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MJ-22

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Installation, Maintenance & Troubleshooting of Computer Networks

Semester: 6th

Branch: Computer Engg.

Scheme: New

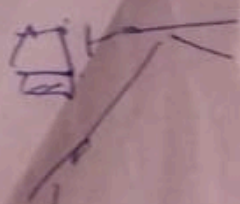
M. Marks: 100

Time: 3 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. Explain briefly preventive and corrective maintenance? What do you understand by site preparation? [20]
- Q2. Explain:
A. LAN Failure B. Hub C. Bridge D. Switches [4x5]
- Q3. Describe power supply requirements of computer and peripherals? What do you understand by "grounding shielding"? [20]
- Q4. Explain in detail the 2-Tier client server architecture? [20]
- Q5. What is Squid Proxy? Explain its functioning? [20]
- Q6. What do you understand by DNS? DOMAIN, Workgroup? [20]
- Q7. A. What do you understand by access point configuration?
B. Briefly explain configuration of manageable switch? [10x2]
- Q8. Explain:
A. Troubleshooting of Routers
B. Router configuration [10x2]
- Q9. Explain different types of addressing used in computer network?
- Q10. Explain with the help of a suitable diagram, TCP/IP model of network?



MJ-22 JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Artificial Intelligence
Scheme: New

Semester: 6th
M. Marks: 100

Branch: Computer Engg.
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. What do you understand by artificial intelligence? List few applications of artificial intelligence in games? 15 (15) [20]
- Q2. Briefly explain architecture of a typical expert system with the help of a suitable diagram? 15 [20]
- Q3. What do you understand by State Space Representation? Explain the importance of "Search" in State Space Representation? [20]
- Q4. Mention some of the heuristic search techniques? Explain any one of the heuristic search technique with the help of a suitable example? [20]
- Q5. What are the different data types in PROLOG? Explain briefly? [20]
- Q6. What is an expert system? Explain its characteristics? [20]
- Q7. (A) What is Knowledge Representation in AI? Name the techniques involved in Knowledge Representation? [20]
- (B) What do you understand by semantic network with examples? [20]
- Q8. What is distributed AI? Mention few examples of AI in our everyday lives? [20]
- Q9. Explain the role of AI in the fight against Covid-19? [20]
- Q10. Explain briefly the evolution of AI & list few issues of AI in games? [20]

Thank you

MJ-22 JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Network Security (Elective-II)
Scheme: New

Semester: 6th
M. Marks: 100

Branch: Computer Engg.
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. What do you understand by Network Security? Difference between internal & external attacks in security? [20]
- Q2. State the advantages of cyber laws in internet security? Why do we need to secure a computer Network? [20]
- Q3. Explain:
A. Encryption
B. Decryption
C. Symmetric Key
D. Asymmetric Key [4x5]
- Q4. What do you understand by Cryptography? Explain Piracy, Copyrights, IPRS? [20]
- Q5. Explain briefly SSL? What do you understand by hashing? [20]
- Q6. Explain:
A. Active Attack
B. Passive Attack
C. Denial of Service
D. Phishing Attacks [4x5]
- Q7. What is a firewall? Explain the types of firewalls? [20]
- Q8. Briefly explain Intrusion Detection system? Mention some of the limitations of Intrusion Detection systems? [20]
- Q9. Explain the steps involved in configuring a VPN Network? Define Vulnerability? [20]
- Q10. Define Disaster? What are the categories of Disaster? Discuss? [20]

J & K BOARD OF TECHNICAL EDUCATIONSemester: 5th

Branch: Computer Engineering

Subject: Advance Data Base Management System

Scheme: New

Time : 3 Hrs

Session:ND22

M.M. : 100

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1.** What do you understand by DATA Independence? Briefly explain the concept of Normalization? (20)
- Q2.** What do you understand by Data Models? Explain? (20)
- Q3.** What do you understand by Distributed databases? What are the various types of distributed database systems? (20)
- Q4.** Explain:
 a) Data definition language b) Scalar functions with respect to DDL
 c) Null values w.r.t DDL d) Aggregate functions w.r.t DDL (20)
- Q5.** What do you understand by Data Manipulation language? Explain the working of a join operator with the help of an example? (20)
- Q6.** Explain the concept of Triggers? (20)
- Q7.** What do you understand by Indexes? What are the advantages and disadvantages of views? (20)
- Q8.** Explain the terms given below with the help of examples:
 a) Try and Catch Statements b) If Statement & While Statement (20)
- Q9.** Explain:
 a) Object Definition Language. b) Object Query language
 c) Object Relational Systems d) SQL3 (20)
- Q10.** What do you understand by backup & recovery with respect of installation of SQL server? Also explain steps to install SQL Server? (20)

MJ23

Semester:- 6th (New)
 Subject:- ARTIFICIAL INTELLIGENCE
 Max Marks:- 100

Branch:- COMPUTER ENGINEERING

Time: 03 Hours

Note:- Attempt any five Questions.

- Q1(a) Define Artificial Intelligence. Explain the history and application areas of AI. (15) 20
- (b) Explain State Space representation of any AI problem. (05)
- Q2(a) Explain the Minimax search with example. (12)
- (b) Explain the importance of Heuristic Search in AI problem solving. (08) 20
- Q3(a) Define expert systems. What are the components of an expert system? Explain (12)
- (b) What are the various characteristics of an Expert System? (08) 20
- Q4(a) Explain information and knowledge in AI. What are the various issues in knowledge representation? (12)
- (b) Describe the different types of users and their role in an expert system. (08)
- Q5(a) Define knowledge representation. What are the various knowledge representation methods? Explain (12)
- (b) List and explain the components of a Robotic System. (08)
- Q6(a) State and explain the latest development trends in Artificial intelligence. (10)
- (b) Explain the role of AI in natural language understanding. (10)
- Q7(a) What are the various Robots developed using artificial intelligence techniques? (12)
- (b) What are the various applications of Expert systems? Explain (08)
- Q8(a) Explain the structure of a PROLOG program (10)
- (b) With the help of an example, explain how to represent rules, facts and goals. (10)
- Q9(a) Explain data types in PROLOG (10)
- (b) Explain the term distributed artificial intelligence (10)
- Q10. Write short notes on any two. (2x10=20) 20
- (a) Predicate Logic. (b) Natural language understanding. (c) AI in game playing.
- Q11. Semantic Networks

