specification	09	02	-	-
3	Analysis of rate	09	02	3	-
4	Detail estimate	24	-		6
	Total	52	6(20marks)	3(30marks)	6(90marks)

DETAILS OF CONTENTS

UNIT 1: INTRODUCTION TO ESTIMATION 10Hrs

Introduction to Estimation, necessity, steps involved in estimation. Detail estimate of quantities Different items of works. Unit of measurement for various items of work. Types of estimate. Different methods of taking out quantities - centre line method and long short wall method.

UNIT 2: SPECIFICATION 09

Necessity of preparing detailed specification.

Detailed specifications for

- Earthwork excavation in foundation
- Cement concrete in foundation
- Ashlar masonry
- Brick work in super structure
- R.C.C roof slab
- Woodwork for windows and doors
- Cement concrete flooring
- Plastering in Cement mortar
- Distempering
- Painting woodwork
- Asbestos cement corrugated sheet roofing
- Mangalore Tiled Roofing

UNIT 3: ANALYSIS OF RATE 09Hrs

Analysis of Rate- Definition, necessity. Steps involved in analyzing rates. Cost components to be considered for analysis of rate. Task turnout of a labour for various types of works. Introduction to schedule of rates.

Analysis of rates for the following items of work

- Earthwork excavation in foundation
- Cement concrete in foundation
- Ashlar masonry
- Brick masonry in CM for superstructure
- R.C.C roof slab
- Plastering in Cement mortar
- cement concrete flooring,
- Granite flooring
- vitrified tile flooring
- Painting woodwork
- Painting for interior (using plastic emulsion paint and Distemper)
- Exterior wall painting using waterproof cement paint.

UNIT 4: DETAILED ESTIMATE 24Hrs

Prepare the detailed estimate of quantities and abstract estimate of cost for a given building with specification for each item of work.

- A single roomed R.C.C building
- Two roomed R.C.C building.
- Residential building - single storied with flat RCC roof.

REFERENCE TEXT BOOKS

1. Estimating and Costing in Civil Engineering - B.N. Datta
2. Estimating and Costing in Civil Engineering - M. Chakraborti
3. Estimating and Costing in Civil Engineering - S.C. Rangwala
4. Estimating and Costing in Civil Engineering - Mahajan
5. Estimating and Costing in Civil Engineering - P.L. Bhasin
6. Estimating and Costing in Civil Engineering - V.N. Vazirani and S.P. Chandola

Web links

1) www.wbdg.org/resources/estimating.php

Suggested student activities:

1) To conduct market survey and to collect information on building materials along with rates

2) To collect information on fittings and fixtures (water supply, sanitary and hardware)

3) To prepare Estimate for an existing building and submit the same

Execution Note:

1. Maximum of 2 students in each batch for student activity
2. Any two activities (either from the list given or any similar activities) shall be assigned among different batches; may be assigned by the teacher based on interest of the students.
3. Project activities shall be carried out throughout the semester and present the project report at the end of the semester; concerned teacher is expected to observe and record the progress of students' activities
4. Submit qualitative hand-written report not exceeding 6 pages; one report per batch
5. Each of the activity can be carried out off-class well in advance; however, demonstration/presentation should be done during laboratory sessions
6. Assessment shall be based on quality of work as prescribed by the following **rubrics** table

Model of rubrics for assessing student activity (for every student)

Dimension	Scale					Marks (Example)
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary	
1. Research and gathering information	Does not collect information relate to topic	Collects very limited information, some relate to topic	Collects basic information, most refer to the topic	Collects more information, most refer to the topic	Collects a great deals of information, all refer to the topic	3
2. Full-fills team roles and duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs almost all duties	Performs all duties of assigned team roles	2
3. Shares work equality	Always relies on others to do the work	Rarely does the assigned work, often needs reminding	Usually does the assigned work, rarely needs reminding	Always does the assigned work, rarely needs reminding.	Always does the assigned work, without needing reminding	5
4. Listen to other team mates	Is always talking, never allows anyone to else to speak	Usually does most of the talking, rarely allows others to speak	Listens, but sometimes talk too much,	Listens and talks a little more than needed.	Listens and talks a fare amount	3
					Total marks	(13/4)= 4

Course Assessment and Evaluation:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE	IA	Students	Three tests (Average of three tests)	20	Blue books	1,2,3,4,5,
				Assignment/activity	05	Assignment books/ Report	1,2,3,4,5
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4,5
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1, 2,3,, Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4,&5 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

***S**tudents should do activity as per the list of suggested activities/ similar activities with prior approval of the teacher. Activity process must be initiated well in advance so that it can be completed well before the end of the term.

FORMAT OF I A TEST QUESTION PAPER (CIE)

Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6 th week of sem 10-11 Am	IV SEM	ESTIMATING AND COSTING-I	20
	Year:	Course code:15AR42T	
Name of Course coordinator : CO's:____			Units:__

Question no	Question	MARKS	CL	CO	PO
1	What is the necessity of preparing estimate?	05			
2	Write the units of the following items	05			

	a) Size stone masonry b) Mangalore tiled roofing c) Granite flooring d) Wood work in frames e) Pointing				
3	Write detail specification of plastering with cement mortar. Or Explain long wall and short wall method of taking out measurements	05			
4	write detail specification for Earth work excavation in foundation	05			

Note: Internal choice may be given in each CO at the same cognitive level (CL).

Questions for CIE and SEE will be designed to evaluate the various educational components such as

Sl no	Bloom's Category	% weightage
1	Remembering and Understanding	20
2	Applying the knowledge acquired from the course	50
3	Analysis	20
	Evaluation and Creating new knowledge :	10

MODEL QUESTION PAPER

IV SEMESTER DIPOMA EXAMINATION

Estimation and costing-I

Time – 3Hrs Max Marks -100

INSTRUCTIONS: Answer four questions from part A and part B & Part C are compulsory

PART A **4X5=20**

1 What is the necessity of preparing estimate?

2 Write the units of the following items

f) Size stone masonry

g) Mangalore tiled roofing

h) Granite flooring

i) Wood work in frames

j) Pointing

3) List different types of estimates.

4) Explain long wall and short wall method of taking out measurements.

5) Write detail specification of plastering with cement mortar.

6 write detail specification for Earth work excavation in foundation

PART B **2X10 =20**

7) Analyze from first principle the rate for any two of the following items of work

a) Painting wood work using enamel paint

b) Brick masonry in super structure using 1:6 cement mortars

c) Exterior wall painting using water proof cement paint

PART C **4x15=60**

8) Prepare detailed estimate of quantities and abstract of estimated cost for any four of the following items of work pertaining to a residential building whose plan and sectional details are given in the accompanying sketch

a) RCC work in roof slab using CC 1: 1.5 :3(M20)

b) Wood work in doors and windows for shutters

c) Size stone masonry in cement mortar 1:6 for foundation

d) Granite flooring using granite slabs laid on a mortar topping of 1:6 of thickness 20mm

e) Internal wall painting using plastic emulsion paint two coats over a coat of primer

f) Weather proof course

Model question bank

Questions for 5 marks

1) Write a short note on schedule of rates
2) Explain revised estimate
3) Write short notes on contingencies and tools and plants
4) Write detail specification of painting of wood work
5) Explain work charged establishment

Questions for 10 marks

1) Analyze from first principle Brick masonry in cement mortar 1:6
2) Analyze from first principle Size stone masonry in cement mortar 1:6
3) Analyze from first principle the rate for wood work for painting work using Oil bound distemper

Question for 15 marks

1) prepare detailed estimate of quantities and abstract estimate of the cost for the for the following items of work
   a) Brick masonry in cement mortar 1:6 15
   b) Size stone masonry in cement mortar 1:6 15
   c) Bed concrete using 1:4:8 c.c in foundation 15
   d) Plastering to exterior walls using 1:6 C.M

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

	Course Title: **Building Construction and Drawing. - II**		
	Scheme (L:T:P) : **2:0:4**	Total Contact Hours: **78**	Course Code: **15AR43D**
	Type of Course: **Lectures, Self-Study & Quiz**	Credit **:04**	Core/ Elective: **Core**
CIE- 25 Marks			SEE- 100 Marks

Pre-requisites: Building construction and drawing –I and Materials of construction.

Course Objectives:

The course aims at enabling the students to

- Study the various building components and their functions.
- Prepare detailed construction drawings of various building components.
- Apply the knowledge of appropriate application of various materials in building construction.

On successful completion of the course, the students will be able to:

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Classify the various types of lintels and arches. Prepare necessary drawings	***R/U/A***	1,2,3,7,10	**10**
CO2	Understand different types of stairs and their requirements. Prepare necessary drawings	***R/U/A***	1,2,3,7,10	**22**
CO3	Understand the various types of roofs and roof coverings. Prepare necessary drawings	***R/U/A***	1,2,3,6,10	**24**
CO4	Identify various types of floors and floor finishes. Prepare necessary drawings.	***U/A***	1,2,3,5,6,7,10	**22**
			Total sessions	**78**

COURSE CONTENT

Unit No	Unit Name	Hour	Questions to be set for (5marks) PART - A	Questions to be set for (20marks) PART - B	Marks weightage (%)
1	LINTELS AND ARCHES	10	02	01	18.75
2	STAIRS	22	04	02	37.50
3	ROOF AND ROOF COVERINGS	24	03	01	21.87
4	FLOORS AND FLOOR COVERINGS	22	03	01	21.87
	Total	78	12(60marks)	05(100marks)	100

DETAILS OF CONTENTS

UNIT I: LINTELS AND ARCHES 10 Hrs

Definition and Necessity of lintels, arches, sunshades and sun breakers. Types of lintels, Arches, technical terms, classification of arches. Comparison between lintels and arches.

