



गुरुवार, दिनांक २४ सप्टेंबर, २०१५

**अधिसूचना**

क्रमांक : १३७/२०१५

दिनांक : २४/०९/२०१५

**विषय : २०१४-२०१५ शैक्षणिक सत्राची वीर उत्तमराव मोहिते शिष्यवृत्ती.**

**संदर्भ : अधिसूचना क्र. १०६/२०१५, दिनांक १६ जुलै, २०१५.**

सर्व सामान्यांचे माहितीकरिता अधिसूचित करण्यात येते की, संदर्भाकित अधिसूचना क्र. १०६/२०१५, दि. १६/०७/२०१५ मध्ये चौथ्या ओळीमध्ये “शासकीय विदर्भ ज्ञान विज्ञान संस्था, अमरावती,” ऐवजी “अमोलकचंद महाविद्यालय, यवतमाळ,” याप्रमाणे दुरुस्ती करण्यात येत आहे.

अधिसूचनेमधील अन्य तपशीलामध्ये कोणताही बदल नाही.

स्वा/-

कुलसचिव

संत गाडगे बाबा अमरावती विद्यापीठ

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**अधिसूचना**

क्रमांक : १३८/२०१५

दिनांक : २४/०९/२०१५

**विषय : सत्र २०१५-१६ बी.कॉम भाग-३ करिता निर्धारित करण्यात आलेल्या मराठी (आवश्यक) विषयाचे अभ्यासक्रमिकेत दुरुस्तीबाबत.**

**संदर्भ : विद्यापीठ गॅझेट भाग-३ मध्ये प्रसिद्ध अधिसूचना क्र. ६५/२०१५, दि. १८/६/२०१५**

सर्व सामान्यांच्या माहितीकरिता सूचित करण्यात येते की, उपरोक्त संदर्भाकित अधिसूचनेतील Appendix-A नुसार सत्र २०१५-२०१६ करिता बी.कॉम. भाग-३ चे आवश्यक मराठी विषयासाठी अभ्यासक्रमिका निर्धारित करण्यात आली आहे. त्यात खालीलप्रमाणे सुधारणा करण्याचा निर्णय विद्यापीठ प्राधिकारिणीने घेतला आहे.

“ बी.कॉम. भाग-३ वर्गाच्या मराठी (आवश्यक) विषयाचे अभ्यासक्रमिकेतून खालील पाठ वगळण्यात आलेले आहेत.

विभाग-अ - (वैचारिक) अ.क्र.१. श्रम

- जिब्रान खलील जिब्रान

विभाग-ब - (ललित) अ.क्र.१०. नारी

- तसलिमा नासरिन

विभाग-क - (कविता) अ.क्र.१३. मज लोभस हा इहलोक हवा

- बा.भ. बोरकर ”

उपरोक्त विभागातील वेचे/कविता (पाठ) वगळल्यानंतर बी. कॉम. भाग-३ च्या मराठी विषयाची प्रश्नपत्रिका खालीलप्रमाणे राहिल.

विभाग-अ	-	वैचारिक	-	पाठ क्र. १ ते ४	:	१० गुण
विभाग-ब	-	ललित	-	पाठ क्र. ५ ते ८	:	१० गुण
विभाग-क	-	कविता	-	कविता क्र. ९ ते १५	:	०८ गुण
विभाग-ड	-	निबंध	-	---	:	०७ गुण
						३५ गुण

उपरोक्त बदल २०१५-२०१६ शैक्षणिक सत्रामधील प्रवेशित विद्यार्थ्यांना लागू राहतील.

