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Roll No. :

300815(22)

B. E. (Eighth Semester) Examination, 2020 2022

(New Scheme)

All

(CSE Branches)

INTERNET and WEB TECHNOLOGY

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass-Marks : 28

*Note : Part (a) is compulsory from each question.
Attempt any two from (b), (c) and (d).
Carrying 7 marks each.*

Unit-I

1. (a) What do you understand by Internet, Intranet and Extranet? 2
- (b) Discuss Internet Service provider in detail. How to choose an ISP? 7

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- (c) Write short notes on : (any two) 7
- (i) TCP/IP and UDP
 - (ii) 3-tier Web based Architecture
 - (iii) IP Addressing
- (d) What are the different ways for Connecting to the Internet? 7

Unit-II

2. (a) Why do we use CSS? What are the different selectors available in CSS? 2
- (b) Write and explain any five HTML form objects that are required for obtaining user details for a typical online user registration process. 7
- (c) Explain Math and String objects in JavaScript with its properties and methods. Illustrate with example. 7
- (d) What are the different technologies available for making a web page dynamic? Explain document object model in detail. 7

Unit-III

3. (a) What is XSLT? 2
- (b) What is XML? Explain how to write an XML document? What are the goals of XML? Clearly explain the XML Schema and XML parsing in detail. 7
- (c) What is the importance of Namespace in XML? How the naming conflict in XML is resolved? Explain it with suitable example. 7
- (d) What is XML DTD? Design an XML document to store information about a student. The information must include Roll No, Name, College, Branch and E-mail id. Make sample data for 3 students. Write XML DTD for the document. 7

Unit-IV

4. (a) What are Web Security Threats? 2
- (b) What is Firewall? Explain different types of firewall. 7
- (c) Discuss the importance and implementation of AAA in internet security. 7
- (d) What are different ways of making payments electronically? Discuss the risk associated with all the payment instruments. 7

Unit-V

5. (a) What do you mean by hosting a website? 2
- (b) Describe the steps for Building a website with an example. 7
- (c) What is FTP? Explain the types of FTP server and FTP client in detail. 7
- (d) Explain the process of registration and indexing of website on search engine. 7

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Roll No. :

300851(76)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020-

(New Course)

(All Branches)

ENTERPRISE RESOURCE PLANNING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

***Note : Attempt all questions. Part (a) is compulsory.
Attempt any two out of part (b), (c) and (d)
in each questions.***

Unit-I

1. (a) Define the term "Finance".

2

(b) Explain the Finance Support Process in an

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- enterprise with suitable example. 7
- (c) "ERP solution would be an effective tool for managing tomorrow business." Critically comment. 7
- (d) Explain various function performed in material management module in ERP/Organization. 7

Unit-II

2. (a) What do you mean by care process? 2
- (b) Explain the core processors of typical business process. 7
- (c) What is Strategic Planning? Explain in detail. 7
- (d) Explain the activities of "Sales order processing" unit/module of organization. 7

Unit-III

3. (a) What do you mean by "ERP"? 2
- (b) Explain how MIS support management process in organization. 7
- (c) Differentiate between EIS, MIS and EDP. 7

- (d) What is information system? Give the detail of executive information system. 7

Unit-IV

4. (a) What is MRP? 2
- (b) Briefly describes forecasting sub system and also explain some forecasting methods. 7
- (c) Differentiate between Data Base Management System and Data Warehousing. 7
- (d) Discuss the important subsystems in "Production Planning" module of ERP? 7

Unit-V

5. (a) Define the term "Reengineering". 2
- (b) Why is multi-round and multilevel training said to be critical for the success of ERP implementation? Discuss the post issues of ERP implementation. 7
- (c) Who is consultant? Write the selection criteria of a consultant. 7

(d) Describe in detail of project management in care business.

