INSTITUTE OF SCIENCE & TECHNOLOGY

ASSIGNMENT QUESTION

BHM-1ST SEM

PAPER NAME:-HOSPITAL OPERATION MANAGEMENT
PAPER CODE : BBA(HM)101

1. Describe in brief about TPA.
2. Describe Job responsibilities of a hospital operations manager.
3. Describe the planning consideration, location, flowchart of functions, physical infrastructure and facilities needed in an OPD.
4. Discuss about the OT.
5. Write a short note on MRD.

PAPER NAME: HOSPITAL & HEALTH SYSTEM
PAPER CODE: BBA(HM)102

1. Hospital viewed as a system.
2. Briefly discuss the roles of a hospital.
3. Explain the different levels of health care.
4. Discuss Importance of hospitals in society.
5. Describe the present state of hospitals in India

PAPER NAME:PRINCIPLE OF MANAGEMENT
PAPER CODE:BBA(HM)103

1. Discuss various approaches of span of management and their limitations. What are the factors determining span of management?
2. Define group. What are the types of group? Explain the five stage model of group development.
3. Define Planning. What are the steps involved in planning process? Discuss the merits and demerits of planning.
4. What do you mean by 'Management'? What are importances of management? Briefly describe Fayol's Fourteen (14) Principles of Management.

PAPER NAME:ENGLISH COMMUNICATION
PAPER CODE:BBA(HM)104

1. **Change the direct speech into indirect**;
    a) She said, "sit down, boys".
    b) The leader said, "Cast your vote, friends"
    c) He said, "What a lovely garden!"
2. What is Communication? Explain the objectives of communication.
3. **Convert the following active voices into passive**:
    a) Nobody had seen her smile.
    b) His conduct annoyed me.
    c) The rose smells sweet.
4. You are the HR manager of an organisation. Write a memo to be circulated informing employees about an upcoming meeting on the annual sales report.
5. Mention in brief how to overcome the barriers of communication.

BCA-1ST SEM-THEORY

PAPER NAME: PROGRAMMING & PROBLEM SOLVING
PAPER CODE: BCAC-101

1. Define array. Explain different types of array in detail.
2. State and explain various types of standard function with example.
3. Write a C language program using recursion n terms of Fibonacci series.

4. Write C Program to implement the following pattern:
       1
       2 3
       4 5 6
       7 8 9 10
5. Write a C program to find the H.C.F and L.C.M of two given numbers

PAPER NAME: SOFT SKILL
PAPER CODE: BCAA-101

1. One word substitution.
   a) One who helps others
   b) One who copies from other writers.
   c) A man who is quite like woman.
   d) One who goes on foot.
2. Write any one essay: a) Women empowerment   b) Corruption
3. Describe different types of reports with example.
4. The principal of a college has appointed a committee of two teachers and three students to suggest new direction in which students' co-curricular activities can be developed write a report.
5. Briefly discuss about the nature and importance of group discussion.

PAPER NAME: HOSPITAL EDUCATION AND COMMUNICATION
PAPER CODE: GE1B-03

1. Define health. What are the determinants of health? Discuss in detail the dimension of health.
2. Define disease. What are the agent factors of disease? Discuss the natural history of disease.
3. What is positive health? What is spectrum of health? Discuss in detail the concept of well-being.
4. Discuss changing Concept of Health in India.
5. What is the major role of Health Education?

BCA-1ST SEM-PRACTICAL
PAPER NAME: PROGRAMMING & PROBLEM SOLVING LAB
PAPER CODE: BCAC-191

1. Armstrong number using C.
2. Fibonacci Series using C.
3. Prime number using C.
4. Factorial using C.

PAPER NAME: DIGITAL ELECTRONICS LAB
PAPER CODE: BCAC-192

1. Briefly explain the Boolean - algebra in Digital Electronics.
2. Sketch with neat diagram of Logic Gates for Digital signals?
3. Draw the Logic symbol and truth table of the different logic gates.
4. Draw & Explain the circuit diagram of A/D converter.

BBA-1ST SEM
PAPER NAME :PRINCIPAL OF MANAGEMENT
PAPER CODE : BBA-101

1. Briefly explain the Big Five Model.
2. Explain the concept of authority and responsibility
3. What do you mean by Management by Objectives (MBO)?
4. Discuss various approaches of span of management and their limitations. What are the factors determining span of management?
5. Define group. What are the types of group? Explain the five stage model of group development.

PAPER NAME :BUSINESS ECONOMICS
PAPER CODE : BBA-102

1. Define Production Function. Explain Law of Variable Proportion with the help of a diagram.
2. Define Demand. Explain Law of Demand. Discuss various types of Price elasticity of demand.
3. Determine the short run equilibrium in perfect competition. Show the break even and shut down point. Will the firm shut down if it earns loss? If not, then when?
4. In the context of an Oligopolistic market, explain the concept of Kinked demand curve. Comment on the determination of equilibrium in this model.
5. What are the basic problems of an economy? How these problems are solved in different economic systems? Explain the concept "scarcity".