स्वा/-

कुलसचिव

संत गाडगे बाबा अमरावती विद्यापीठ

## अधिसूचना

क्रमांक : १३९/२०१५

दिनांक : २४/०९/२०१५

**विषय :- बी.सी.ए., बी.एम.सी. तसेच एम.ए. (इंग्रजी) अभ्यासक्रमाचे संलग्नीकरण Withdraw करण्याबाबत..**

सर्व संबंधीतांचे माहितीकरीता अधिसूचित करण्यात येते की, महिला महाविद्यालय, जोग चौक, अमरावती येथील बी.सी.ए., बी.एम.सी. तसेच एम.ए. (इंग्रजी) हे अभ्यासक्रम बंद करण्यासंबंधी म.वि.कायदा १९९४ कलम ११ नुसार संपूर्ण प्रक्रिया पूर्ण करण्यात आली असून याबाबत विद्वत परीषदेच्या दि.२.५.२०१५ विषय क्र.२६ अन्वये बी.सी.ए., बी.एम.सी. तसेच एम.ए. (इंग्रजी) या अभ्यासक्रमाचे संलग्नीकरण पूर्णता काढून टाकण्याची, महाविद्यालय व विद्यापीठ विकास मंडळाच्या सभेने केलेली शिफारस विद्वत परीषदेने मान्य केलेली होती. त्या अनुषंगाने महिला महाविद्यालय, जोग चौक, अमरावती येथील बी.सी.ए., बी.एम.सी. तसेच एम.ए. (इंग्रजी) या अभ्यासक्रमाचे संलग्नीकरण महाराष्ट्र विद्यापीठे कायदा १९९४ मधील कलम ११ नुसार Withdraw करण्यात येत आहे.

स्वा/-  
प्र.कुलसचिव  
संत गाडगे बाबा अमरावती विद्यापीठ

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### NOTIFICATION

No. : 140 / 2015

Date: 24/09/2015

**Subject : Introduction of new Syllabi for the subjects i) Renewable Energy and ii) Animation at B.Sc. Part-I from the session 2015-16.**  
**Reference : Notification No.51 of 2015, dated 18.6.2015.**

It is notified for general information of all concerned that the authorities of the University have introduced the new subjects i) Renewable Energy & ii) Animation for B.Sc.Part-I (Sem-I & II) to be implemented from the Academic Session 2015-16 as “1S : Renewable Energy and 2S : Renewable Energy” as given in Appendix-A and “1S : Animation & 2S : Animation” as given in Appendix-B as appended herewith.

Sd/-  
Registrar  
Sant Gadge Baba Amravati University

### APPENDIX-A

**Syllabus Prescribed for B.Sc.-I (Sem-I & II) for the Subject Renewable Energy to be implemented from the Academic Session 2015-16**

**Semester-I**  
**1S : Renewable Energy**  
**Fundamentals of Energy Systems**

- Unit-I** : Work and Heat: Definition of work, thermodynamic work, displacement work and other forms of work, Definition of Heat, Work and heat transfer as path function, comparison of work and heat, work done during various processes, P-V diagrams. First law of thermodynamics: Energy of a system, classification of energy, law of conservation of energy law applied to closed system under going a cycle, Joules experiment
- Unit-II** : First Law applied to flow processes: Steady state, steady flow process, mass balance and energy balance in steady flow process, steady flow energy equation and its application to nozzles and diffusers, turbine and compressor pumps, heat exchangers, Throttle valve etc. work done and Heat transfer during steady flow processes.  
Second Law of thermodynamics, Kelvin-Planck and Clausius statements, reversible and irreversible processes, Carnot cycle, two propositions regarding the efficiency of Carnot cycles. The thermodynamic temperature scale. Reverse carnot cycle. COP of heat pump and refrigeration. Inequality of Clausius.