UNIT II: STAIRS 22 Hrs

Definition, Location of Stairs, Terms used in Stairs, Requirement of stairs and Classification of stairs (dog legged, open well, spiral, bifurcated and quarter turn). Brief study of Escalator, Lift and Ramp.

UNIT III: ROOFS AND ROOF COVERINGS 24 Hrs

Definition of roof and types of roof, Requirements of good roof, technical terms used in roof, Truss- king post truss and queen post roof truss .Types of steel truss for different spans, advantages of steel truss. Roofing materials –Tiles, AC sheets, GI sheets and Fibre sheets. Brief study of Flat RCC roof, Advantages and disadvantages of flat roof.

UNIT IV: FLOORS AND FLOOR COVERINGS 22 Hrs

Components of a floor. Factors to be considered while selecting the type of floor, Brief study of floor coverings like: Brick, stone, concrete, wooden, terrazzo, mosaic, rubber ,linoleum and wooden Floor, Sunken Slab

TEXT BOOKS

1. Building construction by S.C.Rangwala
2. Building construction by Sushil kumar
3. Building construction by S.S. Bhavikatti
4. Building construction and drawing by W.B.Mckay
5. Building construction and drawing by M.G shah and kale
6. Building construction Illustration by DK Ching

WEB LINKS

a) https://evrosoriou.files.wordpress.com/.../**construction**-handbook-chudle/
b) https://www.youtube.com/watch?v=9ROrmRYOwf4/

PREPARATION OF DRAWINGS COVERING ABOVE CONTENTS

Plate 1-Prepare plan, sectional elevation and section of RCC lintel with chajja.
Plate 2-Prepare elevations of different types of arches (semicircular, segmental, gothic, centred arch)
Plate 3-Prepare plan and sectional elevation of RCC straight flight stair along with one enlarged fixing detail
Plate 4-Prepare plan and sectional elevation of dog legged stair along with one enlarged fixing detail
Plate 5 -Prepare plan and sectional elevation of open newel stair along with one enlarged fixing detail
Plate 6-Prepare sectional elevation of lean to, coupled, close coupled and collared roof.
Plate7- Prepare sectional elevation of king post roof truss along with any one enlarged fixing detail.
Plate 8- Prepare sectional elevation of queen post roof truss along with any one enlarged fixing detail.
Plate 9- Prepare sectional elevation of Fink roof truss along with any one enlarged fixing
Plate10-Prepare sectional plan and sectional elevation of RCC flat roof.
Plate11- Prepare sectional plan and sectional elevation of Filler slab
Plate 12-Prepare sectional plan and elevation of single joist wooden floor with suitable flooring material.
Plate 13- Prepare water supply layout for the given residential building.
Plate 14- Prepare sanitary layout for the given residential building.
Plate 15- Prepare electrical layout for the given residential building.

Note: Minimum one plate on each topic, site visits to be arranged by studio teacher. Study of material application in the form of portfolio. All the plates on construction and portfolio on material application shall be assessed for progressive marks.

SUGGESTED LIST OF STUDENT ACTIVITYS

1	Visit to a ongoing construction site and submit a detailed report along with photographs on any one of following topic: a) Lintel and Arch b)Stairs c) Roof d) Floor
2	Prepare a scale down model of any one type of stair.
3	Prepare a detailed report on different types of latest floor/roof covering materials along with brochures.

Note: (a)Each student should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned Teacher and HOD.

(b) Each student should conduct different activity and no repeating should occur.

Course Delivery:

- The course will be delivered through lectures and Power point presentations/ Video
- Teachers can prepare or download ppt of different topic's Architectural engineering application, can prepare alternative slides.

Course Assessment and Evaluation Scheme:

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment	CIE	IA	Students	Three IA tests (Average of three tests will be computed)	10	Blue books	1,2,3,4
				Graded exercises	15	Sheets	2,3,4
	SEE	End Exam		End of the course	100	Answer scripts at BTE	1,2,3,4
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1,2 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3,4 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	**Bloom's Category**	**% weightage**
1	**Understanding**	**40**
2	**Applying the knowledge**	**30**
3	**Analysis**	**20**
4	**Evaluation**	**10**

Note to IA verifier*: *The following documents to be verified by CIE verifier at the end of semester

1. Blue books (10 marks)
2. Graded exercise (Portfolio) 15 marks
3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

FORMAT OF I A TEST QUESTION PAPER (CIE)

Test/Date and Time	**Semester/year**	**Course/Course Code**	**Max Marks**
Ex: I test/6 th week of sem	IV SEM	Building construction & Drawing-II	10
	Year: 2017	Course code:15AR43D	
Name of Course coordinator : CO's: COI & COII			Units: I & II

Question no	**Question**	MARKS	**CL**	**CO**	**PO**
1	Define Lintel. List different types of Lintel	05	R	COI	1,2,3,7,10
2	Explain dog legged stair with neat sketch OR Explain requirements of good stair	05	U	COII	1,2,3,7,10

Note: Internal choice may be given in each CO at the same cognitive level (CL).

MODEL QUESTION PAPER
IV Semester Diploma Examination
ARCHITECTURE BOARD
BUILDING CONSTRUCTION AND DRAWING-II

Time: 4Hours) **(Max. Marks: 100**

Instructions: (1) Answer any **eight** Questions from **PART-A**
(2) Answer any **three** Questions from **PART-B**

PART-A

8X5=40

1. Define Lintel. Explain RCC Lintel with neat sketch.
2. Sketch segmental arch and label the parts.
3. What are the requirements of good stair.
4. Differentiate between escalator and elevator.
5. Define roof. List different types of roof covering materials.
6. Define the following terms

7. a) Purlin b) Rafter c) Batten
   d) valley e) Hip

8. Discuss the factors to be considered while selecting a roof.
9. Differentiate between concrete flooring and Brick flooring.
10. Sketch King Post Truss and label its parts.
11. Explain briefly Dog Legged Staircase with a neat sketch.
12. Explain briefly terrazzo flooring.

PART-B

3x20=60

11. Draw open well stair for a Residential building to a scale 1:20. Assume required data.

    Draw the following:
    a) Sectional Plan
    b) Sectional Elevation
    c) One fixing detail to enlarged Scale

13. Draw wooden Queen Post Truss for a span 10.0 mtr to a scale 1:20. Assume required data.

    Draw the following.
    a) Sectional Elevation
    b) One fixing detail to enlarged Scale

13. Draw Single joist floor for a room measuring 3.0X3.0M to a scale 1:10. Assume required data. Draw the following.

    a) Sectional Plan
    b) Sectional Elevation
    c) One enlarged detail

14. (a) Draw sectional elevation of semicircular arch for a span of 3.0 mtr to a scale 1:10. Assume required data.
    (b) Draw sectional elevation of a RCC lintel for a door opening 1.20 mtr to a scale 1:10. Assume required data.

15. Prepare an electrical layout plan for a given line diagram of a residential building to a scale 1:50. Show all details.

Model Question Bank

CO1	Classify the various types of lintels and arches. Prepare necessary drawings

LEVEL 1: Remember

1. Define Lintel. List different types of Lintel.
2. Define the following technical terms of an Arch.(any 5)
3. Write a note on any one type of lintel with the help of sketch.
4. Define Arch. List different types of Arch.
5. Define the following technical terms of lintel.(any 5)

LEVEL 2: Understand

1. Differentiate between Lintel and Arch.
2. Differentiate between Sunshade and Sun breaker.
3. Draw a neat Sketch of a Semicircular Arch and label its parts.
4. Explain briefly any one type of Arch with the help of a neat sketch.
5. Explain briefly any two types of lintels with the help of sketch.

CO2	Understand different types of stairs and their requirements. Prepare necessary drawings

LEVEL 1: Remember

1. List the Points while locating stair in a building.
2. Write a note on any one type of stair with the help of sketch.
3. Write a note on Escalator.
4. List different types of lift with their uses.
5. List the requirements of a good stair
6. Write a note on Escalator and Elevator.

LEVEL 2: Understand

1. Compare Straight flight stair and Geometrical stair.
2. Explain briefly any one type of stair with the help of sketch

CO3	Understand the various types of roofs and roof coverings. Prepare necessary drawings

LEVEL 1: Remember

1. What is roof? List its advantages.
2. List the requirements of a good roof covering material.
3. Write a note on any one type of pitched roof with the help of neat sketch.(lean to roof /coupled/close-coupled/collared/scissor)
4. List the advantages of steel truss.
5. List the different types of roof and roof covering materials.

6. Sketch any one type of pitched roof and label its parts.
7. What are the advantages and disadvantages of flat roof?
8. List the different roof covering materials and explain any two in detail

LEVEL 2: Understand

1. Explain briefly King post / Queen post roof truss with neat sketch

CO4	Identify various types of floors and floor finishes. Prepare necessary drawings.

LEVEL 1: Remember

1. Define floor. List the different types of flooring materials.
2. List the requirements of a good flooring material.
3. Write a note on any one type of floor.
4. Write a note on sunken slab with a neat sketch.

LEVEL 2: Understand

1. Explain briefly any two types of flooring with neat sketch.
2. Explain briefly single joist wooden floor with neat sketch.
3. Explain the method of laying cement concrete floors with neat sketch.

