Total No. of Questions : 12]

SEAT No. :

P1046

[Total No. of Pages : 2

[4661] - 301
S.Y. M.C.A. (Engg.)
ADVANCED JAVA
(2013 Course) (Semester - III) (410901)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to the right side indicate full marks.***
3) ***Assume Suitable data if necessary.***

Q1) What is J2EE? Explain the J2EE architecture. **[8]**

OR

Q2) What is JDBC? Explain JDBC architecture. **[8]**

Q3) What is servlet? Compare servlet with CGI. **[8]**

OR

Q4) Write down the servlet life cycle? Also write notes on HttpServlet and Generic Servlet. **[8]**

Q5) What is MVC concept? Explain MVC Architecture and its advantages. **[9]**

OR

Q6) Write a JSP program to display student record in html table using JDBC. Assuming that STUDENT table contains studId, studName, studAddress, studMobile as fields and Mysql/Oracle /MS-ACCESS as RDBMS. **[9]**

Q7) What is Enterprise java Beans? Write short notes on any 2 of following: **[8]**

i) Session Bean ii) Entity Bean iii) Message Driven Beans.

OR

P.T.O.

Q8) Explain the EJB life cycle. Compare Statefull and Stateless Session Beans. **[8]**

Q9) What is Spring? Explain the core spring module. **[8]**

OR

Q10) Define Spring? Write Short notes on any 2 of following:

i) Aspect-oriented spring ii) Spring Core Module iii) JMX **[8]**

Q11) What is hibernate? Explain Hibernate architecture and features. **[9]**

OR

Q12) Write short notes on any 3 of following in context of Hibernate.

a) HQL b) Object Relational Persistence

c) Persistence Object d) Hibernate Elements **[9]**

Total No. of Questions : 12]

SEAT No. :

P1048

[Total No. of Pages :2

[4661] - 303
S.Y. M.C.A. (Under Engineering Faculty)
OPERATING SYSTEMS
(2013 Course) (Semester - III) (410903)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to the right side indicate full marks.***
3) ***Use of calculator is allowed.***
4) ***Assume suitable data if necessary.***

Q1) a) Explain the components of system software in detail. **[5]**

b) Explain an absolute loader with its advantages and disadvantages. **[4]**

OR

Q2) a) State any 5 functions of an operating system in brief. **[5]**

b) Explain Real time systems with example. **[4]**

Q3) a) What is a system call? What are the differences between system calls and system commands? Name any three system calls. **[4]**

b) What is process? What is process control block (PCB). Explain in detail. **[4]**

OR

Q4) a) What are the different scheduling criteria for scheduling algorithms? **[4]**

b) What is long-term, short -term and medium - term scheduling? Which one of three is used in process scheduling? **[4]**

Q5) a) Explain concurrency? What is Race condition. **[4]**

b) Explain semaphores in detail. **[4]**

OR

P.T.O.

Q6) a) What is the deadlock characterization. **[4]**

b) How to prevent the occurrence of a deadlock? **[4]**

Q7) a) Explain the concept of segmentation. **[4]**

b) Compare contiguous and Non-contiguous memory. **[5]**

OR

Q8) a) Compare demand paging and segmentation. **[4]**

b) Assume there are 3 free frames. Find out belady's anomaly for 4 free frames if the reference string is as follows 1, 2, 3, 4, 1, 2, 5, 1, 2, 3, 4, 5

Use LRU. **[5]**

Q9) a) Write a note on Disk management and types. **[4]**

b) Assume there are total 200 tracks are present on each surface of the disk. If request queue is 30, 140, 20, 170, 60, 190. and initial position of the head is 120. Calculate total head movement using **[4]**

i) FCFS ii) SSTF

OR

Q10)a) Explain the concept of file? And also list different types of files. **[4]**

b) Differentiate between Linked allocation and Index allocation. **[4]**

Q11)a) Explain architecture of Linux system. **[4]**

b) Explain the following commands **[4]**

i) grep ii) cut iii) ws

OR

Q12)a) Explain the following system calls **[4]**

i) seek ii) Fork iii) exec

b) Differentiate between Linux, Unix and Windows Operating Systems. **[4]**

Total No. of Questions : 12]

