

**B.E.First Year
(Part-Time)
Civil Engineering**

Prospectus No.111728

**संत गाडगे बाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY**

**अभ्यासक्रमिका
(FACULTY OF ENGINEERING & TECHNOLOGY)**

PROSPECTUS

**Prescribed for
Four Year Degree Course
Bachelor of Engineering
Civil Engineering (Part-Time)
First Year Examination
Winter 2011
(Annual Pattern)**



2011
Visit us at www.sgbau.ac.in

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SYLLABUS
PRESCRIBED FOR
BACHELOR OF ENGINEERING
CIVIL ENGINEERING (PART-TIME)
ANNUAL PATTERN
FIRST YEAR

1PTC1/3SC1 MATHEMATICS-III
SECTION -A

Unit I : Ordinary Differential Equations.

Complete solution, Operator D, rules for finding the complementary function, the inverse operator, Rules for finding particular integral. Method of variation of parameters, Cauchy's and Legendre's Linear Differential equations. Simultaneous linear differential equations with constant coefficients Applications to civil engineering.

Unit II: Laplace transforms :

Definition and elementary properties, Inverse L.T. by various methods, Convolution theorem, Solution of ordinary and simultaneous differential equation using Laplace transform of periodic functions. Application to problems of beams.

Unit III Partial Differential Equations.

P.D.E. of first order and first degree of types i) $f(p,q) = 0$ ii) $f(p,q,z)=0$, iii) $f(p,q,x,y)=0$ iv) $f(p,q,x,y,z)=0$ i.e. (a) Lagrange's form $Pp + Qq = R$ (b) Clairaut's form $z=px+qy+f(p,q)$ v) Equations reducible to above standard types linear Homogeneous P.D.E. of nth order with constant co-efficients.

SECTION-B

Unit IV Numerical Methods :-

- (a) i) Solution of Algebraic and transcendental Equations by Newton Raphson method and by method of False Position.
- ii) Solution of system of linear equations by Grout's method, Gauss Seidal method and Relaxation Method.
- (b) Numerical solution of differential equations by Picard's method, Taylor's series method, Euler's method, modified Euler's method and Rungekutta forth order method.

Unit V : Complex variable :

Analytic functions, C.R.conditions, Harmonic functions. harmonic conjugate functions, Milne's method, conformal mapping, Elementary conformal mapping $w=z+c$, $w=cz$, $w+$ Bilinear transformation.

Unit VI Statistics :

Probability : Axioms, conditional probability, Baye's theorem, Mathematical Expectation and probability distributions (Binomial, Poisson and Normal) Curve fitting by method of least square only for lime & parabola, Corelation regression.

Books Recommended :

- 1) Text Book of Applied Mathematics by P.N.Wartikar and J.N.Wartikar.
- 2) Advance Mathematics for Engineers by Chandrika Prasad.
- 3) Method of Applied mathematics by F.B.Hildebran.
- 4) Introductory methods of Numerical Analysis by S.S.Sasby.
- 5) Computer Oriented Numerical Method by Raja Raman.

1PTC2/3SC2 STRENGTH OF MATERIALS
SECTION-A

- Unit-I**
1. Mechanical properties : Concept of direct, bearing and shear stresses and strains, stress-strain relations, Biaxial and triaxial loading, elastic constants and their relationship, stress-strain diagrams and their characteristics for mild steel, tor steel and concrete, Generlized Hook's law, factor of safety.
 2. Uniaxial stresses and strains : Stresses and strains in compound bars in uniaxial tension and compression, temperature stresses in simple restrained bars and compound bars of two metals only.

- Unit-II**
1. Axial force, shear force & bending moment diagrams : Beams, loading and support conditions, bending moment, shear force and axial load diagrams for all types of loadings for simply supported beams, cantilevers and beams with overhangs, relation between shear force, bending moment and loading intensity.

- Unit-III**
1. Stresses in beams (Bending, Shear),
 - i) Bending: Theory of simple bending, section modulus, moment of resistance, bending stresses in solid, hollow and built up section.

- ii) Shear : Distribution of shear stresses on beam cross sections,
- iii) Strain energy under uniaxial tension and compression, impact loads and instantaneous stresses.