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

Course Title: **ARCHITECTURAL DRAWING-II**	Course Code: **15AR44P**
Credits (L:T:P) : **0:2:4**	Core/ Elective: **Core**
Type of course: **Tutorial and Drawing**	Total Contact Hours: **78**
CIE- 25 Marks	SEE- 50 Marks

Pre-requisites: Architectural drawing and visual art and drawing.

COURSE OBJECTIVE:
The course aims at enabling the students to

1. To learn and understand character, function etc. in small scale Apartment, Restaurant
2. Design Multilevel Building

COURSE OUTCOMES

On Successful completion of the course, the students shall be able to

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Identify the aesthetic and functional values of a Building	***R/U/A***	1,2	03
CO2	Prepare alternative schematic drawings on the basis of bubble diagram showing interlinking of different spaces	***R/U/A***	1,2,3,10	12
CO3	Design plan, elevation, section and other relevant details of given building	***R/U/A***	1,2,3,10	30
CO4	Prepare presentation drawings	***R/U/A***	1,2,3,10	23
CO5	Develop critical, creative thinking, visualization by preparing scale down model and documentation skills.	***R/U/A***	1,2,3,10	10
			Total sessions	**78**

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
Architectural Drawing II	3	3	2	-	-	-	-	-	-	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed

COURSE CONTENT

Unit No	Unit Name	Hour
1	Introduction	3
3	Case study	12
4	Apartment	33
5	Public building	30
	TOTAL	78

DETAILS OF CONTENTS

UNIT I: Introduction **03 Hrs**

Introduction to public and semi public buildings (as per space standards)

UNIT II: Case study **12Hrs**

Prepare a case study report with supporting proportionate sketches/ photos of an apartment and small public/semi public building.

UNIT III: Apartment **33Hrs**

Develop alternative schemes using concept of bubble diagram showing interlinking of different spaces. Design and draw site plan, floor plans showing all openings with furniture layout, Elevations and sections for a small scale Apartment.(minimum Ground + two floors)

UNIT IV: Public building **30Hrs**

Develop alternative schemes using concept of bubble diagram showing interlinking of different spaces. Design and draw site plan, floor plans showing all openings with furniture layout, Elevations and sections for small school/ bank /architect's office /health centres etc.(any one public building with minimum requirement area not exceeding 400sqmtrs)

Note: 1. Above drawings should be covered through manual drafting.
2. Students should submit minimum 10 number of plates covering the above topics for Considering internal assessment marks.
3. Students should submit case study and conceptual block models.

Course Assessment and Evaluation :

Method	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
DIRECT ASSESSMENT	CIE (Continuous Internal Evaluation)	Drawing sheets	Students	Average of marks of all graded exercises	25	Drawing sheets	1,2,3,4,5
				TOTAL	25		
	SEE (Semester End Examination)	End Exam		End of the course	50	Drawing sheets	1,2,3,4,5
INDIRECT ASSESSMENT	Student Feedback on course		Students	Middle of the course		Feedback forms	1,2,3 Delivery of course
	End of Course Survey			End of the course		questionnaire	1,2,3,4,5 Effectiveness of Demonstrations& Assessment Methods

Questions for CIE and SEE will be designed to evaluate the various educational components such as:

1	Remembering and Understanding :	- 10% weightage
2	Applying the knowledge acquired from the course :	-50% weightage
3	Analysis :	- 10% weightage
4	Evaluation :	- 10% weightage
5	Creating new knowledge :	- 20% weightage

TEXT BOOKS

1. Building Drawing – Shah M G, Tata McGraw – Hill, 1992.
2. Building Planning & Drawing – Kumaraswamy N., Kameswara Rao A., Charotar Publishing
3. Time savers standards for architectural design data by John Hancock
4. Neufert's standards
5. Form, Space & Order by Francis DK Ching

Web links

https://**en.wikipedia.org**/wiki/**Architectural_drawing/**

https://www.bing.com/videos/search?q=architectural+drawing+of+an+apartment+&&view=detail&mid=8E657A1CAEBBAFE004AD8E657A1CAEBBAFE004AD&FORM=VRDGAR/

At the end of the examination small apartment one/two bed room /small public building with given scheme of line sketch .

SCHEME OF EVALUATION

SL NO	DESCRIPTION	MARKS
1	Floor plan with furniture	15
2	Elevation and section	10
3	Rendering	05
4	Sessional works	15
5	Viva	5
	TOTAL	50

Government of Karnataka
Department of Technical Education
Board of Technical Examinations, Bangalore

	Course Title: **CAD-II**		
	Scheme (L:T:P) : **0:2:4**	Total Contact Hours: **78**	Course Code: **15AR45P**
	Type of Course: **Tutorial and practice**	Credit **:03**	Core/ Elective: **Core(practice)**
CIE-25 Marks			SEE- 50 Marks

Prerequisites

Practice of architectural graphics and CAD.

Course Objectives

Develop and render 3D Model of buildings using CAD.

At the end of the course, the students will be able to:

Course Outcome	
CO1	Develop 3D models of simple geometrical objects and render their surfaces.
CO2	Apply suitable commands to generate 3D models of furniture and interior artifacts (viz. Lampshade, of buildings.
CO3	Generate Plan, elevation, sectional views and 3D view of Interior layout of each unit in a Residential Building
CO4	Develop Exterior 3D view of a residential Building along with landscaping elements

COURSE-PO ATTAINMENT MATRIX

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
CAD-II	**3**	**3**	**3**	**3**	**-**	**-**	**-**	**3**	**3**	**3**

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If ≥40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

COURSE CONTENT

Unit No	Unit Name	Hour
1	Introduction to 3D modelling	03
2	3D Surface and Solid Modelling	09
3	3D views of building components	24
4	3D views of exterior and interiors of buildings	42
	TOTAL	78

DETAILS OF CONTENTS

UNIT- I: Introduction to 3D modelling: 03Hrs

General features of CAD, CAD work station, Hardware and exposure to various software requirements in the preparation of 3D views and its Advantages.

UNIT-II: 3D Surface and Solid Modelling: 09Hrs

1. 3D Surface and Solid Modelling: Ruled, Revolved and Tabulated Surfaces.
2. Solid Objects: Box, Sphere, Cylinder, Cone, Wedge and Torus.
3. Solid Editing: Union, Subtract, Extrude, Revolve, and Slice.
4. UCS Icon, Views, View ports, V port Settings.
5. Concept of Light, Shade, Colour and materials for rendering 3D models.
6. Creating views using camera for different levels and locations.

UNIT- III: 3D views of building components: 24Hrs

3D of building components like Doors, Windows, Spread footing, with floor, column footing, Lintel and chejja, Roof with parapet and Staircase.

UNIT- IV: 3D views of exterior and interiors of buildings. 42Hrs

1. Develop rendered 3D view showing both exterior and interior of a residence with single bed and produce the print.
2. Develop rendered 3D view showing both exterior and interior of a residence with two or three bed room with duplex and produce the print out.
3. Develop rendered 3D view showing both exterior and interior of a Restaurant or any other relevant small scale building and produce the print out.

Graded exercises

1) Develop 3D view of any five geometrical objects preferably objects comprising Straight, oblique and curved edges
2) Generate plan, elevation and 3D view of any five furniture and interiors like study Table ,wooden chair ,Book self, Lampshade Teapoy and Dining table(Each drawing must be dimensioned, labled.
3) Create Plan, elevation , section, and 3D view of Interior lay out of a residential Building (Kitchen, Dining, Living and Bed room)
4) To Develop Exterior 3D model of a Building (Any one)

Note: Drawings so produced must be dimensioned, labelled wherever necessary. Proper line weightage must be followed

SUGGESTED STUDENT ACTIVITIES

Students should select any one of the below or other topics relevant to the subject approved by the concerned faculty and prepare 3D view individually with different building. Each Report will be evaluated by the faculty as per rubrics. Weightage for 5 marks Internal Assessment shall be as follows: (Unsatisfactory - 1, Developing -2, Satisfactory -3, Good - 4, and Exemplary- 5)

Develop rendered 3D view of office /Shops/residence/farm house /hotel /entrance arch gate etc. or similar type of buildings and apply elements like landscape, water bodies, vehicles, human figures etc.

Course Delivery:

The course will be delivered through lectures and Demonstration and CAD practices**.**

Course Assessment and Evaluation Scheme

	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment method	CIE	IA	Students	Two tests (average of two tests)	10	Blue books	1,2,3,4
				Record	10	CAD exercises	1,2,3,4
				Suggested activity	05	Reports/Presentations	1,2,3,4
	SEE	End Exam		End of the course	50	Answer scripts at BTE	1,2,3,4
Indirect Assessment	Student Feedback on course		Students	Middle of the course	---	Feedback forms	1,2 Delivery of course

	End of Course Survey		End of the course	---	Questionnaires	1,2,3,4 Effectiveness of Delivery of instructions & Assessment Methods

***CIE** – Continuous Internal Evaluation ***SEE** – Semester End Examination

Note:

1. I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
2. Rubrics to be devised appropriately by the concerned faculty to assess Mini project/Student activities.

