

IV-B.Tech
STUDENT HANDBOOK
A.Y.2015-16/II SEM



Department of IT

MARRI LAXMAN REDDY INSTITUTIONS



**MARRI
LAXMAN
REDDY**
GROUP OF INSTITUTIONS

MLR Institute of Technology

Dundigal (V), Outhbullapur (M), R.R Dist,
Hyderabad – 500043, A.P

www.mlrinstitutions.ac.in



VISION STATEMENT

VISION STATEMENT OF MLRIT

To create and nurture competent Engineers and managers who would be enterprise leaders in all parts of the world with aims of reaching the skies and touching the stars and yet feet firmly planted on the ground – good human beings steeped in ethical and moral values.



MISSION STATEMENT

MISSION STATEMENT OF MLRIT

MLR Institute of Technology is committed to providing a positive, professional and conducive learning environment where all students are inspired to achieve their potential and strive for excellence in a global society as dignified professionals with the cooperation of all stakeholders.



GOALS OF MLRIT

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Goals of Engineering education at undergraduate / graduate level:

- Equip students with industry – accepted career and life skills
- To create a knowledge warehouse for students
- To disseminate information on skills and competencies that are in use and in demand by the industry
- To create learning environment where the campus culture acts as a catalyst to student fraternity to understand their core competencies, enhance their competencies and improve their career prospects.
- To provide base for lifelong learning and professional development in support of evolving career objectives, which include being informed, effective, and responsible participants within the engineering profession and in society.
- To prepare students for graduate study in Engineering and Technology.
- To prepare graduates to engineering practice by learning from professional engineering assignments.

VISION STATEMENT OF DEPARTMENT

“To build IT Department with commitment towards continuous improvement that adapts swiftly to 21st century challenges by developing professionals with robust technical and research backgrounds”.

MISSION STATEMENT OF DEPARTMENT

- To provide quality Teaching Learning environment and make students proficient in both theoretical and applied foundations of Information Technology.
- Create highly skilled IT engineers, capable of doing research and also develop solutions for the betterment of the nation.
- Instill professional and ethical values among students.
- To develop entrepreneurial skills in students and also motive them towards pursuing higher studies.

PROGRAM EDUCATIONAL OBJECTIVES

- PEO I** Be successfully employed as a Software Engineer in the field of Information Technology.
- PEO II** Be a successful entrepreneur and assume leadership position, responsibility within an organization.
- PEO III** Progress through advanced degree or certificate programs in engineering, business, and other professionally related fields.

PROGRAMME OUTCOMES

- PO1** An ability to apply knowledge of computing, mathematics, science, and engineering fundamentals appropriate to the discipline.
- PO2** Identify, formulate and analyze complex engineering problems reaching substantiated conclusions using principles of mathematics and engineering sciences.
- PO3** An ability to design and develop solutions for IT Problems to meet desired needs within pragmatic constraints such as economic, environmental, political, manufacturability, and sustainability.
- PO4** Conduct investigations of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5** An ability to use and apply modern technical concepts, tools and practices in the core Information Technologies.
- PO6** An ability to analyze the local and global impact of computing on individuals, organizations, and society.

- PO7** An ability to effectively integrate IT-based solutions into the user environment constantly.
- PO8** An understanding of professional, ethical, legal, security and social issues and responsibilities.
- PO9** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10** Ability to communicate effectively with all stake holders.
- PO11** Apply Project Management skills and knowledge in Practice as a team member/leader to manage projects.
- PO12** Recognition of the need for and the ability to engage in Life Long Learning.

Our Pioneers...

MARRI LAXMAN REDDY – CHAIRMAN

Sri Marri Laxman Reddy, the founder Chairman of MLR Institutions has been in the field of education for the last 22 years with the aim of spreading quality education among children at the school & college levels. MLR Institute of Technology is the culmination of his dreams. He is also founder chairman of Marri Laxman Reddy Institute of Technology & Management, MLR Institute of Pharmacy, St. Martin's Engineering College and St. Martins Schools at Balanagar, Chintal and Malkajgiri. He is a veteran athlete of international repute.



MARRI RAJASEKHAR REDDY – SECRETARY



Sri Marri Rajashekar Reddy, the Secretary of MLR Institutions has the distinction of establishing the Institute of Aeronautical Engineering, MLR Institute of Technology, MLR Institute of Pharmacy, Vardhaman Engineering College, Vidyanjali Grammar School at L.B.Nagar and Institute of Aircraft Maintenance Engineering, approved by DGCA. He is also Treasurer of Indo-US Collaboration for Engineering Education of A.P. Chapter.

Mr. M. Rajasekhara Reddy, a person with remarkable abilities and great acumen and a dynamic leader. He is known to be the dynamic mentor of MLR Institute of Technology who is always on the spirit to take the institute to newer levels in every aspect of an "Ideal Institution" and strives hard to make every dream a reality. He likes his father Mr. M. Laxman Reddy, who has a credit of establishing Institute of Aeronautical Engineering adding a new flavor to St. Martins group of Institutions and Vidyanjali Grammar School. His ability to turn adversities into opportunities is unquestionable. The Secretary has a vision of establishing MLR Institute of Technology as a brand. He strives hard to initiate various industry oriented programs for the benefit of the students and he envisions his students to be present at the top most position in the industry

Dr. P. BHASKARA REDDY – DIRECTOR

Dr. P. Bhaskara Reddy, B.E.(ECE), M.Tech., Ph.D., F.I.S.E.E., MCSI, MISTE, MIETE, MEMCE. the Director of MLR Institute of Technology, is a young and dynamic Professor of ECE, has 26 years of Industry, Teaching, Research and Administrative experience in Reputed Engineering Colleges.

In 24 years of experience served various positions from Asst. Professor to Principal. Research & Guidance: Published 1 Book (International Edition) "Information Technology in Technical Education - Economic Development by "LAMBERT Academic Publishing" Published 9 Laboratory Manuals, 84 Research papers at National and International Level on Education, Electronics Communication, I.T, Computer Networks, E-Commerce etc. Guided 5 Research Scholars for their Doctorates, about 50 M.Tech., M.C.A and B.Tech projects. Symposiums Conducted: 11 National Level Technical Symposiums on various topics in Electronics & Communications, Computers etc.

Awards Received: 1) Bharath Jyothi Award in 2003 from IIFS, New Delhi, 2) Rastraprathiba Award in 2004 from ICSEP, New Delhi, 3) Knowledge Award from Alumni of SVHCE for the year 2001.



1.GENERAL INFORMATION

ABOUT THE COLLEGE

1.0 BEAUTIFUL CAMPUS:

Set in Sylvan surroundings away from the hustle & bustle of city life yet only 4 km away from Mahindra Satyam Technology Park on Balanagar – Narsapur state highway, the Institute is extremely conducive to academic, co-curricular and extra-curricular activities. It has large and well ventilated buildings with modern equipment in place and “State of the art”, sports facilities.

HIGHLIGHTS:

1.1 AUTONOMOUS STATUS

MLR Institute of Technology is now an Autonomous Institution!!

Under the UGC Autonomous College Scheme for a period of Six Years

1.2 PERFORMANCE

The college has been AA rated under colleges in AP by Careers360 magazine. Also, the college has been ranked at 126 by the week magazine in the Best colleges Survey-2013.

1.3 FACULTY:

The College is proud to have the best faculty, a blend of experienced and academics with eminent academicians team IIT's, NIT's and other reputed organizations teaching at the Institute that makes MLRIT as one of the best Institute pursue B.Tech, M.Tech,MCA and MBA as one of the under JNTU Hyderabad. The faculty is constantly encouraged to upgrade their qualifications and a number of them have enrolled for Ph.D. Most of the faculty members have been empowered with High Impact teaching under Wipro Mission 10X program.

1.4 INFRASTRUCTURES:

- ❖ Spacious campus and natural surroundings with plenty of greenery
- ❖ College Transport facilities from twin cities for students and staff from all corners of the city
- ❖ Air Conditioned auditorium for organizing events, workshops and seminars
- ❖ Good Canteen facility
- ❖ HDFC Bank ATM in the campus
- ❖ Fully equipped Laboratories with the state-of-art equipments

1.5 LABORATORIES:

The Institute has State of the art laboratories with 1000 plus Branded Systems equipped with latest hardware and software with online testing facility catering to the needs of CSE, IT. The Institute also has well equipped Electronic Labs, Aeronautical Engineering Labs and Workshops for ECE and Aeronautical Engineering Students. The college has recently established Microsoft, IBM for CSE/IT cadence lab for VLSI design and CATIA Aeronautical Design Lab.

1.6 CAT Centre:

The Institute is an Authorized IIM Cat Centre, which will conduct tests all through the year as per the IIM schedule.

1.7 ENGLISH LANGUAGE LABORATORY:

The Institute has established Ultramodern Computerized English language Laboratory with 60 plus Computer Systems loaded with latest Software to enhance the Softskills of Students to make the Students Industry ready.

The Library also have the previous University Exam Question papers and previous project reports from all the departments. The library contains recorded lectures of all IIT professors from NPTEL.

1.8 R&D Cell:

The Institute has an R&D Cell under the Chairmanship of ?. The R&D cell undertakes externally funded R&D projects from agencies like AICTE, DST, UGC and other similar state, private and society / trust bodies. It also undertakes research publications and interactions of faculty members with outside world.

1.9 LIBRARY:

The Institute Library has over 29000 books and 244 National and International journals and 15 Magazines that are required to all branches of Engineering. The Institute has the unique distinction of becoming Member of DELNET, Infotrac engineering online journals that connects more than 700 libraries in Asia Pacific Region. The Library has 35 Computers with 10 MB PS, Internet Facility that makes our knowledge Savvy Students to be technically competent on par with Industry professionals. NPTEL Videos and e-books, MIT courses also available.

1.10 National Programme on Technology Enhanced Learning (NPTEL)

The main objective of NPTEL program is to enhance the quality of engineering education in the country by developing curriculum based video and web courses. This is being carried out by seven IITs and IISc Bangalore as a collaborative project. In the first phase of the project, supplementary content for 129 web courses in engineering / science and humanities have been developed. Each course contains materials that can be covered in depth in 60 or more lecture hours. In addition, 110 courses have been developed in video format, with each course comprising of approximately 60 or more one-hour lectures. In the next phase other premier institutions are also likely to participate in content creation.

1.11 Co-Curricular Activities:

The Institution organizes Local Industrial Visits to Organizations like DOORDARSHAN, BSNL, and to Student Conferences like HYSEA, Student Conference at INFOSYS, Gachibowli Campus, and Government Sponsored Summits like INDO SOFT IT Summit at Hitex City Convention Centre to Interface with the Industry for Career Planning and to make them Industry Ready. The Institute focuses on Techno Management Events like Technonium and Zavtra to enhance the Technical Skills and Soft Skills to make them Employable.

1.12 Professional Bodies:

MLR Institute of Technology has the unique distinction of becoming Institutional Member in Professional bodies such as Confederation of Indian Industry (CII), Aeronautical Society of India (AeSI), Computer Society of India (CSI), Institute of Electronics and Telecommunication Engineering (IETE), Indian Society of Technical Education (ISTE), ELIAP and Hyderabad Management Association.(HMA)

1.13 Extra-Curricular Activities:

- ❖ MLRIT has State of the art facilities like Olympic Style Basketball Court, Volleyball Court, Gymnasium, Indoor Stadium, Cricket Stadium with Lush Green Outfields and 400 meter excellent track for Athletic meet. MLR Institute of Technology has been regularly conducting JNTU Zonal Games and Annual Open Invitational Volleyball, Football, Cricket Tournaments

- ❖ The Institute also organizes various Cultural Events like Traditional Day for freshers, “ZAVTRA” A National Level Technical Fest, TRISHNA - The Annual Day Celebrations, ECSTASY – A Cultural Nite by Vishal & Shekhar, Indian Idol Sri Ram, Farewell Party for final year students, Alumni Meet for Ex. Students and Graduation Day for graduated students every year to imbibe a spirit of Oneness.



NSS Activities:

A Sense of social responsibility is inculcated in Young Minds by organizing Plantation Programmes, Health Awareness Camps, Blood Donation Camps, Flood Relief Camps, Distribution of Books to School Children under Digital Literacy Programme of Microsoft by MLRIT NSS Volunteers.

1.14 In House Projects:

The students are taking part in International Project competitions hosted by major MNCs, like IBM, Microsoft and Infosys. The Great Mind Challenge hosted by IBM, Microsoft Imagine Cup and project work as part of foundation programme conducted under the aegis of Infosys are some of the important projects presently being undertaken by the students of MLRIT. Further, the students are encouraged to do In House Projects under the supervision of expert faculty members. In addition, students are encouraged to give innovative ideas and do projects under the aegis of Microsoft academic innovative alliance.

1.15 MOUs:

- BOEING
- Tech Mahindra
- Infotech Enterprises Ltd.
- IBM
- Oracle
- Sun Microsystems
- Infosys
- CA Labs
- Tata Advanced Systems
- Microsoft
- Globarena
- Wipro
- IUCEE

For giving special training programmes to engineering students and Faculty members of the institute

1.16 Student Achievements:

- ❖ Our College students got **2nd Place** out of 2100 colleges in **E-Plus Challenge 14** conducted by **The Hindu** in Hyderabad in March 2014.
- ❖ MLR Institute of Technology students have been securing **JNTUH ranks** regularly right from 1st batch itself, reflecting the core competencies of the faculty and dedicated efforts of the students.
- ❖ **Mr Venkata Rama Varma** student of 3rd year Aero has participated and stood 3rd in **National Aero-Modeling** competition conducted by Boeing held during Techfest 2014 at IIT Madras.

- ❖ **Mr. Venkata Rama Varma** student of 3rd year Aero has participated and stood 3rd in **Avion-E and Hower Mania** held during Techfest 2013 at **NIT Warangal**.
- ❖ **Mr Venkata Rama Varma and NAM Sai Teja** students of 3rd year Aero have been selected for Boeing National Aeromodeling Competition which will be held at IIT Delhi next Month.
- ❖ **Mr. Venkata Rama Varma** student of 3rd year Aero has participated and stood 1st in **Aero-Modeling Competition** held during Techfest 2013 at **Christ University**
- ❖ **Mr Venkata Rama Varma** student of 3rd year Aero has participated and stood 3rd in **Blitz Krieg Design Challenge** held during Techfest 2013 at IIT BOMBAY.
- ❖ **Mr.Varma** and team **III-Aeronautical** students got **2nd Prize** in **ICRAMAV-2013** organized by JNTUH for their **MAV** (Micro Aerial Vehicle).
- ❖ **Mr.Eshwer Reddy** student of 4th year Aero has participated and stood 2nd Prize in **Working Models** competition organized by Rotary Club.
- ❖ Three of **2nd Aero** students got **Rs. 5000/-** cash prize in **Design Competition** organized Engineers CAD Centre Hyderabad

1.17 Alumni Outreach

- ❖ The Institute has Alumni Association under the name and Style of MLR Alumni Association and conducted the First Alumni Meet on 14th Feb 2009 with the first batch Of 2008 passed out MBA students attending the meet.
- ❖ The Association has honoured the 2009 batch B.Tech, MCA along with MBA students by conducting the Second Alumni Meet at hotel Blue Fox on 13th March 2010 where more than 200 students participated in the Meet.
- ❖ The Association conducted 3rd Alumni meet for 2010 batch B.Tech, MCA & MBA students on 16th April 2011 at our college Auditorium.
- ❖ The Association conducted 4th Alumni meet for 2011 batch B.Tech, MCA & MBA students on 14th July 2012 at our college Auditorium.
- ❖ The Association conducted 5th Alumni meet for 2012 batch B.Tech & MBA students on 11th May 2013 at our college Auditorium.
- ❖ The Association conducted 6th Alumni meet for 2013 batch B.Tech, M.Tech & MBA students on 14th Feb 2015 at our college Auditorium.

1.18 Contact Information

Principal	- Dr. P. Bhaskara Reddy	- 9866678599
Dean (CS)	- Prof. K. L. Chugh	- 9866666601
Department Head CSE	- Mr.G.Kiran Kumar	- 9440759766
Department Head IT	- Dr.K.Srinivas Rao	- 9959656448
Department Head ECE	- Mr. S.V.S Prasad	- 9440840483
Department Head AERO	- Dr.M.Satyanarayana Gupta	- 9848339384
Department Head MECH	- Dr.S.Madhu	- 9160404635
Department Head MBA	- Mrs.Suneetha	- 9160404639
Department Head H&S	- Dr. V. Radhika Devi	- 9848472797
Sr.Administrative Officer	- Mr.G.Prabhakar Reddy	- 9866675818

2. PLACEMENT & HIGHER STUDIES

MLR Institute of Technology has a unique distinction of placing their First Batch of B.Tech Students in their prefinal year of Study and MBA Students in Multi National Companies. The Institute has so far interacted with more than 69 Companies and 233 Selections from B.Tech/MCA and MBA Programmes have taken Place.

In this direction Apart from the Placements the Institute has arranged Summer Internship Programmes with Companies like Computer Amociates, Mind Tree M/s Infotech Enterprises Ltd, Mahindra Finance, Max New York Life Insurance, Nokia Ltd , Mahindra Finance, Bajaj Capital Ltd, Reliance Money and Tata AIG for Engineering and MBA Students to develop Mentor Relationships and to get to know about the Work Culture and gain Competencies to make them Industry Ready during their Study period.

The Institute has arranged Campus Recruitment drives Infosy, Mind Tree Ltd, Oracle, ADP, Mahindra Satyam, Infotech Enterprises Ltd, Keane India Ltd (NTT), IBM Technologies Pvt Ltd, Tata Advanced Systems, IBM, Syntel Inc, Tech-Synergy Pvt Ltd, Adithya Software Solutions, HDFC Bank Ltd, Medha Servo drives. NR Radio & Switches Pvt.Ltd. OsiTechnologies Ltd, Genpact, Reliance Money, Nagarjuna Caments Ltd & Oasis Software Informatics, Shoppers Shop, Trident Micro Systems India, SnapDeal.com, India Mart Ltd, Power Tech, Suchir India, Quartz Infra and Engineering Pvt Ltd, Gobrah Technologies Pvt Ltd, Elbit Diagnostics, Eprism Solutions, Geo Meme Strategic Consulting, India Info Line, Water Shed project of Govt of AP, Ocean Ship Maritime etc.

The CSE students visited Infosys Infosys for the SPARK Programme which is an orientation programme on Information Technology Space.

2.1 Industry Grade Skills required for Employment

Behavioral and Communication Skills are recognized as important elements in professional development of an Engineer including English for specific purposes. Employers give considerable value to these diverse set of skills at the time of interviews.

In addition to course curriculum, every student will gain the following skills during the study period:

- Analytical and Problem solving skills
- Subject – specific knowledge
- Research and improved decision making abilities
- Oral communication skills
- Managerial skills
- Understanding of other cultures
- Confidence and competence to work in International environment

As students are the future leaders, the Responsibility, Accountability and exhibiting the leadership skills should start from the first year of engineering. Every student is advised to read / practice from the following books;

- Verbal and Nonverbal by RS Agarwal
- Baron GRE
- Wren and Martin English Grammer Book

2.2 Important criteria of Employment

In addition to the industry grade skills required for employment, the most important criteria for employment is that the student should get a minimum of 60% in academics with no backlogs to make them eligible for campus recruitments. In the recent past, many companies stipulated a cut of 68% for attending the interview / writing the test. Every student should Endeavour to achieve a minimum of 68% with no backlogs to make them suitable for picking up by good companies.

Job Portals:

1. www.freshersworld.com
2. www.monster.com
3. www.naukri.com

2.3 Higher Studies**M.Tech**

The Graduate Aptitude Test in Engineering (GATE) is an all-India examination administered and conducted in eight zones across the country by the GATE Committee comprising faculty from Indian Institute of Science, Bangalore and seven Indian Institutes of Technology on behalf of the National Coordinating Board - GATE, Department of Education, Ministry of Human Resources Development (MHRD), and Government of India.

Objective

To identify meritorious and motivated candidates for admission to Post Graduate Programmes in

Engineering, Technology, Architecture and Pharmacy at the National level. To serve as benchmark for normalization of the Undergraduate Engineering Education in the country.

This provides an opportunity for advanced engineering education in India. An M.E or M.Tech degree is a desirable qualification for our young engineers seeking a rewarding professional career. Engineering students, while in the final year of their degree course, spend considerable time in seeking an opening for studies in foreign universities.

The students are advised to pursue M.Tech in IIT's/NIT's/University Colleges.

MBA

Earning a Master's of Business Administration (MBA) degree can provide you with management skills and business expertise that open new career opportunities to you. An MBA program will also launch you into the much higher pay range that upper level managers and executives enjoy. Furthermore, in the high-level positions, an MBA degree will allow you to hold and your work will often be more interesting and rewarding.

The students are advised to pursue M.BA in IIM's/XLRI/Reputed Business Schools.

Higher Studies Abroad

TOEFL is mandatory for seeking admission in any academic course at any level- undergraduate, graduate or post graduate, in USA and Canada. Similarly UK Universities ask for IELTS for seeking admission to graduate and past graduate courses.

GRE The Graduate Record Examination (GRE) is administered by the Educational Testing Services (ETS) for admission into all graduate academic programs (except management) in universities across USA and Canada and some selected universities across the world including India. The exam is a Computer Adaptive Test and is administered at any of the Sylvan testing centers in the country after prior registration.

The GMAT is a Computer Adaptive Test administered online by Educational Testing Services (ETS) through Sylvan testing centers located in all the major cities in India. Those who wish to enroll for courses in Business Management in American universities have to take the GMAT test and submit their scores to the department.