J AND K BOARD OF TECHNICAL EDUCATION

MJ23

ROLL No: 64483

Semester:-6th (New)

Branch:- COMPUTER ENGINEERING /IT

Subject:- VISUAL PROGRAMMING USING .NET

Max Marks:-100

Time: 03 Hours

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1: a) What is VB .Net? Explain the main features of VB .Net. [5,5]
b) Describe the five different types of variables used in VB .Net with examples. [2x5]
- Q2: Define
a) Common Language Runtime (CLR) b) Common Type System (CTS)
c) Common Language Specifications (CLS) d) Microsoft Intermediate Language (MSIL) [4x5]
- Q3: a) What is an IDE in the context of VB .Net? [10]
b) List and briefly explain the key components of the Visual Studio IDE for VB .Net development. [10]
- Q4: a) Explain Sub Procedure, function in context of VB .Net [10]
b) Explain difference between ByVal and ByRef with the help of example. [10]
- Q5: a) Discuss the importance of exception handling in VB .Net. [10]
b) Explain the try-catch-finally block and its role in exception handling with an example. [10]
- Q6: a) What are control structures in VB .Net? [10]
b) Compare and contrast the If-Then-Else and Select Case statements in VB .Net with suitable examples. [10]
- Q7: a) Explain the concept of database connectivity in VB .Net. [10]
b) Discuss the steps involved in connecting to a database and performing select query. [10]
- Q8: a) What are event handlers in VB .Net? [10]
b) List four event handlers and four property of any three controls in VB .Net and explain how to use them. [10]
- Q9: a) Explain what is Crystal Reports and how to connect them to a database? [10]
b) Explain Request and response object in Asp dot net and their uses. [10]
- Q10: a) Explain web service and list steps to create a web service [10]
b) Explain three tier Client Server architecture [10]

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Class: 6TH Semester

Branch: Elect/ Mech/ Auto/ WT/ T&T/ FT/ E&C/ ME/ Comp/ IT/ Arch/ I&C/ GT

Subject: Basics of Management

Time: 3 Hours

M. Marks: 100

Scheme: New

Note: Attempt any five questions. All questions carry equal marks.

1	Define the term Management. State its features. How does Management differ from Administration?	20
2(a)	Describe the organization structure suitable for large sized organization.	10
2(b)	Explain the methods of improving motivation in an organization.	10
3	Explain in detail the code of professional ethics.	20
4	What is Leadership? Discuss the need and importance of leadership in management of business organization.	20
5	Define and explain the salient features of Factory Act 1948.	20
6(a)	Define Preventive maintenance. What are the objectives of preventive maintenance?	10
6(b)	Explain briefly the terms: patents and copyrights	10
7	"Success or failure of a consumer is directly related to Pricing Decision." Comment. Explain nature and importance of cost- benefit analysis.	20
8	Explain in detail Excise duty and custom duty	20
9	Explain the need and importance of Customer Relationship Management	20
10	Explain in detail the concept of Quality Assurance.	20

Semester:-6th (New)

Branch:- INFORMATION TECHNOLOGY

Subject:- Advanced Database Management Systems

Max Marks:-100

Time: 03 Hours

 ATTEMPT ANY FIVE QUESTIONS. ALL QUESTIONS CARRY EQUAL MARK

- Q1. What do you mean by data models. Explain various data models. (20 marks)
- Q2. What is Database Normalization? Explain first, second and third normal forms with the help of suitable examples. (20 marks)
- Q3. What is distributed database, describe advantages and disadvantages of distributed databases. (20 marks)
- Q4. Explain various types of data fragmentation techniques with suitable examples. (20 marks)
- Q5. (A) Explain the concept of object identifier (OID) in ODBMS. (10 marks)
 (B) What is a type constructor, what are various type constructors in ODBMS. (10 marks)
- Q6. Write a short note on SQL management studio? Write down various steps involved in installing the SQL server. (20 marks)
- Q7. (A) Explain various DDL commands in SQL with the help of suitable examples. (10 marks)
 (B) What are aggregate and scalar functions in SQL with the help of examples, what is the effect of null values on the outcome of aggregate functions. (10 marks)
- Q8. What do you understand by Data Manipulation Language. Explain insert, update, delete and select statements with the help of suitable examples. (20 marks)
- Q9. (A) What are triggers? Differentiate between before and after trigger with example. (10 marks)
 (B) What are views? How can it be created? Explain with the help of example. (10 marks)
- Q10. Explain the use of following in SQL:
- (A) IF statement (B) While Statement
 (C) try and catch statements (D) Stored Procedures

J-22

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Visual Programming Using .Net
Scheme: New

Semester: 6th
M. Marks: 100

Branch: Computer Engg.
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. Briefly explain client server architecture? (10) [20]
- Q2. Briefly explain architecture of .Net framework? (10) [20]
- Q3. Explain:
A. Common Language Runtime (CLR)
B. Common Type System (CTS)
C. Common Language Specification (CLS) (5) [4x5]
D. Microsoft Intermediate Language (MSIL) (5)
- Q4. What do you understand by data providers, datasets, data reader, object command? (5) (5) [20]
- Q5. Explain with the help of an example, the concept of "Error handling using try.....Catch Block?" [20]
- Q6. What do you understand by loop? Explain with the help of an example, the concept of nesting of loops? [20]
- Q7. Explain:
A. Radio Buttons
B. Visual Inheritance (5)
C. Status Bar
D. Progress Bar [4x5]
- Q8. Explain what is a web server? Describe UDDI & SOAP? Explain the working of a web server? (3) [20]
- Q9. What do you mean by ASP.NET? Explain its features? (5) (5) [20]
- Q10. A. What do you understand by crystal report? (5) (5)
B. Explain:
i. Data Validation
ii. Data Adapters
iii. Command object
iv. List Boxes (5) [20]

MJ23

Semester: 6th (New)
 Subject: ARTIFICIAL INTELLIGENCE
 Max Marks: 100

Branch: COMPUTER ENGINEERING
 Time: 03 Hours

Note:- Attempt any five Questions.

