PART - B

# 3 SYLLABI AND SCHEDULE OF CET 2014

## I. Syllabi and Schedule of CET 2014 is detailed below:

### 1. ENGINEERING & B. ARCH. PROGRAMMES

#### A: B.TECH PROGRAMMES

| CET Code | Programme | Subjects of Entrance Test* | Date, Day & Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| 128 | • Lateral Entry to B.Tech. (Engineering/ Technology) programmes (2nd yr/3rd semester) for Diploma Holders | (i) Applied Mechanics-(25%)<br>(ii) Applied Mathematics-(25%)<br>(iii) Fundamentals of Electrical Engineering and Electronics-(25%)<br>(iv) Fundamentals of Mechanical Engineering & Computer Awareness-(25%). | 17.05.2014 (Saturday) 2:00 - 4:30 p.m. | 27.05.2014 (Tuesday) |
| 129 | • Lateral Entry in B.Tech. for B.Sc. Graduates (2nd yr/3rd semester) | (i) B.Sc Level Mathematics- (40%)<br>(ii) English (10+2 level)-(20%)<br>(iii) Analytical & Logical Reasoning - (20%)<br>(iv) Scientific Aptitude - (20%) | 17.05.2014 (Saturday) 2:00 - 4:30 p.m | 27.05.2014 (Tuesday) |
| 130 | • B.Tech./M.Tech. (Dual Degree) (BioTechnology) | (i) Physics-(25%),<br>(ii) Chemistry-(25%) and<br>(iii) Biology (Botany and Zoology) or Biotechnology -(50%) | 17.05.2014 (Saturday) 2:00-4:30 p.m. | 27.05.2014 (Tuesday) |
| 131 | • B.Tech. / M.Tech. (Dual Degree) Chemical Engg<br>• B.Tech. / M.Tech. (Dual Degree) Bio-chemical Engg<br>• B.Tech. / M.Tech. (Dual Degree) Information Technology<br>• B.Tech. / M.Tech. (Dual Degree) Computer Science & Engg<br>• B.Tech. / M.Tech. (Dual Degree) Electornics & Communication Engg,<br>• B.Tech. (Information Technology, Computer Science & Engg, Electronics & Communication Engg, Mechanical & Automation Engg, Power Engg, Electrical & Electronics Engg, Civil Engg, Environment Engg, Tool Engg, and Instrumentation & Control Engg, Electrical Engg, Mechanical Engg, Mechatronics) | (i) Physics-(33.33%),<br>(ii) Chemistry-(33.33%) and<br>(iii) Mathematics-(33.33%) | 18.05.2014 (Sunday) 2:00-4:30 p.m. | 27.05.2014 (Tuesday) |

** Syllabi for CET Code 128, for the prescribed subjects shall be of Diploma level. Syllabi for CET Code 130 and 131, for the subjects of Physics, Chemistry, Mathematics, Biology (Botany & Zoology) or Biotechnology shall be as specified by CBSE for class 11th and 12th under the 10+2 Scheme for the students passing class 12th in the year 2014.*

**NOTE :- On account of upcoming Lok Sabha elections, the dates of CET may change depending on instructions of statutory authorities. The students are, therefore, advised to regularly check the University website for latest updates.**

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## B: M.TECH PROGRAMMES

| CET Code | Programme | Syllabus for CET (For Non GATE Candidates) | Date, Day & time of CET-2014 | Date of Declaration of CET Result |
|---|---|---|---|---|
| 139 | • M.Tech. (Computer Science & Engg)<br>• M.Tech. (Information Tech)<br>• M.Tech. (Information Security)<br>• M.Tech. (Information Tech) Weekend<br>• M.Tech. (Computer Science & Engg) Weekend | As per Syllabus of GATE-2014 - Computer Science and Information Technology | 24.05.2014 (Saturday) 10:30-01:00pm | 03.06.2014 (Tuesday) |
| 140 | • M.Tech. (Digital Communication)<br>• M.Tech. (ECE)<br>• M.Tech. (Signal Processing)<br>• M.Tech. (RF & Microwave Engg)<br>• M.Tech. (VLSI Design)<br>• M.Tech. (ECE- Weekend) | As per Syllabus of GATE 2014 - Electronics & Communication Engineering | 25.05.2014 (Sunday) 10:30-01:00pm | 03.06.2014 (Tuesday) |
| 147 | • M.Tech. (Tool Engg) | As per Syllabus of GATE 2014 - Production & Industrial Engineering (PI) | 04.05.2014 (Sunday) 10:30-01:00 pm | 13.05.2014 (Tuesday) |
| 148 | • M.Tech. (Food ProcessingTechnology) | May kindly see the para at page 28 | 04.05.2014 (Sunday) 10:30-01:00 pm | 13.05.2014 (Tuesday) |
| 149 | • M.Tech. (Nano ScienceTechnology) | May kindly see the para at page 29 | 27.04.2014 (Sunday) 10:30-01:00 pm | 06.05.2014 (Tuesday) |
| 150 | • M.Tech. (Engg Physics ) | May kindly see the para at page 32 | 04.05.2014 (Sunday) 10:30-01:00 pm | 13.05.2014 (Tuesday) |
| 152 | • M.Tech. (Chemical Engineering) | As per Syllabus of GATE-2014 of Chemical Engineering | 24.05.2014 (Saturday) 10:30-1:00 pm | 03.06.2014 (Tuesday) |

## For GATE SCHOLARS

| CET Code | Programme | Last date of application upto 4 PM | Date of declaration of tentative Merit List | Last date of submission of representation( if any) by candidates (upto 4 pm) | Date of declaration final Merit List |
|---|---|---|---|---|---|
| **139** | **M.Tech. (IT/CSE/IS)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |
| **140** | **M.Tech. (ECE/DC/ VLSI/RF&M/SP/..)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |
| **147** | **M.Tech. (Tool Engg)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |
| **148** | **M.Tech. (FPT)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |
| **149** | **M.Tech. (NST)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |
| **150** | **M.Tech. (EP)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |
| **152** | **M.Tech. (CE)** | **10.04.2014 (Thursday)** | **03.06.2014 (Tuesday)** | **06.06.2014 (Friday)** | **10.06.2014 (Tuesday)** |

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## C. B.ARCH PROGRAMME where NO CET will be held. (CET Code 100)

1. Date for submission of Application Form Online- **2nd June 2014 (Monday) to 3rd July 2014 (Thursday).**
2. Applicants will have to fill their result of qualifying examination and NATA Score.
3. Display of Tentative Merit List on University's Website (www.ipu.ac.in) by Controller of Examinations (Operations) **16th July 2014 (Wednesday).**
4. Last Date of submitting Representation **21st July 2014 (Monday) upto 4 p.m.**
5. Display of Final Merit List (after considering representation) **23rd July 2014 (Wednesday).**

### Syllabus for CET for M.Tech (Food Processing Technology) Programme CET Code-152

**(i) FOOD MICROBIOLOGY**

Characteristics of microorganisms: Morphology, structure and detection of bacteria, yeast and mold in food, Spores and vegetative cells; Microbial growth in food: Intrinsic and extrinsic factors, Growth and death kinetics, serial dilution method for quantification; Food spoilage: Contributing factors, Spoilage bacteria, Microbial spoilage of milk and milk products, meat and meat PRODUCTS; FOODBORNE disease: Toxins produced by Staphylococcus, Clostridium and Aspergillus; Bacterial pathogens: Salmonella, Bacillus, Listeria, Escherichia coli, Shigella, Campylobacter; Fermented food: Buttermilk, yoghurt, cheese, sausage, alcoholic beverage, vinegar, sauerkraut and soya sauce.

**(ii) MOLECULES AND THEIR INTERACTION RELAVENT TO BIOLOGY**

Structure of atoms, molecules and chemical bonds. Composition, structure and function of biomolecules (carbohydrates, lipids, proteins, nucleic acids and vitamins). Stablizing interactions (Van der Waals, electrostatic, hydrogen bonding, hydrophobic interaction, etc.).Principles of biophysical chemistry (pH, buffer, reaction kinetics, thermodynamics, colligative properties). Bioenergetics, glycolysis, oxidative phosphorylation, coupled reaction, group transfer, biological energy transducers. Principles of catalysis, enzymes and enzyme kinetics, enzyme regulation, mechanism of enzyme catalysis, isozymes Conformation of proteins (Ramachandran plot, secondary structure, domains, motif and folds). Conformation of nucleic acids (helix (A, B, Z), t-RNA, micro-RNA). Stability of proteins and nucleic acids. Metabolism of carbohydrates, lipids, amino acids nucleotides and vitamins.

**(iii) CELLULAR ORGANIZATION**

Membrane structure and function (Structure of model membrane, lipid bilayer and membrane protein diffusion, osmosis, ion channels, active transport, membrane pumps, mechanism of sorting and regulation of intracellular transport, electrical properties of membranes). Structural organization and function of intracellular organelles (Cell wall, nucleus, mitochondria, Golgi bodies, lysosomes, endoplasmic reticulum, peroxisomes, plastids, vacuoles, chloroplast, structure & function of cytoskeleton and its role in motility). Organization of genes and chromosomes (Operon, unique and repetitive DNA, interrupted genes, gene families, structure of chromatin and chromosomes, heterochromatin, euchromatin, transposons). Cell division and cell cycle (Mitosis and meiosis, their regulation, steps in cell cycle, regulation and control of cell cycle). Microbial Physiology (Growth yield and characteristics, strategies of cell division, stress response).