PAPER NAME :BASIC MATHEMATICS & STATISTICS
PAPER CODE :BBA-103

1. Find the middle term of $(ax - \frac{1}{ax})^6$.
2. The arithmetic mean calculated from the following frequency distribution is known to be 67.45. Find the value of missing frequency.

Height (inches)	60-62	63-65	66-68	69-71	72-74
Frequency	15	54	?	81	24

3 . $\frac{logx}{y-z} = \frac{logy}{z-x} = \frac{logz}{x-y}$, then prove that $x^x y^y z^z = 1$.
4. If A = $\begin{bmatrix} -1 & 2 & 6 \\ 4 & 5 & -4 \\ -2 & 0 & 1 \end{bmatrix}$ and $A^T + 2B = 3I_3$, then find B, where I_3 denotes matrix of order 3
5. Prove that if the roots of the equation $(a^2 + b^2)x^2 - 2(ac + bd)x + (c^2 + d^2) = 0$ are equal then ad=bc.

PAPER NAME :BUSINESS COMMUNICATION
PAPER CODE :BBA-104

1. Draft a letter to godrej Boyce and con sking for information about their new ergonomic furniture for your office. Give detailed specifications of your requirements.
2. Name the five C's of business letters
3. Assume that you ordered some goods to be delivered by a specified date. The goods did not arrive in time and are of no use to you at present. Now write a letter to the concerned supplier cancelling the order and stating your considerable loss on account of his negligence.
4. Pick out the relative clause, noun clause and adjective clause in the following sentences.
   - This is the pen that ram bought yesterday.
   - The person who serves the helpless is always happy.
   - Please ask him what he wants.
   - The idea why she spoke is now clear.
5. One word substitution :
   - One who lives in foreign country.
   - One who does not believe in the existence of God.
   - Government by one man
   - That which is lawful
   - Murder of a human being.

MHA-1ST SEM

PAPER NAME : BASIC CONCEPT OF HEALTH
PAPER CODE :MHA-101

A. Define health. What are the determinants of health? Discuss in detail the dimension of health.
B. Define disease. What are the agent factors of disease? Discuss the natural history of disease.
C. Define Health. Elaborate different dimensions of Health.
D. What is the positive Health? What is the spectrum of health? Discuss the detail Concept of well-being.
E. Discuss briefly the levels of prevention. What are the different modes of intervention of disease?

PAPER NAME :HEALTH CARE SERVICES
PAPER CODE :MHA-102

A. What is NRHM? What are the aims and mission of NRHM? Discuss the plan of action to strengthen the infrastructure.
B. What is a National Health Policy? What are the different important issues of the latest National Health Policy of India?
C. Discuss RNTCP. What are the main strategies adopted under DOTS to control TB from our country?
D. Discuss in brief the different phases of National AIDS Control programme,Describe the role of NACO in this report.
E. What is the Population Policy? What are the different important issues of the latest National Health Policy of India?

PAPER NAME : EPIDEMIOLOGY & HEALTH CARE IN ITS CHANGING SCENERIO
PAPER CODE : MHA-103

A. What do you understand by levels of health care? Discuss in detail the secondary and tertiary care of our country.
B. What is Epidemiology? Describe in detail about methods of epidemiology.
C. Explain the agent, Host, and Environmental factors for any non- communicable disease. What is the National Immunization Schedule? Discuss briefly the hazards of wrong immunization.
D. Discuss level of health care. Discuss in detail the public health care system of our country
E. What is non-communicable disease? Explain the risk factors of non-communicable disease. Discuss the epidemiology of cardiovascular diseases

PAPER NAME :HEALTH EDUCATION & HEALTH COMMUNICATION
PAPER CODE :MHA-104

A. What is mass media? Describe the various types of mass media used for communication and explain the advantages and disadvantages of them.
B. What is NIC? What is health care reporting? Discuss what you know about the contribution of NIC in health care.
C. What is health education? Describe and give suitable examples of the various levels of health education which are provided by the health care personnel in the community.
D. Define communication. Discuss various types of barriers to communication and explain how the barriers can be overcome, give examples from the health care institutions.

PAPER NAME: PRINCIPLE OF MANAGEMENT&ORGANIZATIONAL BEHAVIOR
PAPER CODE: MHAN-105

1) What is MBO? Discuss the process of MBO with process charts.
2) Assess the contributions of Henry Fayol to the development of management thought.
3) Draw and explain the structure of a matrix organization.
4) Write a short note on planning process.
5) What is organization? Give the steps of organizing. Draw a typical organization chart for a large Multidisciplinary hospital.

1. Briefly explain Labour Turnover.
2. Discuss the advantages and disadvantages of LIFO method.
3. Differentiate Job costing and Batch costing.
4. What do you understand by material control? Explain the need for material control in a printing press.
5. Explain the essential characteristics of a good cost accounting system.

MCA-1ST SEM-THEORY
PAPER NAME : PROGRAMMING CONCEPT WITH PYTHON
PAPER CODE : MCAN-101

1.What is the difference between list and tuples in Python?
2. What are the key features of Python?
3. What type of language is python?
4. How is Python an interpreted language?
5. What is pep 8?