SECTION - B

- Unit-IV**
1. Torsion: Theory of torsion & assumptions, derivation of torsion equation, polar modulus, stresses in solid & hollow circular shaft, power transmitted by shaft, closed coiled helical spring with axial load.
 2. Thin cylinders subjected to internal pressures.
- Unit -V :**
1. Principal stresses : Biaxial stress system, principal stresses, principal planes, Mohr's circle of stresses, principal strains.
 2. Combined direct & bending stresses : Combined direct and bending stresses, applications to short columns with eccentric loads, retaining walls with horizontal lateral force.
- Unit-VI**
1. Slope & deflection of beams : Slope & deflection in statically determinate beams subjected to point loads, uniformly distributed loads, moments by a) Macauley's method b) Moment Area method c) Conjugate Beam method.
 2. Theory of long columns, Euler, Rankine formula.

PRACTICALS:

Minimum seven out of following:

1. Tension test on metals.
2. Compression test on metals.
3. Shear test on metals.
4. Impact test on metals.
5. Hardness test on metals.
6. Torsion test on metals.
7. Deflection of beams.
8. Modulus of rupture test.
9. Buckling of columns.
10. Deflection of springs.

A journal/report on experiments conducted shall be submitted by each student. Practical examination shall be viva-voce based on above practical and the syllabus of the course.

BOOKS RECOMMENDED:

1. E.P.Popov, Mechanics of Materials, Prentice Hall of India, New Delhi.
2. S. Timoshenko and O.H.Young, Elements of Strength of Materials, East West Press Private Ltd., New Delhi.
3. Ferdinand L. Singer, Strength of Materials, Harper and Row, New York
4. Shames, I. H., Introduction to solid mechanics, Prentice Hall of India, New Delhi
5. Natarajan, Mahadeoappa, Strength of materials
6. Junnarkar, S. B., Mechanics of materials
7. Mubeen, A., Mechanics of solids, Pearson education (Singapore) Pte. Ltd.
8. Beer and Johnston, Mechanics of materials, Mc-Graw Hill.

IPTC3/4SC4

SURVEYING – I SECTION-A

- Unit-I**
1. Introduction Surveying – Necessity & purpose, Geodetic & plane surveying, classification of survey, principles of surveying.
 2. Instruments for measurement of distance, linear measurements, corrections to field measurements, ranging out, direct and indirect ranging. Use of distomat.
 3. Chain surveying: basic definition, principle, selection of survey stations, offsets for locating details, limiting length of offsets, degree of accuracy of offsets, use of cross staff, optical square, prism square, obstacles in chaining, plotting of chain survey work, cross staff survey.
- Unit II**
1. Instruments for measurement of angles: Prismatic compass, surveyor's compass, their use and adjustments. Vernier and microscopic theodolite, their temporary adjustment. Permanent adjustment of vernier theodolite. Introduction and uses of Total Station.
 2. Traversing with chain and compass, Reference meridians, bearing and azimuths. Local attraction, magnetic declination and its variation. Open & closed traverses. Adjustment of closed traverse - Bowditch's Graphical method.
- Unit-III**
1. Instruments for measurement of elevation : Dumpy levels tilting and automatic levels. Details of their construction.
 2. Temporary and permanent adjustments of Dumpy and tilting levels.
- ### SECTION - B
- Unit-IV:**
1. Measurement. of Horizontal and Vertical angles with theodolite by different methods. Other uses of theodolite.

- Theodolite traverse, latitude and departure, Gale's traverse table.

- Unit-V**
- Leveling: Definition of terms, Principle, leveling methods, leveling staves, Booking and reduction of field notes, curvature and refraction.
 - Contouring: Definition, Characteristics and uses of contour maps, methods of contouring. Refraction, reciprocal leveling plotting of profiles. Errors in leveling.

- Unit-VI:**
- Plane tabling : equipments, methods, two point and three point problems, Advantages & disadvantages of plane tabling, Lehman's rules.
 - Construction and use of minor instruments such as Abney level, Box sextant, Plan i meter, Tangent clinometer, Ghat Tracer.

PRACTICALS–

5 practicals mentioned below shall be performed by each student, Observations, calculations and relevant work to be submitted in the form of field book and 4 drawing in A-1 size sheet as a sessional work.