2.4 Various Scholarships Available In India

Bharat Petroleum Scholarship For Higher Studies | Balarama Digest Scholarship | Central Institute of Indian Languages | Fair & Lovely Foundation - Project Saraswati Scholarships | Government Of India Office of the Director General of Civil Aviation Scholarship | Homi Bhabha Centre For Science Education Tata Institute of Fundamental Research Research Scholarships | HSBC Scholarships | Indian Council Of Agricultural Research Award Of National Talent Scholarship In Agriculture | Indian Institute Of Geomagnetism Research Scholars | Invention Awards For School Children | Indian Oil Corporation Ltd (IOCL) -

Scholarships | Jawaharlal Nehru Memorial Fund Jawaharlal Nehru Scholarships For Doctoral Studies | Junior Research Scholarships For Cancer Biology Tata Memorial Centre & Tata Memorial Hospital | Jaigopal Garodia Vivekananda Trust Scholarships | Lalit Kala Akademi - Scholarship | Mahindra All India Talent Scholarships For Diploma courses In Polytechnics | National Brain Research Centre Scholarships | NTPC Scholarships | National Institute Of Science Communication And Information Resources(NISCAIR) | National Board For Higher Mathematics(NBHM) | National Thermal Power Corporation Ltd.Scholarships | National Olympiad Programme | National Level Science Talent Search Examination - 2005 | Narotam Sekhsaria Scholarship Programme | National Brain Research Centre Scholarships, Post Doctoral Fellowships | National Aptitude Test | NIIT National IT Aptitude Test | Oil And Natural Gas Corporation Ltd (ONGC) Scholarships To SC/ST Students | Office Of The Director General of Civil Aviation Scholarships Stipend to the SC/ST Candidates | Rashtriya Sanskrit Sansthan - Scholarships | Scholarships To Young Artistes | Saf-Madanjeet Singh Scholarship | Sports Authority Of India - Sports Scholarships | SAF-Madanjeet Singh Scholarship | Spic Macay Scholarships | The Childrens Foundation - Scholarships | The L&T Build-India Scholarship | The Hindu-Hitachi Scholarships | The Paul Foundation Scholarships | Technology Information Forecasting and Assessment Council(TIFAC) Women Scientist Scholarship Scheme | The Young Talent IT Scholarship The Dr.GB Scholarships Foundation |

2.5 Various International Scholarships Available In India

A * STAR India Youth Scholarship | A.M.M. Arunachalam-Lakshmi Achi Scholarship For Overseas Study | British Chevening Scholarships | Bharat Petroleum - Scholarships for Higher Studies | Cambridge Nehru Scholarships | Commonwealth Scholarship and Fellowship | Czech Government Scholarship | Chevening Technology Enterprise Scholarship Programme | Chinese Government Scholarship | Greek Government Scholarships | Israel Government Scholarship | Iranian Government Scholarship | Offer of Italian Government Scholarship | Japanese Government Scholarships | K.C.Mahindra Scholarships For Post-Graduate Studies Abroad | Lady Meherbai D.Tata Scholarships | Mexican Government Scholarship | Norwegian Government Scholarships | National Overseas Scholarships/Passage Grant for ST Candidates | Portuguese Government Scholarships | Sophia Merit Scholarships Inc | Slovak Government Scholarship | SIA Youth Scholarships | The Rhodes Scholarships India | The Ramakrishna Mission Institute Of Culture Award of Debesh-Kamal Scholarships For Studies Abroad | The Inlaks Foundation - Scholarships |

Website for Higher Studies:

1. www.higherstudyabroad.org
2. www.highereducationinindia.com

3. STUDENT CAREER ORIENTED PROFESSIONAL CERTIFICATION COURSES

As per the career plan for students of MLR Institute of Technology with a view to bridge the gap between Industry and Academia, it has been planned to equip every student with at least three International / National certification by the time he / she completes the course of study. The details of the certification courses are given below:

Branch	Year	Name of the Certification Course
Computer Science and Engineering / IT / MCA	2 nd Year	Certificate Information Technology
	3 rd Year	IBM Certified DB2 Database Associate, Infosys Campus Connect
	4 th Year	IBM Certified Rational Application Developer
	4 th Year	SUN Certified Java Programmer
Electronics and Communication Engineering	2 nd Year	Institute of Electronics and Telecommunication Engineering
	3 rd Year	Motorola @ CAMPUS
	4 th Year	IBM Certified DB2 Database Associate
Aeronautical Engineering	2 nd Year	Certificate in AutoCAD
	3 rd Year	Certificate in HighPerMesh
	4 th Year	Certificate in CATIA
Mechanical Engineering	2 nd Year	Certificate in AutoCAD
	3 rd Year	Certificate in HighPerMesh
	4 th Year	Certificate in CATIA

3.1 Help Desk

The college has set up a Help Desk for Career Guidance and overseas education. The aim of the Help Desk is to provide a platform for the students to choose the Right Destination. The students can reach the Help Desk in person or through mail at email id helpdesk@mlrinstitutions.ac.in

4. PERFORMANCE MONITORING AND GUIDANCE

4.1 Student Feedback

In case the students find it difficult to cope up / understand a particular subject, they are advised to discuss it with

- a. The Concerned Teacher
- b. The Class Teacher
- c. The Department Head
- d. The Principal

Students can use the suggestion boxes for communicating feedback. Students should mention their names so that they can be informed of the progress / more details / clarifications can be obtained.

4.2 Class Teacher

Every class is assigned a Class Teacher (a faculty member). Students can directly discuss their college related or personal problems related to studies with them. The Class Teachers are accessible to the students and they can talk to the Class Teacher or whenever they are free from class / lab work. Class Teacher will meet with the class representative on daily basis to discuss their day-to-day difficulties if any.

4.3 Class Representatives and their roles

Two students from each class are selected as the Class Representatives from the department basing on their academic performance and discipline. Department Head makes the selections.

Responsibilities of the Class Representatives:

- Collection of MIS format from Class Teacher daily.
- Communicating the departmental / college directives & information to the students.
- Collecting the feedback of difficulties faced by the students and communicating Suggestions for improvements.
- Coordinating academic events and co-curricular activities.
- Encourage students to interact for better studies, sharing books and notes.
- Compilation and submission of MIS form to class teacher at the end of the period.

4.4 Performance Counseling

Mentors will evaluate the student individually for the following:

- a. Less marks in internal exams
- b. Continuous absence (3 days) and shortage of attendance
- c. Not understanding the subject
- d. Students from Telugu medium
- e. Assistance for back log subjects etc.
- f. Communication with parents
- g. Provide help to back log students

4.5 Remedial Classes / Tutorial / Revisions

Remedial Classes are conducted for students who are weak and who do not perform well in their internal examinations / class tests or for the students who want extra help. Slots in the time table have been reserved for Tutorial where in the students are helped to solve the question in the class itself.

4.6 Backlog Management

The Mentors maintain a complete record of Examination results of each student and they counsel and guide them in preparing for backlogs. Students are provided with material and important questions are discussed.

4.7 Correspondence with parents

Parents will be informed about the performance of their ward from time to time in the semester. However, parents are requested to be in touch with the Student mentor / Department Head on a regular basis. Further, parents are sent sms on daily bases if their wards do not attend the college.

5. RULES AND REGULATIONS FOR STUDENTS

5.1 Administrative:

1. Students, admitted into this College, are deemed to have agreed to the rules and regulations of the college, as laid down by the College Authorities from time to time, and the rules lay down in this leaflet, issued at the time of admission.
2. Students should inform **any changes in the addresses/Phone No.** of their parents / guardians to the college office.
3. The college shall communicate to the parents \ guardians of the students from time to time regarding the regularity and performance in the examinations of their wards. The case of serious indiscipline on the part of the students (s) may also be communicated to parent (s) \ guardian (s).

5.2. Academic:

1. Students should **attend the classes in - time**. Late- comers shall not be permitted to enter the class room and they are likely to **lose the attendance**.
2. Students are expected to be regular to the classes. The students Shall not absent themselves for classes without prior approval. **Prior permission** shall be taken from concerned **counselor** and submitted to the **Head of the Department**.
3. In case of **ill-health**, the student should submit the **medical certificate** along with prescription, etc., from a **registered medical doctor**. The student should get the medical certificate within **two days** from the date of reporting to the college after ill health and also produce a **letter from Father/ Mother** regarding ill-health. Permission on medical grounds shall not be granted for one or two days.
4. The students should come to the laboratories with the **prescribed uniform**.
5. If a student **disturbs the class** or makes mischief, he / she will be marked absent and may be **expelled from the class**.
6. Students shall spend their **leisure time** in the library/computer center.
7. Students are expected to put up the **minimum aggregate percentage of attendance (75%)** as laid down by the JNT University. Students, falling short of 75% of attendance shall not be promoted to the next Semester \ Class.
8. Parents \ guardians of the students can contact the college authorities either in person or by post regarding discipline, regularity in attending classes, performance in the examinations, etc., of their wards.

5.3 Dress Code:

1. Students are expected to attend the college **properly dressed**. They should wear the prescribed uniform while attending laboratory classes.
2. Students are expected to **carry the identity cards**, issued by the college, in the campus. They are required to show the identity cards at the library, computer center, office, etc. Students without Identity Cards are not allowed in to the laboratory classes.

5.4 Discipline & Punctuality:

1. No student shall **enter or leave** the class room **without the permission** of the teacher.
2. **Calling students** out of their class rooms while the lecture is in progress is prohibited.
3. Students are required to help in keeping the rooms, buildings, and premises **clean and tidy**. Writing or sticking up of posters and notices on the walls is strictly prohibited.
4. Smoking, Consumption of alcohol, intoxicating drinks or drugs is **strictly prohibited** in and around the college premises. Those indulging in such activities will be put severely or expelled.
5. Students are expected to behave well with the staff, other students and the general public. Any **misbehavior**, coming to the notice of the college authorities, will be severely dealt with.
6. The conduct of the students should be exemplary not only within the premises of the college but also outside. This will help in maintaining the **image and status** of the college.

- not talk in loud tone or call each other by shouting.
8. Students are **prohibited** from loitering in the verandahs / campus during class hours, and sitting on the steps, stair-cases or parapet walls.
 9. Students are **not permitted** to resort to strikes and demonstrations within the campus. Participation in such activity entails their dismissal from the college. Any problem they face may be represented to the Counselor / Head of the Department / Principal.
 10. Students are **prohibited carrying Cell Phones** and organizing any meeting or entertainment in the college campus without the permission of the college authorities.
 11. The entry of **outsiders without permission** is prohibited. Any student found responsible for bringing outsiders into the campus for settling personal disputes with other students, shall be **expelled** from the college.
 12. The college is entitled to take any **disciplinary action**, which is deemed necessary in the case of any indiscipline on the part of the students. The same will be reflected on the **Conduct Certificate** issued at the time of leaving the college.
 13. No Student Unions, except **Professional Associations**, are **permitted** in the college.
 14. If the students cause any **damage to the college property** knowingly or unknowingly individually or in a group they have to pay **5 times to cost of property** damaged them. All the students are collectively responsible for the proper maintenance college property i.e. building, furniture, lab equipment, garden, playgrounds, etc., recovery, calculated on semester to semester basis, will be collected along with examination fee for the semester.
 15. Students should keep their **vehicles** only at the **parking place allotted** for the purpose. Vehicle riding in the campus is strictly prohibited.
 16. Sitting on the parapet wall and Riding beyond the **parking limits**, the fine will be imposed to Rs.100.00
 17. Breakage or loss of equipment /property as decided by the appropriate authority
 18. The Principal/Director may, on the recommendation of the Head of the Department, or otherwise, inflict the **following punishments** in the interests of the student discipline and the Institution: fined, curtailment attendance, denial of promotion to next semester, suspension, expulsion or such other action as deemed necessary for the maintenance of discipline in the campus.

5.5. Lab Classes:

All students must attend lab classes without fail. Those absent shall follow this procedure laid down in the prescribed format explaining valid reasons and obtain permission to attend the future classes.

5.6 Fee:

1. All students admitted into this college, will be required to pay the prescribed tuition fee and other specified fees. Failure of the same will result in the cancellation of admission. No portion of fees will be refunded under any circumstances. If any student wishes to change the college or discontinue the course at any point for any reason, he \ she shall not be permitted to do so unless he \ she pays balance amount of four years fees which he \ she would have to pay, if he \she continued till the completion of the course. His \ Her original certificates including I.e., etc., will be issued only after all the dues as stated above, are cleared by the students. All senior students must pay the college fee every year on or before the 15th of July irrespective of the reopening of the college. If they fail the fine will be imposed as per norms of the management.
2. Miscellaneous fee paid for expenditure related to training programs i.e., technical or soft skills etc., is not refundable.
3. Other than the above, if any fees are levied by the University the student has to be pay the same.

5.7. Transport:

All students who are availing the college bus facility must carry the bus-pass and must produce when demanded, failing which they will not allowed to travel in the bus. All students must travel in the allotted bus and routes. They should not change but occupy only their allotted seats throughout. Unauthorized students caught in the bus for not having the bus

pass, should pay even if they traveled for one day also. First and second year are not allowed to bring two-wheelers.

5.8. Library Rules

1. Library Books will be issued for 15 days time and renewal depends upon the demand of the book.
2. Silence should be strictly maintained in the library.
3. Students are responsible for the library borrower card issued to them. Loss of the library card should be reported in writing to the circulation section immediately. Duplicate library borrower card will be issued on payment of Rs.150/- after a week time from the date of application for duplicate cards.
4. The Library borrower card is not transferable.
5. **Library books must be returned on or before the due date. Any student failed to do so, 1st week –Rs.1/-per day/per book, 2nd week – Rs.2/-per day/per book and 3rd week –Rs.3/-per day/per book penalty will be imposed From 4th week-Rs.5/-per day/per book penalty will be imposed.**
6. Students shall not make any sort of conversation in any part of the library, causing inconvenience to others.
7. Students shall not bring their belongings inside the library and should keep them outside the library.
8. Students leaving from the library should be checked at the exit.
9. Tearing of pages/stealing of books will invite suspension from using of the library facilities and further disciplinary action will be taken against such students, as per college norms.
10. The borrower shall replace the **New book within 7 days, otherwise, he/she has to pay 3 times of the book cost, along with fine.** In case of lose of book.

5.9. General:

1. All the students admitted in this college have to give an **undertaking** to abide by the **rules and regulations** of this college in prescribed format given by the college.
2. All the students **should attend** the college after vacations (Dasara / Sankranthi / Christmas / Semester term / summer) on the **re-opening day** without fail.
3. Students must **deposit all the relevant original certificates and documents** at the time of the admission Office and they will not be returned until completion of the course.
4. Admission of any student can be cancelled by the Management at any point during the course for reasons which are not in consonance with the rules and regulations and which are detrin the reputation of the college.
5. All the Students are here by informed that **college authorities will not take any responsibility for loss or theft of your valuable items and money** kept in your bags or some where else. Hence I request all the students are not to keep your valuables in class room or anywhere without your presence.
6. **Fee For Issue Of Duplicates**

a) Duplicate Hall ticket	Rs. 100.00
b) Duplicate Identity Card	Rs. 100.00
c) Duplicate College Bus Pass	Rs. 50.00
d) Duplicate Study Certificate for same purpose	Rs. 50.00
e) Xerox copies of OD's	Rs. 50.00

All Breakage etc., penalties will be displayed on the Notice Board, and must be paid by the student and no student will be allowed to write examination or internal test or laboratory test, if penalties are not paid by the due date specified in the notice or circular.

5.10. Ragging

Ragging in any form inside or outside the college campus is banned/Prohibited vide Ragging Act 26 of AP. legislative Assembly 1997. Those who indulge in this uncivilized activity are liable for severe disciplinary actions besides being liable for prosecution.

SALIENT FEATURES

apprehension or threat or intimidation or outrage of modesty or injury to a student.

S. No.	Nature of Ragging	Punishment
1	Teasing, Embarrassing and Humiliating	Imprisonment Upto 6 Month or Fine Upto Rs 1000/- or Both.
2	Assaulting or using criminal Force or criminal intimidation	Imprisonment Upto 1 Year or Fine Upto Rs 2000/- or Both.
3	Wrongfully restraining or Confining or causing hurt	Imprisonment Upto 2 Years or Fine Upto Rs 5000/- or Both.
4	Causing grievous hurt kidnapping Or raping or committing unnatural offence	Imprisonment Upto 5 Years or Fine Upto Rs 10000/- or Both
5	Causing death or abating Suicide	Imprisonment Upto 10 Years or fine Upto Rs. 50000/- or Both

Note:

1. A student convicted of any of the above offences, will be, dismissed from the college
2. A student imprisoned for more than six months for any of the above offences 'will not be admitted in any other College.
3. A student against whom there is prima facie evidence of ragging in any form will be suspended from the college immediately.

Prohibition of Ragging

1. Ragging is prohibited as per act 26 of AP. Legislative assembly, 1997.
2. Ragging entails heavy fines and/or imprisonment.
3. Ragging invokes suspension and dismissal from the college.
4. Outsiders are prohibited from entering the college premises without permission.
5. All students must carry their identity cards and show them when Demanded.
6. The principal and staff will visit and inspect the rooms at any time.
7. Suspended students are debarred from entering the campus except when required to attend enquiry and to submit an explanation .

6. ACADEMIC REGULATIONS R13 FOR B.TECH. (REGULAR)

Applicable for the students of B.Tech. (Regular) from the Academic year 2013-14 and onwards

6.1. Award of B.Tech. Degree

A Student will be declared eligible for the award of the B.Tech. Degree if he fulfills the following academic regulations:

- i) Pursued a course of study for not less than four academic years and not more than eight academic years.
 - ii) Register for 224 credits and secure 216 credits.
- 6.2. Students, who fail to fulfill all the academic requirements for the award of the degree within eight academic years from the year of their admission, shall forfeit their seat in B.Tech Course.

6.3. Credits

	I Year		Semester	
	Periods / Week	Credits	Periods / Week	Credits
Theory	03+1/03	06	04	04
	02	04	---	---
Practical	03	04	03	02
Drawing	02T/03D	06	03 06	02 04
Mini Project	---	----	---	02
Comprehensive Viva Voce	---	--	---	02
Seminar	---	---	6	02
Project	---	---	15	10

6.4. Distribution and Weight age of Marks

- i. The performance of a student in each semester / I year shall be evaluated subject – wise with a maximum of 100 marks for theory and 75 marks for practical subject. In addition, Industry oriented mini-project, seminar and project work shall be evaluated for 50,50 and 200 marks respectively.
- ii. For theory subjects the distribution shall be 25 marks for Internal Evaluation and 75 marks for the End-Examination.
- iii. For theory subjects, during the semester there shall be 2 midterm examinations. Each mid term examination consists of objective paper for 10 marks and subjective paper for 15 marks with a duration of 1 hour 50 minutes (20 minutes for objective and 90 minutes for subjective paper).
- iv. For practical subjects there shall be a continuous evaluation during the semester for 25 sessional marks and 50 end examination marks. Out of the 25 marks for internal, day-to-day work in the laboratory shall be evaluated for 15 marks and internal examination for practical shall be evaluated for 10 marks conducted by the concerned laboratory teacher. The end examination shall be conducted with external examiner and laboratory teacher. The external examiner shall be appointed from the cluster of colleges as decided by the University examination branch.
- v. For the subject having design and / or drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing) and estimation, the distribution shall be 25 marks for internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for end examination. There shall be two internal tests in a Semester and the better of the two shall be considered for the award of marks for

- internal tests. However in the I year class, there shall be three tests and the average of best two will be taken into consideration.
- vi. There shall be an industry-oriented mini-project, in collaboration with an industry of their specialization, to be taken up during the vacation after III year II semester examination. However, the mini project and its report shall be evaluated with the project shall be submitted in report form and should be presented before the committee, which shall be evaluated for 50 marks. The committee consists of an external examiner, head of the department, the supervisor of mini project and a senior faculty member of the department. There shall be no internal marks for industry oriented mini project.
 - vii. There shall be a seminar presentation in IV year II semester. For the seminar, the student shall collect the information on a specialized topic and prepare a technical report, showing his understanding over the topic, and submit to the department, which shall be evaluated by the Departmental committee consisting of Head of the department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 50 marks. There shall be no external examination for seminar.
 - viii. There shall be a comprehensive Viva-Voce in IV year II semester. The Comprehensive Viva-Voce will be conducted by a Committee consisting of (i) Head of the Department (ii) two Senior Faculty members of the Department. The comprehensive Viva-Voce is aimed to assess the students' understanding in various subjects he/she studied during the B.Tech course of study. The comprehensive Viva-Voce is evaluated for 100 marks by the Committee. There are no internal marks for the comprehensive viva-voce.
 - ix. Out of a total of 200 marks for the project work, 50 marks shall be for Internal Evaluation and 150 marks for the End Semester Examination. The End semester Examination (viva-voce) shall be conducted by the same committee appointed for industry oriented mini project. In addition the project supervisor shall also be included in the committee. The topics for industry oriented mini project, seminar and project work shall be conducted at the end of the IV year. The Internal Evaluation shall be on the basis of two seminars given by each student on the topic of his project.
 - x. Laboratory marks and the sessional marks awarded by the college are not final. They are subject to scrutiny and scaling by the University wherever necessary. In such cases, the sessional and laboratory marks awarded by the College will be referred to a Committee. The Committee will arrive at a scaling factor and the marks will be scaled as per the scaling factor. The recommendations of the Committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the University norms and shall be produced to the Committees of the University as and when the same is asked for.

6.5. Attendance Requirements:

- i. A student shall be eligible to appear for University examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- ii. Shortage of Attendance below 65% in aggregate shall in NO case be condoned.
- iii. Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester or I year may be granted by the College Academic Committee.
- iv. A student will not be promoted to the next semester unless he satisfies the attendance requirement of the present semester / I year, as applicable. They may seek re-admission for that semester / I year when offered next.
- v. Students whose shortage of attendance is not condoned in any semester / I year are not eligible to take their end examination of that class and their registration shall stand cancelled.
- vi. A stipulated fee shall be payable towards condonation of shortage of attendance.

6.6. Minimum Academic Requirements:

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no 6

- i. A student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each theory or practical design or drawing subject or project if he secures not less than 35% of marks in the end examination and a minimum of 40% of marks in the sum total of the internal evaluation and end examination taken together.
- ii. A student shall be promoted from II to III year only if he fulfills the academic requirement of 37 credits from one regular and one supplementary examinations of I year, and one regular examination of II year I semester irrespective of whether the candidate takes the examination or not.
- iii. A student shall be promoted from third year to fourth year only if he fulfills the academic requirements of total 62 credits from the following examinations, whether the candidate takes the examinations or not.
 - a) Two regular and two supplementary examinations of I year.
 - b) Two regular and one supplementary examinations of I semester.
 - c) One regular and one supplementary examinations of II year II semester.
 - d) One regular examination of III year I Semester.
- iv. A student shall register and put up minimum attendance in all 200 credits and earn the 200 credits. Marks obtained in all 200 credits shall be considered for the calculation of percentage of marks.
- v. Students who fail to earn 200 credits as indicated in the course structure within eight academic years from the year of their admission shall forfeit their seat in B.Tech course and their admission shall stand cancelled.

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7. COURSE CALENDAR FOR THE YEAR

Description	Period	Duration
I Sem		
Commencement of Class work	29-06-2015	
1 st Spell of Instructions	29-06-2015	22-08-2015 (8 weeks)
I mid term exams	24-08-2015	29-08-2015 (1 week)
2 nd Spell of Instructions	31-08-2015	17-10-2015 (8 weeks)
II mid term exams	26-10-201	31-10-2015 (1 weeks)
Preparations & Practical Examinations	02-11-2015	07-11-2015 (1 weeks)
End Examinations	09-11-2015	21-11-2015 (2 weeks)
II Sem		
Commencement of Class work	07-12-2015	
1 st Spell of Instructions	07-12-2015	30-01-2016 (8 weeks)
I mid term exams	01-02-2016	06-02-2016 (1 week)
2 nd Spell of Instructions	22-02-2016	16-04-2016 (8 weeks)
II mid term exams	18-04-2016	23-04-2016 (1 weeks)
Preparations & Practical Examinations	25-04-2016	30-04-2016 (1 weeks)
End Examinations	02-05-2016	14-05-2016 (2 weeks)

8. IV YEAR IT COURSE STRUCTURE

CODE	SUBJECT	L	P	C
58007	Management Science	3	-	3
58061	E-Commerce (Elective-III)	3	1	3
58063	Design patterns(Elective-IV)	3	1	3
58633	Industry Oriented Mini Project	-	-	2
58634	Seminar	-	6	2
58635	Project Work	4	-	4
58636	Comprehensive Viva	-	15	10
58007	Management Science	-	-	2
	Total	9	23	25

Note: All End Examinations (Theory and Practical) are of three hours duration.