**(iv) SYSTEM PHYSIOLOGY - PLANT**

Photosynthesis - Light harvesting complexes; mechanisms of electron transport; photoprotective mechanisms; CO2 fixation-C3, C4 and CAM pathways. Respiration and photorespiration – Citric acid cycle; plant mitochondrial electron transport and ATP synthesis; alternate oxidase; photorespiratory pathway. Nitrogen metabolism - Nitrate and ammonium assimilation; amino acid biosynthesis. Plant hormones – Biosynthesis, storage, breakdown and transport; physiological effects and mechanisms of action. Sensory photobiology - Structure, function and mechanisms of action of phytochromes, cryptochromes and phototropins; stomatal movement; photoperiodism and biological clocks. Solute transport and photoassimilate translocation – uptake, transport and translocation of water, ions, solutes and macromolecules from soil, through cells, across membranes, through xylem and phloem; transpiration; mechanisms of loading and unloading of photoassimilates. Secondary metabolites - Biosynthesis of terpenes, phenols and nitrogenous compounds and their roles. Stress physiology – Responses of plants to biotic (pathogen and insects) and abiotic (water, temperature and salt) stresses.

**(v) FOOD CHEMISTRY AND NUTRITION**

Carbohydrates: Structure and functional properties of mono- oligo-polysaccharides including starch, cellulose, pectic substances and dietary fibre; Proteins: Classification and structure of proteins in food; Lipids: Classification and structure of lipids, Rancidity of fats, Polymerization and polymorphism; Pigments: Carotenoids, chlorophylls, anthocyanins, tannins and myoglobin; Food flavours: Terpenes, esters, ketones and quinones; Enzymes: Specificity, Kinetics and inhibition, Coenzymes, Enzymatic and non-enzymatic browning; Nutrition: Balanced diet, Essential amino acids and fatty acids, PER, Water soluble and fat soluble vitamins, Role of minerals in nutrition, Antinutrients, Nutrition deficiency diseases.

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## Syllabus for CET for M.Tech (Nano Science and Technology) Programme CET Code-149

Answer any three section, Physics & Chemistry sections are compulsory

1. Physics – 33.33% 2. Chemistry – 33.33% 3. Mathematics – 33.33% Or Biology – 33.33%

**PHYSICS**

Interference: Young's double slit experiment, Fresnel's biprism, Thin films, Newton's rings, Michelson's interferometer, Fabry Perot interferometer.

Diffraction: Fresnel Diffraction: Zone plate, circular aperture, opaque circular disc, narrow slit, Fraunhofer diffraction: Single slit, double slit, diffraction grating, resolving power and dispersive power.

Polarization: Types of polarization, Brewsters law, Malu's Law, Nicol prism, double refraction, quarter-wave and half-wave plates, optical activity, specific rotation.

Lasers: Introduction, coherence, population inversion, basic principle and operation of a laser, Einstein A and B coefficients, type of lasers, He-Ne laser, Ruby laser, semiconductor laser, holography-theory and applications

Fibre Optics: Types of optical fibres and their characteristics, (Attenuation and dispersion step index and graded index fibres, principle of fibre optic communication-total internal reflection, numerical aperture, fibre optical communication network (qualitative)-its advantages.

Theory of Relativity: Galenlian transformations, the postulates of the special theory of relativity, Lorentz transformations, time dilation, length contraction, velocity addition, mass energy equivalence.

Thermodynamics: The first law and other basic concepts: dimensions, units, work, heat, energy, the first law of thermodynamics, enthalpy, equilibrium, phase rule, heat capacity, PVT behavior of pure substances, ideal gas, real gas, heat effects.

The second law and Entropy: statements, heat engines, Kelvin-Planck and Clausious statements and their equality, reversible and irreversible processes, Carnot cycle, thermodynamic temperature scale, entropy,ent ropy calculations, T-S diagrams, properties of pure substances, use of steam tables and Mollier diagram.

Refrigeration and liquefaction: the Carnot refrigerator, the vapor–compression cycle, comparison of refrigeration cycles, liquefaction processes, heat pump. Rankine power cycle.

Quantum Mechanics: Wave particle duality, deBroglie waves, evidences for the wave nature of matter – the experiment of Davisson and Germer, electron diffraction, physical interpretation of the wave function and its properties, the wave packet, the uncertainty principle.

The Schrodinger wave equation (1 – dimensional), Eigen values and Eigen functions, expectation values, simple Eigen value problems – solutions of the Schrodinger's equations for the free particle, the infinite well, the finite well, tunneling effect, simple harmonic oscillator (qualitative), zero point energy.

Quantum Statistics: The statistical distributions, Maxwell Boltzmann, Bose-Einstein and Fermi-Dirac statistics, their comparisons, Fermions and Bosons. Applications: Molecular speed and energies in an ideal gas. The Black-body spectrum and failure of classical statistics to give the correct explanation - the application of Bose-Einstein statistics to the Black-body radiation spectrum, Fermi-Dirac distribution to free electron theory, electron specific heats, Fermi energy and average energy - its significance.

Band theory of solids: Origin of energy bands in solids, Kronig-Penny model, Brillouin zones, effective mass, Metals, semiconductors and insulators and their energy band structure. Extrinsic and intrinsic semiconductors, p-n junction diodes- its characteristics, tunnel diode, zener diode, photodiode, LED, photovoltaic cell, Hall effect in semiconductors, transistor characteristics (common base, common emitter, common collector).

Digital techniques and their applications (registers, counters, comparators and similar circuits) A/D and D/A converters

Superconductivity: ZFC and FC, Meissner effect, Type I and II superconductors, the Josephson effect, flux quantization, Cooper pairs, BCS theory, properties and applications of superconductors.

X-rays: production and properties, crystalline and amorphous solids, Bragg's law, applications.

Electricity and magnetism: Electric fields, Gauss' Law, its integral and differential form, applications. Lorentz force, fields due to moving charges, the magnetic field, Ampere's law, motion of a charged particle in an electric and magnetic field, magnetic and electrostatic focussing, Hall effect, determination of e/m by cathode ray tube, positive rays, Thomson's parabolic method, Isotopes, Mass spectrographs (Aston and Bainbridge), Electron microscope, Cyclotron and Betatron.

Overview of Electro – Magnetism: Maxwell's Equations: The equation of continuity for Time – Varying fields, Inconsistency in ampere's law Maxwell's Equations, conditions at a Boundary Surface, Introduction to EM wave.

Nuclear Physics: Introduction of nucleus, Nucleus radius and density, Nuclear forces, Nuclear reactions, Cross section, Q-value and threshold energy of nuclear reactions, Basic Idea for Nuclear Reactor, Breeder reactor, The Geiger-Mullar (G.M.) Counter, Introduction of Accelerators and its Applications.

Numerical techniques: Interpolations, differentiation, integration; Nonlinear equations, the bisection methods, Newton's method, root finding; Differential equations, Euler's method, the Runge-Kutta method; Matrices-inverting, finding eigenvalues and eigenfunctions.

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**MATHEMATICS**

Linear Independence and dependence of vectors, Systems of linear equations – consistency and inconsistency, rank of a matrix, Gauss elimination method, , Eigen values and Eigen vectors.

Successive differentiation, Leibnitz's theorem, Lagrange's Theorem, Cauchy Mean value theorems, Taylor's theorem, Asymptotes, Curvature, Reduction Formulae of trigonometric functions, Properties of definite Integral, Applications to length, area, volume, surface of revolution. Partial derivatives, Method of Lagrange's multipliers. Jacobeans of coordinates transformations. Double and Triple integrals.

Method of separation of variables, homogeneous, linear equations, exactness and integrating factors, linear equations of higher order with constant coefficients, Operator method to find particular integral.

Scalar and vector fields, Directional Derivative, Gradient of scalar field, divergence and curl of a vector field. Green's theorem, Divergence theorem and Stoke's theorem.

Probability: Definition of Sample Space, Event, Event Space, Conditional Probability, Additive and Multiplicative law of Probability, Baye's Law theorem, Application based on these results.

**CHEMISTRY**

Gaseous State: Kinetic theory, molecular velocity, Probable distribution of velocities, mean free path, collision frequency. Distribution of energies of molecules translational, rotational & vibrational, Law of equipartitions of energies, Equation of State of a real gas. Critical phenomenon & principle of corresponding states.

The phase rule: Derivation of phase rule, significance of various terms involved in the definition of phase rule. Phase diagrams of one component systems (Water, Sulphur and CO2). Two component system: Eutectic, congruent and incongruent systems with examples:

Partial miscible liquids: Lower and upper consolute point.

Chemical thermodynamics:

Intensive and extensive variables; state and path functions; isolated, closed and open systems; zeroth law of thermodynamics.

First law: Concept of heat, q, work, w, internal energy U and statement of first law; enthalpy, H, relation between heat capacities, calculations of q, w, U and H for reversible, irreversible and free expansion of gases (ideal and van der Waals) under isothermal and adiabatic conditions.

Thermochemistry: Heats of reactions: standard states; enthalpy of formation of molecules and ions and enthalpy of combustion and its applications; calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data, effect of temperature (Kirchoff's equations) and pressure on enthalpy of reactions. Adiabatic flame temperature, explosion temperature.

Second Law: Concept of entropy; thermodynamic scale of temperature, statement of the second law of thermodynamics; molecular and statistical interpretation of entropy. Calculation of entropy change for reversible and irreversible processes.

Third Law: Statement of third law, concept of residual entropy, calculation of absolute entropy of molecules.

Free Energy Functions: Gibbs and Helmholtz energy; variation of S, G, A with T, V, P; Free energy change and spontaneity. Relation between Joule-Thomson coefficient and other thermodynamic parameters; inversion temperature; Gibbs-Helmholtz equation; Maxwell relations; thermodynamic equation of state.

Chemical Kinetics: Rate, mechanism, steady state concept, Kinetics of complex reactions, concept of energy barrier/energy of activation. Theories of reaction rates, Lindemann theory of unimolecular reaction and reactions in flow system.

Electrochemistry: Concept of electrolysis, Electrical current in ionic solutions. Kohlrausch's law and migration of ions. Transference number. Hittroff and moving boundary methods. Applications of conductance measurements.

Strong electrolytes: Onsager equation: Activity and activity coefficients of strong electrolyte.