Questions for CIE and SEE will be designed to evaluate the various educational components such as:

1	Remembering and Understanding :	- 20% weightage
2	Applying the knowledge acquired from the course :	-50 % weightage
3	Analysis :	-10 % weightage
4	Evaluation :	-10% weightage
5	Creating new knowledge :	-10% weightage

TEXT BOOKS

1. AutoCAD Reference Guide: Everything You Wanted to Know about AutoCAD--Fast! By Dorothy Kent
2. Arshad N Siddique, Zahid Khab, Mukhtar Ahmed- Engineering Drawing withCADD

Web link

www.youtube.com/watch?v=KuU-IifKlxQ/

https://www.bing.com/videos/search?q=AutoCAD+3D+Tutorial&view=detail&mid=045E14C83CFADF637F80045E14C83CFADF637F80&FORM=VIRE2/

https://www.bing.com/videos/search?q=3d+using+cad&&view=detail&mid=0B5C596C9398E1C3A7810B5C596C9398E1C3A781&FORM=VRDGAR/

https://www.bing.com/videos/search?q=3d+rendering+using+cad&&view=detail&mid=23BFF6A4C007857EB5C723BFF6A4C007857EB5C7&FORM=VRDGAR/

SCHEME OF EVALUATION

1	Record	05 marks
3	Rendered 3D view of given problem	30 marks
4	Printout and page setups	10marks
5	Viva-voce	05 marks
	Total	50 marks

Note: The examiner should give the problem in the form of sketch/line diagram and student should develop the 3D view using CAD and take the print out using appropriate scale.

Government of Karnataka
Department of Technical Education
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	Course Title: **PRESENTATION TECHINQUES**		
	Scheme (L:T:P) : **0:2:4**	Total Contact Hours: **78**	Course Code: **15AR46P**
	Type of Course: **Tutorial and practice**	Credit **:03**	Core/ Elective: **Core(practice)**
CIE-25 Marks			SEE- 50 Marks

COURSE OBJECTIVE:
The course aims at enabling the students to

1) Identify the various media of Rendering.
2) Prepare presentation Drawings of Buildings.

COURSE OUTCOMES:

On Successful completion of the course, the students shall be able to

Course Outcome		CL	Linked PO	Teaching Hrs
CO1	Illustrate various presentation techniques.	***R/U/A***	1,2	06
CO2	. Create the textural effects using colours.	***R/U/A***	1,2,3,10	24
CO3	Prepare presentation drawings showing interior layout of various units of Building	***R/U/A***	1,2,3,10	24
CO4	Render the elevation, sectional views and free hand perspectives of buildings using different media.	***R/U/A***	1,2,3,10	24
			Total sessions	**78**

Course-Po Attainment matrix

Course	Programme Outcome									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & Sustainability	Ethics	Individual and Team work	Communication	Life long learning
PRESENTATION TECHNIQUES	3	3	2	1	2	-	-	-	-	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

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If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

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COURSE CONTENT

Unit No	Unit Name	Hour
1	INTRODUCTION	06
2	PRESENTATION OF ARCHITECTURAL DRAWINGS	24
3	INTERIORS OF RESIDENTIAL UNITS	24
4	PERSPECTIVE VIEWS	24
	TOTAL	78

UNIT-I INTRODUCTION (6 Hours)

Define various presentation techniques. Materials and process. Psychology of visual perception. Aesthetics. Design problem solving.

UNIT-II (24 Hours)

PRESENTATION OF ARCHITECTURAL DRAWINGS

Graded exercise:

Prepare Architectural Drawings of a residential building showing interior layout and rendering the same with different techniques like Pen & Ink, color Pencil, sketch pen etc.. to a scale of 1:50

a) Prepare Presentation Drawing a Duplex residential Floor Plans showing furniture layout along with flooring, plants.
b) Sectional elevations with furniture
c) Elevations.

Note: Render with different media like Pen & Ink, colour Pencil, sketch pen etc..

External walls representing finishes like exposed brick work, stone masonry, terra cotta cladding, and wood, grill work, glass etc. Also represent Human activities landscaping, water body, road, automobile etc. to suitable scale

UNIT-III (24 Hours)

INTERIORS OF RESIDENTIAL UNITS AND OFFICE

Prepare plan showing interior layout and sectional elevation for following units.

a) Verandah with living, Kitchen with dining and Master bedroom with toilet

Representing furniture, furnishings, fittings, wall finishes, floor pattern, doors, windows, stair case to a scale of 1:20. Render with different media like Pen & Ink, color Pencil, sketch pen etc..

UNIT-IV (24 Hours)

PERSPECTIVE VIEWS

Prepare approximate perspective sketches of the following

a) Exterior perspective views of residential and rendering the same with different media.
b) Interior perspective views of various units like Living, Bed, Kitchen, unit etc.. and render same with different media.

Note: 1.Above drawings should be covered through manual drafting.
2. Students should submit minimum 10 number of plates covering the above topics for

Considering internal assessment marks.

Resources:

1	Architectural Illustration in Water colour	Stephen Hoffpanir & Joyce Rosiner
2	The Thames and Hudson Manual of Rendering with Pen and Ink	Robert W Gill
3	Architectural Illustration (B.S.S. Illustration Series)	Bijutsu Shauppansha
4	Exteriors: Perspectives in Architectural Design	Graphic Sha Pub. Co Ltd. 1-9- 12, Kudan-Kita, Chiyoda-Ku, Tokyo, 102, Japan.

Web links

https://www.youtube.com/watch?v=RZVXiBvTu08/
https://www.youtube.com/watch?v=yEymIyLbiAI/
https://www.youtube.com/watch?v=yEymIyLbiAI/
https://www.youtube.com/watch?v=ml73GJKAYMk/
https://www.youtube.com/watch?v=8fKUN7g-WRQ/
https://www.youtube.com/watch?v=BjyGHjAwuP0/
https://www.youtube.com/watch?v=AVGGD4xP8Qc/
https://www.youtube.com/watch?v=YeKPt1oVjVE
https://www.youtube.com/watch?v=vmHoGicPQQQ

Course Assessment and Evaluation Scheme:

Method	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
DIRECT ASSESSMENT	CIE (Continuous Internal Evaluation)	Drawing sheets	Students	Average of marks of all graded exercises	25	Drawing sheets	1,2,3,4,
				TOTAL	25		
	SEE (Semester End Examination)	End Exam		End of the course	50	Drawing sheets	1,2,3,4,5
INDIRECT ASSESSMENT	Student Feedback on course		Students	Middle of the course		Feedback forms	1,2 Delivery of course
	End of Course Survey			End of the course		questionnaire	1,2,3,4 Effectiveness of Demonstrations& Assessment Methods

Questions for CIE and SEE will be designed to evaluate the various educational components such as:

1	Remembering and Understanding :	- 10% weightage
2	Applying the knowledge acquired from the course :	-50% weightage
3	Analysis :	- 10% weightage
4	Evaluation :	- 10% weightage
5	Creating new knowledge :	- 20% weightage

In the end of the examination simple one bed room dwelling unit should be drawn with given line diagram.

SCHEME OF EVALUATION

SL NO	DESCRIPTION	MARKS
1	Floor plan with furniture	10
2	Elevation or section	05
3	Rendering	15
3	Sessional works	15
4	Viva-voice	5
	Total	**50**

4ನೇ ಸೆಮಿಸ್ಟರ್–ಕನ್ನಡ ಕಲಿ–2 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)

4th Semester	**Course: Kannada Kali-2**	**Course Code:15KA4NT** (2016-17)
	No. of Credits:02	**No. of teaching hours/week:02** No. of teaching hours/Semester:26
	Mode of Assessment and Evaluation: Semester End Examination (SEE)only. No CIE.	**Maximum Marks: 50 (SEE only) Minimum Passing marks:20**

ಉದ್ದೇಶ:

1. ಕೇಳುವುದು, ಗ್ರಹಿಸುವುದು, ನಿರರ್ಗಳವಾಗಿ ಮತ್ತು ಸ್ಪಷ್ಟವಾಗಿ ಓದುವ ಮತ್ತು ಮಾತನಾಡುವ (ಅಭಿವ್ಯಕ್ತಿಸುವ) ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಸುವುದು.
2. ಜ್ಞಾನಾರ್ಜನೆ, ಸಾಹಿತ್ಯಾಭಿರುಚಿ, ಚಿಂತನೆ ಮತ್ತು ಆನಂದಕ್ಕಾಗಿ ಸ್ವತಂತ್ರವಾಗಿ ಓದಲು, ಬರೆಯಲು ಮತ್ತು ಮಾತನಾಡಲು ಸಮರ್ಥರಾಗುವಂತೆ ಮಾಡುವುದು.
3. ಪದ ಸಂಪತ್ತನ್ನು ಹೆಚ್ಚಿಸಿಕೊಂಡು ಸ್ಪಷ್ಟ ಉಚ್ಚಾರಣೆಯೊಡನೆ ಲಿಖಿತ ಮತ್ತು ಮೌಖಿಕ ಚಟುವಟಿಕೆಗಳನ್ನು ಮಾಡಿಸಿ, ಸ್ವತಂತ್ರವಾಗಿ ಭಾಷೆಯ ಬಳಕೆ ಮಾಡುವುದು.
4. ನಾಡು–ನುಡಿ, ಸಂಸ್ಕೃತಿ ಮತ್ತು ಸಾಹಿತ್ಯಗಳ ಪರಿಚಯ ಮತ್ತು ಆತ್ಮೀಯ ಭಾವಾಭಿಮಾನವನ್ನು ಬೆಳೆಸುವುದು.
5. ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆಗಳಿಂದ ಭಾಷಾ ಕೌಶಲ್ಯದ ಸರಳ ಪ್ರಯೋಗ ಮಾಡಿಸುವುದು./ಕಲಿಸುವುದು.
   (ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆ ಎಂದರೆ, ವರ್ಣಮಾಲೆ ಪರಿಚಯ, ವ್ಯಾಕರಣದ ಸರಳ ಪರಿಚಯ, ಗುಣಿತಾಕ್ಷರ, ಸಂಯುಕ್ತಾಕ್ಷರಗಳು, ನಾಮಪದ, ಲಿಂಗ, ವಚನ, ಪ್ರತ್ಯಯಗಳು, ವಾಕ್ಯರಚನೆ (ಕರ್ತೃ, ಕರ್ಮ, ಕ್ರಿಯಾಪದ) ಇತ್ಯಾದಿ).