T – Tutorial

L-Theory

P- Practical

C – Credits

9. MANAGEMENT SCIENCE

9.0 COURSE DESCRIPTION FORM

Course Title	MANAGEMENT SCIENCE			
Course Code	58007			
Regulation				
Course Structure	Lectures	Tutorials	Practicals	Credits
	4	-	-	4
Course Coordinator	M NAVEEN KUMAR REDDY			
Team of Instructors				

9.1 COURSE OVERVIEW

It is the scientific study of employees, workplaces, and organizations. Industrial and organizational psychologists contribute to an organization's success by improving the workplace and the performance, satisfaction and well-being of its people. An Industrial Management conducts research on employee behaviors and attitudes, and how these can be improved through hiring practices, training programs, feedback, and management systems. Industrial Management also help organizations transition among periods of change and development. Industrial and organizational psychology is related to organizational behavior and human capital

9.2 PREREQUISITE(S)

Level	Credits	Periods/Weeks	Prerequisites
UG	4	4	MANAGEMENT SCIENCE

9.3 MARKS DISTRIBUTIONS

Mid Semester Test	University End Exam Marks	Total Marks
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<p>There shall be 2 Mid Term Examinations. Each Mid Term Examination consists of a Subjective Test and an Objective Test. The Subjective Test is for duration of 1 hr and the Objective Test is for duration of 30 minutes. The Objective Test consists of 10 multiple choice and 10 fill in the blanks type questions. The student has to answer all the questions and each question carries Half Mark. The subjective test is for 10 marks and the objective test will be for 10 marks. Subjective test in midterm examinations shall contain 4 questions, with each question having part a) and part b). Each question will carry 5 marks and the student needs to answer any 2 questions. First midterm examination shall be</p>	75	100
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9.4 EVALUATION SCHEME

S.No	Component	Duration	Marks
1	I Mid Examination	90 minutes	20
2	I Assignment		05
3	II Mid Examination	90 minutes	20
4	II Assignment		05
5	External Examination	3 hours	75

COURSE OBJECTIVES

S.No.	Course
I	Familiarize & obtain Knowledge with the process of management and to provide basic insights into
II.	Understand the structure & Designing of an Organization.
III	Knowledge on the aspects of Production.
IV	Analyze the market and the strategies involved in Marketing.
V	Knowledge on concepts related to Human Resources.
VI	Understand the techniques used in Project Management.
VII	Familiarize with strategies used for analysis of an Organization.
VIII	Understand the Contemporary Management Issues.
IX	Familiarize with the management skills which can be applied in the Organizational context to achieve

9.5 COURSE OUTCOMES

S.No.	Course
a.	Knowledge on management theories and practices.
b.	Understanding designing organizational structure.
c.	Understanding on the methods & charts used in operations management.
d.	Ability to understand the market and its environment.
e.	Understand the processes, functions etc in Human Resources Management.
f.	Ability to solve problems in managing the Project.
g.	Knowledge on Strategic alternatives.
h.	Familiar with the practices implemented in management.
i.	Understand the social responsibilities of Management.
j.	Understand the basic concepts of Management.

9.6 HOW PROGRAM OUTCOMES ARE ASSESSED

Program Outcomes		Level	Proficiency assessed by
A	An ability to apply knowledge of computing, mathematical foundations, algorithmic principles, and computer science and engineering theory in the modeling and	N	---
B	An ability to design and conduct experiments, as well as to analyze and interpret data	N	---
C	An ability to design , implement, and evaluate a computer-based system, process, component, or program to meet desired needs, within realistic constraints such as	S	Interacti ve discussi
D	An ability to function effectively on multi- disciplinary teams (<i>teamwork</i>)	S	Assignments & Exercise

E	An ability to analyze a problem, identify, formulate and use the appropriate managerial skills required for obtaining its solution	S	Exercises and assignments
F	Demonstrate an ability to use latest hardware and software tools to solve complex engineering problems	N	---
G	An ability to apply Demonstrate knowledge of contemporary issues like health, Safety and legal which influences engineering	N	---
H	Show the understanding on the awareness on society and environment for sustainable	S	Exercises and assignments
I	An ability to demonstrate understanding of Professional and ethical Responsibilities	H	Assignments, Tutorials,
J	An ability to work efficiently as an individual and in	S	Oral Discussions.
K	An ability to communicate effectively and efficiently both in verbal and written form	H	Exams, Seminars, Document
L	An ability to develop confidence to pursue higher education and for lifelong learning	H	Exercises and assignments
M	An ability to design, implement and manage the business projects for real world applications with optimum financial resources (successful career fitness/ Practical Engineering Analysis Skills)	S	Assignments and Class Room Presentations by students

N = None

S = Supportive

H = Highly Related

9.7 SYLLABUS

UNIT I

INTRODUCTION TO MANAGEMENT: Concepts of Management and organization-nature, importance and Functions of Management, Taylor's Scientific Management Theory, Fayol's Principles of Management, Mayo's Hawthorne Experiments, Maslow's Theory of Human Needs, Douglas McGregor's Theory X and Theory Y, Herzberg's Two-Factor Theory of Motivation, Systems Approach to Management, Leadership Styles,

Social responsibilities of Management.

UNIT II

DESIGNING ORGANIZATIONAL STRUCTURES: Basic concepts related to Organisation - Departmentation and Decentralisation, Types of mechanistic and organic structures of organisation (Line organization, Line and staff organization, functional organization, Committee organization, matrix organization, Virtual Organisation, Cellular Organisation, team structure, boundaryless organization, inverted pyramid structure, lean and flat organization structure) and their merits, demerits and suitability.

UNIT III

OPERATIONS MANAGEMENT: Principles and Types of Plant Layout - Methods of production (Job, batch and Mass Production), Work Study -Basic procedure involved in Method Study and Work Measurement-Statistical Quality Control: chart, R chart, c chart, p chart, (simple Problems), Acceptance Sampling, Deming's contribution to quality

UNIT IV

MATERIALS MANAGEMENT: Objectives, Need for Inventory control, EOQ, ABC Analysis, Purchase Procedure, Stores Management and Stores Records.
Marketing: Functions of Marketing, Marketing Mix, Marketing Strategies based on Product Life Cycle, Channels of distribution

UNIT V

HUMAN RESOURCES MANAGEMENT (HRM): Concepts of HRM, HRD and Personnel Management and Industrial Relations (PMIR), HRM vs.PMIR, Basic functions of HR Manager: Manpower planning, Recruitment, Selection, Training and Development, Placement, Wage and Salary Administration, Promotion, Transfer, Separation, Performance Appraisal, Grievance Handling and Welfare Administration, Job Evaluation and Merit Rating.

UNIT VI

PROJECT MANAGEMENT (PERT/CPM): Network Analysis, Programme Evaluation and Review Technique (PERT), Critical Path Method (CPM), Identifying critical path, Probability of Completing the project within given time, Project Cost Analysis, Project Crashing. (simple problems)

UNIT VII

STRATEGIC MANAGEMENT: Mission, Goals, Objectives, Policy, Strategy, Programmes, Elements of Corporate Planning Process, Environmental Scanning, Value Chain Analysis, SWOT Analysis, Steps in Strategy Formulation and Implementation, Generic Strategy alternatives.

UNIT VIII

CONTEMPORARY MANAGEMENT PRACTICES: Basic concepts of MIS, End User Computing, Materials Requirement Planning (MRP), Just-In-Time (JIT) System, Total

Quality Management (TQM), Six sigma and Capability Maturity Model (CMM) Levels, Supply Chain Management, Enterprise Resource Planning (ERP), Performance Management, Business Process outsourcing (BPO), Business Process Re-engineering and Bench Marking, Balanced Score Card.

TEXT BOOKS:

1. Aryasri: Management Science, TMH, 2004.
2. Stoner, Freeman, Gilbert, Management, 6th Ed, Pearson Education, New Delhi, 2004.

REFERENCES:

1. Kotler Philip & Keller Kevin Lane: Marketing Mangement 12/e, PHI, 2005.
2. Koontz & Weihrich: Essentials of Management, 6/e, TMH, 2005.
3. Thomas N. Duening & John M. Ivancevich Management—Principles and Guidelines, Biztantra, 2003.
4. Kanishka Bedi, Production and Operations Management, Oxford University Press, 2004.
5. Memoria & S.V. Gauker, Personnel Management, Himalaya, 25/e, 2005
6. Samuel C. Certo: Modern Management, 9/e, PHI, 2005
7. Schermerhorn, Capling, Poole & Wiesner: Management, Wiley, 2002.
8. Parnell: Strategic Management, Biztantra, 2003.
9. Lawrence R Jauch, R. Gupta & William F. Glueck: Business Policy and Strategic Management, Frank Bros., 2005.
10. L.S. Srinath: PERT/CPM, Affiliated East-West Press, 2005.

9.8 COURSE PLAN

Lecture No.	Course Learning Outcomes	Topics to be covered	Refer To.	Topic No./ Page No.
UNIT I INTRODUCTION TO MANAGEMENT				
1	Able to Explain about management concepts according to the business	Concepts of Management and organization-nature, importance and Functions of Management	T1	2.1–2.6,
2-5	Acquires knowledge on concepts & know behavioral aspects of employees, motivation and their morale in performance a job	Taylor’s Scientific Management Theory, Fayol’s Principles of Management, Mayo’s Hawthorne Experiments, Maslow’s Theory of Human Needs, Douglas McGregor’s Theory X and Theory Y, Herzberg’s Two-Factor Theory of Motivation,	T1	3.1-3.10
6-8	Understanding various stages of management & managerial Traits.	Systems Approach to Management, Leadership Styles, Social responsibilities of Management.	T1	3.11& 4.3
UNIT II DESIGNING ORGANIZATIONAL STRUCTURES				
9-10	Acquires concepts on organization	Basic concepts related to Organization - Departmentation and Decentralization,	T1	5.1-5.6 5.17-5.18
11-15	Describe organization structures in the business environment	Types of mechanistic and organic structures of organization (Line organization, Line and staff organization, functional organization, Committee organization, matrix organization, Organization,	T1	5.19-5.26

		Virtual Organizational structure, organization, inverted pyramid, lean and flat organization structure) and their merits, demerits and suitability.		
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**UNIT III
OPERATIONS MANAGEMENT**

17-19	Helps the students to know where to start a plant location Awareness on different production systems and layouts	Principles and Types of Plant Layout - Methods of production (Job, batch and Mass Production),	T1	6.1-6.7
20-25	Facilitating to learn work study, method study procedures	Work Study -Basic procedure involved in Method Study and Work Measurement- Statistical Quality Control: chart, R chart, c chart, p chart, (simple Problems),	T1	8.1-8.14
26	Creating knowledge on work sampling that helps in obtaining stand time and normal time	Acceptance Sampling, Deming's contribution to quality	T1	8.15-8.20

**UNIT IV
MATERIALS
MANAGEMENT**

27-33	Identify the various Inventory Management Techniques	Objectives, Need for Inventory control, EOQ, ABC Analysis, Purchase Procedure, Stores Management and Stores Records.	T1	10.14-10.19
34-36	Acquires knowledge on concepts of marketing and product life cycle	Marketing: Functions of Marketing, Marketing Mix, Marketing Strategies based on Product Life Cycle, Channels of distribution	T1	11.12-11.13

UNIT V HUMAN RESOURCES MANAGEMENT (HRM):				
37-39	Aware of Human resource functions in an organization	Concepts of HRM, HRD and Personnel Management and Industrial Relations (PMIR), HRM vs. PMIR,	T1	13.1-13.10
40-46	Identify significance of job analysis, job evaluation and their uses in wage fixations	Basic functions of HR Manager: Manpower planning, Recruitment, Selection, Training and Development, Placement, Wage and Salary Administration, Promotion, Transfer, Separation, Appraisal, Grievance Handling, Performance and Welfare Administration, Job Evaluation and Merit Rating.	T1	14.1-14.10
UNIT VI PROJECT MANAGEMENT (PERT/CPM)				
47	Acquires knowledge on concepts of network analysis, construction of network diagrams, estimation of time values	Network Analysis,	T1	15.1-15.13
48	Determines the Expected time values with the help of PERT and probability of accomplish within the specified period	Programme Evaluation and Review Technique (PERT),	T1	15.17-15.27
49-53	Critical understanding to crash the project time to the maximum level with optimum duration and optimum	Critical Path Method (CPM), Identifying critical path, Probability of Completing the project within given time, Project Cost Analysis, Project Crashing. (simple problems)	T1	16.1-16.6

	cost			
UNIT VII STRATEGIC MANAGEMENT:				
55-56	Acquires knowledge on concepts of Strategic planning in corporate	Mission, Goals, Objectives, Policy, Strategy, Programmes, Elements of Corporate Planning Process,	T1	17.3-17.12
57-60	Identifying & Analyzing the External & Internal factors of organizations.	Environmental Scanning, Value Chain Analysis, SWOT Analysis, Steps in Strategy Formulation and Implementation, Generic Strategy alternatives.	T1	18.1-18.10 19.1
UNIT VIII CONTEMPORARY MANAGEMENT PRACTICES:				
61-63	Implementation of Japanese techniques on improving the quality of product and process	Basic concepts of MIS, End User Computing, Materials Requirement Planning (MRP), Just-In-Time (JIT) System, Six sigma and Capability Maturity Model (CMM) Levels, Supply Chain Management, Enterprise Resource Planning (ERP), Performance Management, Business Process outsourcing (BPO),.	T1	20.3
64	Importance of TQM	Total Quality Management (TQM),	T1	20.3
65	To assess the quality of the personnel.	Business Process Re-engineering and Benchmarking, Balanced Score Card	T1	20.3

9.9 MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Objectives	Programme												
	a	b	c	d	e	f	g	h	i	j	k	l	m
I			S	S			S	S	H				
II			S					S	H	S			
III									H				
IV											H		S
V				S						S	H	H	
VI													
VII			S		S								
VIII			S		S					S			
IX													

**S = Supportive
Related**

H = Highly

9.10 MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES

Course Outcomes	Programme												
	a	b	c	d	e	f	g	h	i	j	k	l	m
1				S	S			S					
2				S	S								S
3													
4					S						H		S
5				S						S	H	H	
6					S								S
7			S		S					S			
8					S								
9								S					
10			S	S	S			S		S	H	H	S

S = Supportive

H = Highly Related

9.11 OBJECTIVE QUESTIONS:

UNIT-1

INTRODUCTION TO INDUSTRIAL MANAGEMENT

1. Management is considered to be (C)
 - a) only art
 - b) only science
 - c) **blend of art and science**
 - d) Blend of commonsense and art.
2. Administration is mainly: (B)
 - a) determinative function
 - b) **Executive function.**
 - c) both determinative and Executive function
 - d) None of the above
3. Management is mainly: (C)
 - a) determinative function
 - b) Executive function.
 - c) **both determinative and Executive function**
 - d) None of the above
4. Management has a basic principle that: (B)
 - a) things are more important than people
 - b) **people are more important than things**
 - c) Activity are more important than any thing
 - d) Results are the only important things.
5. MBO stands for: (A)
 - a) **Managing business organization**
 - b) Managing by objectives
 - c) Managing big organization
 - d) Managing business outsourcing.
6. The answer to question “What our business is and what it should be?” is given by the following plan (B)
 - a) mission
 - b) **objectives**
 - c) strategies
 - d) Policies.
7. Action commitments through which the mission of an enterprise is fulfilled is called as (A)
 - a) **Strategies**
 - b) objectives

- c) programmes
 - d) Budget.
8. The managerial function that coordinates resources with an aim to enable maximum output under Minimum total cost is called as: (C)
- a) Controlling
 - b) Directing
 - c) **Coordinating**
 - d) Organizing.
9. Directing function of management includes: (D)
- a) Motivation
 - b) Leadership
 - c) Supervision
 - d) **All of the above.**
10. The Managerial function that reviews performance and initiates corrective action is called as: (C)
- a) planning
 - b) directing
 - c) **controlling**
 - d) organizing
11. Management is a -----Process (A)
- a) **Social**
 - b) Economical
 - c) Environmental
 - d) Psychic
12. "Management is concerned with the systematic organization of economic resources and its task is To make the resources productive". Who said these words (B)
- a) Koontz and Wehrlich
 - b) **Peter F. Drucker**
 - c) Koontz & O'Donnell
 - d) Henri Fayol
13. Which one of the following is not an element of planning (D)
- a) Objectives
 - b) Policies
 - c) Budgets
 - d) **Analysis**
14. Which one of the following is not included in the staffing process? (C)
- a) Recruitment
 - b) Placement
 - c) **Demotion**
 - d) Appraisal
15. Which one of the following is not a financial factor in the motivation process? (C)

- a) Salary package
 - b) Bonus
 - c) **Flexibe working hours**
 - d) Allowances
16. From system point of view , which of the following is not a characteristic of management ?(C)
- a) interlinked
 - b) interdependent
 - c) **dispersed**
 - d) intertwined
17. -----has coined the term POSDCORB (B)
- a) Henri Fayol
 - b) Luther Gullick
 - c) Elton Mayo
 - d) Lillian Gilberth
18. General or overall objectives are set by: (C)
- a) Lower level management
 - b) Middle management
 - c) Top level management
 - d) All level management
19. The unity of command means an employee must receive orders from (A)
- a) One superior
 - b) Two superiors
 - c) Any superiors
 - d) By none
20. Management is as important in the business as ----- in the human body (A)
- a) Heart
 - b) Blood
 - c) Nervous System
 - d) Brain

Unit – II

Designing Organizational Structures

1. The diagrammatic representation of the frame work or structure of an enterprise is called as (B)
- a) bar chart
 - b) **organization chart**
 - c) SIMO chart
 - d) structure chart
2. The frame work of relationships within which the management functions are performed is called (A)

- a) **organization**
 - b) minatory
 - c) management
 - d) none of the above
3. Line organization is also called as (C)
- a) flat organization
 - b) white organization
 - c) **military organization**
 - d) project organization
4. Line organization is also called as (C)
- a) vertical organization
 - b) matrix organization
 - c) **scalar organization**
 - d) flat organization
5. An organization in which specialists advise managers to perform their duties is called a(B)
- a) line organization
 - b) **line and staff organization**
 - c) military organization
 - d) scalar organization
6. Line authority flows (A)
- a) **downwards**
 - b) upwards
 - c) both a & b
 - d) cross wise
7. Staff authority flows (A)
- a) **down wards**
 - b) cross wise
 - c) upwards
 - d) both a & b
8. The organization in which the task of management and direction of subordinates is divided (C)
- according to the type of work involved is called as)
- a) line organization
 - b) line and staff organization
 - c) **functional organization**
 - d) scalar organization
9. When an organization has a variety of projects ranging from large to small it is suitable to use a (D)
- a) military organization
 - b) line and staff organization
 - c) line organization
 - d) **matrix organization**

10. It is suitable to use a matrix organization when the organization has (D)
a) only one project
b) less than or equal to three projects
c) two projects
d) variety of projects
11. The obligation on the part of the sub-ordinate to complete the job is called (D)
a) Authority
b) power
c) Reliability
d) Responsibility
12. The process of transferring authority from top to the lower levels in the organization is called (B)
a) Authority
b) Delegation
c) Power
d) Responsibility
13. Which one is the disadvantage for wide span of control (D)
a) Fewer levels of management
b) Difficult to supervise the sub ordinates directly
c) Lower supervision cost
d) Fewer levels of decision making
14. The line organization is favored because of (C)
a) more scope for favoritism
b) no scope for specialization
c) Flexibility
d) no scope nepotism
15. What is the process of classifying the organization on the basis of similar activities? (D)
a) Formulation
b) Departmentation
c) Execution
d) Implementation
16. ----- organization structure most preferred while dealing with a problem launching a rocket. (A)
a) Line
b) Staff
c) Matrix
d) Line & Staff
17. The factor which makes growth and diversification possible is: (D)
a) Good Leadership
b) Attitude of Manager
c) Honesty of Workers
d) Organization
- 18 As found by Lyndall Urwick Ideal number of subordinates a manager can control is: (B)
a) 2

- b) 4
 - c) 6
 - d) 10
19. The proverb “ two bullocks of a cart must lead the cart in the same direction to reach the destination”
analogs to (A)
- a) Unity of objective
 - b) Unity of Command
 - c) Unity of Order
 - d) Unity of Plans
20. An organization structure using the group technology is referred as (C)
- a) Modular Organization
 - b) Virtual Organization
 - c) Cellular Organization
 - d) Horizontal Organization

Unit – III

Operations Management

1. What is referred to the method in which the machinery is arranged with in a given plant area? (A)
- a) **facilities location**
 - b) plant location
 - c) resources location
 - d) wealth location
2. Which of the following is a strategic decision? (B)
- a) facilities location
 - b) **plant layout**
 - c) plant location
 - d) resources location
3. Which of the following is considered more a corporate decision? (D)
- a) plant layout
 - b) facilities layout
 - c) resources layout
 - d) **plant location**
4. Which of the following is not a factor affecting plant location? (C)
- a) fuel and power
 - b) transport
 - c) **diseconomies of scale**
 - d) government influence
5. Which of the deals with the plant location? (A)
- a) **strategic decision**
 - b) engineering decision
 - c) financial decision

- d) marketing decision
6. What is the effect of a good plant layout on the material handling costs? (B)
- a) maximizes
 - b) minimizes**
 - c) stable
 - d) goes negative
7. Which of the following is a consequence of a poor layout? (D)
- a) material handling cost will be low
 - b) working conditions are much safer
 - c) return on capital employed may be high
 - d) production cost gets jacked up**
8. What is an advantage for product layout? (D)
- a) fuse capital layout out lay
 - b) little flexibility
 - c) discontinuity in production likely
 - d) lower cost of material handling**
9. Which of the following is a disadvantages product layout? (D)
- a) faster production
 - b) easy monitoring
 - c) effective team work
 - d) threat of duplication**
10. What referred to the rate at which the goods and services are produced? (C)
- a) production
 - b) product
 - c) productivity**
 - d) efficiency
11. What deals with the efficient design and execution of manual work (C)
- a) Time study
 - b) Method study
 - c) Work study**
 - d) Sample study
12. What deals with the techniques of analyzing the way to do a given job better? (B)
- a) Time study
 - b) Method study**
 - c) Work study
 - d) Sample study
13. Any measurable characteristic of a particular product or service is called (C)
- a) Statistics
 - b) Control
 - c) Quality**
 - d) Performance
14. What refers Process of checking whether the product meets the given quality specification or

not (D)

- a) Quality control
- b) Inspection
- c) Roving inspection
- d) **Quality of conformance**

15

.What is used where data is available about the number of defects per unit?(B)

- a) OC curve
- b) **C chart**
- c) P chart
- d) N chart

16

.Material which are available everywhere is known as: (B)

- a) Localized Materials
- b) **Ubiquitous Material**
- c) Raw Material
- d) Special Material

17

.One of the factor influencing the plant layout is: (A)

- a) Manufacturing Process
- b) **Types of Labour Available**
- c) The managers will
- d) The capital Available

18

.Process Layout is also known as (C)

- a) Line Layout
- b) **Combination Layout**
- c) Functional Layout
- d) Fixed product layout

19

.To manufacture Railway Coach this type of layout is suitable. (D)

- a) Line Layout
- b) Matrix Layout
- c) Process Layout
- d) Static Product Layout

20

.One of the good principles of a good plant layout is (A)

- a) **Minimum Movement & Material Handling**
- b) Easy to control labor
- c) To use less raw material
- d) To minimize the number of managers