- Q1(a) Define Artificial Intelligence. Explain the history and application areas of AI. (15) 10
- (b) Explain State Space representation of any AI problem. (05)
- Q2(a) Explain the Minimax search with example. (12)
- (b) Explain the importance of Heuristic Search in AI problem solving. (05) 10
- Q3(a) Define expert systems. What are the components of an expert system? Explain (12)
- (b) What are the various characteristics of an Expert System? (08) 20
- Q4(a) Explain Information and knowledge in AI. What are the various modes in knowledge representation? (12)
- (b) Describe the different types of users and their role in an expert system. (08)
- Q5(a) Define knowledge representation. What are the various knowledge representation methods? Explain (12)
- (b) List and explain the components of a Robotic System. (08)
- Q6(a) List and explain the latest development trends in Artificial Intelligence. (10)
- (b) Explain the role of AI in natural language understanding. (10)
- Q7(a) What are the various Robots developed using artificial intelligence techniques? (12)
- (b) What are the various applications of Expert systems? Explain (08)
- Q8(a) Explain the structure of a PROLOG program. (10)
- (b) With the help of an example, explain how to represent rules, facts and goals. (10)
- Q9(a) Explain data types in PROLOG. (10)
- (b) Explain the term distributed artificial intelligence. (10)
- Q10(a) Write short notes on any two. (2x 10=20) 20
- (i) Predicate Logic (ii) Natural language understanding (iii) game playing
- (iv) neural Networks

MJ23

J & K BOARD OF TECHNICAL EDUCATION

ROLL No: _____

Semester:- 6th (New)

Branch:- COMPUTER ENGINEERING

Subject:- MOBILE COMPUTING(ELECTIVE II)

Max Marks:- 100

Time: 03 Hours

NOTE:- Attempt any five questions. All carry equal marks.

- ✓ Q1. Explain the first four generations of the wireless networks. [4X5]
- ✓ Q2. ✓(A) Write down the difference between wireless and wireline data networks. [10]
✓(B) What is Mobile Computing? Give its applications. [10]
- ✓ Q3. ✓(A) With diagram explain the architecture of GSM network. [10]
✓(B) Give functionality of GSM network elements. [10]
- ✓ Q4. Write short notes on {any two}:
✓(A) GPRS ✓(B) Middleware (C) J2ME [2x10]
- Q5. (A) Define Wimax. Explain its features. [10]
(B) What are various applications of mobile computing? [10]
- Q6. Write notes on:
(A) CDMA Technologies (B) Gateways [2X10]
- Q7. (A) What is RFID? What are its applications? [10]
(B) Explain various services and security issues concerned with mobile computing [10]
- Q8. What is WAP? Explain its features and applications. [20]
- Q9. (A) How mobile operating systems are different than traditional standalone operating systems. [10]
(B) Explain different features of Symbian operating system. [10]
- ✓ Q10. Write short notes on following (any two)
✓(A) MMS.
✓(B) Edge technology.
✓(C) 3G Mobile networks. [2x10]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Semester : 6th

Branch: Computer Engineering

Subject: Artificial Intelligence

Scheme: New

Time : 3 Hrs

Session: ND22B6SCE

M.M.: 100

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1. Define the term Artificial Intelligence. What are the application areas of artificial intelligence? (20)
- Q2. What are heuristic search techniques? Using example, explain best first search? (20)
- Q3. Explain expert systems. State and explain the various components of an expert system? (20)
- Q4. What is state space representation? Explain with an example? (20)
- Q5. What is knowledge representation? Explain the knowledge representation methods? (20)
- Q6. Explain the role and importance of expert knowledge engineer and user in expert systems? (20)
- Q7. How are rules represented in PROLOG? Explain the statements used in PROLOG with examples? (20)
- Q8. Explain the concept of Distributed Artificial Intelligence. What are its advantages? (20)
- Q9. What are the features of PROLOG? With the help of an example explain the structure of PROLOG program? (20)
- Q10. What are the current State of the art developments in Artificial Intelligence? Give a few examples? (20)

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J & K BOARD OF TECHNICAL EDUCATION

ROLL No: _____

Semester:- 6th (New)

Branch:- COMPUTER ENGINEERING

Subject:- MOBILE COMPUTING (ELECTIVE B)

Max Marks:- 100

Time: 03 Hours

NOTE:- Attempt any five questions. All carry equal marks.

- ✓ Q1. Explain the first four generations of the wireless networks. [4x5]
- ✓ Q2. ✓(A) Write down the difference between wireless and wireline data networks. [10]
✓(B) What is Mobile Computing? Give its applications. [10]
- ✓ Q3. ✓(A) With diagram explain the architecture of GSM network. [10]
✓(B) Give functionality of GSM network elements. [10]
- ✓ Q4. Write short notes on (any two):
✓(A) GPRS ✓(B) Middleware (C) J2ME [2x10]
- Q5. (A) Define Wimax. Explain its features. [10]
(B) What are various applications of mobile computing? [10]
- Q6. Write notes on:
(A) CDMA Technologies (B) Gateways [2x10]
- Q7. (A) What is RFID? What are its applications? [10]
(B) Explain various services and security issues concerned with mobile computing. [10]
- Q8. What is WAP? Explain its features and applications. [20]
- Q9. (A) How mobile operating systems are different than traditional standalone operating systems. [10]
(B) Explain different features of Symbian operating system. [10]
- ✓ Q10. Write short notes on following (any two)
✓(A) MMS.
✓(B) Edge technology.
✓(C) 5G Mobile networks. [2x10]



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J-22 JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Visual Programming Using .Net Semester: 6th Branch: Computer Engg.
Scheme: New M. Marks: 100 Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
Figures to the right indicate marks.