SEAT No. :

P1049

[Total No. of Pages :2

[4661] - 304
S.Y. M.C.A. (Engineering)
OBJECT ORIENTED ANALYSIS AND DESIGN
(2013 Course) (Semester - III) (410904)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to the right side indicate full marks.***
3) ***Assume Suitable data if necessary.***

Q1) a) What are the advantages of object oriented approach? **[4]**

b) What are software architecture framework? How do you model them in UML. **[5]**

OR

Q2) a) In brief give UML history. **[4]**

b) Write a short note on XMI. **[5]**

Q3) a) Write a short note on : UML metamodel. **[4]**

b) Show how stereotypes, tagged values, constraints can be used to extend UML. **[4]**

OR

Q4) Why does one need interaction overview diagram explain with your own example. **[8]**

Q5) a) Compare with concepts and examples **[4]**

aggregation and composition in class diagram.

b) Illustrate forward and reverse engineering of class diagram? **[4]**

OR

P.T.O.

Q6) a) What are the steps to be followed to create CRC models? **[4]**

b) Draw a class diagram for a information system of school making suitable assumption about the scope and functioning. **[4]**

Q7) a) How to model flow of control by organization using communication diagram. **[4]**

b) Write short note on relation between sequence diagrams and use case diagram. **[5]**

OR

Q8) a) Explain the following terms in relation with communication diagram.

i) frame ii) lifeline iii) message **[4]**

b) Describe purpose of sequence diagram. **[5]**

Q9) a) What is Sub state? Explain types of Sub states. **[4]**

b) Describe action state and activity state. **[4]**

OR

Q10)Explain following concepts in UML.

a) Activity **[8]**

b) Guard condition

c) Swimlanes

d) Object flow

Q11)a) What are the common uses of Deployment Diagram? **[4]**

b) Describe the steps to model the architecture of the system. **[4]**

OR

Q12)a) Explain the package diagrams in UML 2, the need, notations and concept. **[4]**

b) What are the commercial applications of UML? **[4]**

Total No. of Questions : 12]

SEAT No. :

P1050

[Total No. of Pages :4

[4661] - 305

S.Y. M.C.A. (Under Engineering Faculty)

OPERATIONS RESEARCH

(2013 Pattern) (Semester - III) (410905)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Use of electronic pocket calculator is allowed.***
4) ***Assume suitable data, if necessary.***
5) ***The graph papers will be provided on demand.***

Q1) a) Solve the following LPP using Simplex Method **[7]**

Maximize $Z = 6X_1 + 8X_2$

Subject to $5X_1 + 10X_2 \leq 60$,

$4X_1 + 4X_2 \leq 40$,

Where $X_1, X_2 \geq 0$.

b) What is LPP? Write its General form? **[2]**

OR

Q2) a) Solve the following LPP by Graphical method **[5]**

Minimize $Z = 6000X_1 + 4000X_2$

Subject to $3X_1 + X_2 \geq 24$,

$X_1 + X_2 \geq 16$,

$2X_1 + 6X_2 \geq 48$,

Where $X_1, X_2 \geq 0$.

b) Convert the following Primal into Dual. **[4]**

Maximize $Z = 3X_1 + 6X_2$

Subject to $2X_1 - 3X_2 \leq 6$,

$X_1 \geq 2$

$X_1 + 2X_2 = 4$,

Where $X_1, X_2 \geq 0$

P.T.O.