Unit - IV

Materials Management

- Which of the following refers to inputs into the production process? (C)
- a) materials
 - b) spare parts
 - c) **work in progress**
 - d) components
2. What refers to the process of planning organizing and controlling the material in a given organization particularly armed process? (A)
- a) **supply management**
 - b) materials management
 - c) logistics management
 - d) operations management
3. What refers to all the idle physical stocks which economic value? (B)
- a) items in stores
 - b) **inventory**
 - c) material in transit
 - d) materials in process
4. Which of the following is not an objective of inventory control? (A)
- a) **ensure economy of costs**
 - b) avoid accumulation in materials
 - c) maximize investment in materials
 - d) maintain adequate inventories
5. which of the following is a factor effecting inventory control function? (D)
- a) decreases in material prices
 - b) decreasing lead time
 - c) excessive storage costs
 - d) **gradually changes in production plans**
6. Who receives the inward invoice? (D)
- a) supplier
 - b) vendor
 - c) consumer
 - d) **buyer**
7. What is the process of assigning numbers or symbols or combination of both? (B)
- a) classification
 - b) **codification**
 - c) duplication
 - d) computerization
8. Which of the following is an advantage of classification and codification? (A)
- a) **easy availability of materials**
 - b) complex inspection process
 - c) complex process of issue in products
 - d) standardization of items
9. What facilitates the maintenance of accounts for each item of inventory? (B)

- a) generals
 - b) store records**
 - c) ledgers
 - d) maintenance records
10. What is the slip attached to the bin where the goods are stocked? (C)
- a) invoice
 - b) material requisition note
 - c) bin card**
 - d) stores ledger account
11. What refers to the cost incurred to procure materials ? (B)
- a) Inventory carrying cost
 - b) Inventory ordering cost**
 - c) stock order costs
 - d) stock out costs
12. What refers to that Quantity of material which can be ordered at one time to minimize the cost of ordering and carrying cost ? (C)
- a) Carrying cost
 - b) cost of acquisition
 - c) Economic order quantity**
 - d) Economic quantity
13. Selling is -----oriented (A)
- a) product**
 - b) consumer
 - c) process
 - d) none
14. Marketing is ----- oriented (B)
- a) product
 - b) consumer**
 - c) process
 - d) none
15. What is the stage of a product tend to fall (B)
- a) Saturation
 - b) Decline**
 - c) Maturity
 - d) Rapid growth
16. The Origin of ABC Analysis is (B)
- a) Taylor's 20-80 rule
 - b) Pareto's 80-20 rule
 - c) Pareto's 20-80 rule

- d) Taylor's 80-20 rule
17. In Inventory Control, the procurement cost is represented by: (B)
- a) C₁
 - b) C₃
 - c) C₂
 - d) C₄
18. Indent on store is known as: (A)
- a) Material issue requisition
 - b) Bill of materials required
 - c) Request Card
 - d) Material Note
19. One of the risks the producer has to face in marketing is: (B)
- a) Risk of Sales
 - b) Risk of competition
 - c) Financial risk
 - d) Risk of sales personal
20. Buying, Assembling & Grading is known as: (C)
- a) Selling Functions
 - b) Transfer Functions
 - c) Merchandising Functions
 - d) Market Planning

Unit – V

Human Resources Management (HRM)

1. Which of the following refers to the process of managing the human resources of any Organization in tune with vision of the top management? (B)
- a) CRM
 - b) **HRM**
 - c) HRD
 - d) PM & IR
2. What is a strategically driven process? (C)
- a) HRD
 - b) PM & IR
 - c) **HRM**
 - d) CRM
3. Which of the following is not a function of HRM? (B)
- a) focusing on team building
 - b) **developing product sensitive management style**
 - c) empowering employees
 - d) evaluating self appraisal

4. What refers to the process of managing people enabling them to contribute their best for the attainment of organization goals? (C)
- a) HRM
 - b) HRD
 - c) **Personal Management**
 - d) Industrial Relations
5. What refers to the relations between the employees and the management? (C)
- a) HRD
 - b) Personal Management
 - c) **Industrial Relations**
 - d) HRM
6. The process of formulating a personal program which is determined in advance is called (A)
- a) **planning**
 - b) organization
 - c) directing
 - d) controlling
7. The process of creating an environment integrating individual interest and organizational interests is known as (C)
- a) development
 - b) compensation
 - c) **integration**
 - d) maintenance
8. What is an expressions of the values and believes of the organization (B)
- a) induction
 - b) **personal policy**
 - c) recruitment
 - d) service
9. What is not a function of a personal manager? (B)
- a) develop vision
 - b) **develop objectives**
 - c) develop cultures
 - d) advice line managers approximately
10. What is not a necessity of HRD? (B)
- a) make organizational dynamics growth oriented
 - b) **make industrial policies**
 - c) succeed in a fast changing environment
 - d) make personal policies
11. What refers to a collection of tasks assigned to a position in an organization (A)
- a) **Job**
 - b) Job analysis
 - c) Job description

- d) Job specification
12. What refers to the process of identification the tasks comparing a particular job to assess whether (B)
They could be organized in productive manner?
a) Job description
b) Job analysis
c) Job specification
d) Job
13. What refers to the numbers of employees leaving the organization as against the total number of (B)
Employee on the payroll per year ?
a) Man power planning
b) Labour turn over
c) Job description
d) Job analysis
14. The stage at which the new recruit is allowed to exercise full authority and is held responsible for the result is called (C)
a) Induction
b) Selection
c) Placement
d) Recruitment
15. Which of the following is a non financial incentive? (C)
a) Stock option
b) Performance linked pay
c) Flexible time
d) Group bonus
16. JMT Means (A)
a) Job Method Training
b) Job Machine Training
c) Job Material Training
d) None of these
17. One of the factor influencing the wage rate is (C)
a) Skill of the Worker
b) Job Evaluation
c) Demand & supply situation of labor
d) Personal qualities of manager
18. Remuneration paid to the worker for the work done by him either on the basis or result basis is known as (D)
a) Reward
b) Bonus
c) Incentive
d) Wage
19. The system in which worker is paid for the amount of work done by him is known as (B)
a) Work Rate System

- b) Piece Rate System
 - c) Quality System
 - d) Capacity System
20. The wage which makes funds available to the worker for keeping his body and soul together is known as (A)
- a) Fair wage
 - b) Real Wage
 - c) Minimum Wage
 - d) Living Wage

Unit – VI

Project Management (PERT/CPM):

1. Which of the following denotes a number of techniques for planning and control of complex projects? (A)
- a) **network analysis**
 - b) planning analysis
 - c) activity analysis
 - d) project analysis
2. The maximum slack will always be (B)
- a) positive
 - b) **negative**
 - c) linear
 - d) deterministic
3. PERT and CPM provide (D)
- a) logical picture layout and complex project sequence
 - b) identifying the critical activities and events
 - c) an optimal rate of return on investment
 - d) **basis for working time, cost and resources**
4. Which is the link between Gantt chart and PERT/CPM network (A)
- a) **mild stone chart**
 - b) logical chart
 - c) network chart
 - d) activity chart
5. What does CPM involve in a tradeoff between? (C)
- a) cost and quantity
 - b) time and work
 - c) **cost and time**
 - d) cost, time and quality
6. CPM is (C)
- a) optimistic
 - b) probabilistic
 - c) **deterministic**
 - d) optimistic and probabilistic

7. In PERT the event is represented by (B)
- a) arrow
 - b) circle**
 - c) line
 - d) dotted arrow
8. What is the start or end of activity is called (A)
- a) event**
 - b) activity
 - c) critical path
 - d) event and activity
9. Which of the following does not consume resources? (D)
- a) activity
 - b) event
 - c) dummy activity
 - d) dangler**
10. In optimistic time estimate the time taken by activity is (B)
- a) maximum
 - b) minimum**
 - c) no consumption of time
 - d) none
11. Time taken to delay a particular event without affecting the project completion time (C)
- a) Deviation
 - b) succession or event
 - c) Slack**
 - d) Critical path
12. Path which contains all events with zero or minimum slack is (A)
- a) Critical path**
 - b) event
 - c) critical slack
 - d) Event slack
13. A program is also called (D)
- a) job
 - b) project
 - c) Event
 - d) Network**
14. Negative float occurs when (B)
- a) $t_s < \text{project time}$
 - b) $t_s > \text{project time}$**
 - c) $t_s = \text{project time}$
 - d) none

- 15 Positive float occurs when (A)
- a) $t_s < \text{project time}$
 - b) $t_s > \text{project time}$
 - c) $t_s = \text{project time}$
 - d) none
16. PERT is (D)
- a) Deterministic in nature
 - b) Optimistic in nature
 - c) Pessimistic in nature
 - d) **Probabilistic in nature**
17. Range in PERT is given by: (A)
- a) $(t_p - t_o)$
 - b) $(t_o - t_p)$
 - c) $(t_p + t_o)$
 - d) (t_p / t_o)
18. In project crashing the crashing of ----- is considered (C)
- a) Event
 - b) Activity
 - c) **Critical Activity**
 - d) Critical Path
19. As we go on crashing the activities, the direct cost goes on (B)
- a) Does not change
 - b) **Increases**
 - c) Decreases
 - d) Both b & c
- 20 ----- Value of cost slope of electrical activity is considered while crashing (B)
- a) Average cost
 - b) **Lowest cost**
 - c) Highest cost
 - d) Imputed cost

Unit – VII

Strategic Management

1. What refers to the process of planning undertaken by the top management to achieve their organizational goals? (B)
- a) strategy formulation
 - b) **corporate planning**
 - c) environmental scanning
 - d) organizing
2. What refers to the broad guidelines set by the top management for the purpose of making decisions at different levels in the organizations? (B)
- a) objectives
 - b) **policies**
 - c) goals
 - d) mission

3. What refers to the logical sequence of operations to be performed in a given project or job? (B)
- a) strategy
 - b) programs**
 - c) purpose
 - d) policy
4. What refers to the process where in a company legally takes over or acquires the business of any of its leading competitors (C)
- a) backward integration
 - b) forward integration
 - c) horizontal integration**
 - d) concentric integration
5. What reflects the vision of the top management? (C)
- a) goal
 - b) policy
 - c) mission**
 - d) strategy
6. What involves an analysis and diagnosis of the external and internal environments of a business firm? (C)
- a) environmental analysis
 - b) SWOT analysis
 - c) Environmental scanning**
 - d) Strategic analysis
7. What refers to the group of firms carrying on similar activity? (C)
- a) suppliers
 - b) competitors
 - c) industry**
 - d) strategy
8. What risks arises from income inequalities, brake down in law and order due to religious fanaticism unionization etc (B)
- a) political risks
 - b) social risks**
 - c) economic risk
 - d) financial risks
9. Which of the following is neither an internal strength nor a weakness to a particular firm (D)
- a) managerial personal
 - b) research and development
 - c) financial policies
 - d) organizational systems**
10. Which of the following is not an alternative strategy to deal with the factors in the external and the internal environment? (C)
- a) TW strategy
 - b) ST strategy

- c) **SW strategy**
d) OW strategy
11. Which of the following is not a characteristic of a mission statement? (C)
a) Flexible
b) Provides shared vision
c) **Focuses on products**
d) Focus on limited Alternative
12. What refers to the general of specific programme of action and deployment of Resources to all on goals in a set of given conditions? (A)
a) **Strategy**
b) Goal
c) Programme
d) Objectives
13. What comprises the managerial decision based on the perceived opportunities and threat of the firm ? (B)
a) environment analysis
b) **Environment diagnosis**
c) Environment scanning
d) Strategic analysis
14. Which f the following is neither a strength nor a weakness to firm? (D)
a) Managerial personnel
b) Research and development
c) Financial polices
d) **organizational system**
- Which of the following to the course of action desired to achieve the objective of the
15. enterprise? (B)
a) Scheduling
b) **Strategy**
c) Scanning
d) Evaluation
16. Which of the following is not a generic strategy alternative ? (D)
a) Stability
b) Expansion
c) Retrenchment
d) **Allocation**
17. In general the course of action is known as (B)
a) Action plan
b) **Strategy**
c) Decision
d) Determination
18. Retrenchment Strategy is also known as (A)
a) **Defensive Strategy**

- b) Offensive Strategy
 - c) Divestiture Strategy
 - d) Growth Strategy
19. Strategic plans are (D)
- a) Short term plans
 - b) Midterm plans
 - c) Product plans
 - d) **Long term plans**
20. In IFE the letter I stands for (B)
- a) INDIA
 - b) **Internal**
 - c) Institutional
 - d) International

Unit – VIII
Contemporary Management Practices

1. JIT concept eliminates (B)
- a) operations
 - b) **inventory**
 - c) manpower
 - d) WIP
2. Kanban is (A)
- a) **information has to what has to be done**
 - b) over production
 - c) inventory control
 - d) automation
3. EOQ is the order quantity that (D)
- a) maximizes total annual carrying cost
 - b) equates total cost
 - c) multiplies which of the following
 - d) **minimizes which of the following**
4. Jikoda means (C)
- a) machines are maintained by workers
 - b) machine monitoring taken care of by consultants
 - c) **providing machines with autonomous capability to use judgment**
 - d) minimization of work
5. In six sigma contest which one of the following is valid? (C)
- a) defects per 100 units of production
 - b) defects per trillions units of production

- c) **defects per million units of production**
 - d) defects per 1lakh units of production
6. Which of the following companies is the pioneer of six sigma? (C)
- a) general motors
 - b) general electric
 - c) **Motorola**
 - d) Wal-Mart
7. Six sigma is registered trade mark of (D)
- a) GE
 - b) United Bank of Swaziland
 - c) Honeywell international
 - d) **Yes bank**
8. DMADV is used for (A)
- a) **new process designs**
 - b) existing process designs
 - c) vendor development
 - d) stock turnover
9. Capability maturity model (CMM) deals with the (A)
- a) **instructions an organization can follow to gain better control over its software**
 - b) instructions to frame HR policy in software organizations
 - c) process for effective utilization of software
 - d) products with effective quality
10. one of the following identifies cluster of related activities achieve a set of goal (A)
- a) **key process area**
 - b) origin
 - c) time lines
 - d) CMM
11. JIT system is sometimes referred to adapting (C)
- a) linear system
 - b) Lean production system
 - c) **TQM**
 - d) none
12. EOQ is (D)
- a) Equal order quantity
 - b) Estimated over all quantity
 - c) Economic order quantity
 - d) **equilibrium open quantity**
13. ERP means (B)
- a) Economic resource planning
 - b) **enterprise resource planning**
 - c) Emerging resource planning
 - d) Economic review periodical
14. Which of the following is the key ingredient of ERP system (C)

- a) Multiple data base
 - b) Diversified data base
 - c) Unified data base**
 - d) Modular data base
15. In the context of JIT muri means (C)
- a) unevenness
 - b) waste
 - c) excess**
 - d) creativity
16. In MIS letter M Stands for (C)
- a) Material
 - b) Manpower
 - c) Management**
 - d) Manager
17. MRP means (B)
- a) Manpower requirement planning
 - b) Material Requirement Planning**
 - c) Money Requirement planning
 - d) Methods Requirement planning
18. Which of the following refers to thinking creatively in JIT Context (D)
- a) Muri
 - b) Muda
 - c) Mura
 - d) Soikufu**
- 19 Which of the following companies is the pioneer of Six Sigma (C)
- a) General Motors
 - b) General Electric
 - c) Motorola**
 - d) Wall mart
- 20 If a product or Service does not confirm to the given specification, it is called to have (A)
- a) Defect**
 - b) Quality
 - c) Design
 - d) Defective

9.12 TUTORIAL QUESTION

Sl.No.	Questions	Blooms Taxonomy Level	Course Outcome
UNIT-I			
Tutorial Short Answer Questions			
1	Define objective. Give two examples?	Remembering	a
2	How do you distinguish specific objectives from general objectives?	Understanding	a

3	Explain what you understand by 'managerial objectives' ?	Understanding	a
4	Define social responsibility?	Remembering	a
5	Explain the social responsibility of business to its different segments?	Understanding	f
6	Distinguish between manager & a leader.	Remembering	a
7	Discuss management as a Process.	Remembering	a
8	Define management. Explain its nature & features.	Understanding	h
9	Explain the applicability of social responsibility.	Understanding	a
10	Explain and evaluate the process of scientific management?	Remembering	a
UNIT-I			
Tutorial Long Answer Questions			
1	Explain what you understand by 'managerial objectives'. What could be the different objectives the management can set for itself? Illustrate.	Remembering	a
2	Explain the concept of social responsibility. Explain the activities of any four of the business organizations which undertake activities related to community development in your town.	Understanding	a
3	Illustrate how marketing strategies and commitment to social needs can be integrated by a business unit?	Remembering	a
4	What activities can a university undertake to demonstrate its commitment to social development?	Understanding	a
5	Explain the principles of management as outlined by Henri Fayol.	Understanding	f
6	Explain and evaluate the process of scientific management?	Remembering	a
7	State and compare the X & Y theories of motivation proposed by McGregor	Applying	a
8	"Scientific Management did much more than what was planned" do you agree Discuss ?	Remembering	h
9	Explain the importance of management. Are management and administration similar? Discuss.	Remembering	a
10	Discuss the challenges to management in the new millennium	Remembering	a
UNIT-II			
Tutorial Short Answer Questions			
1	Explain the relationship between authority and responsibility?	Understanding	a
2	What do you understand by organizational hierarchy?	Understanding	a
3	Evaluate committee type of organization	Applying	a
4	Difference between organization and organizing.	Remembering	h
5	What do you understand by organization manual?	Remembering	f
6	Explain the Line & Staff organization listing its merits & demerits.	Understanding	a
7	Evaluate Matrix organization?	Understanding	a
8	Explain any two techniques of enhancing productivity?	Applying	h

9	Explain basic concepts of organization	Remembering	a
10	Define authority and responsibility	Applying	a
UNIT-II			
Tutorial Long Answer Questions			
1	Explain the broad classification of activities supported by Indian corporate sector for community development, illustrate.	Applying	h
2	Difference between flat organization and tall organization?	Applying	a
3	How can an intelligent business take part in social responsibility related activities? Explain.	Understanding	a
4	Discuss the process of organizing. Explain the principles to be observed while creating an organization	Remembering	h
5	What do you mean by departmentation? Evaluate any three methods of departmentation?	Remembering	f
6	Discuss the utility of organization structure in an organization.	Understanding	a
7	List and explain the various principles to be followed while designing an effective organization.	Remembering	a
8	Write short notes on: a. Committee organization b. Matrix organization	Applying	h
9	Illustrate with an example for each type of organization- Functional organization, Team Structure, Boundaryless organization.	Understanding	a
10	“Product layout is better than process layout”. Do you agree with this statement, support your answer.	Understanding	a
UNIT-III			
Tutorial Short Answer Questions			
1	Goals of plant layout	Remembering	h
2	Consequences of poor plant layout	Understanding	a
3	Product layout	Understanding	a
4	Combination layout	Applying	a
5	Benefits of work study	Remembering	f
6	Method study	Understanding	a
7	Process chart symbols	Applying	a
8	Outline process chart	Remembering	h
9	Work sampling	Remembering	a
10	Define method study. How do you carry it out?	Applying	a
UNIT-III			
Tutorial Long Answer Questions			
1	Explain in brief the factors determining the location of an industrial plant	Understanding	a

2	What do you understand by plant layout ? explain its systems and evaluate the same	Understanding	a
3	Product layout is better than process layout. 'Do you agree with this statement ? Support your answer	Understanding	a
4	Define work study discuss its relevance in the modern context Illustrate	Remembering	h
5	Define method study. How do you carry it out?	Remembering	f
6	Discuss any two techniques of recording the current method of doing the job.	Understanding	a
7	What do you understand by work measurement? Explain how do you determine standard time. Illustrate.	Understanding	a
8	Calculate the number of observations required for an accuracy of +_5 per cent and confidence level of 95 percent. If the percentage occurrence of an activity is 0.8	Applying	h
9	A work study sampling group recording the following observation. The data was collected for eight days and the number of observations per day was 500. The details of the number of times the workers found idle were: 50, 100, 200, 100, 50, 150, 100, 200. Find out the total work time	Understanding	a
10	An operator was kept under observation for 20 days. He was found working 300 occasions out of 400 observations. He produced 20 jobs during these days . the observation per day was only for four hours. Consider a performance rating of 140 for the operator and 30 percent as allowance. Calculate standard time	Applying	a
UNIT-IV			
Tutorial Short Answer Questions			
1	Marketing versus Selling	Remembering	h
2	Functional approach to the study of marketing	Remembering	a
3	Market segmentation	Understanding	a
4	Marketing mix	Understanding	a
5	Product life cycle	Understanding	f
6	Write a note on storage facilities.	Remembering	a
7	Explain materials management as a process.	Applying	a
8	Discuss the duties of a store keeper.	Remembering	h
9	Define purchasing function. What are its objectives?	Applying	a
10	What do you understand by EOQ? Derive a formula to determine it?	Applying	a
UNIT-IV			
Tutorial Long Answer Questions			
1	Define marketing. How is it different from selling? explain how marketing starts and ends with the customer.	Understanding	h
2	Identify and briefly discuss the functions of marketing.	Understanding	a
3	What are the factors that determine the choice of the channels of distribution? Illustrate	Remembering	a

4	Mention and evaluate the prominent channels of distribution	Remembering	a
5	Discuss the various stages in product life cycle? why is it essential for the marketer to know about the stages in product life cycle of his product or service?	Applying	f
6	Explain the necessity of maintain inventory in stores and explain the reasons of poor inventory control.	Understanding	a
7	Explain centralized purchasing & De-centralizes purchasing giving their suitability and limitations.	Applying	a
8	Define marketing? Explain how is it different from selling?	Understanding	h
9	What are the factors that determine the choice of channels of distribution?		a
10	Explain the objectives of purchasing function? How do you organize the purchasing department?	Applying	a
UNIT-V			
Tutorial Short Answer Questions			
1	What is a job? What do you understand by job analysis?	Remembering	h
2	Identify the content of job description	Remembering	a
3	How do you determine labour turnover rate ?	Understanding	a
4	How does succession plan contribute to manpower planning	Understanding	a
5	What are the traits observed in the process of merit rating ?	Applying	f
6	Describe Differences between HRM and HRD?	Applying	a
7	Explain methods of training and development?	Applying	a
8	Describe responsibilities of HR Manager?	Understanding	h
9	Explain Selection process?	Applying	a
10	Explain the contents of job description?	Applying	a
UNIT-V			
Tutorial Long Answer Questions			
1	Explain how job analysis forms the basis for job description and job specification. How does it help the personnel manager?	Remembering	h
2	What are the principles of manpower planning? How do you apply these to a software company?	Remembering	a
3	Explain the important stages in the manpower planning function.	Understanding	a
4	What are the reasons for high rate of labour turnover in some of the industries in India? Suggest how the employees can be retained.	Applying	a
5	Discuss the functions of human resource/ personnel manager in an industrial setting.	Remembering	f
6	Define HRM. Write short notes on recruitment and job description?		a
7	Explain the important stages in the man power planning functions?	Remembering	a