- Q1. Briefly explain client server architecture? (10) [20]
- Q2. Briefly explain architecture of .Net framework? (10) [20]
- 3. Explain:
 - A. Common Language Runtime (CLR) (5) (5) [4x5]
 - C. Common Language Specification (CLS) (5) [4x5]
 - D. Microsoft Intermediate Language (MSIL) (5) [4x5]
- Q4. What do you understand by data providers, datasets, data reader, object command? (5) (5) [20]
- Q5. Explain with the help of an example, the concept of "Error handling using try.....Catch Block? [20]
- Q6. What do you understand by loop? Explain with the help of an example, the concept of nesting of loops? [20]
- Q7. Explain:
 - A. Radio Buttons (5)
 - B. Visual Inheritance
 - C. Status Bar
 - D. Progress Bar
- Q8. Explain what is a web server? Describe UDDI & SOAP? Explain the working of a web server? (5) [4x5]
- Q9. What do you mean by ASP.NET? Explain its features? (5) (5) [20]
- Q10. A. What do you understand by crystal report? (5) (5) [20]
- B. Explain:
 - i. Data Validation
 - ii. Data Adapters
 - iii. Command object
 - iv. List Boxes

J AND K BOARD OF TECHNICAL EDUCATION

MJ23

ROLL No: _____

Semester:-6th (New)

Branch:- COMPUTER ENGINEERING

Subject:- INSTALLATION, MAINTENANCE AND TROUBLESHOOTING OF COMPUTER NETWORKS

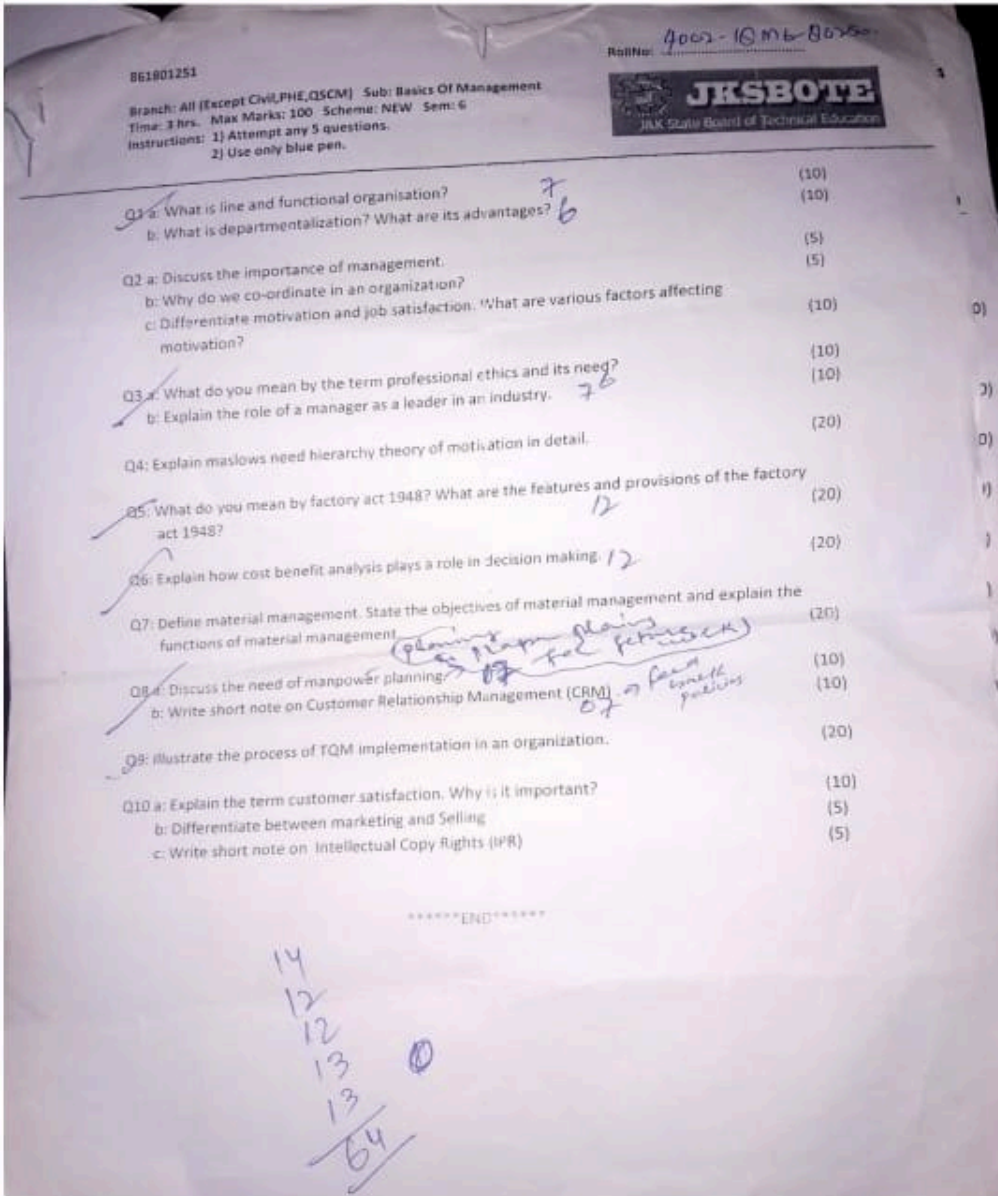
Max Marks:-100

Time: 03 Hours

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1. Explain with the help of a diagram the TCP/IP model of networking. (20)
- Q2. (A) Explain different steps involved in installation of computer systems and peripheral devices in a computer lab. (10)
(B) Explain different environmental requirements for a computer lab. (10)
- Q3. (A) Explain the preventive and corrective maintenance measures for a computer lab. (10)
(B) Explain importance of grounding and shielding in a workstation. (10)
- Q4. Explain following terms:
(A) DNS (B) DOMAIN (C) IP Address (D) Work Group (4x5)
- Q5. (A) Explain 3-Tier Network Architecture of a network. (10)
(B) Explain different steps involved in creating a workgroup. (10)
- Q6. (A) Explain the steps involved in troubleshooting of a Router. (10)
(B) Write a note on LAN failure. (10)
- Q7. Explain in detail the power supply requirements and considerations for computer and its peripherals. (20)
- Q8. Explain the benefits of sharing devices on a network. Write down different steps involved in sharing a printer on a network. (20)
- Q9. What is sub-netting? Subnet any class C IP address into 4 subnets. (20)
- Q10. Write short notes on:
(A) Access Point Configuration (B) Address Management (2x10)

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J & K BOARD OF TECHNICAL EDUCATION

MJ23

ROLL No: _____

Semester:-6th (New)

Branch:- COMPUTER ENGINEERING

Subject:- ARTIFICIAL INTELLIGENCE

Max Marks:-100

Time: 03 Hours

Note:- Attempt any five Questions.