Surface Chemistry: Adsorption, adsorbate and adsorbents. Types of adsorption. Freundlich adsorption isotherm, Langmuir adsorption isotherms. B.C.T. Isotherm: Surface area of the adsorbent. Changes in entropy, enthalpy and free energy on adsorption. Gibbs adsorption equation.

Catalysis: Types of catalysis, homogenous/heterogeneous, enzyme catalysis, acid/base catalysis and their kinetics. Mechanism of heterogeneous catalysis. Kinetics of surface reactions: unimolecular and bimolecular. pH-dependence of rate constants of catalysed reactions. Autocatalysis

Colloids: Colloidal state, classification of colloidal solution, true solution, colloidal solution and suspensions, preparation of sol, Purification of colloidal solutions. viscosity & plasticity General and optical properites, stability f colloids, coagulation of lyphobic sols, electrical properties of sols, kinetic properties of colloids:- Brownion movement, size of colloidal particle, emulsions, gels, colloidal electrolytes and applications of colloids. Emulsions, emulsifiers, theory of emulsification

Polymers: Basic concepts & Terminology, such as monomers, Polymers, Functionality, Thermoplastics, Thermosets Linear, Branched, cross linked polymers etc. different definitions of molecular weight viz., Mw, Mn, Mv and then determinations. Industrial applications of polymers, Addition, condensation and Ionic polymerization's, solutions of polymers, good solvents, & bad solvent, solubility parameter, solutions viscosity and determination of intrinsic viscosity.

Atomic Structure: Introduction to wave mechanics, the Schrodinger equation as applied to hydrogen atom, origin of quantum numbers, Long form of periodic table on the basis of Electronic configuration s, p, d, f block elements periodic trends, Ionisation potential, atomic and ionic radii electron affinity & electro-negativity.

Chemical Bonding: Ionic bond- energy changes, lattice energy Born Haber Cycle, Covalent bond-energy changes, Potential energy curve for H2 Molecule, characteristics of covalent compound. Co-ordinate bond - Werner's Theory,


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effective atomic numbers, isomerism in coordinate compounds. Hydrogen bonding. Concept of hybridisation and resonance, Valance Shell Electron Repulsion theory (VSEPR). Discussion of structures of H2O, NH3, SiF4. Molecular orbital theory, Linear combination of atomic orbitals (LCAO) method. Structure of simple homo nuclear diatomic molecule like H2, N2, O2, F2.

Acids & Bases: Basics of acidities and basicities, electrolytic dissociation, concept of strengths of acids and bases, ionization of water, concept of pH and its scale, Buffer solutions, Buffer solution of weak acid and its salt, calculation of pH of buffer solution, Henderson equation, acid-base indicators and theory of indicators.

Classification of Organic compounds IUPAC nomenclature, Structural isomerism, Cis-trans isomerism, shapes and molecular orbital structures of compounds containing C,N and O conformation of alkanes, structures of dienes, pyridine, pyrrole, aromatic compounds, delocalisation, concept of aromaticity, stability of cycloalkanes, resonance concept, inductive and mesomeric effects, directive effects, activating and deactivating groups, hydrogen-bonding, organic reagents and reaction intermediates.

Chemistry of hydrocarbons House synthesis halogenation of alkanes, free radical mechanism, cracking effect of structure on Physical properties of compounds, alkenes catalytic hydrogenation, dehydration of alcohols, dehydrogenation, Saytzeff rule, electrophilic addition reactions, peroxide effect, mechanism of allylic substitution, acidity of 1-alkynes, conjugated dienes,1,2 and 1,4 additions, free radical and ionic mechanisms of addition polymerisation reactions. Ring opening reactions of cyclopropane and cyclobutane, chemistry of benzene and alkyl benzenes. Aromatic electrophillic substitution reaction, Friedel-Crafts reaction.

Chemistry of functional groups Alkyl and aryl halides, nucleophilic substitution, synthetic utility of Grignard reagents and alkallithiums, Mechanism of Gringnartion of alcohols, Benzyl alcohol, acidity of phenols, Epoxy compounds, Anisole nucleophilic addition, Benzaldehyde, acetophene, benzophenone, aldol condensation, acidity of acids, alkyl and aryl amines.

**BIOLOGY**

Origin of Life: History of earth, theories of origin of life nature of the earliest organism.

Varieties of life: Classification, Five kingdoms, viruses (TMV, HIV, Bacteriophage), Prokaryote (Bacteria-cell structure, nutrition, reproduction), Protista, Fungi, Plantae and Animalia.

Chemicals of life: (Biomolecules)- Carbohydrates lipids, amino acids, proteins, nucleic acids, and identification of biomolecules in tissues.

Cell: The cell concept, structure of prokaryotic and eukaryotic cells, plant cells and animal cells, cell membrances, cell organelles and their function. Structure and use of compound microscope.

Histology: Maritimes (apical, intercalary, lateral) and their function; simple tissue (parenchyma, collenchymas, sclerenchyma); Complex tissue (xylem and phloem); Tissue systems (epidermal, ground, vascular); primary body and growth (root, stem, leaf); Secondary growth. Animal Epithelial tissue, connective tissue, muscle tissue and nervous tissue and their function in body.

Nutrition: Autotrophic (Photosynthesis) Pigment systems, Chloroplast, light absorption by chlorophyll and transfer of energy, two pigment systems, photosynthetic unit, phosphorylation and electron transport system, Calvin-Benson Cycle (C3), Hatch Slack Pathway (C4), Crassulacan Acid Metabolism (CAM), factors affecting photosynthesis; Mineral Nutrition in plants. Heterotrophic - Forms of heterotrophic nutrition, elementary canal in humans, nervous and hormonal control of digestive systems, fate of absorbed food materials; Nutrition in humans, Reference values.

Energy Utilization: (Respiration) - Structure of mitochondria, cellular respiration, relationship of carbohydrate metabolism to other compounds, Glycolysis, fermentation, formation of acetyl co-A, Kreb cycle, Electron Transport System and Oxidative Phosphorylation, ATP, factors affecting respiration.

Transport: Plant water relationships, properties of water, diffusion, osmosis, imbibition, movement of water in flowering plants, uptake of water by roots, the ascent of water in xylem, apoplast symplast theory, Transpiration-structure of leaf and stomata in plants opening and closing mechanism of stomata factors affecting transpiration, significance of transpiration General characteristics of blood vascular system, development of blood systems in animals, Composition of blood, circulation in blood vessels, formation of tissue fluids, the heart, functions of mammalian blood, the immune system.

| Topics | |
|---|---|
| Origin of Life | History of earth, theories of origin of life, nature of earliest organism. |
| Diversity of Life | Basic rules of classification and nomenclature, Classification-two kingdom, five kingdom – brief introduction to kingdoms, three domain introduction and structure of viriods, prions and virus (HIV, TMV, Bacteriophage), Structure and reproduction of bacteria and their economic importance |
| Chemical basis of life | Biomolecules-carbohydrates, proteins, fats and lipids, nucleic acids (DNA and RNA) |
| Enzymes | Definition, Properties, Types, Mechanism of action, factors affecting kinetics and their industrial applications |
| Cell-Structure and function | Prokaryotic and eukaryotic cells, plant and animal cells, structure and function of cell membrane, nucleus, chloroplast, mitochondria, golgi apparatus, endoplasmic reticulum |

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|---|---|
| **Histology** | |
| Plant | Meristem (apical, intercalary and lateral), simple tissue (parenchyma, collenchymas, and sclerenchyma), complex tissue (xylem and phloem) – structure and function; tissue systems (epidermal, ground and vascular); primary body and growth (root, stem and leaf), secondary growth. |
| Animals | Epithelial, connective, muscular and nervous tissue – structure and function. |
| Economic Biology | Food – Cereals (wheat, rice, maize), Beverages (tea, coffee, cocoa), sugarcane, medicinal plants (Taxus, Catharanthus, Salix, Azadirachta); and rubber (Hevea) Apiculture, Sericulture, Vermiculture and Leather |

### Syllabus for CET for M.Tech (Engineering Physics) Programme CET Code-150

1. **Physics – 60%** 2. **Mathematics – 40%**

**PHYSICS**

Interference: Young's double slit experiment, Fresnel's biprism, Thin films, Newton's rings, Michelson's interferometer, Fabry Perot interferometer.

Diffraction: Fresnel Diffraction: Zone plate, circular aperture, opaque circular disc, narrow slit, Fraunhofer diffraction: Single slit, double slit, diffraction grating, resolving power and dispersive power.

Polarization: Types of polarization, Brewsters law, Malu's Law, Nicol prism, double refraction, quarter-wave and half-wave plates, optical activity, specific rotation.

Lasers: Introduction, coherence, population inversion, basic principle and operation of a laser, Einstein A and B coefficients, type of lasers, He-Ne laser, Ruby laser, semiconductor laser, holography-theory and applications

Fibre Optics: Types of optical fibres and their characteristics, (Attenuation and dispersion step index and graded index fibres, principle of fibre optic communication-total internal reflection, numerical aperture, fibre optical communication network (qualitative)-its advantages.

Theory of Relativity: Galenlian transformations, the postulates of the special theory of relativity, Lorentz transformations, time dilation, length contraction, velocity addition, mass energy equivalence.

Thermodynamics: The first law and other basic concepts: dimensions, units, work, heat, energy, the first law of thermodynamics, enthalpy, equilibrium, phase rule, heat capacity, PVT behavior of pure substances, ideal gas, real gas, heat effects.

The second law and Entropy: statements, heat engines, Kelvin-Planck and Clausious statements and their equality, reversible and irreversible processes, Carnot cycle, thermodynamic temperature scale, entropy,ent ropy calculations, T-S diagrams, properties of pure substances, use of steam tables and Mollier diagram.

Refrigeration and liquefaction: the Carnot refrigerator, the vapor–compression cycle, comparison of refrigeration cycles, liquefaction processes, heat pump. Rankine power cycle.