- Measurement of length – use Distomat.
- Chain and Compass surveying.
- L Section & C/section of road.
- Plane table survey.
- Theodolite traverse.
- Study and use of minor instruments.
- Measurement of area of a irregular figure by digital planimeter.

Practical examination shall consists of field exercise and vivavoce based on the above syllabus and practical work.

BOOKS RECOMMENDED :

- D.Clark : Plane and Geodetic Surveying, Vol. I & II Aisa Publication House.
- P.B.Sahani : T.B. of Surveying, Vol. I & II, Oxford B.H.B.H.
- T.P.Kanetkar & Kulkarni : Surveying and Leveling, Part I & II, Pune Vidharthi Griha Prakashan, Pune.
- B.C.Punmia : Surveying I & II, Standard Book House Delhi.
- R.C.Brinker and P.R. Wolf, Harper and Row : Elementary Surveying

IPTC4/3SC4 BUILDING CONSTRUCTION & MATERIALS SECTION -A

- Unit-I**
- Introduction : Definition, types of buildings as per national building code, components of buildings and their functions, Types of structure – load bearing structure & framed structures, their relative advantages & disadvantages, load bearing walls and partition walls, HDPE Wall panel.
- Foundation :- Definition and necessity, loads of foundation, Bearing Capacity soil, SBC values based on IS code, field methods of improving bearing capacity.
- Types of foundation – shallow foundation & deep foundations for buildings, spread footings for walls & columns, Raft foundations, Foundations in black cotton soils, under-reamed pile foundation, precautions to be taken. Causes of failure of foundations. Setting out for foundation, excavation for foundation.

- Unit-II**
- Stone Masonry – Technical terms, General principles to be observed during construction, random rubble masonry, coursed and un- coursed rubble masonry, Selection of stone for masonry.
- Brick Masonry – Classification of bricks, manufacturing of clay bricks, tests on bricks, properties of burnt bricks, new trends in brick manufacturing such as use of fly ash, stabilized mud blocks.
- Brick masonry construction – Technical terms, general principles, commonly used types of bonds such as stretcher, header, English bond and Flemish bond, their suitability. Earthquake force, various features for making load bearing structure earthquake resistant.

- Unit-III**
- Floors – Types of Floors – Basement floor, ground floor and upper floors, Types of upper floors – R.C.C. slab floor, R.C.C. slab & beam floor, R.C.C. ribbed floor, R.C.C. Grid floor, R.C.C. flat slab floor, Floor finishes – Types of flooring material, Sahabad, Kotta, Granite, Ceramic tiles, plain tiles, mosaic tiles, glazed tiles, different types of floor finishes, their suitability, method of construction, criteria for selection.
- Roofs – Flat & pitched roof, steel roof trusses – types and suitability, fixing details at supports, types of roof covering, AC & GI sheets, acrylic sheets, fixing details of roof covering.
- Formwork – Different types, their relative merits & demerits, period for removal of formwork for different members.

SECTION - B

- Unit-IV** Doors & Windows – Different forms of commercial woods-plywood, particle-board, batten-board, block-board, novapan, sunmica, veneer sheets.
Doors : Purpose, criteria for location, size of door, door frames & its types, methods of fixing, T Types of door shutters and their suitability, HDPE door shutter.
Windows – Purpose, criteria for location, no. sizes & shapes of Windows, types of windows & their suitability.
Ventilators – Types and their suitability. Fixtures & fastening for doors & windows.
Glass – Types of glass & their suitability.
Arches & lintels – Types & their suitability, details of R.C.C. lintels & chajja, precast lintels & arches.
- Unit-V** Stairs – Function, technical terms, criteria for location, types of staircases, their suitability, principle of stair layout design.
Lifts, ramps & escalators – suitability.
Plastering & pointing- Necessity, types, processes of different types of plastering, defects in plastered work.
Painting & Colouring – Necessity, types, processes of painting & colouring to wall surfaces, wooden surface, iron & steel surfaces, types of paints and their uses.
Scaffolding – Purpose, types, suitability.
- Unit-VI** Special Aspects of Construction –
Damp proofing – causes of dampness, its effects, various methods of damp proofing, material used for damp proofing, details of cavity wall construction.
Fire proof construction – Points to be observed during planning & construction. Fire protection requirements for a multistoried building.
Sound proof Construction – Sound absorbants and their characteristic, factors affecting the acoustical design of an auditorium.
Joints – Expansion & construction joints necessity, details of expansion joint at foundation level & roof level of load bearing structure and framed structure. Provision of construction joints in slabs, beams & columns.