- Q1. a) What is State Space Representation. Represent Water Jug problem using State Space Representation? (10) ✓
b) Write short note on: (10) ✓
i) MinMax Search ii) Natural Language Understanding
- Q2. a) What is Artificial Intelligence. Explain the various application of Artificial Intelligence? (10) ✓
b) Explain in brief history of Artificial Intelligence? (10) ✓
- Q3. a) What is Hill Climbing Search. Discuss the various problem of Hill Climbing? (10)
b) Differentiate between Breadth First Search (BFS) and Depth First Search (DFS)? (10)
- Q4. a) What is an Expert System. Explain the Architecture of an Expert System? (10) ✓
b) Explain the various steps to built an Expert System? (10) ✓
- Q5. What is Knowledge Representation. Explain the various techniques of knowledge Representation? (20)
- Q6. Convert the following statements into logical Representation:
1. If I will go to Australia, then I will earn more money. ✓
2. He goes to play a match if and only if it does not rain.
3. He is poor but honest.
4. Every man respects his parent.
5. Not all students like both Mathematics and Science.
6. Some boys play cricket.
7. We will leave whenever he comes.
8. Not every animal dislikes honey. (20)
- Q7. a) What is Prolog. Explain the various datatypes of Prolog? (10)
b) Write short note on (10)
1. Facts 2. Rules 3. Atoms
- Q8. a) What is Robotics. Explain the various components of Robotics System? (10)
b) Explain distributed Artificial Intelligence? (10)
- Q9. a) Explain the various current developments in Artificial Intelligence? (10)
b) Differentiate between Knowledge and information? (10)
- Q10. a) What is Heuristic Search. Explain A* Search with the help of an example? (10)
b) Explain the various issues of Artificial Intelligence? (10)

J & K BOARD OF TECHNICAL EDUCATION

RND225SCE

Semester: 5th

Branch: Computer Engineering

Subject: Advance Data Base Management System

Scheme: New

Time : 3 Hrs

Session: ND22

M.M. : 100

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1. What do you understand by DATA Independence? Briefly explain the concept of Normalization? (20)
- Q2. What do you understand by Data Models? Explain? (20)
- Q3. What do you understand by Distributed databases? What are the various types of distributed database systems? (20)
- Q4. Explain:
a) Data definition language b) Scalar functions with respect to DDL
c) Null values w.r.t DDL d) Aggregate functions w.r.t DDL (20)
- Q5. What do you understand by Data Manipulation language? Explain the working of a join operator with the help of an example? (20)
- Q6. Explain the concept of Triggers? (20)
- Q7. What do you understand by Indexes? What are the advantages and disadvantages of views? (20)
- Q8. Explain the terms given below with the help of examples:
a) Try and Catch Statements b) If Statement & While Statement (20)
- Q9. Explain:
a) Object Definition Language. b) Object Query language
c) Object Relational Systems d) SQL3 (20)
- Q10. What do you understand by backup & recovery with respect of installation of SQL server? Also explain steps to install SQL Server? (20)

J & K BOARD OF TECHNICAL EDUCATION

RND225SCE

Semester: 5th

Branch: Computer Engineering

Subject: Advance Data Base Management System

Scheme: New

Time : 3 Hrs

Session: ND22

M.M. : 100

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1. What do you understand by DATA Independence? Briefly explain the concept of Normalization? (20)
- Q2. What do you understand by Data Models? Explain? (20)
- Q3. What do you understand by Distributed databases? What are the various types of distributed database systems? (20)
- Q4. Explain:
a) Data definition language b) Scalar functions with respect to DDL
c) Null values w.r.t DDL d) Aggregate functions w.r.t DDL (20)
- Q5. What do you understand by Data Manipulation language? Explain the working of a join operator with the help of an example? (20)
- Q6. Explain the concept of Triggers? (20)
- Q7. What do you understand by Indexes? What are the advantages and disadvantages of views? (20)
- Q8. Explain the terms given below with the help of examples:
a) Try and Catch Statements b) If Statement & While Statement (20)
- Q9. Explain:
a) Object Definition Language. b) Object Query language
c) Object Relational Systems d) SQL3 (20)
- Q10. What do you understand by backup & recovery with respect of installation of SQL server? Also explain steps to install SQL Server? (20)

8618010234

RollNo:

Branch: Computer Sub: Installation, Maintenance and Troubleshooting
of Computer Networks

Time: 3 hrs. Max Marks: 100 Scheme: New Sem: 6

Instructions: 1) Attempt any Five questions
2) Use only blue pen.



JKSBOTE

J&K State Board of Technical Education

Q1: How are Sites for Computer Systems/Labs Prepared and designed. Also write in detail about the preventive maintenance of computer systems. (20)

Q2: What is troubleshooting? Discuss the various steps involved in troubleshooting? (20)

Q3 a) what are the reasons of LAN failure . How will you manage them? (10)

b) What are Bridges .explain the advantages and disadvantages of Network Bridges (10)

Q4 a) Differentiate between:

i) Domain and workgroup

ii) Switch and Hub. (10)

b) Explain the different types of addressing used in computer network? (10)

Q5: Explain in detail the TCP/IP model of networking. (20)

Q6 a) What are I/O channels .Explain the different types of I/O channels? (10)

b) Explain the working of DNS. (10)

Q7: What is Squid Proxy? Explain in detail its functioning.

Q8 a) Explain 2-tier and 3-tier network architecture ? (10)

b) Write short note on a) VSAT b) PSTN c) Leased line. (10)

Q9 a) What is Sub-netting? What is the need of sub-netting the network .Explain Subnet mask in detail. (10)

b) What are routers. Explain the various commands used for configuring a router? (10)

Q10 a) Describe some of the standard symbols to create floor layout ? (10)