Quantum Mechanics: Wave particle duality, deBroglie waves, evidences for the wave nature of matter – the experiment of Davisson and Germer, electron diffraction, physical interpretation of the wave function and its properties, the wave packet, the uncertainty principle.

The Schrodinger wave equation (1 – dimensional), Eigen values and Eigen functions, expectation values, simple Eigen value problems – solutions of the Schrodinger's equations for the free particle, the infinite well, the finite well, tunneling effect, simple harmonic oscillator (qualitative), zero point energy.

Quantum Statistics: The statistical distributions, Maxwell Boltzmann, Bose-Einstein and Fermi-Dirac statistics, their comparisons, Fermions and Bosons. Applications: Molecular speed and energies in an ideal gas. The Black-body spectrum and failure of classical statistics to give the correct explanation - the application of Bose-Einstein statistics to the Black-body radiation spectrum, Fermi-Dirac distribution to free electron theory, electron specific heats, Fermi energy and average energy - its significance.

Band theory of solids: Origin of energy bands in solids, Kronig-Penny model, Brillouin zones, effective mass, Metals, semiconductors and insulators and their energy band structure. Extrinsic and intrinsic semiconductors, p-n junction diodes- its characteristics, tunnel diode, zener diode, photodiode, LED, photovoltaic cell, Hall effect in semiconductors, transistor characteristics (common base, common emitter, common collector).

Digital techniques and their applications (registers, counters, comparators and similar circuits) A/D and D/A converters

Superconductivity: ZFC and FC, Meissner effect, Type I and II superconductors, the Josephson effect, flux quantization, Cooper pairs, BCS theory, properties and applications of superconductors.

X-rays: production and properties, crystalline and amorphous solids, Bragg's law, applications.

Electricity and magnetism: Electric fields, Gauss' Law, its integral and differential form, applications. Lorentz force, fields due to moving charges, the magnetic field, Ampere's law, motion of a charged particle in an electric and magnetic field, magnetic and electrostatic focussing, Hall effect, determination of e/m by cathode ray tube, positive


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rays, Thomson's parabolic method, Isotopes, Mass spectrographs (Aston and Bainbridge), Electron microscope, Cyclotron and Betatron.

Overview of Electro – Magnetism: Maxwell's Equations: The equation of continuity for Time – Varying fields, Inconsistency in ampere's law Maxwell's Equations, conditions at a Boundary Surface, Introduction to EM wave.

Nuclear Physics: Introduction of nucleus, Nucleus radius and density, Nuclear forces, Nuclear reactions, Cross section, Q-value and threshold energy of nuclear reactions, Basic Idea for Nuclear Reactor, Breeder reactor, The Geiger-Mullar (G.M.) Counter, Introduction of Accelerators and its Applications.

Numerical techniques: Interpolations, differentiation, integration; Nonlinear equations, the bisection methods, Newton's method, root finding; Differential equations, Euler's method, the Runge-Kutta method; Matrices-inverting, finding eigenvalues and eigenfunctions.

**MATHEMATICS**

Linear Independence and dependence of vectors, Systems of linear equations – consistency and inconsistency, rank of a matrix, Gauss elimination method, , Eigen values and Eigen vectors.

Successive differentiation, Leibnitz's theorem, Lagrange's Theorem, Cauchy Mean value theorems, Taylor's theorem, Asymptotes, Curvature, Reduction Formulae of trigonometric functions, Properties of definite Integral, Applications to length, area, volume, surface of revolution. Partial derivatives, Method of Lagrange's multipliers. Jacobeans of coordinates transformations. Double and Triple integrals.

Method of separation of variables, homogeneous, linear equations, exactness and integrating factors, linear equations of higher order with constant coefficients, Operator method to find particular integral.

Scalar and vector fields, Directional Derivative, Gradient of scalar field, divergence and curl of a vector field. Green's theorem, Divergence theorem and Stoke's theorem.

Probability: Definition of Sample Space, Event, Event Space, Conditional Probability, Additive and Multiplicative law of Probability, Baye's Law theorem, Application based on these results.

# PART - B

## 2. PROFESSIONAL PROGRAMMES

| CET Code | Programme | Subjects of Entrance Test* | Date, Day & Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| 101 | • MBA<br>• MBA (Financial Markets) | (i) English Language & Comprehension-(30%),<br>(ii) Numerical Ability-(30%),<br>(iii) General Awareness-(10%),<br>(iv) Reasoning ability including data interpretation-(30%) | 18.05.2014 (Sunday) 10:30-1:00 p.m | 27.05.2014 (Tuesday) |
| 105 | • Master of Computer Applications<br>• MCA (Software Engineering) | (i) Mathematics - (25%),<br>(ii) English Language & Comprehension-(25%),<br>(iii) Computer Awareness-(25%),<br>(iv) Logical and Analytical Ability-(25%) | 27.04.2014 (Sunday) 10.30-1.00 p.m | 06.05.2014 (Tuesday) |
| 106 | • Master of Mass Communication | (a) Communication Skills -English (30%)<br>(b) Current Affairs (20%)<br>(c) General Knowledge (20%)<br>(d) Mass Media (Print/TV/Radio/Film/ New Media) (30%) | 03.05.2014 (Saturday) 10.30-1.00 p.m. | 13.05.2014 (Tuesday) |
| 107 | • MPT (Neurology)<br>• MPT (Musculoskeletal)<br>• MPT (Sports)<br>• MPT (Cardiopulmonary) | (i) Anatomy<br>(ii) Biomechanics<br>(iii) Exercise<br>(iv) Electrotherapy<br>(v) Physiotherapy-Rehabilitation in Clinical Sciences:<br>(a) Musculoskeletal<br>(b) Neurology | 03.05.2014 (Saturday) 10.30-1.00 p.m. | 13.05.2014 (Tuesday) |
| 108 | • MOT (Neurology) | (i) Anatomy<br>(ii) Biomechanics<br>(iii) Exercise<br>(iv) Occupational Therapy in Mental Health<br>(v) Occupational Therapy in Rehabilitation of Neurological conditions<br>(vi) Occupational Therapy in Physical Dysfunction | 03.05.2014 (Saturday) 10.30-1.00 p.m. | 13.05.2014 (Tuesday) |
| 109 | • Master of Prosthetics and Orthotics (MPO) | (i) Anatomy (ii) Biomechanics<br>(iii) Electrotherapy<br>(iv) Applied Mechanics and strength of materials<br>(v) Prosthetics (vi) Orthotics | 03.05.2014 (Saturday) 10.30-1.00 p.m. | 13.05.2014 (Tuesday) |
| 110 | • MPH (FE) | Section I: General Aptitude<br>Section II: Allied Health Sciences (Biotechnology, Biochemistry, Microbiology and Entomology)<br>Section III: Public Health | 03.05.2014 (Saturday) 10.30-1.00 p.m. | 13.05.2014 (Tuesday) |
| 111 | • M.Sc (Environment Management) | (i) Chemistry-(25%),<br>(ii) Environment Science-(25%),<br>(iii) Either Botany and Zoology-(50%), or Physics and Mathematics-(50%). | 03.05.2014 (Saturday) 2.00-4.30 p.m. | 13.05.2014 (Tuesday) |
| 112 | • LLM | (i) General Knowledge (including English Language)- (20%)<br>(ii) Jurisprudence, Constitutional Law, | 03.05.2014 (Saturday) 2.00-4.30 p.m. | 13.05.2014 (Tuesday) |

## PART - B

| CET Code | Programme | Subjects of Entrance Test* | Date, Day & Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| | | Law of Torts, Criminal Law, Commercial Law & Family Law- (30%)<br>(iii) Public International Law, Human Rights Law and Environment Law - (30%),<br>(iv) Current Trends in Law - (20%) | | |
| 113 | • M.A. (English & Communication Studies) | (i) English Language & Comprehension (30%),<br>(ii) General Awareness and Culture (20%),<br>(iii) Literature (50%) | 03.05.2014 (Saturday) 2.00-4.30 p.m. | 13.05.2014 (Tuesday) |
| 114 | • BCA | (i) English Language & Comprehension-(15%),<br>(ii) Mathematics -(30%),<br>(iii) Computer Awareness -(30%),<br>(iv) General Knowledge-IT and Science Related - (25%). | 10.05.2014 (Saturday) 10.30-1.00 p.m. | 20.05.2014 (Tuesday) |
| 115 | • B.Sc. (Hons) Nursing [Only for Unmarried Female Candidates] | (i) Physics-(20%)<br>(ii) Chemistry - (20%)<br>(iii) Biology - (40%)<br>(iv) English Language and Comprehension - (10%)<br>(v) General Awareness about Health related Matters - (10%) | 10.05.2014 (Saturday) 2.00-4.30 p.m. | 20.05.2014 (Tuesday) |
| 116 | • MBA (SEM) | (i) English Language & Comprehension<br>(ii) Numerical Ability & Mathematics<br>(iii) Logical Reasoning & Data Interpretation<br>(iv) Computer Science | 25.05.2014 (Sunday) 10.30-1.00 p.m. | 03.06.2014 (Tuesday) |
| 118 | • M.A.(Criminology) | i) General Knowledge.<br>ii) General Proficiency in English (Class 12th Standard.)<br>iii) Elementary Knowledge of Social Science.<br>iv) Understanding different facets of human behavior | 10.05.2014 (Saturday) 2.00-4.30 p.m. | 20.05.2014 (Tuesday) |
| 119 | • M.Sc. (Forensic Science) | Section - I (50 questions)<br>i) Critical thinking<br>ii) Awareness of Laboratory safety<br>iii) Observation and attention to details<br>iv) Basic Computer Knowledge<br><br>Section-II (100 questions)<br>(Four components of 25 marks each)<br>i) Physics<br>ii) Chemistry<br>iii) Biology (Zoology, Genetics, Biotech, Physical Anthropology)<br>iv) Forensic Science | 11.05.2014 (Sunday) 10:30-1.00 p.m. | 20.05.2014 (Tuesday) |
| 120 | • Master of Education (M. Ed.) | (a) Teaching Aptitude (40%)<br>(b) General Awareness and Logical Reasoning (30%)<br>(c) English/Communication skills (30%) | 11.05.2014 (Sunday) 10.30-1.00 p.m. | 20.05.2014 (Tuesday) |