PRACTICALS –

1. Drawing of following building elements on A-2 size sheet.
 - a) Panelled door, flush door, glazed window.
 - b) Steel truss with details of joints, details & support, details of fixing of roof covering.

2. Planning & drawing of a staircase for the given data. [On A-2 size sheet, Design calculations, plan & section.]
3. Preparation of foundation plan from the given line plan of a two room building [On a A-2 size sheet.]
4. Layout of the above, in field.
5. Field visits to building under construction and its report writing including material of construction, construction processes, Human resources required, construction details.
6. Sketch book containing Free hand sketches of following
 - i) Different types of foundations.
 - ii) Bonds in brick masonry
 - iii) Types of floors. [sections]
 - iv) Types of stairs. [plans and side view]
 - v) Line sketches of different types of steel roof trusses.
 - vi) Details of expansion joints.
 - vii) Details of damp proofing for basement.
 - viii) Fixtures & fastenings of doors & windows.

BOOKS RECOMMENDED :

- 1) Mackay W.B. : Building Construction, Vol. I, II, III, Longmans.
- 2) Sushilkumar : Building Construction, Standard Publishers Distributors.
- 3) Deshpande R.S. and Vartak C.V. : A Treatise on Building Construction.
- 4) Sharma S.K. Kaul B.K. : A. T.B. of Building Construction, S. Chand & Co.
- 5) Gurucharan Sing : Building Construction Engg., Standard Book House, Delhi-6
- 6) Sane L.S. : Construction Engg., Manak Talas, Mumbai.
- 7) Chudley R. : Construction Technology, Vol. I, II, III & IV, Longmans Group Ltd.
- 8) ISE National Building Code of India, 1970.
- 9) Punmia B.C. : Building Construction.
- 10) A Manual of Earthquake Resistant, Non-Engineered Construction Indian Society of Earthquake Tech.

1PTC5/3SC5**GEOLOGY**

- Unit-I:** Introduction - Different branches of Geology and importance of Geology in Civil Engineering.
Mineralogy - Study of common rock forming and ore minerals with reference to its physical properties.

Petrology - rock cycle, rock weathering and soil formation, origin, classification and textures of igneous sedimentary and metamorphic rocks, study of common rock types.

Unit II: Structural Geology - outcrop, dip strike, elementary ideas about folds, faults, joints and unconformity, effect of these structures in foundation.

Earthquake Engineering - earthquake waves, causes and effects, magnitude and intensity, earthquake zones of India, seismic coefficient.

Geological investigation - surface and sub-surface investigation, direct and indirect.

Unit-III: Rock as a material of construction. Study of engineering properties of rocks and soils. Geological studies related to site selection for dams and reservoirs, tunnel alignment, hydroelectric plants, bridges, roads, air fields etc. Case histories of some major projects of tunnels, dams and reservoirs.

LABORATORY WORK :-

- 1) Megascopic study of common rock forming and ore minerals.
- 2) Megascopic study of the common igneous, sedimentary and metamorphic rocks.
- 3) Geological map reading and construction of sections from simple geological maps with engineering problems (about 8 maps)
A report/journal on above practical conducted shall be submitted by each student. Practical examination shall be based on practical and viva-voce conducted on the above syllabus.

BOOKS RECOMMENDED :-

- 1) Singh Parbin : General & Engineering Geology.
- 2) Mukharjee : A Text Book of Geology.
- 3) Tuyrell G.W. : The Principle of Petrology.
- 4) Wadia D.N. : Geology of India.
- 5) Krishan M.S. : Geology of India.
- 6) Date S. Y. & Mukharjee D.M. : Geological Maps.
- 7) Deshmukh D.N. & Mukharjee D.M. : Engineering Geological Maps.
- 8) Gupte R.B. : Geology of Engineering.
- 9) Reddy Venkata : Engineering Geology.