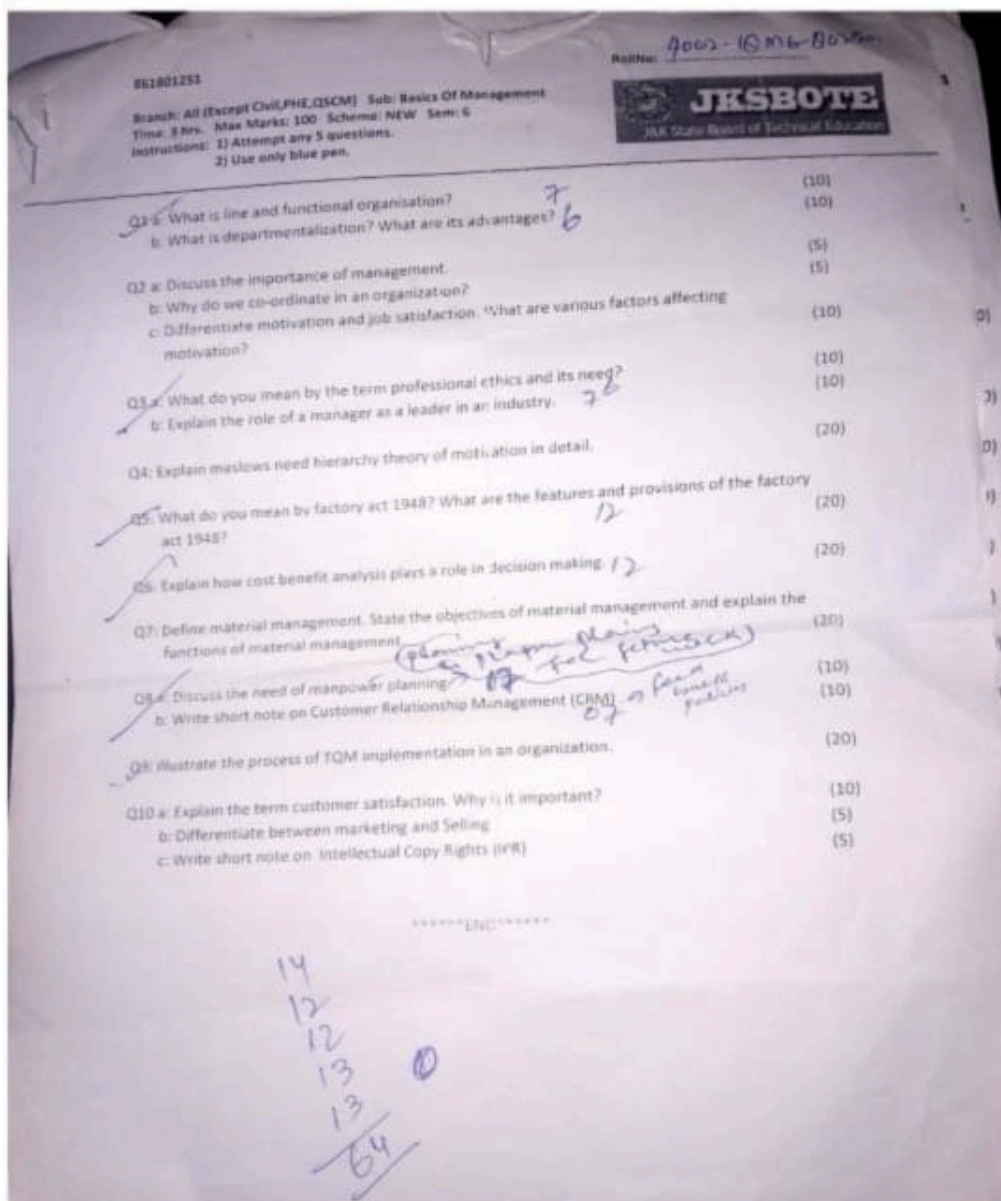
b) Explain different types of networking cables in detail ? (10)

*****END*****

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Page 1 / 1



← IMG-20190512-WA0007



881802132

Branch: Computer Engineering
Sub: Installation, Maintenance & Troubleshooting of Computer Networks
Time: 3 hrs. Max Marks: 100 Scheme: New Sem: 6
Instructions: 1) Attempt any 5 questions.
2) Use only blue pen.

Rollno: 62816



Qno1 a: Discuss the points to be kept in mind while installing the computer system.

b: What are the essentials of design of a computer room?

Qno2 a: Differentiate between preventive maintenance and corrective maintenance.

b: What are the installation steps required while installing a printer?

Qno3 a: What are the environmental requirements of computer system and peripherals during installation?

b: What are bridges? Explain the advantages and disadvantages of network bridges.

Qno4 a: Differentiate between:-

- (A) Domain and Workgroup
- (B) Switch and Hub

b: Explain the different types of addressing used in computer network.

Qno5 a: Explain the domain name system (DNS). Discuss the main objective of using DNS.

b: Explain client server technology. List the advantages and disadvantages of client server technology.

Qno6 a: Explain various services used to manage computer networks.

b: What do you understand by the term "grounding"? Explain the various types of grounding.

Qno7 a: Write short note on the following:-

- (A) IPAM (ip address management)
- (B) Access point
- (C) LAN cards

b: What are the reasons of LAN failure? How will you manage them?

Qno8 a: Explain different types of networking cables in detail.

b: Explain the various methods of shielding used to protect the electronic equipment from EMI.

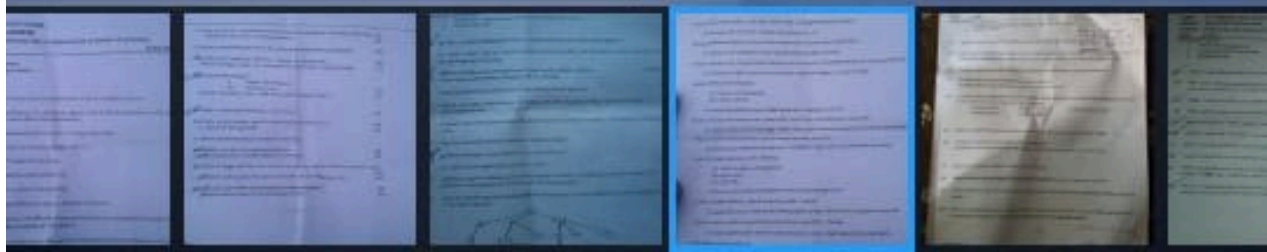
Qno9 a: what are I/O channels? Explain the different types of I/O channels.

b: Explain peer-to-peer network model. Also list its various advantages and disadvantages.

✓ Qno10 Write Short notes on

- i) Trouble shooting of computers
- ii) PC Specifications

*****END*****



Roll NO. : 2207-16M6-3161

8

SEMESTER : 6TH SEMESTER (NEW SCHEME).