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Roll No. :

322831(22)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE Engg. Branch)

ARTIFICIAL INTELLIGENCE and EXPERT SYSTEMS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

*Note : Part (a) from each question is compulsory.
carry 2 marks. Attempt any two parts from
(b), (c) and (d) carry 7 marks each.*

Unit-I

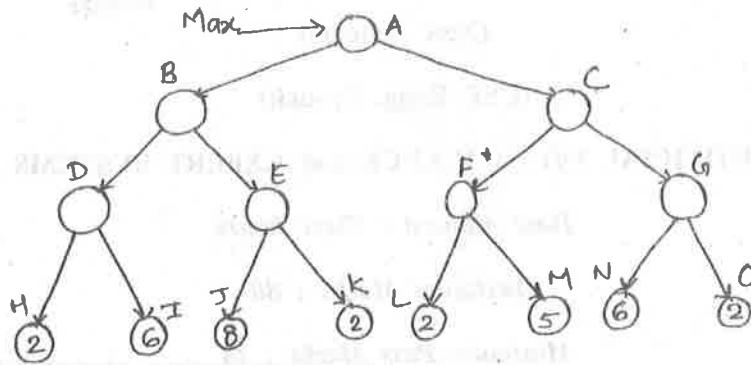
1. (a) Define Turing test. 2
- (b) Define state space for classical water jug problem with 4 litre and 3 litre jug. How can we get exactly 2 litres of water in 4 litre jug? 7

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[2]

- (c) Explain Hill climbing search algorithm with its limitations. 7
- (d) Prun the search tree with α - β cutoff pruning technique and calculate the value of root node 'A'. 7



Unit-II

2. (a) Define fact and quantifier. 2
- (b) Convert the following sentence in FOPL (First Order Predicate Logic) : 7
- (i) All employee earning 1500 Rs. or more per year pay taxes.
 - (ii) Some employees are sick today.
 - (iii) No employee earns more than president.
- (c) Explain skalemization and unification. 7

[3]

- (d) Draw a semantic network for following : 7
- (i) Scooter is a two wheeler.
 - (ii) Motorbike is a two wheeler.
 - (iii) Motorbike is a moving vehicle.
 - (iv) Moving vehicle has engine.
 - (v) Moving vehicle has electrical system.
 - (vi) Moving vehicle has fuel system.
 - (vii) Two wheeler is a moving vehicle.

Unit-III

3. (a) State Baye's theorem. 2
- (b) Compare supervised and unsupervised learning. 7
- (c) Explain Dempster-Shafer theory and truth maintenance systems. 7
- (d) Consider two fuzzy subsets of set 'X',

$$X = \{a, b, c, d, e\}$$

referred to as 'A' and 'B' as

$$A = \{1/a, 0.3/b, 0.2/c, 0.8/d, 0/e\}$$

$$B = \{0.6/a, 0.9/b, 0.1/c, 0.3/d, 0.2/e\}$$

Find out the support, cardinality, union and intersection. 7

Unit-IV

- 4. (a) Define language. 2
- (b) Explain the steps of Natural Language Processing. 7
- (c) Explain the components of planning system. 7
- (d) Explain block world problem with example. 7

Unit-V

- 5. (a) Write example of Expert System (any two). 2
- (b) Explain expert system architecture with neat diagram. 7
- (c) Explain list manipulation functions of LISP. 7
- (d) Explain backtracking in PROLOG What is functioning of cut (!) operator in PROLOG? 7

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322832(22)

APR-MAY

B. E. (Eighth Semester) Examination, 2020 2022

(New Scheme)

(CSE Branch)

DATA MINING & WAREHOUSING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory. Solve any two of parts (b), (c) and (d). Draw neat and clean diagrams wherever necessary. Assume suitable example wherever necessary.