Q3) a) A cement factory Manager is considering the optimal way to transport cement from his three manufacturing centers P,Q,R to depots A,B,C,D. The weekly production and demands along with transportation costs per ton are given below

	A	B	C	D	Production
P	25	30	20	40	37
Q	30	25	20	30	22
R	40	20	40	35	32
Demand	25	20	25	21	

Find the transportation Schedule for the above problem. **[7]**

b) Explain an Assignment model. **[2]**

OR

Q4) a) A company has 5 jobs to be done on five machines. Any job can be done on any machine. The cost of doing the jobs on different machines are given below. Assign the jobs for different machines so as to minimize the total cost. **[6]**

	Machines				
Jobs	A	B	C	D	E
1	13	8	16	18	19
2	9	15	24	9	12
3	12	9	4	4	4
4	6	12	10	8	13
5	15	17	18	12	20

b) Write a short note on Degeneracy in the Transportation Problem. **[3]**

Q5) A small maintenance project consists of the following jobs, whose precedence relationships is given below: **[7]**

Job	1-2	1-3	2-3	2-5	3-4	3-6	4-5	4-6	5-6	6-7
Duration (days)	15	15	3	5	8	12	1	14	3	14

a) Draw an arrow diagram representing the project.

b) Find the total float each activity.

c) Find the critical path and the total project duration.

OR

Q6) Eight jobs 1,2.....8 are to be processed on a single machine. The processing times, due dates and importance weights of the jobs are represented in table **[7]**

Job	Processing time ti(minutes)	Due date di(minutes)	Importance Weight wi	ti/wi
1	5	15	1	5.0
2	8	10	2	4.0
3	6	15	3	2.0
4	3	25	1	3.0
5	10	20	2	5.0
6	14	40	3	4.7
7	7	45	2	3.5
8	3	50	1	3.0

Assuming that no new jobs arrive thereafter, determine using and WSPT rule

a) Optimal Sequence

b) Completion time of the jobs.

c) Mean flow time as well as weighted mean flow time,

d) Average in Process Inventory.

e) Lateness, mean lateness and maximum lateness

f) Number of jobs are actually late.

Q7) What is Goal Programming? Explain methods to solve Goal Programming Problem. **[8]**

OR

Q8) Consider the details of a distance network as shown below **[8]**

Arc	Distance	Arc	Distance
1-2	6	5-6	13
1-3	7	5-8	9
1-4	10	6-7	5
2-3	8	6-8	4
2-5	4	6-9	8
3-4	6	6-10	3
3-5	11	7-9	10
3-6	3	8-10	10
3-7	5	9-10	9
4-7	7		

a) Construct the distance network.

b) Find the minimum spanning tree using Kruskl's algorithm.

Q9) A manufacture of a new detergent powder consisting of three varieties viz Super, Fine and Glow has to decide the appropriate variety of detergent to be launched on the basis of the following estimated payoffs according to sales-levels. **[8]**

DetergentVariety	Estimated Levels of sales(units)		
	50,000	25,000	15,000
Super	45	30	20
Fine	60	45	15
Glow	75	50	10

Determine the optical decision using:

a) Minimax criterion
b) Regret criterion
c) Laplace criterion
d) Hurwicz criterion for $\alpha = 0.5$

OR

Q10) A newspaper boy has the following probabilities of selling a magazine **[8]**

No.of copies sold	Probability
10	0.10
11	0.15
12	0.20
13	0.25
14	0.30

Cost of a copy is 30 paise and sale price is 50 paise. He cannot return unsold copies. How many copies should he order? Determine EVPI?

Q11) a) Using multiplicative congruential method generate 7 random numbers with b = 17, c = 111, m = 103 and the seed = 7. **[5]**

b) What is simulation. Explain merits and demerits of simulation. **[4]**

OR

Q12) a) EXCEL bakery maintains sufficient stock of its 'Ever delight' cake and daily demand is **[7]**

Daily Demand	0	10	20	30	40	50	60	70	80
Probability	0.02	0.16	0.23	0.15	0.13	0.12	0.10	0.06	0.03

Using the following sequence of random numbers, simulate the demand for next 12 days. If the proprietor of the bakery decides to make 40 cakes everyday, then calculate the stock position at the end of the 12th day. Also calculate the daily average demand for the cakes.