1PTC6/3 SC 6 COMMUNICATION SKILLS

Unit I: Word Study : synonym, antonym, meanings, matching words, adjectives, adverbs, prefix and suffix, correct forms of commonly misspelled words, understanding of the given passage.

Comprehension over an unseen passage.
Most commonly spoken sentences.

Unit II: (a) Verbal communication, its significance, types of written communication, organization of a text (titles, summaries, headings, sequencing, signaling, cueing etc.), important text factors (length of paragraph, sentences, words, clarification and text difficulty). Evaluation of written communication for its effectivity and subject content.
(b) Non-verbal communication, types of graphics and pictorial devices, body language.

Unit III: (a) Specific formats for written communication like business correspondence, formal reports, technical proposals, research papers and articles, advertising and graphics. Format for day-to-day written communication like application, notices, minutes, quotations, orders, enquiries etc.
(b) Oral communications - important objectives of interpersonal skills, (verbal and non-verbal), face to face communications, group discussion and personal interviews.
Methodology of conduction of meetings, seminars, symposia, conferences and workshops.

BOOKS RECOMMENDED :

- 1) Krishna Mohan, Meera Banerjee : Developing Communication Skills, MacMillan India Limited.
- 2) Chrissie Wright (Editor) : Handbook of Practical Communication Skills, Jaico Pub. House.
- 3) Curriculum Development Centre, TTTI WR, Bhopal : A Course in Technical English, Somaiya Pub. Pvt. Ltd.]
- 4) F. Frank Candlin : General English for Technical Students, University of London Press Ltd.

PRACTICALS :

- 1) Interactive Language Laboratory.
- 2) Group Discussion
- 3) Submission of Technical Report.
- 4) Mock Interview.

External Examination will be based on Group Discussion (5 Marks)
& Viva-Voce on other practicals (10 Marks).

**1PTC7/4SC5 CONCRETE TECHNOLOGY AND REINFORCED
CEMENT CONCRETE – I**

SECTION – A

- Unit-I** Cement: Physical properties of Portland cement, laboratory tests, special types of cements.
Aggregate: Classification of aggregate, physical properties, bulking and moisture content, specific gravity, bulk density, laboratory tests.
Properties of fresh concrete: Workability of concrete, methods of measuring workability, nominal mix, mixing, centering & formwork, placing, compaction and curing of concrete
- Unit-II** Properties of hardened concrete: Grades of concrete, properties of concrete, compressive, tensile, and shear strength, modulus of elasticity, creep, shrinkage and durability, laboratory tests on concrete.
Pozzolana and Admixtures: Plasticizer, retarders, accelerators, water proofing agents, mineral admixtures, IS code provisions.
- Unit-III** Special concrete: Light weight concrete, fibre reinforced concrete, Roller compacted concrete, self compacted concrete, high strength concrete, high performance concrete, high volume fly ash concrete.
Special concreting techniques: Guniting, grouting and shotcreting concrete, introduction & application of Ferrocement.

SECTION-B

- Unit-IV** Introduction of mix design, factors governing mix design, IS code method of mix design (IS: 10262 – 1982) and Indian Road Congress (IRC) – 44 methods.
- Unit-V** Basic elastic theory and concept of reinforced concrete, types of reinforcement.
Analysis of rectangular sections by working stress method, modes of failure, design of singly reinforced beams, one-way slabs (simply supported), lintels, and chajjas.
- Unit-VI** Analysis and design of doubly reinforced rectangular beam by working stress method section for simply supported span.
Shear and Bond: Shear stress in reinforced concrete beam section, shear reinforcement, bent up bars and stirrups, bond stress, local and average bond stress, and development length.

Students must be shown video CD, slides, transparencies, and photograph of actual structures.

PRACTICALS:

- Compulsory site visit and submission of site visit report.
- Minimum seven out of following list:
 1. Fineness of cement:
 2. Soundness of cement
 3. Consistency and setting time of the cement
 4. Compressive strength of cement
 5. Sieve analysis of aggregate.
 6. Bulking of sand (fine aggregate).
 7. Silting of sand.
 8. Workability by slump cone test.
 9. Workability by compaction factor test.
 10. Workability by flow table method.
 11. Compressive strength of concrete.
 12. Mix Design (Compulsory) by IS method.