Unit-I

1. (a) What are the basic elements of data warehousing? 2
- (b) Write down the difference between data warehouse (OLAP) and operational database (OLTP). 7

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[2]

- (c) Explain different types of activities encompassed in an ETL process. 7
- (d) Explain in detail data warehouse architecture. 7

Unit-II

- 2. (a) What is Metadata? 2
- (b) What do you mean by dimensional modelling? Explain any one schema with suitable example. 7
- (c) Explain the different OLAP operations. 7
- (d) What are the types of storage repositories in the data staging component of data warehousing architecture? 7

Unit-III

- 3. (a) How are the data warehouse and web related? 2
- (b) List four main activities during data warehouse deployment. 7
- (c) Explain web enabled data warehouse with complete architecture. 7
- (d) How is data partitioning helpful in reducing the query access time from data warehouse? 7

[3]

Unit-IV

- 4. (a) Write down the applications of data mining. 2
- (b) Explain the steps of KDD processes. 7
- (c) Define the term data mining. Briefly explain different data mining techniques. 7
- (d) What do you mean by clustering? Briefly explain the association rules. 7

Unit-V

- 5. (a) Define web mining. 2
- (b) Describe the architecture of data mining. 7
- (c) Discuss about data generalization and summarization based characteristics. How does it differ from analytical characterization? 7
- (d) How graphical user interface are designed using DMQL? 7

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322833(22)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE, IT Branch)

CYBER SECURITY

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

***Note : Attempt all questions. Part (a) is compulsory.
Attempt any two from (b), (c) & (d).***

Unit-I

1. (a) Define the term Cyber Security.

2

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| 2 |

- (b) Explain Authentication, Authorization & Non-Repudiation in brief. 7
- (c) Explain : 7
- (i) Confidentiality
- (ii) Availability
- (d) Describe any three types of Cyber Crime with help of examples. 7

Unit-II

2. (a) What do you mean by Phishing? 2
- (b) Explain any two tunneling techniques. 7
- (c) Write short note on Botnets. 7
- (d) Explain Pay-Per-Click Business Model. 7

Unit-III

3. (a) Define the term Exploitation. 2
- (b) Explain DNS Amplification Attacks. 7

| 3 |

- (c) Write short note on Social Engineering. 7
- (d) Using suitable example explain SQL injection. 7

Unit-IV

4. (a) Define Cyber Crime. 2
- (b) Write short notes on : 7
- Network Service Providers Liability
- (c) Give a brief overview of IT Act, 2000. 7
- (d) Explain Cyber Crime & Offences. 7

Unit-V

5. (a) What do you mean by Copyright? 2
- (b) Define Trademark & explain law associated with it in India. 7
- (c) Write short notes on : 7
- Online Dispute Resolution
- (d) Explain Electronic Database & its protection in detail. 7

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Roll No. :

322840(22)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE, IT Engg. Branch)

NEURAL NETWORK and FUZZY LOGIC

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) and (d) of each question.

Unit-I

1. (a) Define Neural network topologies.

2

- (b) Illustrate the functional Mapping between Biological Neuron and Artificial Neuron using appropriate diagrams. 7
- (c) Differentiate between Mc-Culloch Pitts Neuron, Rosenblatt's Perceptron and Hopfield neuron models. 7
- (d) What is a synapse in ANN? When the action potential reaches the synaptic end, what happens? 7

Unit-II

- 2. (a) Define terms : 'Convergence, Recall' in learning neural models. 2
- (b) Discuss the principle of Learning in Hebbian neural nets; support Hebb's rule with an algorithm. 7
- (c) Distinguish among various types of learning mechanisms performed in artificial neural networks. 7
- (d) Why is back propagation learning also known as generalized delta rule? 7

Unit-III

- 3. (a) Define the hidden layer in a neural model. 2

- (b) Describe the structural parameter settings required in a typical Back Propagation Neural Network. Write Back-propagation learning algorithm. 7
- (c) Justify the linear inseparability of single-layered perceptron with respect to classical XOR problem. 7
- (d) Simulate and ADALINE model by identifying its structural parameters for implementing OR Boolean function using bipolar inputs and bipolar targets. 7

Unit-IV

- 4. (a) What is NET Talk model? 2
- (b) Enumerate the applications of BPN models. 7
- (c) Distinguish between pattern association, pattern classification and pattern matching tasks. 7
- (d) Explain the character recognition application resolved by Neocognitron model. 7

Unit-V

- 5. (a) Enumerate any two fuzzy set operations with examples. 2

- (b) Explain the hetero-association task performed by BAM model taking any set of exemplary pattern vectors. 7
- (c) Explain the working of a typical Fuzzy Control System. 7
- (d) Define Fuzzy Relations. Give mathematical expressions for max-min composition and max-product composition upon any two Fuzzy Relations. Illustrate their use in fuzzy inferencing using an example. 7

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APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE, IT Engg. Branch)

DISTRIBUTED MULTIMEDIA

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Question (a) from each question is compulsory having 2 marks. Attempt any two question among (b), (c) & (d) from each question having 7 marks.