8	What is the difference between job evaluation and merit rating?	Remembering	h												
9	Explain the analytical methods of job evaluation?	Applying	a												
10	Define merit rating, explain and evaluate any four methods of merit rating.	Applying	a												
UNIT-VI															
Tutorial Short Answer Questions															
1	Average time estimate	Remembering	h												
2	PERT versus CPM	Understanding	a												
3	Rules for drawing networks	Remembering	a												
4	Network analysis	Remembering	a												
5	Milestone chart	Understanding	f												
6	Direct cost and indirect cost	Understanding	a												
7	Optimum duration and cost	Remembering	a												
8	Cost slope	Remembering	h												
9	Deterministic cost	Understanding	a												
10	Crash cost	Remembering	a												
UNIT-VI															
Tutorial Long Answer Questions															
1	<p>Draw a grant chart for the following programme:</p> <p>(a) Conducting a campus interview: Collect the final year student profile 2 Weeks Print the profile 1 week Contact the potential employees 4 weeks Fix the dates for interviews 2 weeks Prepare the students by mock interviews 3 weeks Conduct the interviews 1 week Understanding</p> <p>(b) Make a mile stone chart for the above gantt chart</p>	Remembering	h												
2	<p>Draw a PERT network for the following project</p> <p>A is the first event and J the end event J is a successor event to F C and D are successor event to B D is a Predecessor event to G E and F occure after event C E precedes F C restrains the occurrence of G and G precedes H H follows F H precedes J</p>	Understanding	a												
3	<p>Which of the following two time estimates is reliable ?</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>to</th> <th>Tm</th> <th>Tp</th> </tr> </thead> <tbody> <tr> <td>Estimate by P</td> <td>18</td> <td>22</td> <td>27</td> </tr> <tr> <td>Estimate by Q</td> <td>22</td> <td>30</td> <td>36</td> </tr> </tbody> </table>		to	Tm	Tp	Estimate by P	18	22	27	Estimate by Q	22	30	36	Remembering	a
	to	Tm	Tp												
Estimate by P	18	22	27												
Estimate by Q	22	30	36												
4	In a construction company, the construction engineer spends on inspection different periods of time at different sites. More often he inspects from ten minutes to one hour. Twenty	Remembering	a												

	minutes inspections are more frequent than inspection of any other duration. If each inspection were an activity in a PERT project. (a) What would be the expected duration of each inspection? (b) What estimate would you give for its variance? (c) In scheduling the project, how much time would you allocate for the inspection?																																															
5	Explain the nature of costs in a project. Discuss how the project manager should go about analyzing the costs while different activities are to be crashed in a project.	Remembering	f																																													
6	The particulars of cost and duration are given in the following table	Remembering	a																																													
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="2">Normal cost</th> <th colspan="2">Crash cost</th> </tr> <tr> <th>Activity</th> <th>Days</th> <th>Cost</th> <th>Days</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>3</td> <td>500</td> <td>2</td> <td>1,000</td> </tr> <tr> <td>1-3</td> <td>2</td> <td>750</td> <td>1</td> <td>1,500</td> </tr> <tr> <td>1-4</td> <td>6</td> <td>1,400</td> <td>4</td> <td>2,600</td> </tr> <tr> <td>2-4</td> <td>5</td> <td>1,000</td> <td>3</td> <td>1,800</td> </tr> <tr> <td>2-5</td> <td>7</td> <td>1,150</td> <td>6</td> <td>1,450</td> </tr> <tr> <td>3-4</td> <td>2</td> <td>800</td> <td>2</td> <td>800</td> </tr> <tr> <td>4-5</td> <td>4</td> <td>1,000</td> <td>2</td> <td>2,400</td> </tr> </tbody> </table>				Normal cost		Crash cost		Activity	Days	Cost	Days	Cost	1-2	3	500	2	1,000	1-3	2	750	1	1,500	1-4	6	1,400	4	2,600	2-4	5	1,000	3	1,800	2-5	7	1,150	6	1,450	3-4	2	800	2	800	4-5	4	1,000	2	2,400
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Show the calculation of total cost at every stage of crashing.																																																
7	Workout optimum duration and optimum cost for the following project	Remembering	a																																													
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B restrict the completion of D																																																
8	Briefly explain about project cost and time	Understanding	h																																													
9	Explain about time and cost relationship in project	Remembering	a																																													
10	How to ensure optimum cost and optimum duration	Understanding	a																																													
UNIT-VII																																																
Tutorial Short Answer Questions																																																
1	Discuss the different steps in planning process	Applying	h																																													
2	Explain briefly about Environmental scanning.	Understanding	a																																													
3	Explain the strategies to improve sales	Understanding	a																																													
4	The process of strategy	Remembering	a																																													
5	Steps in corporate planning	Understanding	f																																													
6	Alternatives for planning new business	Remembering	a																																													

7	Significance of corporate goals	Remembering	a
8	SWOT analysis as a tool of personality development	Remembering	h
9	External environment analysis	Understanding	a
10	Strategic advantage profile	Applying	a
UNIT-VII			
Tutorial Long Answer Questions			
1	Define corporate planning. And how to measure the corporate planning?	Remembering	h
2	Explain with suitable example what is meant by a mission.	Remembering	a
3	What are the differences between objectives and goals?	Remembering	a
4	Write long notes on elements of corporate planning process	Understanding	a
5	Write briefly about SWOT analysis. Present a case of any organization explaining its Swot analysis.	Remembering	f
6	Illustrate with an example and explain Mission and its characteristics	Remembering	a
7	Is there any link between mission, goal, objective, strategy and programs in an industrial environment?	Understanding	a
8	Explain the concept of corporate planning. Discuss the essential steps in corporate planning though a flow chart	Remembering	h
9	What do you understand by strategic business unit ? discuss its role and relevance in corporate planning?	Understanding	a
10	Explain the strategies to improve the sales performance of a strategic business unit.	Remembering	a
UNIT-VIII			
Tutorial Short Answer Questions			
1	Mention the applications of MIS in todays era.	Understanding	h
2	Discuss on End user computing?	Remembering	a
3	Explain the concept of Value chain analysis?	Remembering	a
4	Write short notes on BPO ?	Understanding	a
5	What is Bench Marking? How is it useful ?	Remembering	f
6	List out the basic concepts of MIS?	Understanding	a
7	Write short notes on BPR ?	Remembering	a
8	Balanced score card	Remembering	h
9	Six sigma	Applying	a
10	Just in times systems	Remembering	a
UNIT-VIII			
Tutorial Long Answer Questions			
1	List out the advantages of Materials Requirements Planning (MRP)?	Understanding	h
2	Briefly Explain the term of Total Quality Management (TQM)?	Understanding	a
3	Explain how JIT, MRP, Six Sigma changed the production environment?	Understanding	a
4	Explain what different levels mean under capability maturity	Understanding	a

	models?		
5	What do you understand by end user computing?	Understanding	f
6	How modern concepts changed the production environment	Remembering	a
7	Explain about material requirement planning	Applying	a
8	Business process reengineering deals with the restructuring the process associated with the products of services, do you agree ? Illustrate.	Understanding	h
9	Briefly explain about JIT, MRP,SIX SIGMA	Applying	a
10	Write a brief notes on value chain analysis.	Understanding	a

9. 13 ASSIGNMENT QUESTIONS

Sl.No.	Questions	Blooms Taxonomy Level	Course Outcome
UNIT-I			
Assignment Short Answer Questions			
1	Define objective. Give two examples?	Remembering	a
2	How do you distinguish specific objectives from general objectives?	Understanding	a
3	Explain what you understand by ‘managerial objectives’ ?	Understanding	a
4	Define social responsibility?	Remembering	a
5	Explain the social responsibility of business to its different segments?	Understanding	f
6	Distinguish between manager & a leader.	Remembering	a
7	Discuss management as a Process.	Remembering	a
8	Define management. Explain its nature & features.	Understanding	h
9	Explain the applicability of social responsibility.	Understanding	a
10	Explain and evaluate the process of scientific management?	Remembering	a
UNIT-I			
Assignment Long Answer Questions			
1	Explain what you understand by ‘managerial objectives’. What could be the different objectives the management can set for itself? Illustrate.	Remembering	a
2	Explain the concept of social responsibility. Explain the activities of any four of the business organizations which undertake activities related to community development in your town.	Understanding	a
3	Illustrate how marketing strategies and commitment to social needs can be integrated by a business unit?	Remembering	a
4	What activities can a university undertake to demonstrate its commitment to social development?	Understanding	a
5	Explain the principles of management as outlined by Henri Fayol.	Understanding	f

6	Explain and evaluate the process of scientific management?	Remembering	a
7	State and compare the X & Y theories of motivation proposed by McGregor	Applying	a
8	“Scientific Management did much more than what was planned” do you agree Discuss ?	Remembering	h
9	Explain the importance of management. Are management and administration similar? Discuss.	Remembering	a
10	Discuss the challenges to management in the new millennium	Remembering	a
UNIT-II			
Assignment Short Answer Questions			
1	Explain the relationship between authority and responsibility?	Understanding	a
2	What do you understand by organizational hierarchy?	Understanding	a
3	Evaluate committee type of organization	Applying	a
4	Difference between organization and organizing.	Remembering	h
5	What do you understand by organization manual?	Remembering	f
6	Explain the Line & Staff organization listing its merits & demerits.	Understanding	a
7	Evaluate Matrix organization?	Understanding	a
8	Explain any two techniques of enhancing productivity?	Applying	h
9	Explain basic concepts of organization	Remembering	a
10	Define authority and responsibility	Applying	a
UNIT-II			
Assignment Long Answer Questions			
1	Explain the broad classification of activities supported by Indian corporate sector for community development, illustrate.	Applying	h
2	Difference between flat organization and tall organization?	Applying	a
3	How can an intelligent business take part in social responsibility related activities? Explain.	Understanding	a
4	Discuss the process of organizing. Explain the principles to be observed while creating an organization	Remembering	h
5	What do you mean by departmentation? Evaluate any three methods of departmentation?	Remembering	f
6	Discuss the utility of organization structure in an organization.	Understanding	a
7	List and explain the various principles to be followed while designing an effective organization.	Remembering	a
8	Write short notes on: a. Committee organization b. Matrix organization	Applying	h
9	Illustrate with an example for each type of organization- Functional organization, Team Structure, Boundaryless organization.	Understanding	a
10	“Product layout is better than process layout”. Do you agree with this	Understanding	a

	statement, support your answer.		
UNIT-III			
Assignment Short Answer Questions			
1	Goals of plant layout	Remembering	h
2	Consequences of poor plant layout	Understanding	a
3	Product layout	Understanding	a
4	Combination layout	Applying	a
5	Benefits of work study	Remembering	f
6	Method study	Understanding	a
7	Process chart symbols	Applying	a
8	Outline process chart	Remembering	h
9	Work sampling	Remembering	a
10	Define method study. How do you carry it out?	Applying	a
UNIT-III			
Assignment Long Answer Questions			
1	Explain in brief the factors determining the location of an industrial plant	Understanding	a
2	What do you understand by plant layout ? explain its systems and evaluate the same	Understanding	a
3	Product layout is better than process layout. 'Do you agree with this statement ? Support your answer	Understanding	a
4	Define work study discuss its relevance in the modern context Illustrate	Remembering	h
5	Define method study. How do you carry it out?	Remembering	f
6	Discuss any two techniques of recording the current method of doing the job.	Understanding	a
7	What do you understand by work measurement? Explain how do you determine standard time. Illustrate.	Understanding	a
8	Calculate the number of observations required for an accuracy of +_5 per cent and confidence level of 95 percent. If the percentage occurrence of an activity is 0.8	Applying	h
9	A work study sampling group recording the following observation. The data was collected for eight days and the number of observations per day was 500. The details of the number of times the workers found idle were: 50, 100, 200, 100, 50, 150, 100, 200. Find out the total work time	Understanding	a
10	An operator was kept under observation for 20 days. He was found working 300 occasions out of 400 observations. He produced 20 jobs during these days . the observation per day was only for four hours. Consider a performance rating of 140 for the operator and 30 percent as allowance. Calculate standard time	Applying	a
UNIT-IV			
Assignment Short Answer Questions			
1	Marketing versus Selling	Remembering	h

2	Functional approach to the study of marketing	Remembering	a
3	Market segmentation	Understanding	a
4	Marketing mix	Understanding	a
5	Product life cycle	Understanding	f
6	Write a note on storage facilities.	Remembering	a
7	Explain materials management as a process.	Applying	a
8	Discuss the duties of a store keeper.	Remembering	h
9	Define purchasing function. What are its objectives?	Applying	a
10	What do you understand by EOQ? Derive a formula to determine it?	Applying	a
UNIT-IV			
Assignment Long Answer Questions			
1	Define marketing. How is it different from selling? explain how marketing starts and ends with the customer.	Understanding	h
2	Identify and briefly discuss the functions of marketing.	Understanding	a
3	What are the factors that determine the choice of the channels of distribution? Illustrate	Remembering	a
4	Mention and evaluate the prominent channels of distribution	Remembering	a
5	Discuss the various stages in product life cycle? why is it essential for the marketer to know about the stages in product life cycle of his product or service?	Applying	f
6	Explain the necessity of maintain inventory in stores and explain the reasons of poor inventory control.	Understanding	a
7	Explain centralized purchasing & De-centralizes purchasing giving their suitability and limitations.	Applying	a
8	Define marketing? Explain how is it different from selling?	Understanding	h
9	What are the factors that determine the choice of channels of distribution?		a
10	Explain the objectives of purchasing function? How do you organize the purchasing department?	Applying	a
UNIT-V			
Assignment Short Answer Questions			
1	What is a job? What do you understand by job analysis?	Remembering	h
2	Identify the content of job description	Remembering	a
3	How do you determine labour turnover rate ?	Understanding	a
4	How does succession plan contribute to manpower planning	Understanding	a
5	What are the traits observed in the process of merit rating ?	Applying	f
6	Describe Differences between HRM and HRD?	Applying	a
7	Explain methods of training and development?	Applying	a
8	Describe responsibilities of HR Manager?	Understanding	h
9	Explain Selection process?	Applying	a
10	Explain the contents of job description?	Applying	a
UNIT-V			

Assignment Long Answer Questions			
1	Explain how job analysis forms the basis for job description and job specification. How does it help the personnel manager?	Remembering	h
2	What are the principles of manpower planning? How do you apply these to a software company?	Remembering	a
3	Explain the important stages in the manpower planning function.	Understanding	a
4	What are the reasons for high rate of labour turnover in some of the industries in India? Suggest how the employees can be retained.	Applying	a
5	Discuss the functions of human resource/ personnel manager in an industrial setting.	Remembering	f
6	Define HRM. Write short notes on recruitment and job description?		a
7	Explain the important stages in the man power planning functions?	Remembering	a
8	What is the difference between job evaluation and merit rating?	Remembering	h
9	Explain the analytical methods of job evaluation?	Applying	a
10	Define merit rating, explain and evaluate any four methods of merit rating.	Applying	a
UNIT-VI			
Assignment Short Answer Questions			
1	Average time estimate	Remembering	h
2	PERT versus CPM	Understanding	a
3	Rules for drawing networks	Remembering	a
4	Network analysis	Remembering	a
5	Milestone chart	Understanding	f
6	Direct cost and indirect cost	Understanding	a
7	Optimum duration and cost	Remembering	a
8	Cost slope	Remembering	h
9	Deterministic cost	Understanding	a
10	Crash cost	Remembering	a
UNIT-VI			
Assignment Long Answer Questions			
1	Draw a grant chart for the following programme: (c) Conducting a campus interview: Collect the final year student profile 2 Weeks Print the profile 1 week Contact the potential employees 4 weeks Fix the dates for interviews 2 weeks Prepare the students by mock interviews 3 weeks Conduct the interviews 1 week (d) Make a mile stone chart for the above gantt chart	Remembering	h

2	<p>Draw a PERT network for the following project A is the first event and J the end event J is a successor event to F C and D are successor event to B D is a Predecessor event to G E and F occur after event C E precedes F C restrains the occurrence of G and G precedes H H follows F H precedes J</p>				Understanding	a																																												
3	<p>Which of the following two time estimates is reliable ?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>to</th> <th>Tm</th> <th>Tp</th> </tr> </thead> <tbody> <tr> <td>Estimate by P</td> <td>18</td> <td>22</td> <td>27</td> </tr> <tr> <td>Estimate by Q</td> <td>22</td> <td>30</td> <td>36</td> </tr> </tbody> </table>					to	Tm	Tp	Estimate by P	18	22	27	Estimate by Q	22	30	36	Remembering	a																																
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Estimate by Q	22	30	36																																															
4	<p>In a construction company, the construction engineer spends on inspection different periods of time at different sites. More often he inspects from ten minutes to one hour. Twenty minutes inspections are more frequent than inspection of any other duration. If each inspection were an activity in a PERT project.</p> <p>(d) What would be the expected duration of each inspection? (e) What estimate would you give for its variance? (f) In scheduling the project, how much time would you allocate for the inspection?</p>				Remembering	a																																												
5	<p>Explain the nature of costs in a project. Discuss how the project manager should go about analyzing the costs while different activities are to be crashed in a project.</p>				Remembering	f																																												
6	<p>The particulars of cost and duration are given in the following table</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Activity</th> <th colspan="2">Normal cost</th> <th colspan="2">Crash cost</th> </tr> <tr> <th>Days</th> <th>Cost</th> <th>Days</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>3</td> <td>500</td> <td>2</td> <td>1,000</td> </tr> <tr> <td>1-3</td> <td>2</td> <td>750</td> <td>1</td> <td>1,500</td> </tr> <tr> <td>1-4</td> <td>6</td> <td>1,400</td> <td>4</td> <td>2,600</td> </tr> <tr> <td>2-4</td> <td>5</td> <td>1,000</td> <td>3</td> <td>1,800</td> </tr> <tr> <td>2-5</td> <td>7</td> <td>1,150</td> <td>6</td> <td>1,450</td> </tr> <tr> <td>3-4</td> <td>2</td> <td>800</td> <td>2</td> <td>800</td> </tr> <tr> <td>4-5</td> <td>4</td> <td>1,000</td> <td>2</td> <td>2,400</td> </tr> </tbody> </table> <p>Show the calculation of total cost at every stage of crashing.</p>				Activity	Normal cost		Crash cost		Days	Cost	Days	Cost	1-2	3	500	2	1,000	1-3	2	750	1	1,500	1-4	6	1,400	4	2,600	2-4	5	1,000	3	1,800	2-5	7	1,150	6	1,450	3-4	2	800	2	800	4-5	4	1,000	2	2,400	Remembering	a
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7	<p>Workout optimum duration and optimum cost for the following project</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Activity</th> <th rowspan="2">Preceded by</th> <th colspan="2">Normal Cost</th> <th colspan="2">Crash Cost</th> </tr> <tr> <th>Days</th> <th>Cost</th> <th>Days</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				Activity	Preceded by	Normal Cost		Crash Cost		Days	Cost	Days	Cost							Remembering	a																												
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		Days	Cost	Days	Cost																																													

	A	-	10	5,00,000	6	5,60,000		
	B	A	21	1,00,000	14	1,49,000		
	C	A	8	1,50,000	6	2,00,000		
	D	C	15	2,00,000	12	2,40,000		
	B restrict the completion of D							
8	Briefly explain about project cost and time						Understanding	h
9	Explain about time and cost relationship in project						Remembering	a
10	How to ensure optimum cost and optimum duration						Understanding	a
UNIT-VII								
Assignment Short Answer Questions								
1	Discuss the different steps in planning process						Applying	h
2	Explain briefly about Environmental scanning.						Understanding	a
3	Explain the strategies to improve sales						Understanding	a
4	The process of strategy						Remembering	a
5	Steps in corporate planning						Understanding	f
6	Alternatives for planning new business						Remembering	a
7	Significance of corporate goals						Remembering	a
8	SWOT analysis as a tool of personality development						Remembering	h
9	External environment analysis						Understanding	a
10	Strategic advantage profile						Applying	a
UNIT-VII								
Assignment Long Answer Questions								
1	Define corporate planning. And how to measure the corporate planning?						Remembering	h
2	Explain with suitable example what is meant by a mission.						Remembering	a
3	What are the differences between objectives and goals?						Remembering	a
4	Write long notes on elements of corporate planning process						Understanding	a
5	Write briefly about SWOT analysis. Present a case of any organization explaining its Swot analysis.						Remembering	f
6	Illustrate with an example and explain Mission and its characteristics						Remembering	a
7	Is there any link between mission, goal, objective, strategy and programs in an industrial environment?						Understanding	a
8	Explain the concept of corporate planning. Discuss the essential steps in corporate planning though a flow chart						Remembering	h
9	What do you understand by strategic business unit ? discuss its role and relevance in corporate planning?						Understanding	a
10	Explain the strategies to improve the sales performance of a strategic business unit.						Remembering	a
UNIT-VIII								
Assignment Short Answer Questions								
1	Mention the applications of MIS in todays era.						Understanding	h
2	Discuss on End user computing?						Remembering	a
3	Explain the concept of Value chain analysis?						Remembering	a

4	Write short notes on BPO ?	Understanding	a
5	What is Bench Marking? How is it useful ?	Remembering	f
6	List out the basic concepts of MIS?	Understanding	a
7	Write short notes on BPR ?	Remembering	a
8	Balanced score card	Remembering	h
9	Six sigma	Applying	a
10	Just in times systems	Remembering	a
UNIT-VIII			
Assignment Long Answer Questions			
1	List out the advantages of Materials Requirements Planning (MRP)?	Understanding	h
2	Briefly Explain the term of Total Quality Management (TQM)?	Understanding	a
3	Explain how JIT, MRP, Six Sigma changed the production environment?	Understanding	a
4	Explain what different levels mean under capability maturity models?	Understanding	a
5	What do you understand by end user computing?	Understanding	f
6	How modern concepts changed the production environment	Remembering	a
7	Explain about material requirement planning	Applying	a
8	Business process reengineering deals with the restructuring the process associated with the products of services, do you agree ? Illustrate.	Understanding	h
9	Briefly explain about JIT, MRP,SIX SIGMA	Applying	a
10	Write a brief notes on value chain analysis.	Understanding	a

10. E-COMMERCE

10.0 COURSE DESCRIPTION FORM

Course Title	E COMMERCE			
Course Code				
Regulation	R09 –JNTUH			
Course Structure	Lectures	Tutorials	Practicals	Credits
	4	1	-	4
Course Coordinator	Mr. J. Pradeep Kumar, Assistant Professor			
Team of Instructors	Mr. J. Pradeep Kumar, Assistant Professor			

10.1 COURSE OVERVIEW:

Understand how the E-Commerce is done in the IT environment when the data is huge and in a variety of formats (eg. multi media) like on the Internet and in digital libraries. To enable them to use the search and retrieval techniques taught in any of the IT applications that they may develop in future. It is limited to conceptual explanation of compressing techniques underlying E-commerce. It also explains theoretical concepts of Consumer Search and Resource Discovery.

10.2 PREREQUISITES:

Level	Credits	Periods /Week	Prerequisites
UG	4	5	1. Students must have the minimal concept of Data Base Management Systems 2. They must also have the concept of different types of

10.3 COURSE ASSESSMENT METHODS:

Sessional Marks	University End Exam marks	Total marks

<p>Mid Semester Test There shall be two midterm examinations. Each midterm examination consists of subjective type and objective type tests. The subjective test is for 10 marks of 60 minutes duration. Subjective test shall contain 4 questions; the student has to answer 2 questions, each carrying 5 marks. The objective type test is for 10 marks of 20 minutes duration. It consists of 10 Multiple choice and 10 objective type questions, the student has to answer all the questions and each carries half mark.</p>	75	100
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Sessional Marks	University End Exam marks	Total marks
<p>Assignment Five marks are earmarked for assignments. There shall be two assignments in every theory course. Marks shall be awarded considering the average of two assignments</p>		

10.4 EVALUATION SCHEME:

S.No	Component	Duration	Marks
1	I Mid Examination	80minutes	20
2	I Assignment	-	05
3	II Mid Examination	80minutes	20
4	II Assignment	-	05
5	External Examination	3hours	75

COURSE OBJECTIVES:

1. To teach the students regarding E-Commerce.
2. To make the student understand the relationship to DBMS, Digital libraries and Data Warehouses.
3. To teach the students business capabilities and also Cataloging and Indexing process.
4. To teach the students about the different Transaction Methods and payment methods.
5. To make the students understand the process of Multimedia Information Retrieval and also Libraries and Bibliographical Systems

10.5 COURSE OUTCOMES:

Upon completion of the subject, students will be able to:

1. comprehend the underlying economic mechanisms and driving forces of E-Commerce;
2. understand the critical building blocks of E-Commerce and different types of prevailing business models employed by leading industrial leaders;
3. appraise the opportunities and potential to apply and synthesize a variety of E-Commerce concepts and solutions to create business value for organizations, customers, and business partners;
4. formulate E-Commerce strategies that lever firms' core competencies, facilitate organizational transformation, and foster innovation;
5. undertake planning, organizing, and implementing of E-Commerce initiatives to effectively respond to of dynamic market environments.