Random	36	29	84	57	19	79	46	67	08	81	87	94

b) What are random numbers? Why they are called Pseudo-random. **[2]**

Total No. of Questions : 12]

SEAT No. :

P1019

[Total No. of Pages : 3

[4661]-31

Second Year M.C.A. (Faculty of Engineering)

OPERATING SYSTEMS

(2008 Course) (610901) (Semester - III)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers to the two sections should be written in separate answer books.***
2) ***Answer any three questions from each section.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right side indicate full marks.***
5) ***Use of Calculator is allowed.***
6) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) What are the components of system software? **[6]**

b) What are the advantages of Assembly language over machine language programming. **[6]**

OR

Q2) a) Explain any four Assembly directives. **[6]**

b) Compare and contrast the properties of macros and subroutines. **[6]**

Q3) a) What is the .EXE and .DLL file? Explain with their advantages and disadvantages. **[6]**

b) What is static and dynamic linking? **[6]**

OR

Q4) a) Compare between absolute loader and compile and go loader. **[6]**

b) Write a short note on Dynamic loading. **[6]**

P.T.O.

Q5) a) Define essential properties of following operating systems. **[6]**

i) Batch Operating system

ii) Real time operating system

b) Write short note on short-term and long term scheduling. **[5]**

OR

Q6) a) Assume you have the following jobs to execute, with the jobs arriving in the order listed here: **[6]**

Job No	ARRIVAL TIME(Mins)	RUN TIME(Mins)
P1	0	8
P2	1	4
P3	2	9
P4	3	5

Draw Gantt chart, Calculate Average waiting time, total turnaround time and Average Turnaround time using.

i) FCFS CPU scheduling algorithm

ii) SJF (Pre-emptive approach)

iii) Round Robin (Assume time quantum = 1)

b) With the help of neat diagram explain the state transitions for process. **[5]**

SECTION - II

Q7) a) Write a note on demand paging. **[6]**

b) What is internal and external fragmentation? **[6]**

OR

Q8) a) What is thrashing? Why multiprogramming systems can suffer from it? **[6]**

b) A process references pages in the following order 2 3 2 1 5 2 4 5 3 2 5 2 use FIFO and LRU page replacement algorithms to find out the no of page faults for the above reference string using 3 page frames. **[6]**

Q9) a) Explain Bit Vector and Linked List free space management schemes. **[6]**

b) Write notes on: **[6]**

i) indexed allocation

ii) linked allocation

OR

Q10)a) Suppose that disk drive had 5000 cylinders. Head is at cylinder 143. The FIFO queue of requests is 86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130. Draw FCFS and SSTF disk scheduling algorithm to compute total head movement. **[6]**

b) Write short note on: **[6]**

i) Programmed I/O

ii) Interrupt driven I/O

Q11)a) Write short note on Linux Kernel. **[6]**

b) Write short note on Linux file system organization. **[5]**

OR

Q12)a) Explain the following with respect to Linux system: **[5]**

i) Fork system call

ii) Exit system call

b) Explain memory management routine in Linux **[6]**

Total No. of Questions : 12]

SEAT No. :

P1021

[Total No. of Pages : 3

[4661]-33

S.Y.M.C.A. (Engg.)

FINANCIAL ACCOUNTING AND MANAGEMENT

(Semester - III) (2008 Course) (610903)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers to the two sections should be written in separate answer books.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) Explain the 2 systems of Book Keeping with example. **[6]**

b) Explain the Going Concern concept & Materiality concept used in Accounting. **[5]**

OR

Q2) a) Explain the concept of Journal. How many different types of Journals are used and for recording which type of transactions? **[6]**

b) Explain which account you do not have to maintain after using the Cashbook. **[5]**

Q3) a) Explain the structure of balance sheet as per the provisions of Schedule VI of the Companies Act, 1956. Explain the treatment of Contingent Liabilities. **[6]**

b) Explain Current Ratio, Liquid / Acid Test Ratio, Current Asset Turnover ratio. **[6]**