Unit-I

1. (a) What is Distributed system?

2

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[2]

- (b) Discuss about Audio & Full Motion video store. 7
- (c) Describe about clients in distributed work group computing. 7
- (d) Explain about Middleware in distributed work group computing. 7

Unit-II

- 2. (a) What is Multimedia Server? 2
- (b) Explain about Network topologies for Multimedia Object Server. 7
- (c) Describe about Mass Storage for Multimedia server in detail. 7
- (d) Write in brief about Network Performance issues. 7

Unit-III

- 3. (a) Differentiate between Hypermedia & Multimedia. 2
- (b) Describe about the database organization for multimedia applications. 7
- (c) Describe object server architecture in detail. 7

[3]

- (d) Explain about Database replication techniques. 7

Unit-IV

- 4. (a) What is Data Mining Enterprise? 2
- (b) Explain about business information model in detail. 7
- (c) Write notes of performance analysis and monitoring for system design. 7
- (d) Explain about the impact of performance on design. 7

Unit-V

- 5. (a) What are the uses of Multimedia? 2
- (b) Explain about Access Management & optimization of storage distribution. 7
- (c) Describe about maximizing network transportation in Multimedia. 7
- (d) Explain about Object Oriented Multimedia System. 7

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APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020-

(New Scheme)

(CSE, IT Engg. Branch)

DECISION SUPPORT SYSTEM

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. In each question, part (a) is compulsory. Answer any two from the rest of three ^{parts} questions. The figures in the right hand margin indicate marks.

Unit-I

1. (a) Why knowledge management is important for decision making?

2

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[2]

- (b) Models are classified as strategic, tactical and operational. What is the purpose of such a classification? Give an example for each. 7
- (c) Describe the various components of a DSS with a diagram. 7
- (d) Explain the structure of an expert system and describe the functionality of each module. 7

Unit-II

2. (a) List implications for design of decision making support. 2
- (b) What is the role of communication in DSS? List the various communication issues with example. 7
- (c) Explain the impact of culture on decision making with an example. 7
- (d) What do you mean by Decision Making Support? Explain design of decision making support in detail. 7

Unit-III

3. (a) What is requisite modeling? 2
- (b) What do you mean by Recognition Primed Decision? Explain the process of RPD with a neat diagram. 7

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[3]

- (c) What are the important phases of prescriptive analysis? Describe scientific disciplines that comprise prescriptive analysis. 7
- (d) Write short notes on : 7
- (i) Normative analysis
- (ii) Descriptive analysis

Unit-IV

4. (a) What do you mean by belief nets? 2
- (b) What is Simulation? Describe general process of simulation. 7
- (c) What is Model? Explain in detail the various types of OR modeling tools and their benefits. 7
- (d) Explain decision analysis and strategic decision support in detail. 7

Unit-V

5. (a) List various cutting-edge decision support technologies. 2
- (b) Write short notes on : 7
- (i) GDSS
- (ii) Decision Conferencing

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- (c) Explain IDSS tools and applications in detail. 7
- (d) Write short notes on : 7
- (i) Deliberative e-democracy
 - (ii) e-participation

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Roll No. :

322847(22)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE Engg. Branch)

INTERNET and MULTIMEDIA TECHNOLOGY

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory and carrying 2 marks each and attempt two parts from (b), (c) and (d) carrying 7 marks each.

Unit-I

1. (a) Define classfull addressing.