10.6 HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes		Level	Proficiency assessed by
A	An ability to apply the knowledge of mathematics, Computing, Science and engineering to solve Computer Science and Engineering problems. (fundamental engineering)	S	Assignment Exercise
B	An ability to design and conduct engineering experiments, as well as to analyze and interpret data. (information retrieval skills).	H	Solving Practical Example
C	An ability to design and construct a hardware and software system, component, or process to meet desired needs, within realistic constraints. (creative skills).	S	Building Prototypes with Simulators
D	Graduates will demonstrate an ability to visualize and work on laboratory and Multi-disciplinary tasks individually or as a member within the teams. (teamwork)	H	Minor or Micro Project
E	An ability to demonstrate skills to use the techniques, modern engineering Tools, Software and equipments necessary to analyze computer engineering Problems. (Engg.)	S	Easy approach for Complex Problem
F	An understanding of professional, social and ethical responsibility	N	--
G	An ability to recognize the global issues like green initiatives and alternate energy sources and to take technology to villages and to recognize the rural requirements. (Engg.)	S	Mini Projects
H	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and	S	Build Prototypes
I	Graduate will develop confidence for self education and acquire new knowledge in the computing discipline and ability and practice for Multi-disciplinary tasks as a member within the teams	S	Seminars Presentation, Micro Projects
J	To communicate effectively	N	
K	An ability to use the techniques, skills and modern engineering tools necessary for Engineering practice.	S	Assigning Exercises, Development of Prototypes, Mini Projects
L	Graduates are able to participate and succeed in competitive examination like GRE, GATE, TOEFL, GMAT	H	Higher Studies
M	The use of current application software and the design and use of operating systems and the analysis, design, testing and documentation of computer programs for the use in Computer Science and engineering technologies.	H	Major Project
N	An ability to setup an enterprise. (Employment Skills)	S	Placement

N = None S = Supportive H = Highly Related

10.7 SYLLABUS:

UNIT – I

Electronic Commerce-Frame work, anatomy of E-Commerce applications, E-Commerce Consumer applications, E-Commerce organization applications.

UNIT – II

Consumer Oriented Electronic commerce - Mercantile Process models.

UNIT – III

Electronic payment systems - Digital Token-Based, Smart Cards, Credit Cards, Risks in Electronic Payment systems.

UNIT-IV

Inter Organizational Commerce - EDI, EDI Implementation, Value added networks.

UNIT – V

Intra Organizational Commerce - work Flow, Automation Customization and internal Commerce, Supply chain Management.

UNIT – VI

Corporate Digital Library - Document Library, digital Document types, corporate Data Warehouses. Advertising and Marketing - Information based marketing, Advertising on Internet, on-line marketing process, market research.

UNIT – VII

Consumer Search and Resource Discovery - Information search and Retrieval, Commerce Catalogues, Information Filtering.

UNIT – VIII

Multimedia - key multimedia concepts, Digital Video and electronic Commerce, Desktop video processings, Desktop video conferencing.

Text books:

Frontiers of electronic commerce – Kalakata, Whinston, Pearson.

Reference books:

1. E-Commerce fundamentals and applications Hendry Chan, Raymond Lee, Tharam Dillon, Elizabeth Chang, John Wiley.
2. E-Commerce, S.Jaiswal – Galgotia.
3. E-Commerce, Efrain Turbon, Jae Lee, David King, H.Michael Chang.
4. Electronic Commerce – Gary P.Schneider – Thomson.
5. E-Commerce – Business, Technology, Society, Kenneth C.Taudon, Carol Guyerico Traver

10.8 COURSEPLAN:

At the end of the course, the students are able to achieve the following course learning outcomes.(Thecourseplanismeantasa guideline.Theoremayprobablybechanges.)

Lecture	Course LearningOutcomes	Topics to becovered	Reference
1	Understand and E-commerce	E-commerce frame work, and applications	T1
2-3	Analyzing the E-commerce architecture	Consumer and business electronic architecture	T1
4	Memorize the benefits ofE-commerce	E-commerce frame	T1
5	Understand the organizational E-commerce	Supply chain management and CRM	T1
6	Explain the digital library	Corporate digital library,digital documents types	T1
7	Explain Consumer the research process	Consumer research and resource discovery	T1
8	Understand different type of cards	Smart cards ,credit cards	T1
9-10	Solve multimedia concepts	Digital video and electronic commerce	T1
11	Understand the organizational E-commerce	Supply chain management and CRM	T1
12	Analyzing the E-commerce architecture	Consumer and business electronic architecture	T1
13	Understand E-commerce applications	Anatomy of E-commerce application	T1

14	Analyzing consumer application	E-commerce Consumer application	T1
15	Analyzing business application	E-commerce business applications	T1
16	Understand Consumer oriented commerce	Consumer oriented Electronic commerce	T1
17-19	Analyzing Consumer oriented commerce	Mercentile Process models	T1
20-21	Understand E-payments	Electronic payments systems types	T1
22-25	Analyzing different payment types	Digital Token Based, Smart cards, credit cards	T1
26-28	Understand Inter-organizational systems	Inter organizational commerce EDI,EDI Implementation	T1
29-30	Solve inter organizational networks	E-commerce value added networks	T1
31	Understand digital library system	Corporate digital library, digital library types	T1
32-33	Analyzing document types	Digital library document types	T1
34	Understand data warehouses	Corporate document data warehouses	T1
35	Understand E-commerce Advertising	E-commerce advertisement process	T1
36-38	Understand E-commerce Marketing	E-commerce marketing process, Information based marketing, online marketing	T1

39	Understand Resource discovery	Consumer search and Resource Discovery	T1
40-41	Analyzing Information retrieval process	Information search and retrieval and information filtering	T1
42	Understand Multimedia	Key multimedia concepts	T1
43	Analyzing Digital video commerce	Digital video and electronic commerce	T1
44-45	Analyzing Desktop video processing	Desktop video processing's, Desktop video conferencing.	T1

10.9 MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Objectives	Program Outcomes													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
I	S										S			
II		S						S			H			
III		H		S	S							H		
IV			H					S					S	
V	S			H					S					
VI					H								H	
VII			S				S						H	
VIII	S			S			H							S
IX				H					H				H	

S =Supportive

H = Highly Related

10.10 MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Objectives	Program Outcomes													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
I	S													
II		S	H											
III					H						S			
IV				S	H				S					
V		S			S						H			
VI							S						H	H
VII												H		S

S=Supportive

H = Highly Related

10.11 OBJECTIVE QUESTIONS

UNIT-1

- 1)E-commerce stands for -----commerce[]
a)electrical b) encryption c) electronic d) none
- 2)E-commerce can be classified into-----different types []
a)1 b)7 c) 8 d) 6
- 3)the second type of electronic commerce is-----[]
a) business to organization b) organization to constitution
c) business to consumer d) both a and b
- 4)Convergence plays a very important role in the functionality of the ----- building block[]
a)1 b) 2 c) 3 d) 4
- 5)Multimedia storage servers is the-----element of E-commerce applications[]
a)first b) second c)third d) fourth
- 6)JIT stands for----[]
a) just in transfer b) just in target c) just in time d) none
- 7)Stable workloads -----practice[]
a)production b) maintenance c) management d) none
- 8)cost of using these systems was-----[]
a) high b)low c) very high d) verylow
- 9)B2B transactions in e-commerce utilizes-----[]
a)BDI B)EDI C)BCG D)BMB
- 10)The authenticity is concerned about the----- of business[]
a) verification b) qualification c) specification d) none

- 11) In India e-commerce is still in----- stage[]
a) final b) middle c) initial d) both a and b
- 12) The middle class families in India constitute about -----million people[]
a) 200 b) 350 c) 288 d) 190
- 13) Since many companies are providing-----services[]
a) HTML-based b) web-based c) XML d) both a and b
- 14) ATM services are----- and----- cash[]
a) depositing and checking amount b) depositing and withdrawing
c) transfer and depositing d) none
- 15) The term “business-business” implies that the transaction is between -----
Trading partners[]
a) Two or more b) no one c) both a and b d) none
- 16) The Indian generation that can quickly adapt to the-----technologies[]
a) older b) newer c) both a and b d) none
- 17) Information is transmitted through -----[]
a) Ethernet b) internet c) cellular d) none
- 18) Consumer access device is the ----- element of e-commerce applications []
a) 2 b) 4 c) 6 d) 8
- 19) Packaging and distribution play important roles in----- applications[]
a) internet b) e-commerce c) organization d) none
- 20) Pressure of being ----step ahead of the competitor[]
a) 1 b) 2 c) 3 d) 4

ANSWERS:

- 1)c 2)d 3)c 4)d 5)b 6)c 7)c 8)c 9)b 10)a 11)c 12)c 13)b 14)b 15)a 16)b 17)b 18)c 19)c 20)a

UNIT-II

- 1) There are mainly----- types of consumer-oriented applications[]
a) 1 b) 2 c) 3 d) 4
- 2) Developing this type of catalogue is ----- and ----- expensive[]
a) hard and less b) easy and less c) both a and b d) none
- 3) Suppose you have got the software you are looking for from-----website[]
a) online b) particular c) software d) none
- 4) Information search can be categorized into mainly-----searches[]
a) Organizational and consumer b) information
c) both a and b d) none
- 5) Analytical customers----- the product before buying it[]
a) producing b) explore/analyse c) both a and b d) none
- 6) The most common types of customers are []
a) planned customers b) impulsive customers c) both a and b d) none
- 7) There are two main categories to download a software[]
a) shareware and freeware b) freeware and hardware
c) shareware and software d) both a and b
- 8) The biggest advantage of this category of freeware software is that it is-----[]

- a) cost high b) cost free c) both a and b d) none
- 9) Electronic market place gives-----time[]]
a) less b) more c) sufficient d) both a and b
- 10) A market place which consists of -----number of suppliers and only one customer[]]
a) less b) more c) both a and b d) none
- 11) Mercantile transactions using credit cards is based on -----major processes[]]
a) 1 b) 2 c) 3 d) 4
- 12) Consideration on the cost that will be-----for order completion[]]
a) bad b) good c) very bad d) none
- 13) Installing the product in the system as well as -----and-----the product[]]
a) repairing and maintaining b) maintaining and receiving
c) relation and processing d) none
- 14) Comparison of-----set of products with-----set of products[]]
a) placing and descending b) larger and smaller c) both a and b d) none
- 15) This is the----- step of the order management cycle[]]
a) 1 b) 2 c) 3 d) 4
- 16) Mercantile process transactions using----- cash[]]
a) image b) digital c) processor d) none
- 17) E-retailing offers several benefits to the customers which includes-----[]]
a) convenience b) convergence c) both a and b d) none
- 18) The phase of business model focuses on----- of the products[]]
a) selling b) buying c) pricing d) none
- 19) A business model is an-----model[]]
a) artefact b) administration c) architectural d) none
- 20) Consumer-oriented-----challenges[]]
a) industrial b) E-commerce c) customer d) none

ANSWERS

- 1) d 2) b 3) b 4) a 5) b 6) b 7) a 8) b 9) c 10) b 11) b 12) b 13) b 14) b 15) c 16) b 17) a 18) c 19) c 20) b

UNIT-3

- 1) EFT stand for-----[]]
a) electronic fund transmit b) electronic fund transaction
c) electronic form transfer d) electronic fund transfer
- 2) Home banking service can be classified into-----types[]]
a) 1 b) 2 c) 3 d) 4
- 3) E-cash is a form of digital cash which provides-----level of security[]]
a) high b) low c) medium d) none
- 4) E-cash possess -----value that is evaluated in terms of money or cashier's check that is certified by bank[]]
a) interoperability b) security c) monetary d) none
- 5) Lack of-----or-----in banking system[]]
a) belief or confidence b) clearing or agreement
c) interest or deposit d) none
- 6) E-checks are----- and-----when multiple billing servers are used[]]

- a)reliable and transfer b) transfer and processing
c)reliable and scalable d) none
- 7)They are mostly used for processing the payment for ----- transactions[]
a) macro b) authorize c) micro d) both a and b
- 8)Every electronic token has-----means of providing security and protection[]
a))different b)same c)approach d) none
- 9)-----token or-----token is a form of online electronic commerce payment system[]
a)e-cash or e-check b)e-cash or e-digital c) electronic or digital d) none
- 10)A cryptographic technique called-----signature[]
a) electronic b) document c) digital d) none
- 11) Card reader is capable of displaying both----- and----- []
a)reader and interface b) prompt and replay c) both a and b d) none
- 12)If OTP server receives a ----- acknowledgment[]
a) negative b) positive c) both a and b d) none
- 13)----- refers to an application's property that enhances the performance of the application by making changes in its hardware environment[]
a)reliability b) scalability c)authenticating d) none
- 14)Standardizing the----- structure[]
a) users b) process c) data d) both a and b
- 15)E-cash offers-----advantages to merchants[]
a)restrict b) particular c) tremendous d) none
- 16)Smart cards are used in a----collection of applications []
a) small b) large c) huge d) none
- 17)Buyers are protected against -----charges[]
a) counterfeit b) fake c) both a and b d) none
- 18)A series of ----- numbers are generated using e-cash software []
a) huge b) so many c) random d) none
- 19)The problem of anonymity can be resolve by using -----that provide security to customers[]
a)transaction b)regulation c) both a and b d)none
- 20)When transactions are----- and depends only on automatic records []
a)financial b)logical c)imperceptible d) none

ANSWERS

- 1)d 2)b 3)a 4)c 5)a 6)c 7)c 8)a 9) c 10) c 11)b 12)b 13)b 14)c 15)c 16)c 17)b 18)c 19)b 20)c

UNIT-4

- 1) The rate at which order filling was done before have improved with the use of-----[]
a) Electronics b) Reducing c) EDI d) None
- 2) EDI standard -----layer []
a) Application b) packaging c) Infrastructure d) Translation
- 3) In EDI, data is organised in such a format that it can only be interpreted by the----- []
a) Humans b) Information c) Software d) both a and b

- 4) Using EDI for doing international trade started way back in ----- []
a) 1940 b) 1938 c) 1955 d) 1948
- 5) Registration of goods to be transmitted through----- []
a) Vendor b) aircrafts c) insurer d) none
- 6) ACH stands for----- []
a) auto charity house b) auto chasing house c) automated clearing house d) none
- 7) CTP stands for----- []
a) Computer trade part b) computer tracing parts
c) Corporate trade payments d) corporate trading payment
- 8) Most companies using -----with-----are finding it a lot easier to do manufacturing process []
a) EDI , JIT b) EDI,CTX c) CTX , JIT d) CCD , CTP
- 9) Traditional EDI service can also refer to as ----- EDI service []
a) Electronic b) conventional c) transfer d) none
- 10) BOV stands for----- []
a) Business operation vending b) business operation value
c) Business operational view d) Business operational value
- 11) Data segments are nothing but set of ----- elements []
a) User b) data c) cost d) both a and b
- 12) The first version of X.400 was developed in----- []
a) 1990 b) 1984 c) 1960 d) 1948
- 13) MIME was developed in----- []
a) 1990 b) 1984 c) 1999 d) 1992
- 14) ----- is the first component of the mailing system []
a) Data agent b) message c) user agent d) services
- 15) ----- is the second component of the mailing system []
a) User agent b) message store c) both a and b d) none
- 16) The fourth and the final component of mailing system is ----- services []
a) In directory b) directory c) system d) none
- 17) The different service providers of EDI VAN are ----- []
a) Sprint b) line c) inter cost d) none
- 18) ----- is a well known service provider with high level of experience providing its services
around 50 countries
a) British b) AT c) GEIS d) AT and T
- 19) ----- covers 150 countries []
a) Sprint b) Saturn c) Cable d) none
- 20) An EDI messages is divided into ----- parts []
a) Header and body b) positive and negative c) both a and b d) none

ANSWERS

- 1)c 2) d 3) c 4) d 5) b 6) c 7) c 8) a 9) b 10) c 11) b 12) b 13) d 14)c 15) b 16) b 17) a
18) c 19) b 20) a

UNIT-5

- 1 Simple work flow consist of ----- tasks []
a) 1 r 2 b)2or4 c)3or4 d)both and b
 - 2 workflow can be of -----types []
a) 2 b)3 c)4 d) 1
 - 3) organizations can be viewed as a collection of both-----departments[]
A)vertical and parallel b)vertical and horizontal c) both d)none of these
 - 4the main attribute that binds the companies in a virtual organization is[]
a)trust b)excellent c)opportunity d)none
 - 5)concentration or improvement is given to-----functions[]
a)cell b)key c)both d)none of these
 - 6)global market differs from-----market[]
a)industrial b)international c)production d) both a and c
 - 7)marketing plays a very important role to achieve ----- advantage[]
a)manufacturing b)management c)competitive d) none
 - 8each and every individual employee can work from-----comfortable location[]
a)his b) her c) his/her d) noneofthese
 - 9)development cycle times are -----[]
a)produced b)reduced c) cost d) none
 - 10)abbreviation for USAAs-----[]
a)united service automobile association b)united section automated association
c)united selection auto associoted d)united section allocation airline
 - 11)data in the form of-----documents[]
a)database b) text c) record d) data
 - 12)logistics is an important function of-----management[]
a)integrated b)supply chain c) product d) none
 - 13)they are responsible for analyzing the performance of-----[]
a)standard products b) analize c) products d) none
 - 14)the work of virtual organization is based mostly on----- []
a)consideration)excellent c)organization d)opportunities
 - 15)EDI notifications can be classified into the following-----types[]
a)1 b)2 c)3 d) 4
 - 16) Existing processes are modified by using ----- technology[]
a)individual b) functional c)different d) none
 - 17)lateral approach is used in ----- firms[]
a)small-scaled b)large-scaled c)medium-scaled d)none
 - 18)Global market are generally preferred by-----inorder to attain globalization[]
a)MNC's b) GNC's c)BNC's d) both a and b
 - 19)complex workflow consist of-----concurrently executing workflows[]
a)literal b) several c)currently d) none
 - 20)there are -----primary models present in SCM []
a)1 b)2 c) 3 d)4
- ANSWERS
1)a 2)a 3)b 4)a 5)b 6)b 7)c 8)c 9)b 10)a 11)b 12)b 13)a 14)d 15)c 16)c 17)a 18)a 19)b 20)b

UNIT-6

- 1) Documents play a very important role in the success-----companies[]
a)two b) three c) various d) none
- 2) Promoting the products -----is costly[]
a) White papers b) newspapers c) both a and b d)none
- 3) Cost of advertising through magazines is ----[]
a) high b) low c)very low d)very high
- 4) TIFF stands for---[]
a) Tag interchange file formed b)Tag interchange file format
c) Tag interchange file forced d) none of these
- 5) ODA stands for-----[]
a) office documents artified b) office deified architecture
c) office documents architecture d) both a and b
- 6) Different standards used for hypertext documents are-----[]
a)html,mheg b) html,myhz c)xml, html d) none
- 7) OLE stands for-----[]
a) object linking and ethernet b) object linking and embedding
c) object linkage and excepting d) none
- 8) companies advertise their products in mostly----- ways[]
a)1 b)2 c)3 d)4
- 9)Online surveys produce very-----results[]
a)slow b) fast c)both a and b d) none
- 10)the size of the software is ----- kb[]
a)1654 b) 1565 c) 1900 d) 1850
- 11)XP smoker is a-----software[]
a)share b) line c) shareware d) none
- 12)silver software size is-----kb[]
a)1004 b)2000 c)2050 d)both a and b
- 13)They need the customers to implement ----- technologies []
a)old b)new c) so old d) so new
- 14)Data library is just a part of a-----[]
a)data warehouse b)data consistency
c)data holding d)none
- 15)Developing bundles of ----- products[]
a)customised b)produced c) both a and b d) none
- 16)CDA stands for-----[]
a)compound document assembler b) compound document architecture
c)compound design architecture d) none
- 17) RTF stands for --- []
a) rich technique format b) rich testing format
c)rich text format d) none
- 18)MHEG was developed under-----[]
a)multimedia b)hyper linking c) both a and b d)none
- 19)Help in reducing the-----cost[]

a)illusion b)transmission c) physical d)none

20)The third type of digital documents in -----document[]

a)time b) hypertext c)both a and b d) none

ANSWERS

1)c 2)b 3)a 4)b 5)c 6)a 7)b 8)b 9)b 10)a 11)c 12)c 13)b 14)a 15)a 16)b 17)c 18)a 19)b 20)b

UNIT-7

1)-----filters are used for processing incoming stream of data []

a)Remote filter b)local filter c)a&b d)none

2)Software filters are ----- []

a)Remote filter b)local filter c)a&b d)none

3)Which is the not “search and resource discovery paradigm” []

a)Information Filtering b)Information Browsing

c)Information search d)Electronic directories

4)Which level indexing is difficult ----- []

a)Word-level b)File-level c)both d)none

5)Which level indexing does not maintain any additional information about the word location []

a)Word-level b)File-level c)both d)none

6)WAIS ----- []

a)Work Area Information service b)Wide Area Information Service

c)none d) Wide Area Include Service

7)Web Robots are also known as----- []

a)Wanderers b)Spiders

c)both d)none

8)Which is the Information Retrieval model []

a)Boolean Information b)Probabilistic

c)Vector space d) all the above

9)How many types of Directories []

a)1 b)2 c)3 d)4

10)Directories -----data []

a)finding b)sending c)inserting d)deleting

11)Intelligent Filters are responsible for----- []

a)processing b)searching c)deleting d)none

12)Software Filters are responsible for-----[]

a)processing b)searching c)deleting d)none

13)Which agent is allows to users to view details? []

a)News Filtering b)Mail Filtering

c)both d)none

14)Probabilistic Information plays important role in-----[]

a)e-commerce b)distribution applications

c)both d)none

15)CDSTs stands for -----[]

a)clinical decision support system tools b) clinical decision supply system tools

- c) both a and b d) none
16) Electronic directory services were first introduced by -----[]]
a) Haven district b) France telecom c) both a and b d) none
17) Virtual reality plays a significant role in ----- and -----[]]
a) capturing and generating b) internet advertising and marketing
c) organization and requirements d) none
18) URL stands for----[]]
a) uniform reduced location b) uniform resource locator
c) uniform reduction location d) none
19) the 3D data can be integrated into the web using-----[]]
a) URML b) URL c) VRML d) CDSTs
20) the first telephone directory was published in -----[]]
a) 1970 b) 1820 c) 1878 d) 1900