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| CET Code | Programme | Subjects of Entrance Test* | Date, Day & Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| 121 | • B.A. LLB (Integrated)<br>• BBA LLB (Integrated) | (i) English Language & Comprehension-(25%)<br>(ii) General knowledge (25%),<br>(iii) Legal Aptitude - (25%),<br>(iv) Reasoning - (25%) | 25.05.2014 (Sunday) 2.00-4.30 p.m. | 03.06.2014 (Tuesday) |
| 122 | • B.Ed.<br>• B.Ed.(Special Education) | (i) English Comprehension - 10%<br>(ii) Mental Ability - 20%<br>(iii) Reasoning - 20%<br>(iv) General Awareness - 20%<br>(v) Aptitude for Teaching - 30% | 11.05.2014 (Sunday) 2.00-4.30 p.m. | 20.05.2014 (Tuesday) |
| 123 | • M.Sc. (Biodiversity & Conservation) | (i) Life Sciences (Taxonomy, morphology, anatomy, physiology, genetics, evolution, ecology, biogeography and economic uses of all the five kingdoms and virus.) (50%)<br>(ii) Anthropology - Human culture and Society (10%)<br>(iii) Biotechnology (20%)<br>(iv) General Knowledge related to Environment issues (20%) | 17.05.2014 (Saturday) 10.30-1.00 p.m. | 27.05.2014 (Tuesday) |
| 124 | • Bachelor of Physiotherapy (BPT)<br>• Bachelor of Prosthetics & Orthotics (BPO)<br>• Bachelor of Science B. Sc.(MLT)<br>• Bachelor of Audiology and Speech Language Pathology (BASLP)<br>• BHMS<br>• BAMS | (i) Physics - (25%),<br>(ii) Chemistry - (25%)<br>(iii) Biology -(50%) | 24.05.2014 (Saturday) 10.30-1.00 p.m. | 03.06.2014 (Tuesday) |
| 125 | • BBA & Allied Programmes | (i) English Language & Comprehension-(25%),<br>(ii) General Awareness-(25%)<br>(iii) Logical and Analytical Ability -(25%)<br>(iv) Aptitude relating to the field of Management and for Communication Skills-(25%). | 24.05.2014 (Saturday) 2.00-4.30 p.m. | 03.06.2014 (Tuesday) |
| 126 | • Bachelor of Journalism (Mass Communication) BJMC | (i) English Language & Comprehension-(25%),<br>(ii) General Awareness-(25%),<br>(iii) Reasoning-(25%),<br>(iv) Media Aptitude-(25%) | 17.05.2014 (Saturday) 10.30-1.00 p.m.. | 27.05.2014 (Tuesday) |
| 127 | • Bachelor of Hotel Management & Catering Technology (BHMCT) | (i) English Language & Comprehension-(30%),<br>(ii) General Awareness-(20%),<br>(iii) Logical and analytical ability including Computer awareness-(30%)<br>(iv) Knowledge of accounts/commerce & science-(20%). | 31.05.2014 (Saturday) 2.00-4.30 p.m. | 10.06.2014 (Tuesday) |
| 141 | • MAHM<br>• MCPHM | (i) Indian History, Culture & Archeology<br>(ii) Museums of India<br>(iii) Heritage Tourism<br>(iv) Basic Science(12th Standard) | 24.05.2014 (Saturday) 10.30-1.00 p.m. | 03.06.2014 (Tuesday) |


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| CET Code | Programme | Subjects of Entrance Test* | Date, Day & Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| | | (v) General Knowledge<br>(vi) Current Affairs<br>(vii) General Reasoning<br>(viii) Geography & Natural Heritage<br>(ix) Management of Heritage<br>(x) Heritage Conservation | | |
| 145 | • M.Sc. (Natural Resource Management) | (i) Environment Science-(30%)<br>(ii) Biology - (40%)<br>(iii) General Knowledge, Social Science, Economics & Policy- (30%) | 25.05.2014 (Sunday) 2.00-4.30 p.m | 03.06.2014 (Tuesday) |
| 146 | • B.Com (Hons) | (i) General English-(25%)<br>(ii) Logical Reasoning-(25%)<br>(iii) Data Interpretation-(35%)<br>(iv) Basic General Awareness-(15%) | 01.06.2014 (Sunday) 10.30-1.00 p.m. | 10.06.2014 (Tuesday) |
| 117 | • Bachelor of Science B. Sc. (Yoga Science) | (i) Physics (25%)<br>(ii) Chemistry (25%)<br>(iii) Biology (50%) | 31.05.2014 (Saturday) 10.30-1.00 p.m. | 10.06.2014 (Tuesday) |
| 142 | • MCA (Dual degree) | (i) Maths (25%)<br>(ii) Physics (25%)<br>(iii) English (25%)<br>(iv) Logical Reasoning & Mental Ability (25%) | 25.05.2014 (Sunday) 10.30-1.00 p.m. | 03.06.2014 (Tuesday) |

* *Wherever the subjects of Physics, Chemistry, Mathematics and Biology (Botany & Zoology) have been prescribed for Entrance Tests for admission to graduation level courses, the Syllabi shall be of 11th and 12th standard under the 10+2 Scheme of CBSE as prescribed for the students passing out class 12th in 2014. For post-graduate level courses, the standard of questions for Entrance Tests will be of graduation level.*

**The last date for submission of online CET application forms is 10th April 2014 (Thursday) for all Engineering and Professional programmes excepting B. Arch & PGMC programmes.**

**Every Common Entrance Test will be of 2½ hours duration. Medium of all Common Entrance Tests will be English.**

## 3. MEDICAL PROGRAMMES/POST GRADUATE MEDICAL PROGRAMMES (PGMC/SSMC)

### A. MBBS & BDS

### 1. SCHEDULE FOR MBBS (CET CODE 103)

All the candidates who are keen to seek admission to MBBS programme for the Academic Session 2014-15 must appear in the Common Entrance Test : CET Code 103 (2014), which will be conducted by the Guru Gobind Singh Indraprastha University, Sector-16 C, Dwarka, New Delhi-110078. There will be two stages of the Common Entrance Test. Only qualified candidates of Stage I will be allowed to appear in Stage II Entrance Test of MBBS.

**1.1** The dates & time are as under:

| CET Code | Programme | Date of CET-2014 | Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| 103 | MBBS – Stage I | 27th April 2014 (Sunday) | 2 pm- 5 pm | 6th May 2014 (Tuesday) |
| | MBBS – Stage II | 2nd June 2014 (Monday ) | 2 PM- 5 PM | 10th June 2014 (Tuesday) |

**The CET : MBBS-2014 (Stage I) is proposed to be conducted at the Centres detailed in table at Para II given at the end of this chapter.**

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However, depending upon the number of candidates at any station, the final venue of the CET : MBBS - 2014 (Stage I) will be communicated to the candidates through Admit Cards. **MBBS (Stage II) test will be held only at Delhi.** In case of any query, candidate may contact on 011-25302287.

The candidates are also advised to indicate in the Application Form their two preferred choices in respect to the places in order of his/her preference. The choices indicated by the candidates shall however, be considered as their 'preferred choices'. The actual centre code will be allotted by the University and the same shall be considered as final. Neither any change in the preferences already indicated by the candidate shall be allowed by the University nor any correspondence in this regard will be entertained under any circumstances.

### 2 SCHEDULE FOR BDS (CET CODE 104)

All the candidates who are keen to seek admission to BDS programme for the Academic Session 2014-15 must appear in the Common Entrance Test : CET Code 104, which will be conducted by the Guru Gobind Singh Indraprastha University,Sector-16C, Dwarka, New Delhi-110078.

**2.1** The dates & time are as under:

| CET Code | Programme | Date of CET-2014 | Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| 104 | BDS | 3rd May 2014 (Saturday) | 2 pm - 5 pm | 13th May 2014 (Tuesday) |

**The last date for submission of CET application forms is 10th April 2014 (Thursday) for MBBS & BDS programmes.**

### 3. GENERAL STANDARD OF THE QUESTION PAPER OF CET : MBBS & BDS – 2014

The level of questions will be that of 12th class under the 10+2 Scheme/Intermediate Science. Syllabi for Physics, Chemistry and Biology (Botany and Zoology) shall be as specified by CBSE for class 11th and 12th under 10+2 scheme for students passing class 12th in the year 2014.

## B. POST GRADUATE MEDICAL COURSES (PGMC)

### 1. COMMON ENTRANCE TEST -2014 (CET CODE-102)

**1.1** All candidates seeking admission to Post Graduate Medical Degree/Diploma courses of the University for session 2014-15 must appear in the CET, which will be conducted by Guru Gobind Singh Indraprastha University, Delhi as per details given below:

| CET Code | Programme | Date of CET-2014 | Time of CET-2014 | Date & Day of Declaration of CET Result |
|---|---|---|---|---|
| 102 | PGMC | 5th April 2014 (Saturday) | 10.30 am – 1.30 pm | 8th April 2014 (Tuesday) |

### 2. DECLARATION OF RESULT OF CET : PGMC 2014 (CET CODE : 102)

**2.1** The University shall declare the result of **CET: PGMC 2014** for qualifying candidates as given in the table given above and the list will be displayed on the University's Website, i.e., www.ipu.ac.in. No separate intimation to this effect will be sent to the candidates individually.

**2.2** The University does not issue or supply or intimate the marks / ranks to any candidate and no correspondence on the subject will be entertained. However, marks obtained by individual candidate can be seen or downloaded from the University's website www.ipu.ac.in.