PAPER NAME :RELATIONAL DATABASE MANAGEMENT SYSTEM
PAPER CODE : MCAN-102

1. What is DBMS? Explain advantages and disadvantages of DBMS.
2. What is a primary key and explain its characteristics?
3. What is a primary key and explain its characteristics?
4. What is Normalization? Explain its advantages.
5. What is a transaction and explain its properties?

PAPER NAME :COMPUTER ORGANISATION & ARCHITECHTURE
PAPER CODE : MCAN-103

1) Compare sRAM and dRAM.
2) Explain control hazard and explain the solution of the control hazard.
3) Describe the difference between hardware and micro program control unit
4) Differentiate between paging and framing?
5) Explain write-back policy and write-through policy.
6) Define vector pipeline and scalar pipeline.

PAPER NAME :DISCRETE MATHEMATICAL
PAPER CODE : MCAN-101

1. Prove that every cyclic group is abelian but converse is not true.
2. Prove the Handshaking theorem in a graph.
3. Solve the recurrence relation $a_n + 5a_{n-1} + 6a_{n-2} = 3n^2 - 2n + 1$
5. Prove that a tree with n number of vertices has n-1 number of edges.
6. Prove that the number of internal vertices in a binary tree is one less than the number of pendant vertices.

PAPER NAME :ENVIRONMENT & ECOLOGY
PAPER CODE : MVANE105A

A. Explain the environmental impacts of deforestation.
B. Describe mining activities.
C. Describe the role of individuals in case of sustainable development.
D. Describe environmental ethics.
E. Describe environmental auditing.

MCA-1ST SEM-PRACTICAL

PAPER NAME : SOFT SKILL & INTERPERSONAL COMMUNICATION
PAPER CODE : MCAN-190

1. What do you understand by the term "non-verbal communication". Discuss the importance of on-verbal communication?

2. Discuss about the characteristics of successful group discussion?

3. State the importance of public speaking. Imagine yourself to be the CEO of your company and you have to address the Board of Directors at a meeting regarding the expansion of company. Now prepare a speech.

PAPER NAME : PYTHON PROGRAMMING LAB
PAPER CODE : MCAN-191

- Python program to add two numbers
- Maximum of two numbers in Python
- Python Program for factorial of a number
- Python Program for simple interest
- Python Program for compound interest

PAPER NAME : PYTHON PROGRAMMING LAB
PAPER CODE : MCAN-191

1. i) List the employees belonging to the department 20.
ii) List the name and salary of the employees whose salary is more than 3000.
iii) List the names of clerk working in the department 20.
iv) List the number of jobs available in the table.
v) List the employee numbers, names, department number and department name.

EMPNO	ENAME	JOB	MGR	DATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-1980	800	NULL	20
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500	30
7566	JONES	MANAGER	7839	02-APR-1981	2975	NULL	20
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-1981	2850	NULL	30
7782	CLARK	MANAGER	7839	09-JUN-1981	2450	NULL	10
7788	SCOTT	ANALYST	7566	09-DEC-1982	3000	NULL	20
7839	KING	PRESIDENT	NULL	17-NOV-1981	5000	NULL	10
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0	30
7876	ADAMS	CLERK	7788	12-JAN-1983	1100	NULL	20
7900	JAMES	CLERK	7698	03-DEC-1981	950	NULL	30
7902	FORD	ANALYST	7566	03-DEC-1981	3000	NULL	20
7934	MILLER	CLERK	7782	23-JAN-1982	1300	NULL	10

2. i) List the employee number and name of manager.
ii) List the name and salary of the employees whose salary is between 2000 and 4000.
iii) List the names of analyst and salesman.
iv) List the average salaries and number of employees working in the department.
v) Display the different designation in department 20 and 30.

BHM-3RD SEM
PAPER NAME :PUBLIC HEALTH AND HEALTH CARE PLANNING
PAPER CODE :BHMN-301

1) Write a short note on Vision 2020.
2) Discuss briefly about AIDS control programme.
3) Health Manpower planning and Distribution.
4) Health service research.
5) National Family planning programme.

PAPER NAME :ACCOUNTS
PAPER CODE : BHMN-302

1. Discuss the various methods that not disclosed by a trial balance.
2. Write down the differences between Management Accounting and Financial Accounting.
3. Explain various conventions of Accounting.
4. Differentiate FIFO and LIFO.
5. From the following transactions prepare a Journal of Mr. Basu for the month of July 2017.
   - Commenced business with cash Rs. 5,00,000.
   - Purchased furniture by cheque for Rs. 32,000.
   - Sold goods to Sourav on credit Rs. 45,300.
   - Outstanding rent paid Rs. 1400.
   - Cash withdrawn for personal use Rs. 23,000.