ANSWERS

- 1) b 2) c 3) b 4) a 5) b 6) b 7) c 8) d 9) b 10) a 11) b 12) a 13) b 14) a 15) a 16) b 17) a 18) b 19) c 20) c

UNIT-8

- 1) MPEG stands for----[]]
a) Motion picture excellent group b) motion picture expert group
c) Motion picture arranging group d) none
2) Multimedia server act as both----- and -----[]]
a) Hardware and software b) database and communication
c) Both a and b d) path and multiprocessing
3) Multi processors can either be-----or -----coupled[]]
a) Folded or stopped b) tightly or loosely
c) Holding or securing d) none
4) Disk array is a-----[]]
a) store large b) store array c) store medium d) none
5) JPEG stands for -----[]]
a) Joint point excellent group b) joint part expert group
c) joint photographic expert group d) none
6) Resistive technology is the most affordable of-----technology[]]
a) screen b) touch screen c) swipe screen d) none
7) SAW stands for-----[]]
a) south accuracy wave b) surface acoustic wave
c) south advanced wave d) none
8) Touch tablets are constructed in a ----- manner with no moving parts[]]
a) difficult b) expensive c) simple d) none
9) Touch sensitive tablets can be----- into one-piece constructions[]]
a) folded b) moulded v) both a and b d) none
10) Storage of video and meta-data is possible in-----[]]
a) MBVDS b) VDBMS c) SDBMV d) MDVNA
11) OSSL stands for ---- []]
a) object string storage language b) object storage system large

- c) object storage system layer d) none
 12) PQM stands for-----[]
 a) predator quantify manage b) predator qualify machine
 c) predator query manager d) none
 13) RDBMS developed by --- []
 a) Informix b) Microsoft c) query d) none
 14) Multimedia systems are used by different types of----- []
 a) process b) systems c) users d) none
 15) The bandwidth of the communication channel has the major impact on-----[]
 a) data processing b) data transmission c) data query d) none
 16) The video conferencing standard needs the frequency range of----Hz to-----Hz[]
 a) 120 to 100 b) 80 to 190 c) 125 12500 d) none
 17) An intranet is a collection of networks that uses ----- protocol[]
 a) internet protocol b) internet image c) internet processing d) none
 18) Connecting computers in the world as----- are connected[]
 a) terminal b) processor c) telephone d) none
 19) A reference point refers to an interface between ----- functional groupings[]
 a) 1 b) 2 c) 3 d) 4
 20) H-channel provides higher bandwidth by combining multiple----- and ----- channels[]
 a) H and D b) H and B c) B and C d) B and D

ANSWERS

- 1)b 2)a 3)b 4)c 5)c 6)b 7)b 8)c 9)b 10)b 11)c 12)c 13)b 14)c 15)b 16)c 17)a 18)c 19)b 20)d

10.12 TUTORIAL QUESTIONS

S. No	Question	Blooms Taxonomy Level	Course Outcome
UNIT - I			
1	What is E-commerce ?explain the framework E-commerce?	Understand	2
2	Define E-commerce .what are its functions ?Mention its	Understand	8
3	What is E-commerce ?state how e-commerce differ from traditional commerce?	Understand	4
4	Explain E-commerce and media convergence?	Understand	2
5	what are the major limitations of e-commerce?	Understand	3
6	explain e-commerce consumer applications?	Understand	2
7	explain the e-commerce organization of applications	Understand	2
8	explain anatomy of e-commerce applications	Knowledge	8
UNIT – II			
1	what are the components of business model ?explain each of	Understand	3
2	explain consumer oriented e-commerce applications?	Understand	3

S. No	Question	Blooms Taxonomy Level	Course Outcome
3	what is catalog based shopping? State its advantages?	Remember	3
4	explain the mercantile models from consumer perspective	Understand	3
5	explain about post purchase consummation phase	Understand	2
6	explain the mercantile models from the	Understand	8
7	what are the challenges for consumer oriented e-commerce	Understand	4
8	what are the steps taken by customers in product	Understand	2
UNIT - III			
1	what is meant by scalability and inter-operability in the	Remember	3
2	list out categories of explain in detail?	Understand	3
3	what is electronic cash ?explain its properties and	Understand	2
4	write short notes on electronics checks?	Understand	8
5	discuss the various types of electronic tokens?	Understand	4
6	what is hybrid card? what is it's role in e-commerce?	Understand	2
7	what is smart card? what are their types and uses?	Remember	3
8	list out some of the security requirements for safe e-	Understand	3
	UNIT - IV	Understand	2
1	what is EDI ?how does it build up relationship between	Understand	8
2	distinguish between eft and ach transfers?	Understand	4
3	write short notes on EDI?	Remember	3
4	Explain four layers of EDI architecture?	Understand	3
5	compare EDI and E-mail?	Understand	2
6	Explain information flow with and without EDI.	Understand	8
7	Explain the costs and benefits of EDI.	Understand	4
8	Write a detailed essay on van's.	Understand	2
	UNIT – V	Remember	3
1	Define workflow?	Understand	3
2	Compare and contrast Real and Virtual organizational	Understand	2
3	Define intra organizational commerce?	Understand	8
4	Explain the procedure to construct an effective intra	Understand	4
5	Write a short notes automation customization	Understand	2
6	Explain supply Chain Management?	Remember	3
7	List the macro forces influence internal commerce ?	Remember	3
8	define simple workflow?	Understand	3
	UNIT – VI	Understand	2
1	Explain the concept of corporate digital library as core of	Understand	8
2	List out the limitations of corporate digital library	Understand	4
3	Discuss in detail various types of digital documents?	Understand	2
4	Describe the concept of corporate digital library	Remember	3

5	Explain the following two types of digital documents?	Understand	3
6	Explain the different steps required to build a complete data	Understand	2
7	Write a short notes on push based advertising	Remember	3
8	Define data ware house. Explain briefly different types of	Understand	3
UNIT – VII		Understand	2
1	Explain the utility of business information?	Understand	8
2	Discuss on search and resource discovery paradigm?	Understand	4
S. No	Question	Blooms Taxonomy	Course Outcome
3	Show integrate research and consumer buying behaviour ?	Remember	3
4	Describe commerce catalogues?	Understand	3
5	Describe information filtering?	Understand	2
6	Explain the processes of consumer searching online	Understand	8
7	Differentiate electronic white and yellow pages of directory	Understand	4
8	Discuss the overview Directory business	Understand	2
UNIT – VIII		Remember	3
1	Define multimedia and explain its key concepts	Understand	3
2	Explain about multimedia servers ?	Understand	2
3	Discuss various types of Codecs. In this context explain	Understand	8
4	Discuss the characteristics Digital Video?	Understand	4
5	Write a short note on functioning of CD-ROM as a	Understand	2
6	Write a short notes on digital video?	Remember	3
7	List out the applications of digital video in e-commerce?	Understand	3
8	Discuss about desktop video processing?	Remember	3

10.13 ASSIGNMENT QUESTIONS

S. No.	Question	Blooms Taxonomy Level	Course Outcome
UNIT – I			
1	What is E-Commerce ? Explain the framework of E-Commerce	Remember	3
2	Explain the technology architecture for e-commerce. Explain various e-commerce activities.	Understand	3
3	What are the basic architectural elements of e-commerce? Also explain broad goals of e-commerce.	Understand	3
4	Define B2B. Describe the nature of business-to-business transactions in e-commerce	Understand	3
5	State how e-commerce differs form traditional commerce	Remember	3
6	What are the major limitations on the growth of e-commerce in India? How do we overcome them?	Understand	3

7	How does e-commerce benefit a company and how a company can serve its customer better	Remember	3
8	Discuss the e-commerce opportunities available for companies in India	Understand	3
S. No.	Question	Blooms Taxonomy Level	Course Outcome
UNIT – II			
1	What is e-retailing? Explain its advantages to the consumer and business	Understand	3
2	What are the challenges for consumer-oriented e-commerce in	Understand	3
3	What is catalog based shopping ? State its advantages.	Remember	3
4	Explain mercantile models from the merchant’s perspective.	Remember	3
5	Compare and contrast online retailing with traditional	Remember	3
6	What are the components of a business model?	Remember	3
7	Explain Home Banking and Home Shopping.	Understand	3
8	Write short notes on microtransactions of information.	Understand	3
UNIT – III			
1	What is electronic cash? Explain its properties and advantages.	Understand	12
2	What is an electronic cheque? State its importance and role in e-commerce	Understand	12
3	What is hybrid card? What is its role in e-commerce.	Understand	12
4	What is smart card? What are their types and uses.	Understand	12
5	Discuss why anyone with a credit card would want to use an electronic payment system	Understand	12
6	How do you ensure consumer protection in e-payment system.	Understand	12
7	Explain risks involved in electronic cash handling and cash payment	Understand	12
8	Explain detection of double spending in e-cash.	Knowledge	12
UNIT – IV			
1	Explain the information flows in the EDI purchasing process.	Understand	11
2	Discuss the legal, security and privacy issues involved in EDI.	Understand	11
3	Explain the costs and benefits of EDI.	Understand	11
4	How do companies eliminate the potential limitations and risks associated with internet based EDI	Understand	11
5	Explain MIME based EDI. Explain MIME advantages and disadvantages	Understand	11

6	compare EDI and e-mail.	Understand	11
7	Explain different financial EDI standards.	Analysis	11
8	Explain manufacturing/retail procurement using EDI.	Analysis	11

1

S. No.	Question	Blooms Taxonomy Level	Course Outcome
UNIT – V			
1	Compare and contrast real and virtual organization structures.	Understand	12
2	What are the macroforces influence internal commerce?	Understand	12
3	What is intra-organizational commerce? Explain the procedure to construct an effective intra-organizational commerce.	Understand	12
4	What is automation customization	Understand	12
5	What are internal information systems in internal commerce.	Understand	12
6	Explain supply Chain Management?	Understand	12
7	Define intra organizational commerce?	Understand	12
8	define simple workflow?	Knowledge	12
UNIT – VI			
1	Discuss in detail the various types of digital documents.	Understand	11
2	What is internet advertising? Discuss the methods of internet advertising	Understand	11
3	What are the various forms of advertisements you come across in web. Explain them briefly.	Understand	11
4	Describe the advantages of advertising through web to customer and organization	Understand	11
5	Compare and contrast the various types of online primary research	Understand	11
6	Describe push technology and state its benefits.	Understand	11
7	What is the significance of online marketing? State its limitations	Analysis	11
8	What are the initial procedures for creating digital documents	Analysis	11
UNIT – VII			

1	Explain the utility of business information .	Knowledge	8,9,11
2	What is consumer search ? Explain the process of consumer search in online marketing.	Knowledge	8
3	Discuss on search and resource discovery paradigms	Apply	8
4	How do you integrate research and consumer buying	Apply	8
5	What do you mean by electronic white and yellow pages of directory business.	Apply	
6	Describe information filtering?	Apply	
7	Discuss the overview Directory business	Understand	8
8	Discuss on search and resource discovery paradigm?	Apply	8

S. No.	Question	Blooms Taxonomy Level	Course Outcome
UNIT – VIII			
1	What are the recent advancements in multimedia technology.	Apply	8
2	Explain e-commerce solutions and database solutions that are available in industrial houses for business purposes	Apply	8
3	Explain Networks. Discuss in detail the ISDN.	Apply	8
4	Explain various types of Codes.	Understand	8
5	What are the benefits associated with desktop video conferencing	Apply	8
6	Write a short note on functioning of CD-ROM as a multimedia storage	Understand	8
7	List out the applications of digital video in e-commerce?	Understand	8
8	Discuss the characteristics Digital Video?	Understand	8

11. DESIGN PATTERNS

11.0 COURSE DESCRIPTION FORM

Course Title	DESIGN PATTERN			
Course Code	A70530			
Regulation	R09-JNTUH			
Course Structure	Lectures	Tutorials	Practicals	Credits
	4	-	-	3
Course Coordinator	Mrs. C . Bhanu Jyothi			
Team of Instructors	Mrs. C . Bhanu Jyothi			

11.1 COURSE OVERVIEW:

This course enables students to understand how to use and select appropriate design patterns. At the end of the course the student will be in a position to understand: The basic concepts of design patterns, identification of design pattern in the code they developed during previous semesters, how to use the design pattern, how to select the design pattern and we have documented some of the most important design patterns and present them as a catalog..

11.2 PREREQUISITES:

Level	Credits	Periods/Weeks	Prerequisites
UG	3	4	OOAD

11.3 COURSE ASSESSMENT METHODS:

A) Marks Distributions

Session Marks (25M)	University End Exam Marks	Total Marks
There shall be 2 midterm examinations. Each midterm examination consists of subjective type and objective type tests.		

<p>The subjective test is for 10 marks, with duration of 1 hour. Subjective test of each semester shall contain 4 questions; the student has to answer 2 questions, each carrying 5 marks. The objective type test is for 10 marks with duration of 20 minutes. It consists of 1 multiple choice and 10 objective type questions, the student have to answer all the questions and each carry half mark. First midterm examination shall be conducted for the first two and half units of syllabus and second midterm examination shall be conducted for the portion remaining. Five marks are earmarked for assignments. There shall be two assignments in every theory course. Marks shall be awarded considering the average of two assignments in each course.</p>	75	100
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11.4 EVALUATION SCHEME:

S.No	Component	Total Duration(Hrs)	Descriptive Exam (Duration)	Objective Exam (Duration)	Marks
1	I Mid Examination	90MIN	70MIN	20min.	20
2	I Assignment	--	--	--	5
3	II Mid Examination	90MIN	70MIN	20min.	20
4	II Assignment	--	--	--	5

5	External Examination	3hr	--	--	75
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COURSE OBJECTIVES:

- I. Identify the appropriate design patterns to solve object oriented design problems.
- II. Develop design solutions using creational patterns.
- III. Apply structural patterns to solve design problems.
- IV. Construct design solutions by using behavioral patterns.

11.5 COURSE OUTCOME:

S.no	Course outcomes	Blooms level
1	Gain knowledge by identifying the appropriate design patterns to solve object oriented design problems	Analyzing / Analysis
2	Understanding the development of design solutions using creational patterns	Understanding / Comprehension
3	Understanding and applying the structural patterns to solve design problems	Understanding / Comprehension
4	Introduce how to construct design solutions by using behavioral patterns	Analyzing / Analysis
5	Gain knowledge by identifying the appropriate design patterns to solve object oriented design problems	Analyzing / Analysis

11.6 HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes		Level	Proficiency assessed by
A	An ability to apply knowledge of computing, mathematical foundations, algorithmic principles, and computer science and engineering theory in the modeling and design of computer-based systems to real-world problems (fundamental engineering analysis skills).	S	Assignment , Exams Lectures

B	An ability to design and conduct experiments, as well as to analyze and interpret data (information retrieval skills).	S	Lectures Assignments , Tutorials
C	An ability to design and construct a hardware and software system, component, or process to meet desired needs, within realistic constraints.	H	Assignments, tutorials, lectures
D	An ability to function effectively on multi-disciplinary teams (teamwork).	N	-
E	An ability to analyze a problem, and identify, formulate and use the appropriate computing and engineering requirements for obtaining its solution (engineering problem solving skills).	H	Lectures Tutorials
F	An understanding of professional, ethical, legal, security and social issues and responsibilities (professional integrity).	S	Lectures Assignments
G	An ability to communicate effectively, both in writing and orally (speaking / writing skills).	N	-
H	The broad education necessary to analyze the local and global impact of computing and engineering solutions on individuals, organizations, and society (engineering impact assessment skills).	S	Examination
I	Recognition of the need for, and an ability to engage in continuing professional development and life-long learning (continuing education awareness).	N	-
J	A knowledge of contemporary issues (social awareness).	N	-
K	An ability to use current techniques, skills, and tools necessary for computing and engineering practice (practical engineering analysis Skills)	H	Lectures, Assignments Tutorials,

			Exam
L	Graduates are able to participate and succeed in competitive examination like GRE, GATE, TOEFL, GMAT etc.	S	Tutorials
M	The use of current application software; the design and use of operating systems; and the analysis, design, testing, and documentation of computer programs for the use in information engineering technologies.	H	Lectures, Assignments
N	The basic knowledge of electronics, electrical components, computer architecture and applications of microcomputer systems, communications needed in data transport.	H	Lectures, Assignments

N = None

S = Supportive

H = Highly Related

11.7 SYLLABUS:

UNIT – I:

Introduction: What Is a Design Pattern?, Design Patterns in Smalltalk MVC, Describing Design Patterns, The Catalog of Design Patterns, Organizing the Catalog, How Design Patterns Solve Design Problems, How to Select a Design Pattern, How to Use a Design Pattern.

UNIT – II:

A Case Study: Designing a Document Editor: Design Problems, Document Structure, Formatting, Embellishing the User Interface, Supporting Multiple Look-and-Feel Standards, Supporting Multiple Window Systems, User Operations Spelling Checking and Hyphenation, Summary.

UNIT – III:

Creational Patterns: Abstract Factory, Builder, Factory Method, Prototype, Singleton, Discussion of Creational Patterns

UNIT – IV:

Structural Pattern Part-I: Adapter, Bridge, Composite.

UNIT – V:

Structural Pattern Part-II: Decorator, Façade, Flyweight, Proxy

UNIT-VI:

Behavioral Patterns Part-I: Chain of Responsibility, Command, Interpreter, Iterator.

UNIT-VII:

Behavioral Patterns Part-II: Mediator, Memento, Observer, State, Strategy, Template Method, Visitor, Discussion of Behavioral Patterns

UNIT-VIII:

What to Expect from Design Patterns, A Brief History, The Pattern Community An Invitation, A Parting Thought.

Text Books

1. Design Patterns by Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides. Pearson Education
- 2 Head First Design Patterns By Eric Freeman - Oreilly-spd

Reference Books

1. Pattern's in JAVA Vol-I By Mark Grand ,Wiley DreamTech.
2. Pattern's in JAVA Vol-II By Mark Grand ,Wiley DreamTech.
3. JAVA Enterprise Design Patterns Vol-III By Mark Grand ,Wiley DreamTech.
4. Design Patterns Explained By Alan Shalloway, Pearson Education

11.8 COURSE PLAN:

At the end of the course, the students are able to achieve the following Course Learning Outcomes.

Lecture No.	Course Learning Outcomes	Blooms Level	Topics to be covered	Reference
L1	What is a design pattern	Remembering	Describes about design pattern http://www.oodeesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L2	Design patterns in Smalltalk MVC		http://sourcemaking.com/design_	Text 1 & 2

			http://ui-patterns.com/patterns	
L3	Describing design patterns	Understand		Text 1 & 2
L4	The catalog of design patterns		http://www.oodeesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L5	Overview, Pre-requisites, Explanation (outline) of Course		http://www.oodeesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L6	Organizing the catalog	Understand	http://sourcemaking.com/design_	Text 1 & 2
L7	How design patterns solve design problems	Understanding	http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2
L8	How design patterns solve design problems, How to Select a design pattern	Analysis	http://www.oodeesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L9	How to Select a design pattern, How to use a design pattern		http://www.oodeesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2

L10	Explanation of designing a document editor: Design problems, Document structure		http://nptel.ac.in/courses/106101061/15	Text 1 & 2
L11	Formatting	Understand	http://nptel.ac.in/courses/106101061/6	Text 1 & 2
L12	Embellishing the user interface		http://nptel.ac.in/courses/106101061/9	Text 1 & 2
L13	Supporting multiple look and feel standards		http://nptel.ac.in/courses/106101061/17	Text 1 & 2
L14	Supporting multiple window systems		http://sourcemaking.com/design_	Text 1 & 2
L15	User operations		http://ui-patterns.com/patterns	Text 1 & 2
L16	Spelling checking and hyphenation & Summary	Remembering	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L17	Spelling checking and hyphenation & Summary		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L18	Explanation of creational patterns		http://sourcemaking.com/design_	Text 1 & 2
L19	Abstract factory		http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2

		Understanding		
L20	Abstract factory		http://sourcemaking.com/design_	Text 1 & 2
L21	Builder		http://ui-patterns.com/patterns	Text 1 & 2
L22	Factory method ,	Analysis	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L23	Prototype		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L24	Singleton	Understanding	http://sourcemaking.com/design_	Text 1 & 2
L25	Summary of creational patterns		http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2
L26	Explanation of structural patterns	Analysis	http://sourcemaking.com/design_	Text 1 & 2
L27	Adapter patterns		http://ui-patterns.com/patterns	Text 1 & 2
L28	Bridge patterns	Underastand	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L29	Composite patterns		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L30	Repeated key points for Structural Patterns	Understanding	http://sourcemaking.com/design_	Text 1 & 2
L31	Repeated key points for Structural Patterns		http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2
L32	Decorator patterns		http://sourcemaking.com/design_	Text 1 & 2
L33	Façade patterns	Understanding	http://ui-patterns.com/patterns	Text 1 & 2

L34	Flyweight patterns		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L35	Flyweight patterns		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L36	Proxy patterns	Creating	http://sourcemaking.com/design_	Text 1 & 2
L37	Proxy patterns		http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2
L38	Behavioral patterns		http://sourcemaking.com/design_	Text 1 & 2
L39	Chain of responsibility	Understanding	http://ui-patterns.com/patterns	Text 1 & 2
L40	Chain of responsibility ,Command patterns		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L41	Command patterns	Underastand	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L42	Interpreter		http://sourcemaking.com/design_	Text 1 & 2
L43	Iterator		http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2
L44	Behavioral patterns part-II introduction	Knowlegde	http://sourcemaking.com/design_	Text 1 & 2
L45	Mediator patterns		http://ui-patterns.com/patterns	Text 1 & 2
L46	Mediator Patterns	Analysis	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L47	Mediator Patterns		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L48	Observer patterns	Creating	http://sourcemaking.com/design_	Text 1 & 2
L49	Observer patterns		http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2

L50	State patterns	Understanding	http://sourcemaking.com/design_	Text 1 & 2
L51	State patterns		http://ui-patterns.com/patterns	Text 1 & 2
L52	Template Method	Underastand	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L53	Visitor patterns		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L54	Visitor patterns		http://sourcemaking.com/design_	Text 1 & 2
L55	Discussion of Behavioral Patterns	Underastand	http://sourcemaking.com/design_ http://ui-patterns.com/patterns	Text 1 & 2
L56	What to Expect from Design Patterns		http://sourcemaking.com/design_	Text 1 & 2
L57	A brief history		http://ui-patterns.com/patterns	Text 1 & 2
L58	A brief history	Creating	http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L59	The pattern community		http://www.oodesign.com/ http://ui-patterns.com/patterns http://sourcemaking.com/design_	Text 1 & 2
L60	An invitation , A parting thought	Understanding	http://sourcemaking.com/design_	Text 1 & 2

11.9 MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF THE PROGRAMME OUTCOMES:

Course Objectives	Program Outcomes												
	A	B	C	D	E	F	G	H	I	J	K	L	M
I	H								S				S
II	H	H									S		S
III	H	S		S									S

IV	H								S				
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S = Supportive

H = Highly Related

11.10 MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF THE PROGRAMME OUTCOMES:

Course Outcomes	Program Outcomes												
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	H				H				S				S
2	H		H						S		S		
3	H		S	S					S				S
4	S		H	H	S						S		S
5	S		S		H				S				
6	H	H	H		S						H		S
7	S		H	S	S						S		S
8		H	H								S		