- Unit III : Fluid Properties and Classification of Fluid:** Viscosity, Newton's law of viscosity, Newtonian and Non-Newtonian Fluids, Ideal and real fluids, Steady & Unsteady Flow, Uniform & Non-Uniform Flow, Laminar & Turbulent Flow, Compressible & Incompressible Flow, Surface tension, Definitions, units and Dimensions
- Unit IV : Fluid Pressure & Its Measurement:** Definition of pressure, units and dimensions, Pressure at a point, Pascal's law, Hydrostatic pressure law, Absolute and Gauge pressure Measurement of pressure, Simple Manometer & Differential Manometer theory and problems, Mechanical Pressure Gauges.
- Unit V : Dynamics of Fluid Flow** Concept of Inertia force and other forces causing motion, Derivation of Euler's equation and, Modification of Bernoulli's equation, problem on Bernoulli's equation without and with losses, Flow through Orifices; classification, Hydraulic Co-efficient of an Orifice and relation between them,
- Unit VI : Energy Sources & World Energy Status :** Energy Sectors: Domestic, Transportation, Agriculture, Industry Sector, Energy Scenario, World Energy Present Situation, Availability of Conventional & Non Conventional Energy Resources.  
**Conventional Energy Sources :** Fossil Fuel, Hydro Resources, Nuclear Resources, Coal, Oil, Gas, Thermal Power Stations, Comparison of various conventional energy systems, their prospects and Limitations, Advantages and Disadvantages of Conventional Energy Sources.  
**Non-Conventional Energy Sources :** Solar Energy, Wind Energy, Energy from Biomass & Biogas, Ocean Thermal Energy Conversion, Tidal Energy, Geothermal Energy, Hydrogen Energy, Fuel Cell, Magneto Hydro-Dynamics Generator, Advantages & Limitations of Non-Conventional Energy Sources.

#### Books Recommended Text Books

- [1] Engineering Thermodynamic - by P.K.Nag.
- [2] Thermodynamics Volume: I & II; R. Yadav;
- [3] Basic Engineering Thermodynamics - by Reynier Joel
- [4] Thermodynamics - by C.P. Arora.
- [5] Fundamentals of Classical Thermodynamics - by G.J. Vanwylen.
- [6] Engineering Thermodynamics; P. Chattopadhyay; Oxford
- [7] Engineering Thermodynamics; Gordon Rogers, Yon Mayhew; Pearson
- [8] Energy for a sustainable world: Jose Goldenberg, Thomas Johansson, A.K.N.Reddy, Robert Williams (Wiley Eastern).
- [9] Energy policy for : B.V.Desai (Weiley Eastern),
- [10] Modeling approach to long term demand and energy implication : J.K.Parikh.
- [11] Energy Policy and Planning : B.Bukhootsow.
- [12] TEDDY Year Book Published by Tata Energy Research Institute (TERI),
- [13] World Energy Resources : Charles E. Brown, Springer2002.
- [14] 'International Energy Outlook' -EIA annual Publication
- [15] Heat and Thermodynamics – M.W. Zemansky (McGraw Hill Publication)
- [16] Heat and thermodynamics – D.S.Mathur
- [17] Text book of Heat – J.B.Rajam
- [18] Heat and thermodynamics – Rajam & Arora
- [19] Heat – Rajkumar & Sharma
- [20] Non-Conventional Energy Sources, G. D. Rai, Khanna Publication.
- [21] Non-Conventional Energy Resources, B. H. Khan, The McGraw Hill
- [22] Fluid Mechanics and Fluid Power Engineering by D.S. Kumar, S. K. Kataria & Sons
- [23] Fluid Mechanics and Hydraulic Machines by R.K. Bansal, Laxmi Prakashan
- [24] Theory and Applications of Fluid Mechanics by K. Subramanya, TMH outline series, Tata McGraw Hill Publishing Company Lt

#### List of Experiments

- [1] Study of the processes of Heat Engine
- [2] Study Layout of Thermodynamics laboratory
- [3] To investigate the first law of thermodynamic using heat Engine
- [4] To investigate the Second law of thermodynamic using heat Engine
- [5] To investigate the relation between pressure and temperature of Saturated Steam
- [6] To determine the flow rate using convergent nozzle.
- [7] To determine the nozzle thrust.
- [8] To determine the efficiency of nozzle
- [9] Study of heat exchangers
- [10] Determination of efficiency of pumping system
- [11] Determination of viscosity of liquid by Poiseuille's method.
- [12] Determination of viscosity of liquid by Stoke's method.
- [13] To determine surface tension of liquid by Jaeger's method.