Course outcome:

1. Developing listening and speaking skills.
2. Easy Interaction with peers.
3. Students can use the language at ease in daily life situations

ಪಠ್ಯಕ್ರಮ ಮತ್ತು ಸರಳ ಭಾಷಾ ಕೌಶಲ್ಯ

(ಕನ್ನಡ ಕಲಿ–ಪಠ್ಯಪುಸ್ತಕ –ಶ್ರೀ ಲಿಂಗದೇವರು ಹಳೇಮನೆ – ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ ಪ್ರಕಾಶನ)

ಭಾಗ–2

ಪಾಠಗಳ ಕ್ರಮಾಂಕ Lesson No	ಪಠ್ಯವಸ್ತುವಿನ ವಿವರ – Curriculum Content	ಸೆಮಿಸ್ಟರ್ ಬೋಧನ ಅವಧಿ Total no.of Classes /Sem
Part-I		
11	Plan to go for a movie. Comparative, non-past tense, instrumental and ablative case	02
12	Conversation between Doctor & Patient. Potential forms, accusative case.	02
13	Enquiring about friend's family	02

	Past tense –d, and –t- and –id-, negation.	
14	Conversation between friends – Past tense –k – T – D and –id-v negation verbal noun	02
15	Routine activities of a Student.	01
16	About children's education. Continuous, Perfect tenses and negations.	02
17	Halebidu - Belur Relative participle, negation and Participle nouns.	02
18	Discussing about Examination and future plan- conditional and negative conditions.	03
19	Karnataka (Lesson for reading)(reading skill)	03
20	bEku bEDagaLu (Lesson for reading (Reading skill)	03
Part-II	Kannada Scripts	03
	ECA-word/sentence formation/letter/small essay writing	01
	ಒಟ್ಟು ಗಂಟೆಗಳು	**26**

ಸೂಚನೆಗಳು:

- ಮೇಲಿನ ಪಾಠಗಳ ಪುನರಾವರ್ತಿತ ಭಾಗಗಳಿಗೆ ಬದಲಾಗಿ **"ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆ"**ಯಿಂದ ಗಳಿಸುವ ಅಕ್ಷರ ಜ್ಞಾನ ದಿಂದ ಪದ ಸಂಪತ್ತು ಹೆಚ್ಚಿಸಿ, ಪದಗಳಿಂದ ಸ್ವಂತ ವಾಕ್ಯಗಳ ರಚನೆ ಮಾಡಿಸುವುದು. (ಅಮ್ಮ, ಮೊಬೈಲ್, ಕನ್ನಡ ಭಾಷೆ, ಕವಿಗಳು, ನಾಟಕ, ಜನಪದ ಕಲೆ, ನಾಡಿನ ಪ್ರಸಿದ್ಧ ವ್ಯಕ್ತಿಗಳು, ಸಹೋದರ, ಸ್ನೇಹಿತ, ತರಕಾರಿ, ದೋಸೆ, ತಿಂಡಿ, ನಿದ್ದೆ, ಬಿಸಿ, ಚಳಿ, ಆಕಾಶ, ಓದು, ಇತ್ಯಾದಿ ನಿತ್ಯ ಬಳಕೆಯ ಸರಳ ಪದಗಳಿಂದ ವಾಕ್ಯರಚನೆ ಮತ್ತು 25–50 ಪದಗಳ ಕಿರು ಪ್ರಬಂದ ರೂಪದ ಲೇಖನ ರಚನೆ).
- ಸಂಸ್ಥೆಯ ಪ್ರಾಚಾರ್ಯರಿಗೆ ವಿದ್ಯಾರ್ಥಿಯ ಮನವಿ ಪತ್ರ, ಕುಂದುಕೊರತೆಗಳ ಬಗ್ಗೆ ಸಂಬಂಧಿಸಿದವರಿಗೆ ಪತ್ರ, ಸ್ನೇಹಿತರಿಗೆ ಪತ್ರಗಳು, ಸರಳವಾಗಿ ಯಾವುದೇ ಸಾಮಾನ್ಯ ವಿಷಯಗಳ ಬಗ್ಗೆ ಪತ್ರಲೇಖನ. (6–10 ವಾಕ್ಯಗಳು).

ಆಕರ ಗ್ರಂಥಗಳು:

1. **ಕನ್ನಡ ಕಲಿ–ಶ್ರೀ ಲಿಂಗದೇವರು ಹಳೇಮನೆ – ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.**
2. ಪ್ರಾಥಮಿಕ ಶಾಲೆಯ ಕನ್ನಡ ಪಠ್ಯಪುಸ್ತಕಗಳು
3. ಸರಳ ಕನ್ನಡ ವ್ಯಾಕರಣ ಪುಸ್ತಕಗಳು– ಎಂ.ವಿ ನಾಗರಾಜರಾವ್/ಇತರೆ ಲೇಖಕರು.
4. ಪ್ರಯೋಗ ಪ್ರಣತಿ–ಪ್ರಥಮ ಪಿಯುಸಿ ಪೂರಕ ಪಠ್ಯ.
5. ಸರಳ ಪತ್ರವ್ಯವಹಾರದ ಪುಸ್ತಕಗಳು

ಡಿಪ್ಲೋಮಾ 4ನೇ ಸೆಮಿಸ್ಟರ್–*ಕನ್ನಡ ಕಲಿ–2 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)*

ಸೆಮಿಸ್ಟರ್ ಅಂತಿಮ ಲಿಖಿತ ಪರೀಕ್ಷೆ

ಸಮಯ: 2 ಗಂಟೆಗಳು ಗರಿಷ್ಠ ಅಂಕಗಳು:50

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1. Fill in the blanks using the appropriate words.
2. Rewrite as directed.
3. Combine the following sentences.
4. Translate into Kannada.
5. Answer the following questions.
6. Fill in the blanks using the correct past tense forms of the verbs giving in the bracket.

7. Transform into negative.
8. Substitute and complete the sentence
9. Vocabulary (meanings of words) using formation of sentences (any five).
10. Questions from lessons 17 to 19. (Out of 6 questions, answer any 3 questions).
11. Scripts- consonants form- +vowel (10 types)
12. Conversation & other questions. (KK-Exercises)

ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆ:

ಡಿಪ್ಲೋಮಾ 4ನೇ ಸೆಮಿಸ್ಟರ್–*ಕನ್ನಡ ಕಲಿ–2 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)*

ಸೆಮಿಸ್ಟರ್ ಅಂತಿಮ ಲಿಖಿತ ಪರೀಕ್ಷೆ

ಸಮಯ: 2 ಗಂಟೆಗಳು ಗರಿಷ್ಠ ಅಂಕಗಳು:50

I. (a) Fill in the blank using the correct past tense forms of the verbs given in the bracket. 3+2 =05

1.ಅವರು ನಿನ್ನೆ ಊರಿನಿಂದ ..... (ಬಾ)
2. ಅವಳು ಒಂದು ಹೆಣ್ಣು ಮಗು ..... (ಹೆರು)
3.ನಾನು ನಿನಗಾಗಿ ತುಂಬಾ ಹೊತ್ತು..... (ಕಾಯು)

(b) Fill in the blank using the correct verbal participle forms of the verbs given in the bracket.

1.ಆ ಹುಡುಗಿ ಮನೆ ..... ಹೋದಳು. (ಬಿಡು)
2. ಅವನು ಇವತ್ತ ಊರಿನಿಂದ.....ನಾಳೆ ಬರುತ್ತಾನೆ. (ಹೊರಡು)

II. Give the negative forms of the following sentence. (Any Five) 1X5=05

ಅ) ನೀವು ಪುಸ್ತಕ ಕೊಡಿ.

ಆ) ನೀವು ಸಿಗರೇಟ್ ಸೇದಬಹುದು.

ಇ) ಅವರು ನನಗೆ ಚೆನ್ನಾಗಿ ಗೊತ್ತು.

ಈ) ಅವರು ಕನ್ನಡ ಚೆನ್ನಾಗಿ ಕಲಿತರು.

ಉ) ಅವಳು ತಲೆ ಬಾಚಿಕೊಂಡು ಬಂದಳು.

ಊ) ಅವನಿಗೆ ಫೋನ್ ಬಂದಿದೆ.

ಎ) ರವಿ ಮನೆಯಲ್ಲಿ ಮಲಗಿರ್ತಾನೆ.

III. Translate into KANNADA. (Any Five) 2X5=10

1) Who will come with you?
2) Today Ms. Kamala will go to her native place.
3) You must drink butter milk daily.
4) Please, don't talk to me.

5) How much advance money did you pay for the hostel?
6) How many of you are learning Kannada seriously?
7) If I get good marks in diploma, I will get admission for BE program.
8) At what time today you will be available in the hostel?.