S = Supportive

H = Highly Related

11.11 OBJECTIVE QUESTIONS

UNIT-I

1. The 4 essential elements in a Design patterns are -----, -----, ----- and -----.
 A. Pattern name, Problem, Solution and Consequences
 B. Design, Data, question and answer
 C. Analyzing, creating, retrieving and coding
 D. Gather, analyze, Build and develop.
Answer: A
2. MVC consists of 3 kinds of objects -----, -----, -----.
 A. A model , View and a controller object
 B. Data , problem and consequences

- C. Design, data and control
- D. Manage, velocity and control

Answer: A

3. The model object in MVC is the ----- object
- A. Application
 - B. Design
 - C. Data
 - D. Analysis

Answer: A

4. A View object in MVC is the ----- object
- A. Screen design
 - B. Screen
 - C. Model
 - D. Screen Presentation

Answer: D

5. Depending on the purpose the Design patterns are broadly classified into -----, -
----- and -----
- A. Creational, Structural and Behavioral
 - B. Manage, velocity and control
 - C. Data , problem and consequences
 - D. None

Answer: A

6. Objects are created by ----- a class.
- A. Class
 - B. Instantiating
 - C. Data
 - D. None

Answer: B

7. Classes that are not Concrete are called ----- classes.
- A. Abstract
 - B. Builder
 - C. Prototype
 - D. None

Answer: A

8. ----- is a way of making composition as powerful for reuse as inheritance.
- A. Delegation
 - B. Dedication
 - C. Data
 - D. None

Answer: A

9. Often an application will incorporate classes from one or more libraries of predefined classes known as -----
- A. Toolkits
 - B. Library kits

- C. Data kits
- D. None

Answer: A

10. A ----- is a set of cooperating classes that make up a reusable design for a specific class of software.

- A. Analysis
- B. Framework
- C. Design
- D. None

Answer: A

UNIT-II

1. A common way to represent hierarchically structured information is through a technique called -----

- A. recursive composition
- B. Hierarchical
- C. Representation
- D. None

Answer: A

2. A ----- abstract class for all objects that can appear in the document structure

- A. Framework
- B. Glyph
- C. Desing
- D. None

Answer: B

3. A ----- pattern captures the essence of recursive composition in Object-oriented terms

- A. Composite
- B. Bridge
- C. Prototype
- D. None

Answer: A

4. Achieving ----- across hardware and software platforms is a major problem in system design

- A. Portability
- B. Bridge
- C. Composite
- D. None

Answer: A

5. We use an abstract class called ----- to define a general interface for access and traversal

- A. Iterator
- B. Abstract
- C. Memento
- D. Observer

Answer: A

6. A common way to represent hierarchically structured information is through a technique called -----
- E. recursive composition
 - F. Hierarchical
 - G. Representation
 - H. None

Answer: A

7. A ----- abstract class for all objects that can appear in the document structure
- E. Framework
 - F. Glyph
 - G. Desing
 - H. None

Answer: B

8. A ----- pattern captures the essence of recursive composition in Object-oriented terms
- E. Composite
 - F. Bridge
 - G. Prototype
 - H. None

Answer: A

9. Achieving ----- across hardware and software platforms is a major problem in system design
- E. Portability
 - F. Bridge
 - G. Composite
 - H. None

Answer: A

10. We use an abstract class called ----- to define a general interface for access and traversal
- E. Iterator
 - F. Abstract
 - G. Memento
 - H. Observer

Answer: A

UNIT-III

1. A ----- pattern is used when a system should be independent of how its products are created, composed and represented
- A. Abstract Factory
 - B. State
 - C. Strategy
 - D. Visitor

Answer: A

2. ----- declares and interface for a type of product object

- A. Command
- B. Abstract Product
- C. Interpreter
- D. Iterator

Answer: B

3. A ----- is used when an application needs only one instance of a concrete product family

- A. Singleton
- B. Chain of responsibility
- C. Flyweight
- D. Proxy

Answer: A

4. The builder pattern focuses on building a ----- object step-by-step

- A. Complex object
- B. Flyweight
- C. Proxy
- D. None

Answer: A

5. A ----- emphasis is on families of product objects

- A. Factory method
- B. Abstract Factory
- C. Composite
- D. Adapter

Answer: B

6. A ----- is also known as virtual constructor

- A. Factory Method
- B. Complex object
- C. Flyweight
- D. Proxy

Answer: A

7. Use ----- pattern when a class cant anticipate the class of objects it must create

- A. Factory Object
- B. Chain of responsibility
- C. Flyweight
- D. Proxy

Answer: A

8. Use the ----- when a system should be independent of how the products are created

- A. Prototype
- B. Complex object
- C. Flyweight

D. Proxy

Answer: A

9. ----- creates a new object by asking a prototype to clone itself

A. Client

B. Server

C. Data

D. None

Answer:A

10. A ----- is a class of class and it has one instance

A. Meta class

B. Bite class

C. Byte class

D. None

Answer:A

UNIT-IV

1. ----- Patterns are concerned with how classes and objects are composed to form larger

Structures

A. Behavioral

B. Structural

C. Creational

D. None

Answer: B

2. The intent of ----- pattern is to convert interface of a class into another interface clients

Expect

A. Behavioral

B. Adapter

C. Creational

D. None

Answer: B

3. We use ----- pattern when you want to use an existing class and its interface does not

match the one you need

A. Behavioral

B. Structural

C. Creational

D. Adapter

Answer: D

4. A class adapter uses ----- inheritance to adapt one interface to another

A. Only one

B. Two

C. one

D. Multiple

Answer: D

5. ----- call operations on an Adapter instance.

A. Behavioral

B. Server

C. Clients

D. None

Answer: C

6. The intent of ----- pattern is to decouple an abstraction from its implementation so

that the two can vary independently

A. Facade

B. Bridge

C. Flyweight

D. None

Answer: B

7. Use bridge pattern when the changes in implementation of an _____ should have no impact on clients.

A. Composite

B. Bridge

C. abstraction

D. None

Answer: C

8. The intent of ----- pattern is to compose the objects into tree structures to represent part-whole hierarchies

A. Behavioral

B. Composite

C. Creational

D. None

Answer: B

9. Use composite pattern when we want the clients to be able to ignore the difference between ----- objects and ----- objects

A. Behavioral, Structural

B. Compositions , individual

C. Creational , Composite

D. None

Answer: B

10. In composite pattern often the component-parent link is used for a chain of -----

-

A. Behavioral

B. Structural

C. Responsibility

D. None

Answer: C

UNIT – V

1. A ----- pattern is used to attach additional responsibilities to an object dynamically.

- A. Decorator
- B. Proxy
- C. Façade
- D. None

Answer: A

2. We use Decorator pattern to add responsibilities to individual objects ----- and ----- without affecting other objects.

- A. dynamically and transparently
- B. Behavioral, Structural
- C. Compositions , individual
- D. None

Answer: A

3. Decorator forwards requests to its ----- object.

- A. Component
- B. Deployment
- C. Abstract
- D. None

Answer: A

4. A ----- pattern is used to provide a unified interface to a set of interfaces in a subsystem

- A. Prototype
- B. Façade
- C. Singleton
- D. None

Answer: B

5. Facade defines a ----- interface that makes the subsystem easier to use.

- A. higher-level
- B. Lower level
- C. Middle level
- D. None

Answer: A

6. We use a facade pattern if you want to provide a ----- interface to a ----- Subsystem.

- A. simple, complex
- B. Data , design
- C. Method, process
- D. None

Answer: A

7. ----- is developed to use sharing to support large numbers o fine-grained

objects efficiently .

- A. Proxy
- B. Flyweight
- C. Decorate
- D. None

Answer: B

8. The ----- pattern's effectiveness depends heavily on how and where its used

- A. Flyweight
- B. Decorate
- C. Flyweight
- D. None

Answer: A

9. A proxy is used to provide a ----- for another object to control access to it

- A. Surrogate/placeholder
- B. Proxy
- C. Flyweight
- D. None

Answer: A

10. A ----- proxy provides a local representative for an object in a different address space.

- A. Proxy
- B. Flyweight
- C. Decorate
- D. None

Answer: B

11.12 TUTORIAL QUESTION

Sl.No.	Questions	Blooms Taxonomy Level	Course Outcome
UNIT-I			
1.	What is Design Pattern? Describe the essential elements of Design Pattern.		
2.	Describe Design Pattern in Small Talk MVC.		
3.	How Design Patterns are described? Explain.		
4.	Explain how Design Patterns solve Design Problems.		
5.	Describe Catalog of Design Patterns? And describe how to organize them?		
6.	What are the causes of redesign? Explain.		
7.	Explain how Design Patterns provide solution for		

	portability on to diversified platforms with different look-and-feel standards.		
8.	Write short notes on the following:		
9.	The Catalog of Design Pattern. b. Design Pattern in Small Talk MVC.		
10.	Explain with a neat diagram the Design Pattern Relation Ships?		
UNIT-II			
1.	Explain the design problems in Lexi design.		
2.	Explain the relationship between compositor and composition class with an example		
3.	What are the various problems involved in designing a document Editor? Explain.		
4.	Draw the interaction diagram to illustrates how character glyphs and the spelling checker object work together.		
5.	Describe design problems, document structure, user interfaces, supporting tool systems that are needed for designing a document editor using Design Patterns.		
6.	How can the user operation be handled in the design of document editor?		
7.	Explain the basic responsibilities of Glyphs in detail.		
8.	Discuss in detail about supporting Multiple Look-and – Feel Standards?		
9.	Explain the class design structure of an editor for music scores with suitable Design Pattern.		
10.	Explain the basic responsibilities of Glyphs in detail		
UNIT-III			
1.	What are the features of creational patterns? Explain.		
2.	Explain about abstract factory pattern.		
3.	Explain about builder pattern.		
4.	Explain the structure of builder design pattern with class diagram and describe the collaboration with a sequence diagram. Explain its applicability to document format conversion application with class diagram.		
5.	Explain about factory patterns. 6. Explain about prototype pattern.		
6.	Give a sample code for abstract factory design pattern		
7.	Draw a class diagram and explain collaboration, with example.		
8.	Explain the useful techniques for implementing the abstract factory.		
9.	How do you restrict the instances of a class to only one?		

	Explain the design structure		
10.	Explain the implementation issues of factory method with a sample code.		
UNIT-IV			
1.	Explain in detail about structural patterns.		
2.	Explain in detail about adapter pattern.		
3.	Explain in detail about bridge pattern		
4.	Design a graphic application by composite pattern? Explain.		
5.	Explain in detail about composite pattern.		
6.	Explain the consequences of class and object adapter.		
7.	Explain the applicability of bridge design pattern		
8.	What are the consequences of using bridge pattern		
9.	Explain the applicability of bridge design pattern		
10.	Explain the consequences of class and object adapter.		
UNIT-V			
1.	Explain decorator pattern with an application.		
2.	What are the various consequences of the decorator patterns?		
3.	Explain facade pattern with an application.		
4.	What are the applications of flyweight pattern		
5.	Explain the structure of flyweight pattern with suitable example.		
6.	Explain flyweight with an application.		
7.	Explain proxy pattern with an application.		
8.	Explain the motivation for decorator method with relevant pattern.		
9.	What are the applications of flyweight pattern? Explain the structure of flyweight pattern with suitable example.		
10.	What are the various consequences of the decorator patterns?		
UNIT-VI			
1.	Explain the behavioral patterns.		
2.	Explain the chain of responsibility pattern with an application.		
3.	Explain the command pattern with an application.		
4.	Explain the interpreter pattern with an application.		
5.	Explain the iterator pattern with an application.		
6.	With the help of a neat diagram explain the iterator class and subclasses.		
7.	With the help of a neat diagram explain the command class and subclasses.		

8.	Explain the implementation and consequences of command pattern.		
9.	Explain the chain of responsibility pattern with an application		
10.	Explain the design structure of chain of responsibility design pattern.		
UNIT-VII			
1.	Explain the mediator pattern with an application.		
2.	Explain the memento pattern with an application.		
3.	Explain the observer pattern with an application.		
4.	Explain the state pattern with an application.		
5.	Explain the strategy pattern with an application.		
6.	Explain about the implementation issues of observer design pattern.		
7.	Explain the template method pattern with an application.		
8.	Discuss the motivation, collaboration, participants and sample code of memento pattern		
9.	Explain the template method pattern with an application.		
10.	Explain the known uses of memento method		
UNIT-VIII			
1.	Explain what to expect from design patterns.		
2.	Explain the pattern community.		
3.	Explain the several ways the design patterns affect the way object oriented software is designed.		
4.	Illustrate Alexander's pattern language.		
5.	Explain the target refactoring.		
6.	Explain the Patterns in software.		
7.	Write a note on the history of design pattern		
8.	Write a short notes on an invitation		
9.	What are the 2 ways for grouping the patterns according to Christopher Alexander		
10.	Explain the Patterns in software		

11.13 ASSIGNMENT QUESTIONS

PART A (SHORT ANSWER QUESTIONS)

Sl.No.	Questions	Blooms Taxonomy Level	Course Outcome

UNIT-I			
11.	What is Design Patterns describe in detail	Remember	G
12.	Define the Catalog of Design Patterns? And describe how to organize them?	Remember	I
13.	Explain with a neat diagram the Design Pattern Relation Ships?	Remember	I
14.	Explain the steps involved in selecting a Design Pattern?	Remember	A
15.	Explain briefly common causes of redesign along with the Design Patterns that address them.	Remember	G
16.	Explain short notes on tool kits.	Remember	G
17.	What are the various ways of organizing the design pattern?	Remember	I
18.	How the design pattern are classified?	Remember	A
19.	Explain how design pattern are different from frameworks?	Remember	G
20.	Explain the concept of delegation?	Remember	I
UNIT-II			
2.	Explain the design problems in Lexi design.	Remember	I
2.	How can the user operation be handled in the design of document editor?	Remember	I
3.	Discuss in detail about supporting Multiple Look-and – Feel Standards?	Remember	I
4.	Explain the class design structure of an editor for music scores with suitable Design Pattern.	Remember	I
5.	Discuss in detail about supporting Multiple Look-and – Feel Standards?	Remember	I
6.	Explain the basic responsibilities of Glyphs in detail.	Analyze	D
7.	How can the user operation be handled in the design of document editor?	Remember	G
8.	What are the 8 patterns that can be applied to Lexi’s design	Remember	A
9.	How design patterns help meeting the portability requirement of software	Remember	G
10.	Explain visitors class and subclasses in detail	Remember	A
UNIT-III			
11.	Explain about builder pattern.	Remember	I
12.	Explain about abstract factory pattern	Remember	I
13.	What are the features of creational patterns? Explain	Remember	A
14.	Explain about factory patterns	Remember	G
15.	Explain about builder pattern.	Remember	G
16.	How do you restrict the instances of a class to only one? Explain in design structure.	Remember	I
17.	Outline the structure of singleton design pattern with an	Remember	A

	example from user interface		
18.	Define about implementation issues when using the singleton design pattern.	Remember	G
19.	What are the two ways of parameterizing a system?	Remember	I
20.	Point out all types of creational patterns.	Remember	A
UNIT-IV			
11.	Explain in detail about bridge pattern.	Remember	I
12.	Explain in detail about adapter pattern	Remember	I
13.	Explain in detail about structural patterns	Remember	I
14.	Explain the consequences of class and object adapter.	Remember	D
15.	Explain in detail about composite pattern.	Remember	D
16.	Design a graphic application by composite pattern? Explain.	Remember	A
17.	Explain in detail about bridge pattern.	Remember	G
18.	Explain the sample code for bridge pattern	Remember	A
19.	Explain the applicability of bridge design pattern	Remember	G
20.	What are the consequences of using bridge pattern	Remember	A
UNIT-V			
10.	Explain facade pattern with an application	Remember	I
11.	What are the various consequences of the decorator patterns?	Remember	I
12.	Explain decorator pattern with an application	Remember	I
13.	Explain proxy pattern with an application	Remember	I
14.	Explain flyweight with an application.	Remember	I
15.	What are the applications of flyweight pattern? Explain the structure of flyweight pattern with suitable example.	Remember	I
16.	Explain facade pattern with an application.	Remember	G
17.	What are the various consequences of the decorator patterns?	Remember	I
18.	Explain decorator pattern with an application.	Remember	I
10.	Explain the motivation for decorator method with relevant pattern.	Remember	I
UNIT-VI			
10.	Explain the chain of responsibility pattern with an application.	Remember	I
11.	Explain the command pattern with an application	Remember	I
12.	Explain the behavioral patterns	Remember	I
13.	Explain the chain of responsibility pattern with an application	Remember	D
14.	Explain the command pattern with an application.	Remember	D
15.	Explain the interpreter pattern with an application	Remember	A
16.	With the help of a neat diagram explain the iterator class and subclasses.	Remember	G

17.	Explain the behavioral patterns.	Remember	A
18.	Explain the design structure of chain of responsibility design pattern.	Remember	G
10.	Explain the implementation and consequences of command pattern.	Remember	A
UNIT-VII			
10.	Explain the mediator pattern with an application	Remember	I
11.	Explain the memento pattern with an application	Remember	I
12.	Explain the observer pattern with an application	Remember	A
13.	Explain the state pattern with an application	Remember	G
14.	Explain the strategy pattern with an application.	Remember	G
15.	Explain the template method pattern with an application.	Remember	I
16.	Discuss the consequences and implementation issues of mementos design pattern.	Remember	A
17.	Discuss the motivation, collaboration, participants and sample code of memento pattern	Remember	G
18.	Explain the known uses of memento method	Remember	I
10.	Explain about the implementation issues of observer design pattern.	Remember	A
UNIT-VIII			
10.	Explain what to expect from design patterns.	Remember	I
11.	Explain the pattern community	Remember	I
12.	Explain the several ways the design patterns affect the way object oriented software is designed.	Remember	I
13.	Illustrate Alexander's pattern language.	Remember	D
14.	Explain about A target refactoring.	Remember	D
15.	Explain about Patterns in software	Remember	A
16.	What are the participants of visitor method	Remember	G
17.	Discuss about visitor class an subclass.	Remember	A
18.	Explain the collaborations and consequences of visitor design pattern.	Remember	G
10.	Describe encapsulation aspect of behavioral pattern	Remember	A

PART B (LONG ANSWER QUESTIONS)

Sl.No.	Questions	Blooms Taxonomy Level	Course Outcome
UNIT-I			
1.	What is Design Pattern? Describe the essential elements of Design Pattern	Remember	G
2.	Describe Design Pattern in Small Talk MVC.	Remember	G

3.	How Design Patterns are described? Explain.	Understanding	I
4.	Explain how Design Patterns solve Design Problems.	Remember	A
5.	Describe Catalog of Design Patterns? And describe how to organize them?	Remember	A
6.	What are the causes of redesign? Explain.	Remember	G
7.	Explain how Design Patterns provide solution for portability on to diversified platforms with different look-and-feel standards.	Remember	E
8.	Explain about The Catalog of Design Pattern.	Understanding	A
9.	Explain with a neat diagram the Design Pattern Relation Ships?	Remember	A
10.	Explain briefly common causes of redesign along with the Design Patterns that address them.	Understanding	A
UNIT - II			
1.	Explain the design problems in Lexi design.	Remember	G
2.	How can the user operation be handled in the design of document editor?	Understanding	E
3.	Discuss in detail about supporting Multiple Look-and – Feel Standards?	Remember	A
4.	Explain the class design structure of an editor for music scores with suitable Design Pattern.	Remember	A
5.	Discuss in detail about supporting Multiple Look-and – Feel Standards?	Remember	A
6.	Explain the basic responsibilities of Glyphs in detail.	Remember	A
7.	How can the user operation be handled in the design of document editor?	Remember	D
8.	What are the 8 patterns that can be applied to Lexi’s design	Remember	A
9.	How design patterns help meeting the portability requirement of software	Understanding	D
10.	Explain visitors class and subclasses in detail	Remember	G
UNIT - III			
1.	Explain about builder pattern.	Remember	G
2.	Explain about abstract factory pattern	Understanding	E
3.	What are the features of creational patterns? Explain	Remember	A
4.	Explain about factory patterns	Remember	A
5.	Explain about builder pattern.	Remember	A
6.	How do you restrict the instances of a class to only one? Explain in design structure.	Remember	A
7.	Outline the structure of singleton design pattern with an example from user interface	Remember	D
8.	Define about implementation issues when using the singleton design pattern.	Remember	A

9.	What are the two ways of parameterizing a system?	Understanding	D
10.	Point out all types of creational patterns.	Remember	G
UNIT - IV			
1.	Explain in detail about bridge pattern.	Understand	A
2.	Explain in detail about adapter pattern	Apply	A
3.	Explain in detail about structural patterns	Understand	G
4.	Explain the consequences of class and object adapter.	Understand	I
5.	Explain in detail about composite pattern.	Remember	A
6.	Design a graphic application by composite pattern? Explain.	Remember	A
7.	Explain in detail about bridge pattern.	Remember	G
8.	Explain the sample code for bridge pattern	Remember	E
9.	Explain the applicability of bridge design pattern	Understanding	A
10.	What are the consequences of using bridge pattern	Remember	A
UNIT - V			
1.	Explain facade pattern with an application	Remember	E
2.	What are the various consequences of the decorator patterns?	Remember	I
3.	Explain decorator pattern with an application	Remember	D
4.	Explain proxy pattern with an application	Understanding	A
5.	Explain flyweight with an application.	Remember	A
6.	What are the applications of flyweight pattern? Explain the structure of flyweight pattern with suitable example.	Remember	A
7.	Explain facade pattern with an application.	Remember	G
8.	What are the various consequences of the decorator patterns?	Remember	E
9.	Explain decorator pattern with an application.	Understanding	A
10.	Explain the motivation for decorator method with relevant pattern.	Remember	A
UNIT - VI			
1.	Explain the chain of responsibility pattern with an application.	Remember	A
2.	Explain the command pattern with an application	Remember	A
3.	Explain the behavioral patterns	Remember	G
4.	Explain the chain of responsibility pattern with an application	Remember	E
5.	Explain the command pattern with an application.	Understanding	A
6.	Explain the interpreter pattern with an application	Remember	A
7.	With the help of a neat diagram explain the iterator class and subclasses.	Remember	A

8.	Explain the behavioral patterns.	Remember	A
9.	Explain the design structure of chain of responsibility design pattern.	Remember	G
10.	Explain the implementation and consequences of command pattern.	Remember	E
UNIT - VII			
1.	Explain the mediator pattern with an application	Remember	A
2.	Explain the memento pattern with an application	Remember	G
3.	Explain the observer pattern with an application	Understanding	E
4.	Explain the state pattern with an application	Remember	A
5.	Explain the strategy pattern with an application.	Remember	A
6.	Explain the template method pattern with an application.	Remember	A
7.	Discuss the consequences and implementation issues of mementos design pattern.	Remember	A
8.	Discuss the motivation, collaboration, participants and sample code of memento pattern	Remember	D
9.	Explain the known uses of memento method	Remember	G
10.	Explain about the implementation issues of observer design pattern.	Understanding	E
UNIT - VIII			
1.	Explain what to expect from design patterns.	Remember	A
2.	Explain the pattern community	Remember	A
3.	Explain the several ways the design patterns affect the way object oriented software is designed.	Remember	A
4.	Illustrate Alexander's pattern language.	Remember	D
5.	Explain about A target refactoring.	Remember	G
6.	Explain about Patterns in software	Understanding	E
7.	What are the participants of visitor method	Remember	A
8.	Discuss about visitor class an subclass.	Remember	A
9.	Explain the collaborations and consequences of visitor design pattern.	Remember	A
10.	Describe encapsulation aspect of behavioral pattern	Remember	A