PAPER NAME: HEALTH ECONOMICS
PAPER CODE :BHMN- 303

1) Explain the Law of Demand. Why is the demand curve downward sloping? Discuss the various classification of demand. Explain how price elasticity is measured along a linear demand curve.
2) Scope and coverage of health economics.
3) State the various sources of Health financing in India.
4) State the economic impact of rising incidents of abuse of drugs and tobacco in India.
5) Briefly state the basic concepts of demand and supply analysis. Also mention the effect of price elasticity on demand and supply.

PAPER NAME :SUPPORT, UTILITY SERVICES AND CLINICAL SERVICES – I
PAPER CODE :BHMN-304

A. Elaborate on the organization and function of CSSD in a hospital with special reference to physical facilities, location and problem areas.
B. Define HAI. What are the causes and routes of spread for nosocomial infection? Discuss briefly about hospital infection control Programme.
C. Explain in brief the meaning, significance and importance of support and utility service to health care delivery system.
D. Importance of Laundry services, Describe the storage conditions of a linen room. Describe the laundry process and the equipment use.
E. Explain the importance of housekeeping services in the hospital..

PAPER NAME :FUNDAMENTALS OF INVENTORY MANAGEMENT
SUBJECT CODE – BHMN-305

1. Define Contract. What are the essential elements of a valid Contract? How Contract is differ from an Agreement?
2. Define Quality Control. Discuss various Quality Control Tools.
3. Define Purchasing. Explain various purchasing Cycle.
4. Differentiate Purchase Manager and Store Keeper.
5. "No Consideration no Contract" – Explain.

BCA-3RD SEM-THEORY
PAPER NAME :OPERATING SYSTEMS
PAPERCODE :BCAN-301

1. Explain about Batch Processing.
2. Explain the advantages and disadvantages of Batch Processing.
3. Explain Thrashing.
4. Write down the process of deadlock avoidance.
5. What are the differences between Time Sharing System and Batch Processing System?

PAPER NAME :OBJECT ORIENTED PROGRAMMING WITH C++
PAPER CODE:BCAN-E302A

1. What is a platform? What are the main difference between java platform and other platforms?
2. What is string in java? What are different ways to create string object?
3. How to use inheritance in java? What is the syntax of inheritance?
4. What is an abstract class in java? What is an interface in java?
5. Write a java program to print Fibonacci series without using recursion and using recursion.
Input: 10
Output: 0112358132134

PAPER NAME :COMPUTER GRAPHICS
PAPER CODE :BCAN-303

1. What is the full form of   MIDI?
2. What is hypertext and hypermedia?
3. What are the relation between multimedia, hypertext and hypermedia?
4.Shadow Mask CRT
5.The Sutherland-Hodgman Polygon-Clipping Algorithm

PAPER NAME : MATHEMATICS FOR COMPUTING
PAPER CODE : BMN-301

Answer the following question:
1.i)Obtain the DNF of the following statement $\rightarrow (p \rightarrow q) \Lambda \{\sim(\sim q \vee \sim r)\}$.
ii)Show that $(p \rightarrow q) \Lambda (q \rightarrow r) \rightarrow (p \rightarrow r)$ is a tautology.
2. Prove that a simple graph with n number of vertices and k number of components can have maximum $\frac{(n-k)(n-k+1)}{2}$ number of edges.
3. Find the Grammar on the set of terminals {a, b} that generates the language L = {a, ab, ab^2, ab^3}.
4. Draw the transition diagram finite state automata that accepts the following set of non-null strings over I={0,1}
(i) which ends with 100   (ii) starts with 100
5. In a room there are 40 men and 20 women of which half the men and half the women have blue eyes. How many ways two of them may be selected where (i) both are men   (ii) both are blue-eyed.

BCA-3RD SEM-PRACTICAL
PAPER NAME : PROGRAMMING LAB WITH C++
PAPER CODE : BCANE392A

1. Krishnamurthy Number using C++ (eg:- 1! + 4! + 5! = 145)
2. Ascending & Descending order using C++.
3. Star pattern using C++.
*****
***
*
4. Prime number using C++.

PAPER NAME : WEB TECHNOLOGY LAB
PAPER CODE : BCAN381

1. Write a program in VB to design a calculator.
2. Write a program in VB to find out book price after given 15% discount.
3. Write a program in VB to change the font and color of a word.
4. Write a program in VB to calculate the area of a triangle.

BBA-3RD SEM
PAPER NAME :PRINCIPLES OF MANAGEMENT
PAPER CODE:BBAN- 301

1. Define delegation of authority. State various elements of delegation.
2. Define long term plans. Differentiate between standing and special use plans.
3. Explain the various steps of MBO process. Give the limitations of MBO. Explain briefly the concept of leadership.
4. Management is both a science and an art----elucidate.
5. Briefly explain Matrix structure of an organization.