OR

Q4) The current assets and current liabilities of ABC Telefilms as at 30.06.2014 were Rs. 25 Lakhs and Rs 13 Lakhs respectively. Calculate the impact of each of the following transactions individually and totally on the Current Ratio of the company **[12]**

a) Purchase of new Camera for Rs. 7 Lakhs on C.O.D.

b) Purchase of new sound recording machinery for Studio on medium term loan from bank with 20% margin at a cost of Rs. 10 Lakhs.

c) Payment of Dividend of Rs. 3 Lakhs of which Rs. 0.705 lakh was Tax Deducted at Source.

d) A new Serial was launched at a cost of Rs. 7 Lakhs for which bank finance obtained was for Rs. 5 Lakhs.

P.T.O.

Q5) a) Explain the factors affecting the Working Capital Requirement. Also explain Working Capital requirement for a seasonal fruit shop. **[6]**

b) How can one finance the Working Capital requirements? **[6]**

OR

Q6) Following table shows the proforma cost sheet for ABC Ltd. **[12]**

Elements of Cost	Amount per Unit
Raw Material	70
Direct Labour	25
Overhead	50
Total Cost	145
Profit	25
Selling price	170

The following details are available:

Raw materials are in stock for 1 month. Credit allowed by suppliers is 1 month. Credit allowed to customers is 2 months. Lag in payment of wages is 2 weeks. Lag in payment of overheads is 1 month. Materials are in process for an average 15-16 days period. Finished Goods are in stock for an average of 1 month. 1/2 of output is sold against cash. Cash in hand is Rs. 25000/- and Cash in bank account is Rs. 75000/-. You are requested to prepare a statement showing the working capital requirement to finance level of activity of 1,04,000 units of the product. Assume that the production is evenly carried out through the year. Wages & overheads accrue similarly and a period of 4 weeks is equivalent to 1 month.

SECTION - II

Q7) a) Explain the process of Capital Budgeting. **[6]**

b) Explain the techniques used for evaluation of Capital Expenditure proposal. **[6]**

OR

Q8) A machine costing Rs. 1.5 Lakhs is to be purchased as under: **[12]**

Rs. 35,000 -Down payment out of own contribution.

Rs. 1,15,000/- -Borrowing by way of Term loan which is to be re-paid in 4 equal annual installment with interest @ 15% p.a. The interest being calculated on outstanding balance. Calculate present value of the cash outflow.

Q9) a) Explain the concept of Measuring the Cost of Capital. **[5]**

b) Explain the Composite cost of Capital. **[6]**

OR

Q10) Operating & Combined Leverage of ABC company Ltd is 2 and 3 respectively at the present level of sales of 10,000 units. The selling price per unit is Rs. 120/- while its variable cost is Rs.60/-. The company has no preference share capital. Applicable corporate income tax rate is 50%. The rate of interest on company's debt is 16% p.a. What is the amount of debt in the capital structure of the ABC company Ltd? **[11]**

Q11) Explain the generation of following with Tally Software (any 3 of the following:) **[12]**

a) General Ledger of any account.

b) Profit & Loss statement.

c) Bank reconciliation statement.

d) Cashbook with 3 columns.

OR

Q12) a) Explain the different ways in which you can export data from Tally software. **[6]**

b) Explain the generation of salary sheet through tally. **[6]**

Total No. of Questions : 12]

SEAT No. :

P1022

[Total No. of Pages : 2

[4661]-34
S.Y. M.C.A. (Engg.)
COMPUTER COMMUNICATIONS & NETWORKS
(Semester - III) (610904) (2008 Course)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers to the two sections should be written in separate answer books.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Assume suitable data, if necessary.***

SECTION - I

Q1) What is Multiplexing? Explain types of multiplexing with their usage in detail. **[12]**

OR

Q2) a) Explain any two guided media in detail. **[6]**

b) Write short note on - Satellite Orbit. **[6]**

Q3) a) Explain OSI model in detail. **[6]**

b) Explain different Network Topologies. **[6]**

OR

Q4) What are the different network hardware components? Explain each in detail. **[12]**

Q5) a) Explain Bluetooth Architecture with neat diagram. **[5]**

b) Explain LAN, WAN and MAN in detail. **[6]**

OR

Q6) a) Describe Sliding window protocol with suitable diagram. **[5]**

b) Explain slotted Aloha. **[6]**

P.T.O.