IV. Vocabulary.

(a) Write English equivalents of the Kannada words. (Any five) 1X5=05

1. ಆಗಸ 2. ಶೈಲಿ 3. ಅನುಮಾನ 4.ಪರೀಕ್ಷೆ 5.ಜಾತಿ 6.ನೈಸರ್ಗಿಕ 7.ಮತ 8. ವಾಣಿಜ್ಯ

(b) Write Kannada equivalents of the English words. (Any five) 1X5=05

1. Wealth 2. Religion 3. Memory 4.fear 5.Environment 6. Primary 7. Mistakes 8. Tall

VI. Conversation:

ಈ ಕೆಳಗಿನ ಅಪೂರ್ಣ ಸಂಭಾಷಣೆಯನ್ನು ಆವರಣದಲ್ಲಿ (bracket) ನೀಡಿರುವ ಪದಗಳನ್ನು ಅರ್ಥಮಾಡಿಕೊಂಡು ಪೂರ್ತಿ ಮಾಡಿ. –05

ರಾಜು: ನಿನಗೆ ನಿನ್ನೆ ಮೋಹನ್ ಸಿಕ್ಕನಾ?
ರಾಮು: ..... negative) ನಿನಗೆ ಸಿಕ್ಕನಾ?
ರಾಜು ..... (Positive) ಹೌದು, ನಿಮ್ಮನ್ನು ನೋಡುವುದಕ್ಕೆ ಹೋಗುತ್ತೀನಿ ಅಂತ ಹೇಳಿದ.
ರಾಮು: ..... (Enquiring about meeting him)
ರಾಜು: ಅವನು ಕೆಲಸ ಬಿಟ್ಟನಂತೆ.
ರಾಮು: ..... (Questioning)
ರಾಜು: .....(Answer).

VII.Transform the following sentences as per direction. (Any Five) 1X5=05

1. ಮಕ್ಕಳು ರಸ್ತೆಯಲ್ಲಿ ಆಟ ಆಡ್ತಾ (into present continuous) ಇದ್ದವು.
2. ಹುಡುಗರು ತರಗತಿಯಲ್ಲಿ ಸುಮ್ಮನೆ (into present continuous) ನಗ್ತಾ ಇದ್ದರು.
3. ಆ ಹೆಂಗಸರು ಜಗಳ ಆಡ್ತಾ ಇದ್ದಾರೆ. (into past continuous)
4. ತರಕಾರಿ ಕಡಿಮೆ ಬೆಲೆಗೆ ಸಿಗ್ತಾ ಇದೆ. (into past continuous)
5. ಅವನು ದಿನಾ ಇಲ್ಲಿಗೆ ಬರ್ತಾನೆ. (into habitual)
6. ಇಲ್ಲಿ ಬಸ್ಸುಗಳು ತುಂಬಾ ಓಡಾಡ್ತ (into habitual) ಇವೆ.
7. ಆಂಧ್ರಪ್ರದೇಶದಿಂದ ಬಂದಿದ್ದ ವಿದ್ಯಾರ್ಥಿಗಳು ಎಲ್ಲಿದ್ದಾರೆ?(into present perfect)

VIII.Write the Kannada alphabet in the traditional order. 05

OR

ಹಳೇಬೀಡು ಬೇಲೂರಿನಿಂದ ಎಷ್ಟು ದೂರದಲ್ಲಿದೆ ಮತ್ತು ಯಾವ ಜಿಲ್ಲೆಯಲ್ಲಿದೆ? ಇಲ್ಲಿನ ದೇವಸ್ಥಾನಗಳ ಹೆಸರುಗಳು ಏನು ಮತ್ತು ಅವುಗಳನ್ನು ಕಟ್ಟಿಸಿದವರು ಯಾರು?

IX. Combine the following: (Any One) 1X1=01

(A) 1) ಮನೆ + ಇಂದ =
2) ಮ್ + ಔ =

(B) Combine the following sentence using verbal participle form. (Any One) 1X1=01

ಅ) ಹುಡುಗರು ದುಡ್ಡು ಕೊಟ್ಟರು.
ಹುಡುಗರು ಸರ್ಕಸ್ ನೋಡಿದರು.
ಆ) ನಾನು ಕೆಲಸ ಮಾಡ್ತಾ ಇದ್ದೆ.
ನಾನು ಎಂ.ಎ. ಓದಿದೆ.

(B) Frame meaningful small sentences with using words given given below:(Any Three) -1X3=03.
ಅ) ಮರ ಆ) ಫಲ ಇ) ಊರು ಈ) ಪೇಪರ್ ಉ) ಇವರು ಊ) ಮನೆ ಎ) ಶಾಲೆ

ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನಾ ಸಮಿತಿ

- **ಸಂಪಾದಕೀಯ ಸಮಿತಿ:**

1. ಶ್ರೀ ಟಿ ಎಲ್ ರವೀಂದ್ರ, ಉಪನ್ಯಾಸಕರು, ಸರ್ಕಾರಿ ಜಿ.ಆರ್.ಐ.ಸಿ.ಪಿ ಬೆಂಗಳೂರು.
2. ಶ್ರೀ ಟಿ. ತಿಮ್ಮಪ್ಪ, ಉಪನ್ಯಾಸಕರು(ಆಯ್ಕೆ ಶ್ರೇಣಿ), ಯಾಂತ್ರಿಕ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಪಾಲಿಟೆಕ್ನಿಕ್, ತುಮಕೂರು.

- **ಸಲಹಾ ಸಮಿತಿಯ ಬಾಹ್ಯ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು.**

1. ಪ್ರೊ. (ಡಾ.) ಡಿ. ಪಾಂಡುರಂಗ ಬಾಬು, ಕುಲಸಚಿವರು, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
2. ಪ್ರೊ. (ಡಾ.) ಅಶೋಕ್ ಕುಮಾರ್ ರಂಜರೆ, ಪ್ರಾಧ್ಯಾಪಕರು, ಪ್ರಸಾರಾಂಗ ವಿಭಾಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
3. ಪ್ರೊ. (ಡಾ.) ಕೆ ವೈ ನಾರಾಯಣ ಸ್ವಾಮಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಸ್ನಾತಕೋತ್ತರ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಬೆಂಗಳೂರು.
4. ಪ್ರೊ. (ಡಾ.) ಜೆ ಬಾಲಕೃಷ್ಣ, ಪ್ರಾಧ್ಯಾಪಕರು ಹಾಗು ಮುಖ್ಯಸ್ಥರು, ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ವಿಭಾಗ, ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, (ಜಿಕೆವಿಕೆ) ಹೆಬ್ಬಾಳ, ಬೆಂಗಳೂರು.

KARNATAKA STATE BOARD OF TECHNICAL EXAMINATION, BENGALURU.														
TEACHING AND EXAMINATION SCHEME FOR KANNADA COURSE IN DIPLOMA PROGRAME														
SEMESTER: III			COMMON TO ALL DIPLOMA PROGRAMMES											C-15 Curriculum
SL.N0	COURSE NAME	Teaching Department	COURSE /QP CODE	Teaching scheme					Examination scheme					
				Contact hours										
				TH	TU	PR	TOTAL	Credit	Exam paper duration in Hrs	End exam		Maximum CIE Marks (IA+SA)	Minimum Marks for passing. (IA + SA)	
										Max marks	Min marks			
	THEORY													
1	KANNADA KALI-1	KA	15KA3NT	2	-	-	2	2	-	-	-	50	20	
2	TANTRIKA KANNADA -1	KA	15KA3KT	2	-	-	2	2	-	-	-	50	20	

CIE- Continuous Internal Examination: SEE-Semester End Examination: IA-Internal Assessment Tests: SA- Student Activity.

Note: 1. Candidates studied Kannada as one subject in 10th standard shall take Tantrika Kannada 1 &2. Others may take “Kannada Kali-1&2”.

2. In 3rd Semester- Assessment is only by CIE and no SEE. Average marks of three I A tests shall be rounded off to the next higher digit. Rubrics to be devised appropriately to assess student activity.

KARNATAKA STATE BOARD OF TECHNICAL EXAMINATION, BENGALURU.														
TEACHING AND EXAMINATION SCHEME FOR KANNADA COURSE IN DIPLOMA PROGRAME														
SEMESTER: IV			COMMON TO ALL DIPLOMA PROGRAMMES											C-15 Curriculum
SL.N0	COURSE NAME	Teaching Department	COURSE /QP CODE	Teaching scheme					Examination scheme					
				Contact hours										
				TH	TU	PR	TOTAL	Credit	Exam paper duration in Hrs	Sem End Exam		Maximum CIE Marks (IA+SA)	Minimum Marks for passing. (IA + SA)	
										Max Exam Marks	Min Passing Marks			
	THEORY													
1	KANNADA KALI-2	KA	15KA4NT	2	-	-	2	2	2	50	20	-	-	
2	TANTRIKA KANNADA -2	KA	15KA4KT	2	-	-	2	2	2	50	20	-	-	

CIE- Continuous Internal Examination: SEE-Semester End Examination: IA-Internal Assessment Tests: SA- Student Activity.

Note: In 4th Semester- Assessment is only by SEE and no CIE. To award diploma certificate, passing in Kannada course is mandatory. However Kannada course is not included in the eligibility criteria for promotion to the higher semester.