**2.3** Requests for revaluation/ re-checking of answer sheet will not be entertained under any circumstances.

**2.4** **The last date of submission of online CET application for PGMC Programme is 20.03.2014 (Thursday) upto 4 p.m.**

## C. SUPER SPECIALTY MEDICAL COURSES (SSMC)

### 1. COMMON ENTRANCE TEST

**1.1** All candidates seeking admission to Super Specialty Medical Courses of the University


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for session 2014-15 must appear in the respective CET, which will be conducted by Guru Gobind Singh Indraprastha University, Delhi as per the schedule mentioned below:

| CET Code | Programme | Date of CET-2014 | Time of CET-2014 | Date & Day of Declaration of CET Result | Syllabus for CET -2014 |
|---|---|---|---|---|---|
| 132 | DM (Cardiology) | 25th May 2014 (Sunday) | 10.30 am to 12 noon | 3rd June 2014 (Tuesday) | Basic Sciences & Medicine as applied to Cardiology |
| 133 | M.Ch. (CTVS) | 25th May 2014 (Sunday) | 10.30 am to 12 noon | 3rd June 2014 (Tuesday) | Basic Sciences & Surgery as applied to CTVS |
| 134 | M.Ch. (Neuro Surgery) | 25th May 2014 (Sunday) | 2 pm to 3.30 p.m. | 3rd June 2014 (Tuesday) | Basic Sciences & Surgery as applied to Neuro Surgery |
| 135 | DM (Neurology) | 25th May 2014 (Sunday) | 2 pm to 3.30 p.m. | 3rd June 2014 (Tuesday) | Basic Sciences & Medicine as applied to Neurology |
| 136 | M.Ch. (Burns, Plastic & Maxillofacial Surgery) | 31st May 2014 (Saturday) | 10.30 am to 12 noon | 10th June 2014 (Tuesday) | Basic Sciences & Surgery as applied to Burns, Plastic & Maxillofacial Surgery |
| 138 | DM (Pulmonary & Critical Care Medicine) | 31st May 2014 (Saturday) | 2 pm to 3.30 p.m | 10th June 2014 (Tuesday) | Basic Sciences & Medicine as applied to Pulmonary & Critical Care Medicine |
| 143 | M.Ch. (Paediatrics Surgery) | 31st May 2014 (Saturday) | 2 pm to 3.30 p.m | 10th June 2014 (Tuesday) | Basic Sciences & Surgery as applied to Paediatrics Surgery |
| 144 | M.Ch. (Urology) | 1st June 2014 (Sunday) | 10.30 am to 12 noon | 10th June 2014 (Tuesday) | Basic Sciences & Medicine as applied to Urology |

### 2. DECLARATION OF RESULT OF CET : SSMC 2014

**2.1** The University shall declare the result of CET: SSMC 2014 for each super specialty in respect of qualifying candidates as given in the table given above and the list will be displayed on the University's website, i.e., www.ipu.ac.in. No separate intimation to this effect will be sent to the candidates individually.

**2.2** The University does not issue or supply or intimate the marks / ranks to any candidate and no correspondence on the subject will be entertained. However, marks obtained by individual candidate can be seen or downloaded from the University's website www.ipu.ac.in.

**2.3** Requests for revaluation/ re-checking of OMR answer sheet will not be entertained under any circumstances.

2.4 **The last date for submission of online CET application forms for SSMC is 10th April 2014 (Thursday).**

### II List of City/ Centre *for B. Tech/ MBBS Stage I/ MCA/ MBA programmes for Common Entrance Test (CET-2014)*

(i) The CET for the above mentioned programmes will be held at following centres provided sufficient number of candidates opt for a particular centre:

| S.No. | Name of the City / Centre | Centre/City Code |
|---|---|---|
| 1. | Bengaluru | 51 |
| 2. | Bhopal | 52 |
| 3. | Chandigarh | 53 |
| 4. | Dehradun | 54 |
| 5. | Delhi | 55 |
| 6. | Jaipur | 56 |
| 7. | Jalandhar | 57 |
| 8. | Kolkata | 58 |
| 9. | Lucknow | 59 |

(ii) **MBBS (Stage II) test will be conducted only in Delhi.**

(iii) **For all other programmes** the Common Entrance Tests ( CET 2014) will be **conducted only in Delhi.**

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(iv) The choices indicated by the candidates in respect to the Centres of Entrance Examination shall only be considered as their preferred choices. The actual Centre Code will be allotted by the University and the same shall be considered as final. Neither any change in the preferences already indicated by the candidate shall be allowed by the University nor any correspondence in this regard will be entertained under any circumstances. The University may drop any of the above mentioned centres if sufficient number of candidates are not available or for any other reason deemed appropriate to drop the centre.

(v) In case University decides to drop both the preferences of centres given by the candidate then, in such circumstances, 'Delhi' centre will be allotted.

**Note:**

(i) A Separate Application Form has to be filled-in for each programme (s) having distinct CET / Programme Code.

(ii) No separate intimation will be sent to the candidates regarding declaration of results and commencement of counselling/ admission. Result will be declared on University Website (www.ipu.ac.in). Detailed schedule of first counselling/admissions will be notified prior to commencement of respective counselling, on the University Website (www.ipu.ac.in). Tentative dates of commencement of first and second counselling, are given in Part C: Chapter I. The dates for counselling as given in Part C: Chapter I may be deferred if the sanctioned intake for the respective programme is not received by the University in time.

(iii) The University will declare and display the ranks of only those candidates who are declared as qualified in the CET-2014. The candidates will be called for counselling/admission depending upon the number of seats available in each programme. The admissions will be made only out of these qualified candidates strictly in order of inter-se-merit. The rank of candidates who do not qualify in CET-2014 will not be declared.

**- Sd/-**
**Brig P. K. Upmanyu**
**Joint Registrar (Admissions)**
**Dated: 20 Feb, 2014**

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S.No Content Page No.



- Sd/-
Brig P. K. Upmanyu
Joint Registrar (Admissions)
Dated: 20 Feb, 2014

PART - B

# 4 SUBMISSION OF CET APPLICATION FORM

## A: FOR PROGRAMES WHERE CET WILL BE HELD

1. **All the candidates will submit application forms only through online.** For the convenience of the applicants as well as of their parents/ guardians, the University is also providing the facility of On-Line Submission of Application Form for CET-2014. The application form along with the Common Entrance Test Fee of Rs.750/- **05 Feb,2014** onwards.The Admit Cards will, however, be sent only by e-mail. The same can be downloaded by using candidates log-in ID and password.

2. **Last Dates for Submission of Application Form online is given in the table below:**

| S.No. | Programmes | Date & Time |
|---|---|---|
| 1. | For all programmes excepting B. Arch. & PGMC Programmes | 10th April, 2014 Thursday - 4 pm |
| 2. | B. Arch. programmes | 2nd June 2014 (Monday) to to 3rd July 2014 (Thursday). |
| 3. | PGMC programmes | 20th March, 2014 Thursday - 4 pm |

3. One application form is valid only for **One CET Code**. For applying in more than **One CET Code**, the applicant should apply separately.

4. Display of Information on the University's Website regarding receipt of Application Forms for all Common Entrance Tests 2014:

   (i) On 19th April, 2014 at 5.00 p.m. the details of application forms received by the Office of the Controller of Examinations upto the last date i.e. 10th April, 2014 will be displayed on the University Website (www.ipu.ac.in). The candidates are advised to check their status with the help of Application Form number indicated on the Application Form.

   (ii) In case any candidate does not find his/her application form number on the University's Website, then he/ she is advised to contact the Office of Controller of Examinations, Guru Gobind Singh Indraprastha University, Delhi, immediately (but not later than 24th April, 2014) alongwith the relevant particulars proof of its submission to the University. In case of any query, candidate may contact on **011-25302287** (Only admit card related enquiry).

5. Write the complete e-mail address carefully. Please note that this e-mail address will be used by the University for Admit card delivery in future. The address should be properly filled up in the prescribed boxes. The University will not be responsible for non receipt of Admit Card for incorrect e-mail address given by the applicant in the CET Application Form.

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## B I: FOR M.TECH PROGRAMMES (BASED ON QUALIFIED GATE SCORE)

1. The print out of the filled in online CET Application Form along with relevant enclosure given in Part E.complete in all respects, should be submitted by hand or by speed post to the Controller of Examinations (Operations)/Respective Schools of the University as mentioned in table below, super-scribing GATE for M.Tech Programmes and the name of the Programme with its Programme/ CET Code within the last date as mentioned in table below up to 5 p.m. along with the eligibility documents, if applicable.

2. The applicant has to fill the relevant enclosure given in Part E along with the CET application form.

3 Attested copy of degree certificate and marks-sheet of the qualifying examination clearly showing the marks obtained by the candidate in the degree. (Wherever grades/CPI/CGPA etc are awarded, attach a sheet showing the calculation of overall percentage). **CPI awarded by GGSIP University to be treated as equivalent to percentage**.

4 Result of qualifying examination.

5 Photocopy of documents showing working experience upto the cut-off date.

6. Proof of Date of Birth certificate.

7. Photocopy of certificates for claiming admission under reserved category.

8. Write the complete address by giving your name and PIN code carefully and legibly. Please note that this address will be used by the University for all the correspondence in future. Therefore, it should be very clearly written with black ball point pen only. The address should be properly filled up in the prescribed boxes and should not overflow. The University will not be responsible for any loss in transit or for incorrect address given by the applicant in the Application Form. No request for change of address will be entertained till the admission is finalized.

9. In addition to the above mentioned details, mobile number, contact number of the residence and e-mail id must be provided in the CET application form along with the relevant enclosure given in Part E.