SECTION - II

Q7) a) Explain IP addressing in detail. **[6]**

b) What do you mean by congestion? Discuss the open loop and closed loop Congestion control mechanism. **[6]**

OR

Q8) a) What is the purpose of ARP & RARP protocols? What is the size of Ethernet frame carrying an ARP as well as RARP packet? **[6]**

b) What is Socket? Explain various socket primitives used in client server interaction. **[6]**

Q9) a) Explain the working of UDP. **[6]**

b) TCP and UDP are at which layer? Explain anyone of them in detail. **[6]**

OR

Q10)a) Explain connection establishment using three way handshaking in TCP. **[6]**

b) Explain how TCP provides flow control mechanism. **[6]**

Q11)a) What is FTP? Where & when it is used? Why does it require 2 ports? **[6]**

b) Explain Email architecture with protocol. **[5]**

OR

Q12)a) Explain atleast 5 user commands used in FTP. **[6]**

b) Explain the working of Hyper Text Transfer Protocol. **[5]**

Total No. of Questions : 12]

SEAT No. :

P1023

[Total No. of Pages : 2

[4661]-35
S.Y. M.C.A. (Engg.)
PRINCIPLES OF MULTIMEDIA
(Semester - III) (610905) (2008 Pattern)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers to the two sections should be written in separate answer books.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) What is multimedia document architecture? Explain Open Document Architecture in detail. **[6]**

b) What is Multimedia Authoring? What are the functions of Multimedia Authoring Software? What are it's different types? **[6]**

OR

Q2) a) Explain with suitable examples multimedia building blocks and its role in development of web based multimedia applications. **[6]**

b) Explain storage and retrieval of multimedia data. List any two MM databases. **[6]**

Q3) a) Explain BMP and JPEG file format in detail. **[6]**

b) What is the difference between compression rate and compression ratio? Explain fractal compression technique with the help of suitable example. **[6]**

OR

Q4) a) Write short notes on sampling and quantization. **[6]**

b) Explain Arithmetic coding data compression technique. **[6]**

Q5) a) List different elements of Audio system. Explain various types of Microphones. **[6]**

b) State different audio file formats? How are the following frames used in MPEG compression? **[5]**

i) I-frame

ii) P-frame

iii) B-frames

OR

P.T.O.

Q6) a) Explain CD-DA technology, discuss the limitations and advantages of the same. **[6]**

b) Explain different parameters of digital audio. **[5]**

SECTION - II

Q7) a) Compress the string 'ABABBBABCCABBA' using LZW compression technique. Calculate the compression ratio. **[6]**

b) What are the different types of video editing? **[5]**

OR

Q8) a) Explain the process of digitization of video. **[5]**

b) Write algorithm for Huffman coding. Calculate compression ratio for following symbols using Huffman coding algorithm. **[6]**

Symbol	Count
P	28
Q	12
R	12
S	8

Q9) a) What is VRML? What are its design criteria? What are its characteristics? **[6]**

b) What are the factors which affect the quality and usability of a virtual reality applications. Explain briefly. **[6]**

OR

Q10)a) Define virtual reality. What are its pros and cons? **[6]**

b) Why does it take four nodes to make simple object in VRML and which are those? **[6]**

Q11)a) Explain method of motion control in animation. **[6]**

b) Explain following techniques of animation. **[6]**

i) rotoscoping and blue screening

ii) morphing

iii) masking

OR

Q12)a) What do you mean by animation on web? Explain client pull animation by example. **[6]**

b) Describe different tools to create animation. **[6]**

Total No. of Questions : 12]