COURSE : COMPUTER ENGINEERING.

SUBJECT : INSTALLATION, MAINTENANCE AND TROUBLESHOOTING OF COMPUTER NETWORKS.

DURATION : 3 HRS.

MAX. MARKS

Instructions for candidate:-

- i. ATTEMPT ANY FIVE QUESTIONS.
- ii. ALL QUESTIONS CARRY EQUAL MARKS.
- iii. USE BLUE PEN ONLY.

Explain in detail about preventive and corrective maintenance of computer systems.

What are the different specifications for a computer system that should be considered while purchasing a new system and how their value affects the performance?

Explain in detail the differences between hub, switch, bridge and router.

What is DNS? Explain in detail the working of DNS on internet.

Explain in detail the TCP/IP model of networking.

Explain in detail the 3-tier client-server architecture.

What is Squid Proxy? Explain in detail its functioning.

Explain in detail the functions of Data link layer in computer networks.

What is an IPv4 address? What are its different classes and how they are designed? Calculate an appropriate range of IP addresses of different classes of IP addresses.

What is a manageable switch and how is it different from other types of switch. What are the various configuration parameters that can be configured in the manageable switch?

JAMMU & KASHMIR STATE BOARD OF TECHNICAL EDUCATION

MJ- 22

Class: 6th Semester

Branch: Computer Engineering

Max Marks: 100

Roll No.:

Subject: Mobile Computing

Time: 3 Hours

Note : Attempt any five questions. All question carry equal marks

14/60 52

- Q1. Explain gateway and middle ware. (10,10)
- Q2. Explain the difference between wireless and wired data networks. (20)
- Q3. What is GPRS? Explain its architecture. (20)
- Q4. Explain GSM architecture and its Principles. (20)
- Q5. Describe in detail the 3-tier architecture of mobile computing and explain the various design considerations for mobile computing. (20)
- Q6. Explain in detail RFID and its architecture (10,10)
- Q7. What is Wimax? Explain its features. (10,10)
- Q8. Define J2ME technology? Explain the various design constraints in designing the application for handheld devices. (20)
- Q9. Explain the standard IEEE 802.11.a/b/g/n. (20)
- Q10. Explain in detail Bluetooth architecture. (20)
- Q11. Briefly explain palm and symbian OS features and architecture. (20)
- Q12. a. Define the applications of mobile computing. (10,10)
- b. Explain the various services and security issues concerned with mobile computing.

ROLL NO. : 31601

861601349

CLASS : 6TH SEMESTER (NEW SCHEME).

BRANCH : COMPUTER ENGINEERING.

SUBJECT : INSTALLATION, MAINTENANCE AND TROUBLESHOOTING OF COMPUTER NETWORKS.

TIME : 3 HRS.

MAX. MARKS: 100

Instructions for candidate:-

- I. ATTEMPT ANY FIVE QUESTIONS.
- II. ALL QUESTIONS CARRY EQUAL MARKS.
- III. USE BLUE PEN ONLY.

- Q1. Explain in detail about preventive and corrective maintenance of computer systems.
- Q2. What are the different specifications for a computer system that should be considered while purchasing a new system and how their value affects the performance?
- Q3. Explain in detail the differences between hub, switch, bridge and router.
- Q4. What is DNS? Explain in detail the working of DNS on internet.
- Q5. Explain in detail the TCP/IP model of networking.
- Q6. Explain in detail the 3-tier client-server architecture.
- Q7. What is Squid Proxy? Explain in detail its functioning.
- Q8. Explain in detail the functions of Data link layer in computer networks.
- Q9. What is an IPv4 address? What are its different classes and how they are designed? Calculate and write the range of IP addresses of different classes of IP addresses.
- Q10. What is a manageable switch and how is it different from other types of switch. What are the various configuration parameters that can be configured in the manageable switch?

MJ-22 JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Installation, Maintenance & Troubleshooting of Computer Networks

Semester: 6th
Scheme: New

M. Marks: 100

Branch: Computer Engg.
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

Q1. Explain briefly preventive and corrective maintenance? What do you understand by site preparation? [20]

Q2. Explain:
A. LAN Failure B. Hub C. Bridge D. Switches [4x5]

Q3. Describe power supply requirements of computer and peripherals? What do you understand by "grounding shielding"? [20]

Q4. Explain in detail the 2-Tier client-server architecture? [20]

Q5. What is Squid Proxy? Explain its functioning? [20]

Q6. What do you understand by DNS? DOMAIN, Workgroup? [20]

Q7. A. What do you understand by access point configuration? [10x2]
B. Briefly explain configuration of manageable switch?

Q8. Explain: [10x2]
A. Troubleshooting of Routers

B. Router configuration [20]

Q9. Explain different types of addressing used in computer network? [20]

Q10. Explain with the help of a suitable diagram, TCP/IP model of networking? [20]

leased lines for high-speed internet access. The cost of leased lines is high, starting at 128 Kbps, reduce this cost somewhat and can be found in some apartment buildings

MJ23

J & K BOARD OF TECHNICAL EDUCATION

ROLL No: _____

Semester:-6th (New)

Branch:- COMPUTER ENGINEERING

Subject:- MOBILE COMPUTING(ELECTIVE II)

Time: 03 Hours

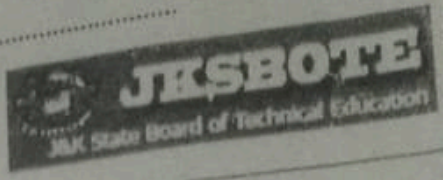
Max Marks:-100

NOTE:- Attempt any five questions. All carry equal marks.

- ✓ Q1. Explain the first four generations of the wireless networks. [4X5]
- ✓ Q2. ✓(A) Write down the difference between wireless and wireline data networks. [10]
✓(B) What is Mobile Computing? Give its applications. [10]
- ✓ Q3. ✓(A) With diagram explain the architecture of GSM network. [10]
o (B) Give functionality of GSM network elements. [10]
- ✓ Q4. Write short notes on (any two): [2x10]
✓(A) GPRS ✓(B) Middleware (C) J2ME
- Q5. (A) Define Wimax. Explain its features. [10]
(B) What are various applications of mobile computing? [10]
- Q6. Write notes on: [2X10]
(A) CDMA Technologies (B) Gateways
- Q7. (A) What is RFID? What are its applications? [10]
(B) Explain various services and security issues concerned with mobile computing. [10]
- Q8. What is WAP? Explain its features and applications. [20]
- Q9. (A) How mobile operating systems are different than traditional standalone operating systems. [10]
(B) Explain different features of Symbian operating system. [10]
- ✓ Q10. Write short notes on following (any two) [2x10]
(A) MMS.
✓(B) Edge technology.
✓(C) 5G Mobile networks.