10. The schedule for the sale of admission brochure and submission of CET application form along with relevant enclosure given in Part E is given in the table below:

| Programme/ CET Code | Programme Name | Where To Submit The Complete Application Form | Last Date for Submission of Application Forms Online | Last Date for Submission of Application Forms Offline/By post |
|---|---|---|---|---|
| 139 | M.Tech. (Computer Science & Engineering)<br>M.Tech. (Information Technology)<br>M.Tech. (Information Security)<br>M.Tech. (Information Technology) Weekend<br>M.Tech. (Computer Science & Engineering) Weekend | Controller of Examination (Operations), GGSIPU, Sector-16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |
| 140 | M.Tech. (Digital Communication)<br>M.Tech. (ECE)<br>M.Tech. (Signal Processing)<br>M.Tech. (RF & Microwave Engg.)<br>M.Tech. (VLSI Design)<br>M.Tech. (ECE- Weekend) | Controller of Examination (Operations), GGSIPU, Sector-16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |
| 147 | M.Tech. (Tool Engg) | Controller of Examination (Operations), GGSIPU, Sector-16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |
| 148 | M.Tech. (Food Processing Technology) | Dean, USBT, GGSIPU, Sector 16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |
| 149 | M.Tech. (Nano Science and Technology) | Dean, USBAS, GGSIPU, Sector 16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |
| 150 | M.Tech. (Engineering Physics) | Dean, USBAS, GGSIPU, Sector 16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |
| 166 | M.Tech. (Chemical Engineering) | Dean, USCT, GGSIPU, Sector 16C, Dwarka, New Delhi-110078 | 10.04.2014 | 20.04.2014 |

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Notes:

1. The applicants are advised to retain a print out of the duly filled-in CET Application Form.
2. The failure to submit any of the relevant enclosure given in appendix 16 and eligibility documents may result in rejection of the CET application form.
3. The applicants are advised to submit the CET application form with the relevant enclosure given in appendix 16 and eligibility documents as per the Admission Brochure before the last date for submission of application form.
4. After the last date is over, CET Application Form sent through Registered/Speed Post/Courier or by any other means will not be accepted, irrespective of the fact when the form was despatched/ posted. Therefore, candidates are advised to submit their CET Applications Form along with relevant enclosure given in appendix 16 and eligible documents at the earliest to the Controller of Examination/Respective School of the University, instead of waiting for the last date.

### B II. FOR GATE SCHOLARS

| CET Code | Programme | Last date of application upto 4 PM | Date of declaration of tentative Merit List | Last date of submission of representation( if any) by candidates (upto 4 pm) | Date of declaration final Merit List |
|---|---|---|---|---|---|
| 139 | M.Tech. (IT/CSE/IS) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |
| 140 | M.Tech. (ECE/DC/ VLSI/RF&M/SP/..) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |
| 147 | M.Tech. (Tool Engg) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |
| 148 | M.Tech. (FPT) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |
| 149 | M.Tech. (NST) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |
| 150 | M.Tech. (EP) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |
| 152 | M.Tech. (CE) | 10.04.2014 (Thursday) | 03.06.2014 (Tuesday) | 06.06.2014 (Friday) | 10.06.2014 (Tuesday) |

## C. B.ARCH PROGRAMME where NO CET will be held. (CET Code 100)

1. Date for submission of Application Form Online- **2nd June 2014 (Monday) to 3rd July 2014 (Thursday).**
2. Applicants will have to fill their result of qualifying examination and NATA Score.
3. Display of Tentative Merit List on University's Website (www.ipu.ac.in) by Controller of Examinations (Operations)
   **16th July 2014 (Wednesday).**
4. Last Date of submitting Representation **21st July 2014 (Monday) upto 4 p.m.**
5. Display of Final Merit List (after considering representation) **23rd July 2014 (Wednesday).**

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## D. FOR WEEKEND PROGRAMMES WHERE NO CET WILL BE HELD

| Prog Code | Programme Name | School of Studies Institutions/Centre | Where To Submit The Complete Application Form | Last Date for Submission application Forms | |
|---|---|---|---|---|---|
| | | | | Online | Offline/ By Post |
| 155 | **MBA** | University School of Management Studies | **1.** Dean, USMS, GGSIPU, Room No. 206, D-Block, GGSIPU Sec-16C, Dwarka, New Delhi-78<br>**2.** Coordinator MBA Weekend Room No. 309, D-Block, GGSIPU Sec-16C, Dwarka, New Delhi-78 | 10.04.2014 | 28.04.2014 |
| 176 | **Master of Journalism & Mass Communication (MJMC)** | University School of Mass Communication | Dean, USMC, GGSIPU, Sec-16C, Dwarka, New Delhi-78 | 10.04.2014 | 28.04.2014 |
| 181 | **LLM (Cyber Law and Cyber Crime) LLM (Intellectual and Industrial Property Law)** | University School of Law and Legal Studies | Dean, USLLS, GGSIPU, Sec-16C, Dwarka, New Delhi-78 | 10.04.2014 | 28.04.2014 |
| 186 | **MBA- Disaster Management** | Centre for Disaster Management Studies | Director, CDMS, GGSIPU, Sec-16C, Dwarka, New Delhi-78 | 10.04.2014 | 28.04.2014 |

## E. FOR PG DIPLOMA PROGRAMMES WHERE NO CET WILL BE HELD

| Prog Code | Programme Name | School of Studies Institutions/ Centres | Where To Submit The Complete Application \|Form | Last Date for Submission of application Forms Online | Last Date for Submission of application Forms Offine / By post |
|---|---|---|---|---|---|
| 151 | PG Diploma in Radiological Physics | University School of Basic & Applied Sciences | Dean, USBAS, GGSIPU,Sec-16C, Dwarka, New Delhi-78 | 10.04.2014 | 28.04.2014 |

**Note:** It is mandatory for all candidates seeking admission in Weekend and Post Graduate Diploma Programmes to submit online applications and further take the printout of the application and send it in a sealed envelope along with relevant enclosures given in **Part E of the Admission Brochure** to the concerned University Schools/Office within the specified period. The applications of the students will not be treated as complete and further the students will not be eligible for admission if the applications do not reach the concerned Schools/ Office within the specified date i.e **28th April, 2014**.

## SUBMISSION OF CET APPLICATION FORM

1. All the applicants are advised to retain a print out of the duly filled-in Application Form.
2. Display of Information on the University's Website regarding receipt of Application Forms for Common Entrance Test 2014.

   (i) On **19.04.2014 at 5.00 p.m.** the details of Application Forms received by the Office of the Controller of Examinations (Operations) upto the last date i.e. **10.04.2014** will be displayed on the University Website (www.ipu.ac.in). The candidates are advised to check their status with the help of Application Form number.

   (ii) In case any candidate, who has submitted the application form online does not find his/her application form number on the University's Website, then he/she is advised to contact the Office of Controller of Examinations (Operations), Guru Gobind Singh Indraprastha University, Delhi, immediately (but not later than **24.04.2014**) alongwith the relevant particulars (printout of the duly filled-in CET Application Form). In case of any query, candidate may contact on 011-25302287.

3. Write the complete e-mail address carefully. Please note that this e-mail address will be used by the University for delivery of Admit Card. The address should be properly filled up in the prescribed boxes. The University will not be responsible for any non receipt of Admit Card for incorrect e-mail address given by the applicant in the application form.

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# 5 CET ADMIT CARD

**PROFESSIONAL, ENGINEERING, B. ARCH, MEDICAL & POST GRADUATE MEDICAL PROGRAMMES**

1. The Admit Card will be made available online, 7 days before the actual commencement of the CET. The Admit Card will also be sent to the candidates e-mail addresses provided by the candidate at the time of filling up of the online Application Forms. The same may also be downloaded from the candidates individual account proving log-in ID and password.
2. No candidate will be allowed to enter the Examination Hall without the valid 'CET Admit Card 2014, issued by the University.
3. **Candidate must preserve the CET Admit Card till the admission procedure is over as it has to be handed over to the Admission Officer at the time of counselling/admission.**
4. **Request for issue of duplicate Admit Card will not be entertained after the Common Entrance Test (under any circumstances).**
5. No claim of having filled up the Application Form and non-receipt of admit card will be admissible after the CET.
6. **Impersonation is a punishable offence. No candidate will be permitted to appear in CET without the Admit Card. The admit card should be presented to the invigilator(s) for verification. The candidate's identity will be verified in respect of his/her details on the admit card/centre verification record. If the identity is doubtful, the candidate may not be allowed to appear in the examination. The authorities may permit the candidates to appear for the examination after completing the necessary formalities (visible mark of identification) at their discretion. No extra time will be allowed for these formalities to be completed. Police action will be initiated in case of dubious identity.**
7. **MBBS Stage II :** New CET admit card will be used for MBBS (Stage-II) examination.
8. In case of non receipt of Admit Card the candidate may contact Office of Controller of Examinations(Operations) at GGSIP University, Sector 16C , Dwarka, New Delhi 110078 at least 5 days before the scheduled commencement of CET 2014.

PART - B

# 6 MODE OF THE COMMON ENTRANCE TEST

## A. Professional and Engineering Programmes

### 1. Scheme of the Test

(i) The test paper will contain 150 objective-type questions in all. Each question will be provided with four alternative answers marked as (1), (2), (3) and (4). Out of these, only one correct or most appropriate answer should be selected and marked on the OMR answer sheet;

(ii) Each question shall carry four marks;

(iii) There will be negative marking for incorrect answers. One mark will be deducted for each incorrect answer;

(iv) The Written Test will be of two and a half hours duration and will carry 600 marks;

(v) The medium of the tests will be English only;

(vi) **Candidates should bring a black ball point pen** to the Examination Hall for writing/marking responses (darkening the ovals) on OMR answer sheet. **Use of pencil is not allowed**;

(vii) No requests for re-checking, re-evaluation, re-assessment or scrutiny of OMR answer sheet will be entertained;

(viii) For those who are unable to appear in the test on the scheduled date for any reason, **retest will not be held by the University under any circumstances.** No refund of fee is permissible;

### 2. Reporting for the Test

(i) The Candidate should report at the Examination Centre 30 minutes prior to the time of the commencement of CET-2014.