SEAT No. :

P1027

[Total No. of Pages : 3

[4661]-44
S.Y. M.C.A. (Engg.)
HUMAN COMPUTER INTERFACE
(610913) (2008 Pattern) (Elective - I)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***From Section - I, answer (Q1 or Q2), (Q3 or Q4), (Q5 or Q6).***
2) ***From Section - II, answer (Q7 or Q8), (Q9 or Q10), (Q11 or Q12).***
3) ***Answers to the two sections should be written on separate answer books.***
4) ***Neat diagrams must be drawn wherever necessary.***
5) ***Figures to the right indicate full marks.***
6) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) What do you mean by 'use of Metaphor' in HCl? Explain any five metaphors used to teach new concept in interactive interface design. **[6]**

b) Explain the similarities and differences in human memory and computer memory. **[5]**

OR

Q2) a) What is reasoning? Explain different type of reasoning with example. **[6]**

b) Describe five important differences between Short Term Memory and Long Term Memory. **[5]**

Q3) a) Explain eight golden rules of interface design. Give suitable examples to Justify your answer? **[6]**

b) Categorize and explain types of users according to task and interface concepts. **[6]**

OR

Q4) a) List and explain seven stages of action model. **[6]**

b) What are the different guidelines for data display? Assume any single application user may interact. **[6]**

P.T.O.

Q5) a) Justify the use of lines on Continuous Computer Stationery. Is blank stationery is better than one with lines? Why such stationery is being used? **[6]**

b) What adjustment one needs to do when pre-printed Computer Stationery is being used for printing Mark sheet of SYMCA Students of this Semester? Explain how you will print exactly at given position on the mark sheet without wasting stationery. **[6]**

OR

Q6) a) When data entry is being done from hand filled printed forms in Computer Systems, why it is recommended that the sequence on the screen has to be exactly same as one on the printed form being entered? **[6]**

b) The task is to print the Hall ticket of SYMCA examination. The task is slightly complicated as you need to print correct elective subject on a pre printed admit card continuous stationery. Explain how you will print exactly at given position on the admit card without wasting stationery.**[6]**

SECTION - II

Q7) a) Explain the issues related with creating a Virtual Environment. **[6]**

b) Explain the command organization strategies. **[5]**

OR

Q8) a) You have been given task of designing a form for entering student exam form. Explain what points you will consider while designing. **[6]**

b) Explain the elements of the Windowing Systems. **[5]**

Q9) You are required to design a printed manual for a mobile phone designed for senior citizens. What are the important points that you will consider while designing such manual. **[12]**

OR

Q10) Some of the favorite techniques of web pages these days include automatic scrolling text boxes, moving marquees & constantly running animations (eg. Icons). Explain these features in terms of college web site design using standard guidelines. **[12]**

Q11) Write short notes on any 3 of the following: **[12]**

a) Direct pointing devices.

b) Multimedia Document Searches.

c) In-direct pointing devices.

d) Speech Recognition.

OR

Q12) a) Explain the different types of keyboard layouts. **[6]**

b) Explain the use of Touch Screen Kiosks at Olympic / Asian Games Villages. **[6]**

Total No. of Questions : 12]

SEAT No. :

P1028

[Total No. of Pages : 2

[4661]-45
S.Y. M.C.A. (Engg.)
ORGANIZATIONAL BEHAVIOR
(Elective - I) (Semester - IV) (610913) (2008 Pattern)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers to the two sections should be written in separate answer books.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) What is perception? Explain factors influencing perception. **[6]**

b) Explain Goal setting and Reward system. **[6]**

OR

Q2) a) Explain primary and secondary motives with suitable example. **[6]**

b) Write a note on competency. **[6]**

Q3) a) Does motivation come from within a person or is it a result of the situation. **[6]**

b) Define Stress? What are the Sources of stress? **[6]**

OR

Q4) a) Explain Maslow's theory of hierarchy of needs. **[6]**

b) Do you think competition and conflict are different? Explain. **[6]**

Q5) a) Explain how to handle levels of conflicts in an organization? **[6]**

b) Define the term Group Dynamics and discuss its importance. **[5]**

OR

P.T.O.