PAPER NAME: MANAGERIAL ECONOMICS
PAPER CODE :BBAN- 302

1. What is Break-even point? Write down it formula.
2. Define Business economics. Explain its scope and importance.
3. Distinguish Tariff and Quota.
4. State the various differences between Monetary policy and Fiscal policy.
5. Distinguish between Balance of Payment and Balance of Trade

PAPER NAME: BUSINESS LAW
PAPER CODE :BBAN- 303

1. "No consideration no contract". Enumerate the exception of the rule.
2. State the salient features of Consumer Protection Act.
3. Distinguish between Indemnity and Guarantee. In what circumstances a surety is discharged from his liability.
4. Remedies for breach of contract.
5. Sale of Goods Act, 1930.

PAPER NAME: FINANCIAL ACCOUNTING
PAPER CODE :BBAN- 304

1. Differentiate Profit & Loss Account and Balance Sheet.
2. Discuss various classifications of receipts.
3. What are the benefits of Accounting in MIS?
4. Give a brief idea about Suspense account.
5. Distinguish between Journal and Ledger.

PAPER NAME : ENVIRONMENTAL SCIENCE
PAPER CODE: BBAN-305

1. What is environmental degradation? How can it be prevented?
2. Discuss in details the energy resources
3. Discuss the basic concepts related to environmental perspective.
4. Describe the different laws of limiting factors.
5. Describe nitrogen cycle with block diagram.

MHA-3RD SEM

PAPER NAME : UTILITY & CLINICAL SERVICE AREA
PAPER CODE:MHAN-301

1. Elaborate on the organization and function of CSSD in a hospital with special reference to physical facilities, location and problem areas.
2. Define HAI. What are the causes and routes of spread for nosocomial infection? Discuss briefly about hospital infection control Programme.
3. Explain in brief the meaning, significance and importance of support and utility service to health care delivery system.

4. Importance of Laundry services, Describe the storage conditions of a linen room. Describe the laundry process and the equipment use.
5. Explain the importance of housekeeping services in the hospital.

PAPER NAME :HEALTH INSURANCE
PAPER CODE:MHAN-302

1. What steps should be taken by the state for social insurance for the population of the country. Discuss.
2. Discuss point wise all issues and conditions which are not covered in any health insurance policy. What suggestion you have to avoid the principle of 'not covered'? what are the Income Tax benefits of premium paid for health insurance as per Finance Act, 2012 (as amended).
3. Give the general principles of insurance. Critically examine each and suggest your views for improvement of such principles.
4. Enumerate the types of approved health insurance policies------discuss their advantages and disadvantages.

PAPER NAME : LEGAL ASPECT OF HEALTH
PAPER CODE:MHAN-303

1. Discuss the essential conditions of liability in Tort? How is tort different from the criminal law? Give two examples of torts committed in the medical profession.
2. Discuss in detail the PNDT Act with its applications in a large hospital having both USG & CT scan machines.
3. Discuss Donation of organs Act. What are its salient features and penal provisions under this Act.
4. Write down the objectives and salient features of West Bengal Clinical Establishment Act. Why this act is called the backbone of health care delivery system?

PAPER NAME :OPERATIONAL RESEARCH
PAPER CODE:MHAN-304

Answer the following questions.

1. Write down the queuing model for $\{(M/M/1) : (N/FCFS)\}$

2. Use two-phase simplex method to solve the following LPP problem:

Maximize $z = 3x_1 + 2x_2 + 2x_3$

Subject to $5x_1 + 7x_2 + 4x_3 \le 7$

$-4x_1 + 7x_2 + 5x_3 \ge -2$

$3x_1 + 4x_2 - 6x_3 \ge 29/7$, $x_1 , x_2 , x_3 \ge 0$.

3. Machine A costs Rs 45,000 and its operating costs are estimated to be Rs 1,000 for the first year increasing by Rs 10,000 per year in the second and subsequent years. Machine B costs Rs 50,000 and operating costs are Rs 2,000 for the first year, increasing by Rs 4,000 in the second and subsequent years. If at present we have a machine of type A, should we replace it with B ? If so when ? Assume that both machines have no resale value and their future costs are not discounted?

PAPER NAME :HUMAN RESOURCE MANAGEMENT & INDUSTRIAL RELATIONS
PAPER CODE:MHAN-305

1. What do you understand by employee discipline? What is the charge sheet? State the procedure to carry out any enquiry a charge sheeted employee.
2. Explain the term 'promotion' and 'transfer'. State the different types of promotion and transfer. Discuss the role of promotion and transfer in the career planning of the employees.
3. Discuss the advantages and disadvantages of internal sources of recruitment. Briefly explain the selection process.
4. Explain the process of recruitment. Write, in brief, the sources of recruitment along with advantages and disadvantages of internal and external recruitment?

PAPER NAME :MARKETING AND STRATEGIC MANAGEMENT
PAPER CODE:MHA-306

1. Discuss the various bases for segmenting consumer markets. Being a marketing manager of a reputed hospital how you will target both the primary and secondary customer?
2. Describe the various factors you would like to consider for selecting the channel partners for hospitals. How the choice affects the business of the hospital?
3. You have been appointed as consultant by a consultancy firm to design a marketing strategy for an upcoming corporate hospital with capacity of 50 beds. Use Porter's Generic model as a good starting point.
4. Marketing strategy and planning are of little value without a system of control. What control procedures can be employed by marketing management?