4ನೇ ಸೆಮಿಸ್ಟರ್ – ತಾಂತ್ರಿಕ ಕನ್ನಡ –2 (ಸಾಹಿತ್ಯ ಮತ್ತು ಭಾಷಾ ಕೌಶಲ್ಯ ಪ್ರಯೋಗ)
ಪತ್ಯಕ್ರಮ

4th Semester	**Course:** **ತಾಂತ್ರಿಕ ಕನ್ನಡ –2**	**Course Code:15KA4KT** (2016-17)
	No. of Credits:02	**No. of teaching hours/week:02** No. of teaching hours/Semester:26
	Mode of Assessment and Evaluation: Semester End Examination (SEE)only. No CIE.	**Maximum Marks: 50** **(SEE only)** **Minimum Passing marks:20**

ಪತ್ಯ ಪ್ರಕಾರ	ಪಾಠ	ಪತ್ಯದ ಹೆಸರು/ಲೇಖಕರು/ಪ್ರಕಟಣೆ	ಸೆಮಿಸ್ಟರ್ ಬೋಧನಾವಧಿ ಗಂಟೆಗಳು
ಕಾವ್ಯ ಮಂಜರಿ–(ಬದುಕು ಮತ್ತು ಮಾನವತೆ)	1	(ಕಾವ್ಯ ಗುಚ್ಛಗಳು) (1) ನನ್ನ ಹಣತೆ–ಡಾ:ಜಿ.ಎಸ್.ಎಸ್. (2) ಮಂಕು ತಿಮ್ಮನ ಕಗ್ಗ–ಡಿ.ವಿ.ಜಿ	02
ಸಂಸ್ಕೃತಿ	2	ಅಲೆಕ್ಸಾಂಡರ್‌ನ ಗುರುದಕ್ಷಿಣೆ–ಮಾಸ್ತಿ ವೆಂಕಟೇಶ ಅಯ್ಯಂಗಾರ್	02
ಪರಿಸರ/ಸಾಹಸ	3	ವೈನಾಡಿನ ನರಭಕ್ಷಕರು – ಪೂರ್ಣಚಂದ್ರ ತೇಜಸ್ವಿ	02
ಕ್ರೀಡೆ/ಕಲೆ	4	ಜೆ.ಆರ್.ವಿಶ್ವನಾಥ್–ಡಾ: ಕೆ.ಪುಟ್ಟಸ್ವಾಮಿ	02
ತಂತ್ರಜ್ಞಾನ	5	ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ–ಒಂದು ಸ್ಥೂಲ ನೋಟ–ಜಿ.ಎನ್.ನರಸಿಂಹಮೂರ್ತಿ	02
ಯಶೋಗಾಥೆ/ವ್ಯಕ್ತಿಚಿತ್ರಣ	6	ಡಾ:ವಿಶ್ವೇಶ್ವರಯ್ಯ–ವ್ಯಕ್ತಿ ಮತ್ತು ಐತಿಹ್ಯ – ಎ.ಎನ್.ಮೂರ್ತಿರಾವ್	02
ಭಾಷಾ ಕೌಶಲ್ಯ–ಚಟುವಟಿಕೆಗಳು	7	<u>ಲಿಖಿತ ಅಭಿವ್ಯಕ್ತಿ</u>: ಪತ್ರಗಳ ರಚನೆ–ವ್ಯಾಖ್ಯೆ: ಪತ್ರದ ಭಾಷೆ, ಶೈಲಿ, ನಮೂನೆಗಳು (1) ವೈಯಕ್ತಿಕ ಪತ್ರ (ಪ್ರವಾಸ/ಕೋರಿಕೆ.(ಮನವಿ/ಆತ್ಮೀಯರಿಗೆ ಬರೆಯುವ ಪತ್ರಗಳು)..) (2) <u>ಪತ್ರ ವ್ಯವಹಾರ</u> (ವಾಣಿಜ್ಯ ಸಂಸ್ಥೆಗಳಿಗೆ ಬರೆಯುವ/ಪ್ರತ್ಯುತ್ತರ ಪಡೆಯುವ, ಬ್ಯಾಂಕ್‌ಗಳಿಗೆ/ಸರ್ಕಾರಿ ಕಚೇರಿಗಳಿಗೆ ಬರೆಯುವ ಪತ್ರಗಳು....)–ಮಾದರಿಗಳು (3) ಅಭ್ಯರ್ಥನ ಪತ್ರ (ಹುದ್ದೆಗೆ ಅರ್ಜಿ) –1–2 ನಮೂನೆಗಳು–4–5 ಪ್ರಶ್ನೆಗಳು (4) ಓದುಗರ ವಿಭಾಗಕ್ಕೆ ಪತ್ರಿಕಾ ಸಂಪಾದಕರಿಗೆ ಬರೆಯುವ ಪತ್ರಗಳು 1 ನಮೂನೆ–3–4 ವಿಷಯಗಳ ಮೇಲೆ ಪತ್ರ ಬರೆಸುವುದು.	06
	8	<u>ಸಂಕ್ಷಿಪ್ತ ಲೇಖನ</u> (ಸಾರಾಂಶ ಲೇಖನ)	02
	9	<u>ಮೌಖಿಕ ಅಭಿವ್ಯಕ್ತಿ</u>> ಚರ್ಚಾ ಸ್ಪರ್ಧೆ/ಕೂಟ–ಭಾಷಣ–ಆಶುಭಾಷಣ –ಕಾರ್ಯಕ್ರಮ ನಿರೂಪಣೆ ಮಾಡುವುದು.	06
		ಒಟ್ಟು ಅವಧಿ	26 ಗಂಟೆಗಳು

ಡಿಪ್ಲೋಮಾ 4ನೇ ಸೆಮಿಸ್ಟರ್ (ಕನ್ನಡಬಲ್ಲ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ)
ತಾಂತ್ರಿಕ ಕನ್ನಡ–2

ಪರಿವಿಡಿ

ಭಾಗ–1

ಕಾವ್ಯ ಗುಚ್ಛ

1. ನನ್ನ ಹಣತೆ–ಡಾ:ಜಿ.ಎಸ್.ಶಿವರುದ್ರಪ್ಪ
2. ಮಂಕುತಿಮ್ಮನ ಕಗ್ಗ–ಡಿವಿಜಿ

ಗದ್ಯ ಸಾಹಿತ್ಯ

3. ಅಲೆಕ್ಸಾಂಡರನ ಗುರುದಕ್ಷಿಣೆ (ಸಂಸ್ಕೃತಿ–ಕತೆ)–ಶ್ರೀನಿವಾಸ (ಮಾಸ್ತಿ)
4. ವೈನಾಡಿನ ನರಭಕ್ಷಕರು (ಪರಿಸರ–ಸಾಹಸ)–ಕೆ.ಪಿ.ಪೂ.ತೇಜಸ್ವಿ
5. ಲಿಟ್ಲಲ್ ಮಾಸ್ಟರ್ (ಕ್ರೀಡೆ/ಕಲೆ)–ಡಾ.ಕೆ.ಪುಟ್ಟಸ್ವಾಮಿ
6. ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ–ಜಿ.ಎನ್.ನರಸಿಂಹಮೂರ್ತಿ
7. ಡಾ:ವಿಶ್ವೇಶ್ವರಯ್ಯ–ವ್ಯಕ್ತಿ ಮತ್ತು ಐತಿಹ್ಯ–ಎ.ಎನ್.ಮೂರ್ತಿರಾವ್

ಭಾಗ–2 –ಭಾಷಾ ಕೌಶಲ್ಯ ಚಟುವಟಿಕೆಗಳು

(1)ಬರಹ ರೂಪದ ಸಂವಹನ ಕನ್ನಡ–ಅಭಿವ್ಯಕ್ತಿಯ ಸ್ವರೂಪ
ಔಪಚಾರಿಕ ಮತ್ತು ಅನೌಪಚಾರಿಕ ಪತ್ರಗಳು
(ಅ) ಪತ್ರವ್ಯವಹಾರ–ವ್ಯಾಖ್ಯೆ–ವಿವರಣೆ
(ಆ) ಪತ್ರಗಳ ಮಾದರಿಗಳು
1. ವಾಣಿಜ್ಯ ಪತ್ರಗಳು–ವ್ಯಾಖ್ಯೆ, ಕೆಲವು ವಿಧಗಗಳು
2. ಖಾಸಗಿ/ವೈಯಕ್ತಿಕ ಪತ್ರಗಳು
3. ಪತ್ರಿಕೆಗಳಿಗೆ ಬರೆಯುವ (ಓದುಗರ)ಪತ್ರಗಳು
4. ಅಭ್ಯರ್ಥನ ಪತ್ರಗಳು

(2) ಸಾರಾಂಶ ಲೇಖನ: ವ್ಯಾಖ್ಯೆ, ಉದ್ದೇಶ, ವಿಧಾನಗಳು.

3 . ಮೌಖಿಕ ಅಭಿವ್ಯಕ್ತಿ ಚಟುವಟಿಕೆಗಳು(ತರಗತಿ ಚಟುವಟಿಕೆಗಳು)

1. ವಿಷಯಾತ್ಮಕ ಭಾಷಣಗಳು
2. ಆಶುಭಾಷಣ (ರಚನಾತ್ಮಕ ವಿಷಯಗಳು)
3. ಚರ್ಚೆ (ವಿಚಾರ ವಿನಿಮಯ/ಪರ–ವಿರುದ್ಧ ವಾದ ಮಂಡನೆ)
4. ನಿರೂಪಣೆ

Course outcome:

1. Developing listening and speaking skills.
2. Easy Interaction with peers.
3. Students can use the language at ease in daily life situations

ಡಿಪ್ಲೋಮಾ ನಾಲ್ಕನೇ ಸೆಮಿಸ್ಟರ್ (ಕನ್ನಡ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ)

ತಾಂತ್ರಿಕ ಕನ್ನಡ–2

ಸಮಯ: **2.00** ಗಂಟೆ ಅಂಕಗಳು: 50

I. ಕೆಳಗಿನ ಯಾವುದೇ **ಐದು** ಪ್ರಶ್ನೆಗಳಿಗೆ 1–2 **ಪೂರ್ಣ** ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. 1X5=05

(1) ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನದ ಮಾಹಿತಿಯನ್ನು ನಷ್ಟಗೊಳಿಸುವ ಅನಿಷ್ಟ ಯಾವುದು?
(2) ದಿವಾನ್ ಪದವಿ ಬಂದಾಗ ಸರ್.ಎಂ.ವಿಶ್ವೇಶ್ವರಯ್ಯನವರು ತಮ್ಮ ತಾಯಿಗೆ ಹೇಳಿದ ಮಾತೇನು?
(3) ಅರಿಸ್ಟಾಟಲ್ ಯಾರು ಮತ್ತು ಅವರು ಅಲೆಕ್ಸಾಂಡರನಿಗೆ ಏನಾಗಬೇಕು?
(4) ಸುತ್ತೋಲೆ ಅಥವ ಪರಿಪತ್ರ ಎಂದರೇನು?
(5) ಫಿನಿಕ್ಸ್ ಎಂದರೇನು?
(6) 'ಖೆಡ್ಡಾ' ಎಂದರೇನು?
(7) ನಿರೂಪಕರೆಂದರೆ ಯಾರು?