A journal/report on experiments conducted shall be submitted by each student. Practical examination shall be viva-voce based on above practical and the syllabus of the course.

BOOKS RECOMMENDED:

1. Lea, F. M. The Chemistry of Cement and Concrete, Edward Arnold (Publishers) Ltd.
2. Neville, A. M. : Properties of Concrete, Pitman Publishing Company.
3. Neville, Brooks : Concrete Technology, ELBS
4. Gambhir, M. L. : Concrete Technology, Dhanpat Rai and Sons
5. Orchard D. F. : Concrete Technology, Applied Science Pub Ltd.
6. Shetty, M. S. : Concrete Technology, S. Chand
7. Varshney, R. S. : Concrete Technology, Oxford Pub. house.
8. IS: 456 – 2000,
9. IS: 10262 – 1982,
10. Krishna Raju : Design of Concrete Mixes, Mc – Graw Hill.
11. Shah and Kale : Reinforced Cement Concrete Design,
12. Sushil Kumar : Treasure of Reinforced Cement Concrete

1PTC8/5SC6 COMPUTERAIDED DRAFTING**PART I – AUTOCAD / FELIX CAD.**

1. INTRODUCTION & BASIC CONCEPTS –

Introduction to Auto CAD / Felix CAD, advantages over manual drawing, understanding basic concepts such as, Absolute, relative, polar & world co-ordinates, drawing units, drawing limits, extents, layers, line types, line thickness, object snapping, filters.

2. CREATING & EDITING DRAWING –

Drawing entities in Auto CAD / Felix CAD, various drawing commands, use of object snaps & filters, Editing the drawing – different editing commands, Dimensioning Commands, text commands, hatching commands.

Viewing the drawing – Different views, view ports, zooming in & out, panning,

Saving & Printing drawing in different scales.

3. CREATING THREE DIMENSIONAL OBJECTS –

Creating objects/images in three dimensions, editing in three dimensions, Using 3-D image types, creating shaded images, creating rendered images, display options, setting the camera position.

PART II – M.S.EXCEL

Working with expressions – mathematical & relational operators.

Functions – Functions for simple mathematical calculations [SUM, AVERAGE, COUNT, MAX, MIN, SQRT] Rounding, logical operators [IF, SUMIF, AND, OR, NOT], Data lookup.

PRACTICAL CONTENTS –

1. Practicing the various drawing & editing commands in Auto CAD / Felix CAD.
2. Preparing drawings of following building elements in Auto CAD / Felix CAD and taking out printouts.
 - i) Any two types of door.
 - ii) Any two types of window.

- iii) Plans of different types of stairs.
 - iv) Cross-section of dog-legged stair.
 - v) Line diagrams of different types of steel roof trusses.
 - vi) Spread footing for wall & column [plan & section]
 - vii) Bonds in brick masonry. [One brick thick wall in English bond & Flemish Bond].
3. Practising EXCEL and POWER POINT commands and any one assignment based on syllabus including printout.

"APPENDIX - A"

**FOUR YEAR B.E DEGREE COURSE IN
CIVIL ENGINEERING (PART-TIME)
YEAR : FIRST
ANNUAL PATTERN**

L: Theory Lecture
T : Tutorials
P : Practicals
D : Drawing/Design Work

Branch abbreviation
PTC : Part Time Civil Engg.

Sr. No.	Sub. Code	Equi-valent Subject Code No.	S U B J E C T	TEACHING SCHEME			E X A M I N A T I O N					S C H E M E				
				L	T	P/D	Total Perio- ds	Dura- tion of Paper (HRS)	Max. Marks Theory Papers	Max. Marks Coll- ege Asse- sment	T O T A L	Min. Pass Marks	Max. Marks Exte- rnal	Max. Marks Coll- ege Asse- L	Min. Pass Marks	
1.	1PTC1	3SC1	Mathematics-III	2	-	-	2	3	80	20	100	40	—	—	—	—
2.	1PTC2	3SC2	Strength of Materials	2	-	1	3	3	80	20	100	40	15	10	25	12
3.	1PTC3	4SC4	Surveying-I	2	-	1	3	3	80	20	100	40	25	25	50	25
4.	1PTC4	3SC4	Building Construction & Materials	2	-	1	3	3	80	20	100	40	15	10	25	12
5.	1PTC5	3SC5	Geology	1	-	1	2	2	40	10	50	20	25	25	50	25
6.	1PTC6	3SC6	Communication Skills	1	-	1	2	2	40	10	50	20	15	10	25	12
7.	1PTC7	4SC5	Concrete Technology & Reinforced Cement Concrete-I	2	-	1	3	3	80	20	100	40	25	25	50	25
8.	1PTC8	5SC6	Computer Aided Drafting	1	-	1	2	-	-	-	-	-	25	25	50	25
TOTAL				13	-	7	20				600			275		