MCA-3RD SEM-THEORY
PAPER NAME : OPERATING SYSTEMS AND SYSTEMS SOFTWARE
PAPER CODE:MCA-301

1. Consider a system with a 32bit logical address space, a two level paging scheme, 4 byte page table entries, 1 kb pages and a 4 entry TLB. The page table base register access time is 0ns, TLB access time is 10ns and memory access time is 100ns.
    i)   How many address bits are needed for the page offset?
    ii)   How much memory in bytes is required to store the outer page table entirely in main memory?
2. What is the problem of fragmentation and how can it be solved?
3.
    a) Briefly explain the critical section problem.
    b) Mention the criteria which must be satisfied to solve the critical section problem.
    c) What is semaphore? What are the alternatives?
    d) Briefly explain the role of semaphore in relation to critical section problem.
    e) Differentiate between pre-emptive and non pre-emptive scheduling of processes.
4.What is deadlock?Describe the necessary and sufficient conditions for the occurrence of deadlock."All unsafe states may not lead to deadlock". Why or why not?
5. What is process? Draw the state diagram of a process and describe it.

PAPER NAME :UNIX & SHELL PROGRAMMING
PAPER CODE :MCA-302

1. Distinguish between Internal command and external command.
2. Compare Absolute path and relative path.
3.a) Explain the function of pipe.
b) What do you mean by system call
4.Describe the seven column in details from which we get information of file by typing ls-1 command?
5. What is meta character? Describe command for creating and editing a file in UNIX system.

PAPER NAME :INTELLIGENT SYSTEMS
PAPERCODE :MCA-303

1. What is Multiple Document Interface(MDI)?Write an event procedure for a command button to find the smallest among the 3 numbers given.
2. What is difference between hide and upload form methods? In Window based programming what do you mean by controls, properties of control, events and methods?
3. What is dialog box? How many types of dialog boxes are there in VB?
4. Explain difference between ByVal and ByRef. When would each be used?
5. What is Window Registry? What is the role of Registry Editor?

PAPER NAME :STATISTICS & NUMERICAL TEHNIQUES
PAPER CODE:MM-301

Answer the following questions.

1. Find the mean and median for the following data:

Weight in Kg	36-40	41-45	46-50	51-55	56-60	61-65	66-70
No. of Persons	14	26	40	53	50	37	25

2. The integers x and y are chosen at random with replacement from nine natural numbers 1, 2, 3, ...,9. Find the probability that $|x^2 - y^2|$ is divisible by 2.

3. Solve the system of linear equations by LU-factorization method:
$$2x - 6y + 8z = 24$$
$$5x + 4y - 3z = 2$$
$$3x + y + 2z = 16$$

4. There are 3 children in a family. Find the probability that all the children are boys, i) if no prior information is available about the children, ii) if it is known that the two eldest are boys, iii) if it is known that at least two of them are boys.

5. Evaluate $\int_0^1 (4x - 3x^2)dx,\ taking\ 10\ intervals, by\ simpson's\ one-third\ rule$. Compute the exact value and find the absolute and relative errors in your result

PAPER NAME :BUSINESS MANAGEMENT
PAPER CODE:MBA-301

1. Define the concept of SWOT analysis. What are the objectives of SWOT analysis?
2. How do you explain Human Resource Development in management?
3. Write down the benefits of higher productivity.
4. Define communication. Write down the process of communication.
5. Compare between training and development. Discuss any four methods of training.

PAPER NAME :MANAGEMENT ACCOUNTING
PAPER CODE – MBA302

1. Draw a Flexible Budget for the level of operation at 70%, 80% and 90%.
Variable Overheads at 80% capacity:
Indirect labour Rs. 12,000
Stores and spares Rs. 4,000
Semi variable overheads at 80% capacity:
Power (30% fixed) Rs. 20,000
Repair and maintenance at 60% fixed Rs. 2,000
Fixed overheads at 80% capacity:
Depreciation Rs. 11,000
Insurance Rs. 3,000
Salaries Rs. 10,000
The estimated direct labour hours is 1, 24,000.

2. Explain the features of EOQ. State its assumptions.
3. State the errors that disclosed and not disclosed by a trial balance.
4. Differentiate between Fund flow and Cash flow statement.
5. Explain various factors affecting Working Capital. Explain various advantages and disadvantages of Budgetary Control.

MCA-3RD SEM-PRACTICAL
PAPER NAME :STATISTICS & NUMERICAL TEHNIQUES LAB
PAPER CODE:MM-391

1. Write a C program to implement Newton forward interpolation.
2. Write a C program to implement Trapezoidal rule where f(x) = (1 / (1 + x * x)).
3. Write a C program to implement Gauss Elimination.
4. Write a C program to implement Gauss Seidel method.