II. ಕೆಳಗಿನ ಯಾವುದೇ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಉತ್ತರಿಸಿ. 5X3=15

(1) ಕವಿ **"**ಹಣತೆ ಹಚ್ಚುತ್ತೇನೆ ನಾನು' ಎಂದು ಏಕೆ ಹೇಳುತ್ತಾರೆ?
(2) ಕ್ಲಿಯಾಂತಸನ ಸಾವು
(3) ಕಾಕನಕೋಟೆ ಕಾಡು ಹೇಗಿದೆ?
(4) ಅಂತರಜಾಲದ ಉಪಯೋಗಗಳು.
(5) ಅನೌಪಚಾರಿಕ ಅಭಿವ್ಯಕ್ತಿ ಎಂದರೇನು ತಿಳಿಸಿ.
(6) ಚರ್ಚೆ – ವ್ಯಾಖ್ಯೆ ಮತ್ತು ಉಪಯೋಗದ ಬಗ್ಗೆ ಬರೆಯಿರಿ.

III . ಈ ಕೆಳಗಿನ ಯಾವುದೇ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ವಿವರಣಾತ್ಮಕ ಉತ್ತರ ಬರೆಯಿರಿ. 10X3=30

(ಅ) ಹುಲ್ಲಾಗು ಬೆಟ್ಟದಡಿ..... ಕಗ್ಗದಲ್ಲಿ ಮನುಷ್ಯ ಏನಾಗಬೇಕೆಂದು ಮತ್ತು ಸಂಗೀತ ಕಲೆಯೊಂದು ಸಾಹಿತ್ಯ ಕಲೆಯೊಂದು...." ಕಗ್ಗದಲ್ಲಿ ಕವಿ ಇವೆಲ್ಲ ಮನುಷ್ಯನಿಗೆ ಏಕೆ ಬೇಕೆಂದು ಹೇಳುತ್ತಾರೆ?

(ಆ) ಅಣ್ಣನನ್ನು ಕಾಪಾಡಲು ಯೇಗ ಮಾಡಿದ ಸಾಹಸವನ್ನು ವಿವರಿಸಿ.

(ಅಥವ)

ಅತಿಯಾದ ನಗರೀಕರಣಕ್ಕಾಗಿ ಕಾಡುಗಳ ನಾಶದಿಂದ ಪರಿಸರದ ಮೇಲಾಗುವ ಪರಿಣಾಮಗಳ ಬಗ್ಗೆ ಬರೆಯಿರಿ.

(ಇ) ನೀವು ಕಾಲೇಜಿನಿಂದ ಹೋಗಿಬಂದ ಪ್ರವಾಸದ ಅನುಭವ ಕುರಿತು ನಿಮ್ಮ ಗೆಳೆಯರಿಗೆ ಪತ್ರ ಬರೆಯಿರಿ.

(ಈ) ಕೆಳಗಿನ ವಿಷಯವನ್ನು ಒಂದು ಸೂಕ್ತ ಶೀರ್ಷಿಕೆ ಸಹಿತ 30 ಪದಗಳ ಮಿತಿಯಲ್ಲಿ **ಸಂಕ್ಷೇಪಗೊಳಿಸಿ**.

ನೀಲಾಂಬರ ದ್ವೀಪ. ಇದೊಂದು ಸುಂದರ ದ್ವೀಪ. ಪ್ರವಾಸಿಗಳಿಗೆ ಸ್ವರ್ಗಸಮಾನ ದ್ವೀಪ. ಈ ದ್ವೀಪ ಹಿಂದೂ ಮಹಾಸಾಗರದ ದಕ್ಷಿಣಕ್ಕಿರುವ ಆರು ದ್ವೀಪ ಸಮೂಹದಲ್ಲಿ ಮಧ್ಯದಲ್ಲಿ ಹುಣ್ಣಿಮೆ ಚಂದ್ರನಂತೆ ಕಂಗೊಳಿಸುತ್ತಿರುವ ದೊಡ್ಡ ದ್ವೀಪ. ಈ ದ್ವೀಪ ಒಂದು ಭಾಗದಲ್ಲಿ ಹಸಿರು ಚಾದರ ಹಾಸಿದಂತೆ ಸಮತಟ್ಟಾದ ಹುಲ್ಲುಗಾವಲು. ಇನ್ನೊಂದು' ಪಕ್ಕ ಬಗೆಬಗೆಯ ಹಣ್ಣುಗಳ ಮತ್ತು ಹೂವುಗಳ ಗಿಡಗಳು ಮತ್ತು ಅಡಿಕೆ, ಮಾವು, ಮೆಣಸು, ಏಲಕ್ಕಿ, ಲವಂಗದಂತಹ ಗಿಡ–ಮರಗಳಿಂದ ಕೂಡಿದೆ.ಈ ದ್ವೀಪದ ಮಧ್ಯೆ ಕಿರೀಟದಂತೆ ನಮ್ಮ ಉದಕಮಂಡಲದಂತಿರುವ ಹಸಿರಿನ ಬೆಟ್ಟ. ನಿಸರ್ಗದತ್ತ ಹೂವುಗಳ ಗಿಡಗಳಿಂದ ಪುಷ್ಪೋದ್ಯಾನದಂತಿದೆ. ಪ್ರಕೃತಿಯೇ ನಿರ್ಮಿಸಿರುವ ತಿಳಿನೀರಿನ ಸುಂದರ ಕೊಳ ಈ ಬೆಟ್ಟದ

ಆಕರ್ಷಣೆಯಾಗಿದೆ. ಹೀಗಾಗಿ ಈ ದ್ವೀಪ ಪ್ರವಾಸಿಗರಿಗೆ ಅಪಾರ ಆಕರ್ಷಕ ತಾಣವಾಗಿದೆ. ಇಲ್ಲಿನ ಜನ ಸಹ ಸೌಜನ್ಯಶೀಲರು. ಸೃಷ್ಟಿಯ ಶೃಂಗಾರವನ್ನೆಲ್ಲ ಒಳಗೊಂಡ ಈ ದ್ವೀಪದ ಮುಖ್ಯ ಕಸುಬು ಕೃಷಿ, ತೋಟಗಾರಿಕೆ ಮತ್ತು ಪ್ರವಾಸೋದ್ಯವಾಗಿರುವುದರಿಂದ, ಇದೊಂದು ಶ್ರೀಮಂತ ದ್ವೀಪವಾಗಿದೆ.

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ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನಾ ಹಾಗು ಪಠ್ಯಪುಸ್ತಕ ಸಮಿತಿ

- **ಸಂಪಾದಕೀಯ ಸಮಿತಿ:**

1. ಶ್ರೀ ಟಿ ಎಲ್ ರವೀಂದ್ರ, ಉಪನ್ಯಾಸಕರು, ಸರ್ಕಾರಿ ಜಿ.ಆರ್.ಐ.ಸಿ.ಪಿ ಬೆಂಗಳೂರು.
2. ಶ್ರೀ ಟಿ. ತಿಮ್ಮಪ್ಪ, ಉಪನ್ಯಾಸಕರು(ಆಯ್ಕೆ ಶ್ರೇಣಿ), ಯಾಂತ್ರಿಕ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಪಾಲಿಟೆಕ್ನಿಕ್, ತುಮಕೂರು.

- **ಸಲಹಾ ಸಮಿತಿಯ ಬಾಹ್ಯ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು.**

1. ಪ್ರೊ. (ಡಾ.) ಡಿ. ಪಾಂಡುರಂಗ ಬಾಬು, ಕುಲಸಚಿವರು, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
2. ಪ್ರೊ. (ಡಾ.) ಅಶೋಕ್ ಕುಮಾರ್ ರಂಜರೆ, ಪ್ರಾಧ್ಯಾಪಕರು, ಪ್ರಸಾರಾಂಗ ವಿಭಾಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
3. ಪ್ರೊ. (ಡಾ.) ಕೆ ವೈ ನಾರಾಯಣ ಸ್ವಾಮಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಸ್ನಾತಕೋತ್ತರ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಬೆಂಗಳೂರು.
4. ಪ್ರೊ. (ಡಾ.) ಜೆ ಬಾಲಕೃಷ್ಣ, ಪ್ರಾಧ್ಯಾಪಕರು ಹಾಗು ಮುಖ್ಯಸ್ಥರು, ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ವಿಭಾಗ, ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, (ಜಿಕೆವಿಕೆ) ಹೆಬ್ಬಾಳ, ಬೆಂಗಳೂರು.