**Semester-II**  
**2S-Renewable Energy**  
**Fundamentals of Electricity**

- Unit I** : **Electric Network:** Network elements: branch, junction, node, mesh. Network Law's: Kirchoff's laws, Thevenin's theorem, Power in electric circuit, unit of power, power in pure resistive circuit, Maximum power transfer theorem,  
**Energy sources:** Voltage source, Current source. Combination of Sources: voltage and current sources, Voltage source series combination, current source series combination. Voltage source parallel combination, current source parallel combination, numerical.
- Unit II** : **Electromagnetic Induction** : Relation between Magnetism and Electricity-Production of Induced E.M.F. and Current-Faraday's Laws of Electromagnetic Induction- Lenz's Law-Induced E.M.F. -Self-Inductance-Coefficient of Self-Inductance (L)-Mutual Inductance-Coefficient of Mutual Inductance (M)-Coefficient of Coupling-Inductances in Series and Parallel, Transformer construction, working, applications and losses.
- Unit III** : Magnetic Hysteresis- Area of Hysteresis Loop Properties and applications of Ferromagnetic Materials, Permanent magnet materials, Hysteresis Law-Energy Stored in Magnetic Field, Rate of Change of Stored Energy, Transient Current: Rise and decay of current in series LR, CR Circuits.
- Unit IV** : **Elements of Electro-mechanical Energy Conversion:** Introduction, Salient aspects of conversions, Energy- Balance, Magnetic-field System; Energy and Co-energy, A Simple Electromechanical System, Energy in Terms of Electrical Parameters, Rotary Motion, Dynamic Equations and system-model of a simple system.
- Unit V** : **A C Fundamental** - A.C. Through Resistance, Inductance and Capacitance, A C applied to LR, CR and LCR circuits, , power consumption in ac circuit, Apparent Power, Power factor, Power consumed in pure inductive and capacitive circuit, Resonance in LCR Circuits, Graphical Representation of Resonance, Sharpness of Resonance Curve, Q-Factor of a Series Resonant Circuit, Parallel A.C. Circuits, Bandwidth of a Resonant Circuit.
- Unit VI** : Primary and Secondary Batteries, Classification of Secondary Batteries based on their Uses, Classification of Lead Storage Batteries, Parts of a Lead-acid Battery, Electrical Characteristics of the Lead-acid Cell, Application of Lead-acid Batteries, Battery Ratings, Indications of a Fully Charged Cells.

**Reference Book:**

1. Text Book of "Electrical Technology" Vol. II, B.L. Theraja & A.K. Theraja, S. Chand Publications.
2. "Electrical Machines" by P. S. Bhimbra.
3. Energy Demand and Supply, (Stathis) Michaelides, Efstathios E. Springer Germany, 2012
4. Solar Electricity Handbook - 2012 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems, Michael Boxwell, Greenstream Publishers, 2012
5. Photovoltaics: Design and Installation Manual, Solar Energy International, 2012
6. Solar Electric Handbook: Photovoltaic Fundamentals and Applications, Solar Energy International, 2012
7. Electrical Technology, Naidu-Kamakshiah, Tata McGraw-Hill Education, 2006
8. Fundamentals of Electrical Engineering, Rajendra Prasad, PHI Learning Pvt. Ltd., 2005
9. A Text Book of Electrical Technology, B.L. Theraja, S. Chand Limited, 2008
10. Photovoltaic: Design and Installation Manual, Solar Energy International, 2012

**Practical**

1. Simulation of Hysteresis Loop on the CRO
2. Characteristics of LVDT
3. Characteristics of Current Transformers and Potential Transformers
4. Power measurement using current transformer & potential transformer
5. Power factor improvement with capacitor banks
6. Testing of energy meters

**APPENDIX-B**

**Syllabus Prescribed for B.Sc.-I (Sem-I & II) for the Subject Animation  
to be implemented from the Academic Session 2015-16**

**Semester I**  
**1S : Animation**  
**Computer Fundamentals and Animation**

- Unit-I** : Introduction to computer, relevant hardware and software, their list and general-purpose utility in actual practical application, connection diagrams with each other (simple block diagrams expected).
- Unit-II** : Introduction to different operating systems (OS) like **Windows, Linux**, etc. (their names and general idea should be given), requirements, etc. (brief idea and simple explanation only).
- Unit-III** : Basic idea of networks with block diagrams and definitions only (general-purpose networks like WAN, MAN and the LAN topologies and sub-topologies of LAN), their applications (brief idea and simple explanation only).