PAPER NAME :UNIX LAB
PAPER CODE:MCA392

1. Calculate Fahrenheit to Celsius using Shell Script.

2. Check any number is even or odd using Shell Script.

3. Check the given number is palindrome or not using Shell Script.

PAPER NAME :ACCOUNTING SYSTEM LAB
PAPER CODE:MBA-392

1. Explain 'Cost centre' and 'Cost unit'.

2. A company manufactures a product from a raw material, which is purchased at Rs.54 per kg. The company incurs a handling cost Rs.350 plus freight of Rs.400 per order .The incremental carrying cost of inventory of raw material is Rs. 0.50 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is Rs. 8 per kg per annum. The annual production of the product is 94,500 units and 2 units are obtained from one kg of raw material.

Required:

i.   Calculate the economic order quantity of raw materials.
ii.   Advise, how frequently should orders for procurement be placed.
iii. If the company proposes to rationalize placement of orders on quarterly basis, what percentage of discount in the price of raw material should be negotiated?

3. A large consignment of materials of various types of makes was purchased for Rs. 40,000. Later on these were short into the following categories:

Category A	6,000 **units**	Market price **Rs. 4 per unit**
Category B	4,000 **units**	Market price **Rs. 3 per unit**
Category C	7,000 **units**	Market price **Rs. 2 per unit**

You are required to calculate the purchase price for each of the materials presuming that percentage of profit in each case is the same.

BHM-5THSEM

PAPER NAME :QUALITY IN HEALTH CARE
PAPER CODE :BHMN-501

1) What is NABH? What are the elements of NABH? Examine the steps involved in obtaining NABH for a hospital.
2) PDCA cycle
3) Quality Health care through patient satisfaction.
4) Describe ISO 9000, its elements, advantages and disadvantages with special reference to a hospital.
5) What are the determinants of Quality? Enumerate 4 tools for evaluating quality.

PAPER NAME : HEALTH INSURANCE
PAPER CODE :BHMN-502

1. What steps should be taken by the state for social insurance for the population of the country. Discuss.
2. Discuss point wise all issues and conditions which are not covered in any health insurance policy. What suggestion you have to avoid the principle of 'not covered'? what are the Income Tax benefits of premium paid for health insurance as per Finance Act, 2012 (as amended).
3. Give the general principles of insurance. Critically examine each and suggest your views for improvement of such principles.
4. Enumerate the types of approved health insurance policies------discuss their advantages and disadvantages.

PAPER NAME :CLINICAL LAW & MEDICAL ETHICS
PAPER CODE :BHMN-503

1. What is mercantile law? Mention the different types of contracts. Who are not eligible to   enter into a contract? What are the circumstances under which a minor can enter into a contract?
2. Mention the rights of a consumer. What are the objectives of Consumer Protection Act? State how consumers can settle disputes with the help of Redressed Agencies.
3. What do you understand by the term 'free consent'? What are the conditions under which consent is said to be free? Explain with examples.
 4. What is Medical Misconduct? What is Disciplinary Action? Write in detail
the different types of Medical Misconducts as elaborated in Chapter 7 of Code of Medical Ethics of Medical Council of India.
5. State the classification of contract.

PAPER NAME : HUMAN RESOURCE MANAGEMENT
PAPER CODE : BHMN-504

1. Explain the concept of Collective bargaining. What are the essential features of Collective Bargaining Process?
2. Explain the term 'promotion' and 'transfer'. State the different types of promotion and transfer. Discuss the role of promotion and transfer in the career planning of the employees.
3. Discuss the advantages and disadvantages of internal sources of recruitment. Briefly explain the selection process.
4. Explain the process of recruitment. Write, in brief, the sources of recruitment along with advantages and disadvantages of internal and external recruitment?
5. Explain briefly on grievance handling.

BCA-5TH SEM-THEORY
PAPER NAME :CYBER SECURITY
PAPER CODE – BCAN501

1. What is Intellectual property Law? What is development of information system?
Explain spiral model of information system
2. What is Cyber security? How to secure your information explain in detail?
3. What is smart card? Differentiate between Credit and Debit card?
4. What is the Cyber crime? Discuss the categories of cyber crime and cyber law.
5. What is the security Architecture of information system?

PAPER NAME :UNIX & SHELL PROGRAMMING
PAPER CODE:BCAN502

1. Describe briefly the UNIX architecture explaining the role played by the kernel and shell in sharing the workload.
2. What do multiprogramming, multiuser and multitasking mean?
3. Why are many UNIX commands designed to perform simple rather than complex tasks?
4. How do you direct **man** to use a specific pager, say, **less**?
5. What is the default location of a user's mailbox on UNIX and Linux system?

PAPER NAME :MANAGEMENT & ACCOUNTING
PAPER CODE :BCAN503

1. What are the differences between Trial Balance and Balance Sheet? Explain Accounting process in detail
2. Differentiate between Cash Budget and Flexible Budget.
3. Explain various assumptions of EOQ.
4. Explain the concept of CVP Analysis.
5. What are the functions of Financial Management?
6. "Planning is an important part of management" – Explain.