2

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[2]

- (b) Explain flow control mechanism of TCP. 7
- (c) Explain private key cryptography algorithm. 7
- (d) Explain TCP/IP protocol suite. 7

Unit-II

- 2. (a) Define ISDN channels. 2
- (b) Explain DIAS network architecture with example. 7
- (c) Explain B-ISDN. Discuss the services provided by B-ISDN. 7
- (d) Explain ATM networks. 7

Unit-III

- 3. (a) Define WLL. 2
- (b) Explain the protocol stack of IEEE 802.11 standard. 7
- (c) Explain wireless TCP with example. 7
- (d) Explain the working of bluetooth security mechanism. 7

Unit-IV

- 4. (a) Define temporal and non-temporal media? 2

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- (b) Explain MPEG video compression technique. 7
- (c) Explain the compression of synthetic graphical objects. 7
- (d) Explain JPEG compression and features of JPEG 2000. 7

Unit-V

- 5. (a) Define resource scheduling. 2
- (b) Explain video on demand systems. 7
- (c) Briefly explain architecture of multimedia support. 7
- (d) Explain content based video retrieval. 7

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Roll No.

322848(22)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE, IT Branch)

SOFTWARE TESTING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) & (d).

Unit-I

1. (a) Define software quality. 2
- (b) Explain in detail level of Testing. 7

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[2]

- (c) What are the source of information for test case selection? Explain it in detail. 7
- (d) Explain in detail monitoring and measuring test execution. 7

Unit-II

2. (a) Define unit testing. 2
- (b) Explain the theory of Goodenough and Gerhart. 7
- (c) Explain in detail theory of Gourlay. 7
- (d) Differentiate between Static Unit Testing and Dynamic Unit Testing. 7

Unit-III

3. (a) Define domain error. 2
- (b) WAP to print the Fibonacci Series. Draw flow graph and calculate number of independent path. 7
- (c) Describe the comparison between Data Flow and Test selection criteria. 7
- (d) WAP that checks whether the two number entered by the user are equal or not. Draw flow graph and calculate number of independent path. 7

[3]

Unit-IV

4. (a) Define acceptance testing. 2
- (b) Explain in detail requirement identification. 7
- (c) Explain Test Suite structure in detail. 7
- (d) Explain in detail system test design. 7

Unit-V

5. (a) Define Quality assurance. 2
- (b) Explain in detail CMM (Capability Maturity Model). 7
- (c) Explain in detail McCalls Quality factors. 7
- (d) Write short notes on : 7
- (i) SQA Plan
- (ii) ISO 9000

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Roll No. :

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APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(CSE Engg. Branch)

WIRELESS NETWORKS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) is compulsory.

Attempt any two parts of three i.e. (b), (c) and (d).

1. (a) What is Channel Model? 2

(b) Define Wireless Communication Network. Also explain the generations of wireless communication standard. 7

[2]

- (c) Write short technical notes : 7
- (i) Multipath propagation
 - (ii) Coverage extension
- (d) What is channel correlation function? Also explain large scale path loss & shadowing. 7
2. (a) What is OFDMA? 2
- (b) What is Digital Modulation? Explain MPSK, MSK and GMSK. 7
- (c) What is Power Spectral Density? Explain probability of Transmission Error. 7
- (d) Write short technical notes : 7
- (i) Signal space
 - (ii) Decision region
3. (a) What is Sectoring? 2
- (b) Explain in detail about Cell Cluster. 7
- (c) Explain in detail about co-channel & adjacent channel interference. 7

[3]

- (d) Write short technical notes : 7
- (i) Frequency reuse
 - (ii) Mobility management
4. (a) What is Traffic Calculation? 2
- (b) What is Mobility Management and In wireless network? Explain. 7
- (c) What is Handoff Management & also explain location management for cellular network & PCS network? 7
- (d) Write short technical notes : 7
- (i) Multiple Access Technique
 - (ii) Carrier Sense Multiple Access (CSMA)
5. (a) What are the entities of Mobile IP? 2
- (b) Differentiate an adhoc network and a cellular network with respect to : 7
- (i) Bandwidth usage
 - (ii) Cost effectiveness
- (c) Explain the Mobile IP session initiation protocol for IP Packet delivery in Mobile IP Networks. 7

(d) Explain with neat diagram and example the destination sequence distance vector routing algorithm of Adhoc Network.

7