**Unit-IV** : Basic idea of memory, RAM, ROM, PROM, EPROM, etc. their definitions with description (brief idea and simple explanation only)

**Unit-V** : Using internet explorer, different browsers, email, attachment techniques, using compression utilities, search engine techniques (brief introduction), downloading, etc. introduction to POP and SMTP mail server configurations techniques.

**Unit-VI** : History of animation. Different types of animations and its applications.  
(Types : 2D animation , 3D animation , Stop motion animation, etc. & Applications : Entertainment, Education, Computer/Mobile Gaming, Special Effects, etc.)

**Practicals** : Minimum eight experiments based on above contents are to be performed.

**Recommended Books :**

1. Recommended Text Books: Computers & Common Sense by Roger Hunt, John Shelley, Published by Pretence-Hall of India, Edi.2004.
2. Reference books: Fundamentals of Computers by Rajaraman, Published by Pretence-Hall of India, Edi.2004.
3. Digital Computer Fundamentals by Bartee, Edi.2001.
4. Computer Fundamentals and Information Technology by Ramesh Bangia, Edi.2008.

The Concerning teachers are also suggested to use other relevant material available on the net, to update the knowledge of the students...

Following are the recommended links, for further search-

- 1) [www.tatamcgrawhill.com](http://www.tatamcgrawhill.com)
- 2) [www.books.google.co.in](http://www.books.google.co.in)
- 3) [www.penguinbooksindia.com](http://www.penguinbooksindia.com)
- 4) [www.bookcafe.in](http://www.bookcafe.in)
- 5) [www.newindianbooks.com](http://www.newindianbooks.com)
- 6) [www.newasiabooks.org](http://www.newasiabooks.org)

**Semester II  
2S : Animation  
Fundamentals of Graphics**

**Unit-I** : **Adobe Photoshop:** concepts of graphics, file menu basic of layers, selection, move, lasso, magic wand, crop, etc. (study of all tools expected).

**Unit-II** : All types of paint tools like air brush, custom shapes, quick mask, notes, audio annotation tools, masking, path, etc.

**Unit-III** : Working with layers, applications of masking to matting (study of all menus related to layers); image menu, color correction, scanning, filters, creating backgrounds & textures for website, slice tools, web related concepts. Creation of a simple web and presentation graphics, file automate options, video editing techniques.

**Unit-IV** : **Adobe illustrator:** Concepts of graphics designing, interface, basic shapes, all types of menus like file menu, edit, view, select, group/ungroup, lock, hide/show, etc.; File/outline, gradients, patterns, symbols, styles, swatches, mesh tool, paint brush. Creating a greeting card, etc.

**Unit-V** : Deformation tools, symbols tools, redrawing or cartoon making, type tools and type menus.

**Unit-VI** : Use of different tools like path, envelop, clipping and crop mask, etc; filters and effect menus, exporting document, idea of printing, setting bleed, idea of PDF technology.

**Practicals** : Minimum eight experiments based on above contents are to be performed.

**Recommended Books :**

1. Recommended Text Books: Digital fashion illustration with Photoshop and Illustrator by Kevin Tallon; Published by Batsford 2008.
2. Reference books: Real word Adobe Illustrator CS4 by Mordy Golding; Published by Pretence-Hall of India, 2008.
3. Creative Suite 3 integration: Photoshop, Illustrator by Keith Martin; Published by Pretence-Hall of India, 2008.
4. Special edition using Adobe Photoshop 7 by Peter Bauer, Jeff Foster; Published by Pretence-Hall of India, 2008.

The Concerning teachers are also suggested to use other relevant material available on the net, to update the knowledge of the students...

Following are the recommended links, for further search-

- 1) [www.tatamcgrawhill.com](http://www.tatamcgrawhill.com)
- 2) [www.books.google.co.in](http://www.books.google.co.in)
- 3) [www.penguinbooksindia.com](http://www.penguinbooksindia.com)
- 4) [www.bookcafe.in](http://www.bookcafe.in)
- 5) [www.newindianbooks.com](http://www.newindianbooks.com)
- 6) [www.newasiabooks.org](http://www.newasiabooks.org)