Q6) a) How are opportunities, constraints, and demands related to stress? Give an example of each. **[6]**

b) Explain factors influencing Human Resource Planning in organization. **[5]**

SECTION - II

Q7) a) Explain the various Organizational Structures in detail. **[6]**

b) Define Leadership and explain importance of leadership to the organization. **[6]**

OR

Q8) a) Write a short note on Organization Culture. **[6]**

b) Write a short note on Hersey & Blanchard's theory of leadership. **[6]**

Q9) a) Write short note on. **[6]**

i) Constructive conflicts.

ii) Destructive conflicts.

b) What is relation of re-engineering with empowerment? **[6]**

OR

Q10)a) Write short note on. **[6]**

i) Resistance to change.

ii) Response to change.

b) Compare traditional Vs Modern view of conflict. **[6]**

Q11)a) Explain Learning organization. **[5]**

b) Write short note on: **[6]**

i) Benchmarking.

ii) Downsizing.

OR

Q12)Explain various aspects of Quality? What is Total Quality Management? What are the benefits of TQM? **[11]**

Total No. of Questions : 12]

SEAT No. :

P1029

[Total No. of Pages : 2

[4661]-46
S.Y. M.C.A. (Engineering)
JAVA PROGRAMMING
(Semester - IV) (610912) (2008 Pattern)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers to the two sections should be written in separate answer books.***
2) ***Answer any three questions from each section.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right side indicate full marks.***
5) ***Use of Calculator is allowed.***
6) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) What is thread synchronization? Explain with example. **[6]**

b) Explain concept of overloading and overriding with example? What is difference between overloading and overriding? **[6]**

OR

Q2) a) Explain "Java is Object-oriented programming language". **[6]**

b) Explain try, catch, throws, finally block. **[6]**

Q3) a) What are different types of layouts? **[6]**

b) What is the difference between Swing and awt? Explain JButton and JTextField classes with their constructors. **[6]**

OR

Q4) a) What are adapter classes? What advantage does it provide over listener interfaces? **[6]**

b) Write a program which will override all the methods of MouseListener interface and display the mouse coordinates on the screen. **[6]**

Q5) a) What is difference between a Java Application (Standalone) and Java Applet? Explain the life cycle of an applet. **[6]**

b) Write java applet which will accept two numbers from user and display addition of these numbers on the screen. **[5]**

OR

P.T.O.

Q6) a) Write a short note on how parameters are passed to an applet with example. **[6]**

b) List and explain the various attributes of <APPLET> tag. **[5]**

SECTION - II

Q7) a) Write a java program to accept the directory name. If directory exist, display names of the files in given directory. **[6]**

b) What is Serialization and how it is implemented in java. **[6]**

OR

Q8) a) Write a java program to concatenate two text files sequentially into single file. Accept file name as a command line argument. **[6]**

b) Explain the use of Stream Tokenizer with example. **[6]**

Q9) a) Write a JDBC application to search and display employee details from given empid. (Assume suitable table structure). **[6]**

b) Explain various JDBC drivers with their advantages and disadvantages. **[6]**

OR

Q10)a) How batch updates are implemented in JDBC? Explain with example. **[6]**

b) Write short note on: **[6]**

i) Types of Resultset

ii) Resultset Concurrency

Q11)a) Write a program to implement chart program with the help of Java Socket classes. **[6]**

b) How TCP and UDP are implemented in java? **[5]**

OR

Q12)a) What is internet addressing? Write a java program to print the InetAddress of the Remote computer. **[6]**

b) Write a note on DatagramPacket and DatagramSocket class. **[5]**