GRAND TOTAL : 875

SANT GADGE BABA AMRAVATI UNIVERSITY AMRAVATI**SPECIAL NOTE FOR INFORMATION OF THE STUDENTS**

- (1) Notwithstanding anything to the contrary, it is notified for general information and guidance of all concerned that a person, who has passed the qualifying examination and is eligible for admission only to the corresponding next higher examination as an ex-student or an external candidate, shall be examined in accordance with the syllabus of such next higher examination in force at the time of such examination in such subjects papers or combination of papers in which students from University Departments or Colleges are to be examined by the University.
- (2) Be it known to all the students desirous to take examination/s for which this prospectus has been prescribed should, if found necessary for any other information regarding examinations etc., refer the University Ordinances Booklet the various conditions/provisions pertaining to examination as prescribed in the following Ordinances.

Ordinance No. 1	:	Enrolment of Students.
Ordinance No. 2	:	Admission of Students
Ordinance No. 4	:	National cadet corps
Ordinance No. 6	:	Examinations in General (relevent extracts)
Ordinance No. 18/2001	:	An Ordinance to provide grace marks for passing in a Head of passing and Improvement of Division (Higher Class) and getting Distinction in the subject and condonation of defficiency of marks in a subject in all the faculties prescribed by the Statute NO.18, Ordinance 2001.
Ordinance No. 9	:	Conduct of Examinations (relevent extracts)
Ordinance No. 10	:	Providing for Exemptions and Compartments
Ordinance No. 19	:	Admission of Candidates to Degrees.
Ordinance No. 109	:	Recording of a change of name of a University student in the records of the University.

Ordinance No. 138	:	For improvement of Division/Grade.
Ordinance No.19/2001	:	An Ordinance for Central Assessment Programme, Scheme of Evaluation and Moderation of answerbooks and preparation of results of the examinations, conducted by the University, Ordinance 2001.

Dineshkumar Joshi
Registrar
Sant Gadge Baba Amravati University

PATTERN OF QUESTION PAPER ON THE UNIT SYSTEM

The pattern of question paper as per unit system will be broadly based on the following pattern.

- (1) Syllabus has been divided into units equal to the number of question to be answered in the paper. On each unit there will be a question either a long answer type or a short answer type.
- (2) Number of question will be in accordance with the unit prescribed in the syllabi for each paper i.e. there will be one question on each unit.
- (3) For every question long answer type or short answer type there will be an alternative choice from the same unit. However, there will be no internal choice in a question.
- (4) Division of marks between long answer and short answer type question will be in the ratio of 40 and 60.
- (5) Each short answer type question shall Contain 4 to 8 short sub question with no internal choice.

SANT GADGE BABA AMRAVATI UNIVERSITY
REGULATION NO. 15 OF 2004

Examinations leading to the Degree of Bachelor of Engineering (Civil) (Four Year Part Time Degree Course) Regulation, 2004.

Whereas it is expedient to frame the Regulation in respect of Examinations leading to the Degree of Bachelor of Engineering (Civil) (Four Year Part Time Degree Course) Regulation, for the purposes hereinafter, appearing, the Management Council is hereby pleased to make the following Regulation.

1. This Regulation may be called “Examinations leading to the Degree of Bachelor of Engineering (Civil) (Four Year Part Time Degree Course) Regulation, 2004”.
2. This Regulation shall come into force w.e.f. the date of its approval by the Management Council.
3. Appendices A, B, C, & D in respect of Bachelor of Engineering (Civil) (Four Year - Part Time Degree Course) Regulation, 2004, shall be as appended with this Regulation.