(ii) **No candidate will be allowed to enter in the Examination Hall after the commencement of CET;**

(iii) No candidate will be allowed to leave the examination hall before the prescribed time for CET is over;

(iv) Candidate should leave Examination Hall only after handing over OMR answer sheet & test booklet to the Invigilator;

### 3. Expected Behaviour and Discipline during the Test

(i) If any candidate is found using any ***UNFAIR MEANS*** or does not observe discipline during conduct of the Common Entrance Test, the University will take necessary disciplinary action against such candidate(s) as per its rules;

(ii) No candidate should carry any textual material, printed or written, bits of papers or any other material except the Admit Card (without envelope) inside the Examination Hall. If the candidate is found to be copying or conversing with other candidate(s) or having in his/her possession papers, notes or books/any electronic material with or without relevant text, he/she will be disqualified from taking the Test and the next one or two such Tests depending on the nature of offence;

**(iii) Carrying of cell phone, pager, calculator or any other electronic gadgets to the Examination Centre is strictly prohibited. The University will neither make any arrangement for the safe custody of any of these items nor will be responsible for loss of any such item. Hence, the parents may counsel their wards for not carrying such items with them while going to respective examination centres for taking the CET.**

(iv) Candidates must not obtain or give or attempt to obtain or to give irregular assistance of any kind during the Test, as it will entail expulsion and cancellation of candidature for the Test;

(v) Any attempt to note down questions during the Test or to take away pages from the Test Booklet will be viewed very seriously, and invite legal action;

(vi) Candidate shall maintain perfect silence and attend to their papers only. Any conversation, gesticulation or causing disturbance during the Test will be deemed to be an act of misbehavior and is, therefore, strictly prohibited. Also, if a candidate is found impersonating or using unfair means, he/she will be disqualified from taking the Test and the next one or two such Tests depending on the nature of offence.

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**4.** Detailed instructions to be followed in the examination hall are given in **Part -E: Appendix :1**. **Specimen copy** of the **OMR answer sheet** to be used for the Test, is given in **Part -E: Appendix :2 for all Professional, Engineering, MBBS & BDS and Appendix :3 for PGMC & SSMC programmes.**

### 5. Procedure for preparing Merit List of CET

The inter-se-merit of candidates securing equal aggregate marks in Common Entrance Test will be determined according to the following criteria :

**(a) For B.Tech. / M.Tech. (Dual Degree) (IT, CSE, ECE, CT & BCE), B.Tech (IT, CSE, ECE, MAE, PE, ENE, TE, CVE, ICE, EEE, EE, ME, MET) programmes:**

(i) The candidates getting higher marks in Maths in CET shall rank higher;

(ii) In case of candidates securing equal marks in the aggregate of PCM as well as in Maths separately in CET, then the candidate getting higher marks in Physics shall rank higher;

(iii) In case of tie in (i) and (ii) above, the candidate older in age shall rank higher.

**(b) For B.Tech. / M.Tech. (Dual Degree) Bio-Technology programme :**

(i) The candidates getting higher marks in Biology /Bio-Technology in CET shall rank higher;

(ii) In case of candidates securing equal marks in the aggregate of PCB/PC-Bio-Technology as well as in Biology/Bio-Technology separately in CET, then the candidate getting higher marks in Chemistry shall rank higher;

(iii) In case of tie in (i) and (ii) above, the candidate older in age shall rank higher.

**(c) For M.Tech. programme :**

The procedure for preparing MERIT list is given in Chapter 2 of this part.

**Note:** If it is found at the time of counselling that after considering the above, there is still tie for merit, then marks in the qualifying examination shall be considered for determining the rank. If marks of qualifying examination are not available or happen to be equal, then marks obtained by the candidate in public examination passed prior to the qualifying examination shall be considered to decide inter-se-merit.

**(d) For Master of Science (Environment Management) Programme:**

(i) The candidates getting higher marks in Environment Science shall rank higher;

(ii) In case of candidates securing equal marks in the aggregate as well as in Environment Science separately in CET, then the candidate getting higher marks in Chemistry shall rank higher;

(iii) In case of tie in (i) and (ii) above, the candidate older in age shall rank higher.

**(e) For Bachelor of Physiotherapy (BPT), Bachelor of Prosthetics & Orthotics (BPO), BAMS, BHMS, BASLP, B.Sc.(MLT) and B.Sc (Hons.) Nursing:**

(i) The candidates getting higher marks in Biology shall rank higher;

(ii) In case of candidates securing equal marks in the aggregate of Physics, Chemistry, Biology as well as in Biology separately in CET, then the candidate getting higher marks in Chemistry shall rank higher;

(iii) In case of tie in (i) and (ii) above, the candidate older in age shall rank higher.

**(f) For all other programmes, except as mentioned above from (a) to (e), the candidate older in age shall rank higher.**

**Note:** For all the above programmes, if it is found that after considering all the above criterion, there is still tie for merit, then marks in the qualifying examination shall be considered for determining the rank. If marks of qualifying examination are not available or are equal, then the marks obtained by the candidate in public examination passed prior to the qualifying examination shall be considered to decide inter-se-merit.

**(g) For Programmes, where no CET will be held, admission and selection procedure will be followed as per details given in chapter 2 of this part.**

### B. MEDICAL/POST GRADUATE MEDICAL PROGRAMMES

#### 1. SCHEME of CET for MBBS & BDS:

**i) CET code 103 for MBBS (both stages I & II) and CET code 104 for BDS** will be of 3 hours duration and will have One Question Paper in English medium. This Question Paper shall have 200 objective type (multiple choice) questions from Physics, Chemistry, Botany & Zoology. Each question will be provided with four alternative answers marked as (1), (2), (3) and (4). Out of these, only one correct or most appropriate answer should be selected and marked on the OMR answer sheet. Each question shall carry 3 marks, which shall be awarded for each correct answer.

**ii)** There will be negative marking for incorrect answers. Incorrect answers will include both the

**'wrong answers' as well as 'more than one answer to a question'.** 1 mark will be deducted for each incorrect answer.

**iii)** Candidates should bring a black ball point pen to the Examination Hall for writing/marking responses (darkening the ovals) on OMR answer sheet. Use of pencil is not allowed.

**iv)** No requests for re-checking, re-evaluation, re-assessment or scrutiny of OMR answer sheet will be entertained.

**v)** For those who are unable to appear in the test on the scheduled date for any reason, retest will not be held by the University under any circumstances. No refund of fee is permissible.

## 2. SCHEME of CET for POST GRADUATE MEDICAL COURSES (PGMC)

2.1 The Entrance Test shall cover all subjects of MBBS course and will comprise of one Paper of 3 hours duration. This paper shall carry 300 Multiple Choice Questions (MCQs) of 4 marks each, divided in two sections viz. I & II. The subjects covered under these Sections are detailed below:-

Section-I Pre & Para-Clinical subjects, i.e., Pathology, Physiology, Pharmacology, Forensic Medicine, Medical Microbiology, Medical Bio-Chemistry and Anatomy.

Section-II Clinical Subjects, i.e., General Medicine, Obstetrics & Gynecology, Paediatrics, Anesthesiology, Dermatology including Venereology & Leprosy, Radio-Diagnosis, Radio-Therapy, Community Medicine, Pulmonary Medicine, Psychiatry, General Surgery, Orthopaedics, Ophthalmology and Otorhinolaryngology.

2.1.1 Section-I will be of one hour duration and will carry 100 MCQs allocated 400 marks and Section-II will be of two hours duration and will carry 200 MCQs allocated 800 marks respectively.

Note: Students will be required to distribute their time of 3 hours duration for the two sections in such a way that they are able to finish Section - I within 1 hour and Section - II in the next 2 hours.

2.1.2 Every question shall have four alternative answers, and out of these only one correct or most appropriate answer should be selected and marked on the OMR answer sheet provided with each paper.

2.1.3 There will be negative marking for every incorrect answer. 'Incorrect answers will include Wrong answers' as well as "those which contain more than one answer to the question." For each incorrect answer 1 mark will be deducted.

2.2 Candidates are required to bring a black ball point pen to the Examination Hall for marking their responses by darkening the ovals on OMR answer sheet. Use of pencil is strictly prohibited.

2.3. The University will not entertain any request for re-checking, re-evaluation, re-assessment or scrutiny of OMR answer sheet.

2.4. For those who are unable to appear in the CET:PGMC 2014 on the scheduled date for any reason, re-test will not be held by the University under any circumstances and the fee deposited for such test shall not be refunded.

2.5. Candidates are advised to follow the instructions mentioned in **Part -E: Appendix -22** while appearing for CET:PGMC 2014.

## 3. SCHEME of CET for SUPER SPECIALTY MEDICAL COURSES (SSMC)

**3.1** The Entrance Test shall cover subjects of respective super specialty course and will comprise of one paper of 1½hours duration. This paper shall carry 100 Multiple Choice Questions (MCQ's) of 4 (four) marks each. The Test for each super specialty will carry a maximum marks of 400.

**3.1.1** Every question shall have four alternative answers, and out of these only one correct or most appropriate answer should be selected and marked on the OMR answer sheet provided alongwith Test paper.

**3.1.2 Incorrect answer will be given zero marks and correct answer will be allotted 4 marks. Incorrect answers will include wrong answers as well as those containing more than one answer to the question.**

**3.2** Candidates are required to bring a black ball point pen to the Examination Hall for marking their responses by darkening the ovals on OMR answer sheet. Use of pencil is strictly prohibited.

**3.3** The University will not entertain any request for re-checking, re-evaluation, re-assessment or

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scrutiny of OMR answer sheet.

**3.4** For those who are unable to appear in the **CET: SSMC- 2014** on the scheduled date for any reason, re-test will not be held by the University under any circumstances and the fee deposited for such test shall not be refunded.

**3.5** Candidates are advised to follow the instructions mentioned in **Part- E** while appearing for CET: SSMC-2014.

**- Sd/-**
**Brig P. K. Upmanyu**
**Joint Registrar (Admissions)**
**Dated: 20 Feb, 2014**