BCA-5TH SEM-PRACTICAL
PAPER NAME :LINUX LAB
PAPER CODE :BCAN592

- How to change the file owner and group and changing the access and modifications times of a file. Show it with an example.
- How to change date and time in Unix system and show calendar and create a user id and change the password.
- Write a c program largest of three numbers and show the result using vi editor.
- Write a c program for factorial of a number and show the result using vi editor.

BBA-5TH SEM
PAPER NAME :FINANCIAL MANAGEMENT
PAPER CODE :BBAN-501

1. Differentiate LIFO and FIFO.
2. How does the concept of "Economic Order Quantity" (EOQ) help manufacturing companies to cut costs? State the assumptions taken while applying the EOQ.
3. Briefly explain Labour Turnover.
4. Discuss the advantages and disadvantages of LIFO method.
5. Differentiate Job costing and Batch costing.

PAPER NAME :SALES & DISTRIBUTION OF MANAGEMENT
PAPER CODE:BBAN502

1. What are the factors that determine choice of channels of distribution ?
2. What are the different types of sales quota ?
3. What measures can be taken up to improve territory productivity?
4. What do you understand by the term sales force ? Why is controlling and motivation essential for sales force
5. Define public distribution and elaborate its special features. Also discuss its role and importance

PAPER NAME :HUMAN RESOURCE DEVELOPMENT
PAPER CODE :BBAN503

1. State the importance of HRM audit.
2. Define the concept of learning organization
3. State the concept of Mentoring.

4. Explain the term 'career planning'. Outline and discuss the career stages. What problem may be encountered in career planning?
5. What is executive development? Why executive development necessary? Describe in brief the methods of executive development.

PAPER NAME : ENTREPRENEURSHIP DEVELOPMENT
PAPER CODE :BBAN504

1. Discuss the role of Entrepreneurs in complementing the economic growth of a country. How the innovative power of the entrepreneurs help in this respect?
2. Peter Drucker says "Knowledge is the business." How far is it true for entrepreneurship? Name the different knowledge areas that help an Entrepreneur to be successful in his venture
3. What is a project report? What is meant by feasibility analysis? Prepare a specimen project feasibility report for an SSI unit.
4. Discuss about the needs of Entrepreneurship Development Programmes in a developing country. State the problems normally faced by EDPs.
5. Entrepreneurship is a process of creative destruction. Explain.

PAPER NAME :RESEARCH METHODOLOGY
PAPER CODE – BBAN-505

MCA-5TH SEM-THEORY
PAPER NAME :IMAGE PROCESSING
PAPER CODE:MCAE-501B

1. What is sampling? What is quantization? What is the relation between them?
2. What is meant by image segmentation? What its use in image processing?
3. What is Image smoothing? Explain image smoothing using ideal low pass filters and Butterworth low pass filters?
4. Explain edge linking using Hough transform.
5. Explain about edge detection using gradient operator.

PAPER NAME :WINDOWS PROGRAMMING WITH VB
PAPER CODE – MCAE-502B

1. What is Multiple Document Interface(MDI)?Write an event procedure for a command button to find the smallest among the 3 numbers given.
2. What is difference between hide and upload form methods? In Window based programming what do you mean by controls, properties of control, events and methods?
3. What is dialog box? How many types of dialog boxes are there in VB?
4. Explain difference between ByVal and ByRef. When would each be used?
5. What is Window Registry? What is the role of Registry Editor?

PAPER NAME :OBJECT ORIENTED PROGRAMMING WITH JAVA
PAPER CODE: MCAE-503B

1. Write a Java program to check any character is vowel or consonant.
2. Write a Java program to print the greater number among three numbers.
3. Write a Java program to check **153** is Armstrong number or not.
4. Write a Java program to print the reverse number of any number. (e.g. like 123 = 321).
5. Write a Java program to check any number is prime or not.
PAPER NAME :E-COMMERCE

1. What is Electronic Data Exchange? Explain withthe help of proper diagram and give examples.
2. What legal issues are associated with internet commerce? Explain them
3. Draw the Generic Trade cycle and briefly explain it.
4. Describe the component of EDI in electronic market?
5. Explain about Virtual Auction.

PAPER NAME :VALUE & ETHICS OF PROFESSION
PAPER CODE:HU501

1. Discuss science, technology and engineering as social and professional activity.
2. What do you understand by Whistle Blowing? Are whistle blowers disloyal workers?
3. Define the term 'Corporate Social Responsibility'. How can a company provide support to the society through proper implementation of Corporate Social Responsibility?
4. Discuss the role of engineers and technologists in the development of the society.
5. Write in brief on the Report of Club of Rome.

STUDENTS WHO HAVE CHOOSED ANOTHER OPTIONAL PAPER ARE ADVISED TO CONTACT WITH MR. Avijit Bera, Contact No :9836883884

MCA-5TH SEM-PRACTICAL
PAPER NAME :WINDOWS PROGRAMMING WITH VB LAB
PAPER CODE:MCAE592B

1. Write a program in VB to design a calculator.
2. Write a program in VB to find out book price after given 15% discount.
3. Write a program in VB to change the font and color of a word.
4. Write a program in VB to calculate the area of a triangle.