86190186

Rollno:



Branch: Computer Engineering Sub: Mobile Computing
Time: 3 hrs. Max Marks: 100 Scheme: New Sem: 6
Instructions: 1) Attempt any 5 questions.
2) Use only blue pen.

- Qno1 a: Define gateway. How gateways are used in networks? (10)
- b: Bring out the difference between wireline and wireless data networks. (10)
- Qno2 Describe in detail the 3-tier Mobile Computing Architecture and explain the various design considerations for Mobile Computing. (20)
- Qno3 What is GPRS? Also explain its architecture. (10)
- Qno4 a: What are the features of mobile computing? List various mobile computing devices. (10)
- b: What is CDMA? Explain the CDMA technology in detail. (10)
- Qno5 a: Explain any two 2G cellular standards. (10)
- b: What is WiMAX? Explain its features. (10)
- Qno6 a: IPv6 is advanced addressing than IPv4. Explain. (10)
- b: What is RFID? Explain it with the help of tagging. (10)
- Qno7 Explain in detail WAP and MMS Protocols (10)
- Qno8 a: Write the features of EDGE and 3G technology. (10)
- b: What is mobile middle ware? What are its types? Explain. (10)
- Qno9 a: ~~Explain the IEEE 802.11 architecture.~~ (10)
- b: Give the features of palm and symbian operating system. (10)
- Qno10 a: Briefly explain J2ME technology. (10)
- b: What are the design constraints in designing handheld devices? (10)

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MI-22

Subject: Basics of Management

Scheme: New

Semester: 6th

M. Marks: 100

Branch: Computer Engg.

Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- 1516
- 100
- 5510331
- Q1. Define management also discuss its functions in detail? [20]
- Q2. Explain the management of men, materials & machinery in an organization? [20]
- Q3. Define culture in relation to management, briefly explain the pillars of organization culture? [20]
- Q4. How are qualities of an effective leader connected with effective motivation management? [20]
- Q5. State and explain the necessity of industrial laws? [20]
- Q6. Name & explain the various methods employed for training workers? [20]
- Q7. What do you mean by marketing? Also state the objectives of market research? [20]
- Q8. What do you mean by patent? Describe the advantages of patent to the behavior? [20]
- Q9. Write down the procedure for registration of a trade mark. State the functions of trade mark? [20]
- Q10. What do you mean by ethics in business. Also explain main functions of social conduct? [20]

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is highest power/status
as we see who is

MJ-22 JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Artificial Intelligence
Scheme: New

Semester: 6th
M. Marks: 100

Branch: Computer
Time: 03 H

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Grades 333*
- Q1. What do you understand by artificial Intelligence? List few applications of artificial Intelligence in games? *12* [20]
- Q2. Briefly explain architecture of a typical expert system with the help of a suitable diagram. *15* [20]
- Q3. What do you understand by State Space Representation? Explain the importance of "Search" in State Space Representation? [20]
- Q4. Mention some of the heuristic search techniques? Explain any one of the heuristic search technique with the help of a suitable example? [20]
- Q5. What are the different data types in PROLOG? Explain briefly? [20]
- Q6. What is an expert system? Explain its characteristics? *13* [20]
- Q7. (A) What is Knowledge Representation in AI? Name the techniques involved in Knowledge Representation?
- (B) What do you understand by semantic network with examples? *5* [20]
- Q8. What is distributed AI? Mention few examples of AI in our everyday lives? *5* [20]
- Q9. Explain the role of AI in the fight against Covid-19? [20]
- Q10. Explain briefly the evolution of AI & list few issues of AI in games? [20]

861801052

Branch: Computer Sub: Artificial Intelligence
Time: 3 hrs. Max Marks: 100 Scheme: New Sem: 6
Instructions: 1) Attempt any 5 questions.
2) Use only blue pen.

Roll No:



Q1: What is Artificial Intelligence and how it has impacted/will impact the world. (20)

Q2 a: Write a short note on natural language processing. (5)

b: What are the various issues of AI? (5)

c: What are the different search processes in artificial intelligence? Write algorithm for best first search? (10)

Q3:a: Write short note on i) a* algorithm ii) heuristic search. (10)

b) Explain hill climbing method in detail. (10)

Q4: Use Propositional Logic to Prove (D) from A,B and C below: (20)

A: $P \rightarrow (Q \leftrightarrow R)$

B: $\sim(Q \leftrightarrow R)$

C: $(S \wedge Q) \rightarrow P$

D: $\sim P \wedge (S \rightarrow \sim Q)$

(Truth Table Can Be Used For the Same)

Q5: Explain in detail the architecture of typical expert system. (20)

Q6 a: What are the differences between information and knowledge? (10)

b: Explain semantic network using example. (10)

Q7: Write short note on the following: (a) propositional logic (b) first order predicate logic (10)

Q8 a: Explain the current developments in robotics. (10)

b: What is robotics and components of robotic system? (10)

Q9 a: What are the various current developments in artificial intelligence besides robotics (10)

b: Discuss the limitations of prolog. (10)

Q10: a: What are the data types used in prolog language. (10)

b: Discuss the structure of prolog. (10)

J-22

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Visual Programming Using .Net
Scheme: New

Semester: 6th
M. Marks: 100

Branch: Computer Engg
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. Briefly explain client server architecture? (10) [20]
- Q2. Briefly explain architecture of .Net framework? (10) [20]
- Q3. Explain:
A. Common Language Runtime (CLR)
B. Common Type System (CTS)
C. Common Language Specification (CLS)
D. Microsoft Intermediate Language (MSIL) (5) (5) [4x5]
- Q4. What do you understand by data providers, datasets, data reader, object command? (5) (5) [20]
- Q5. Explain with the help of an example, the concept of "Error handling using try.....Catch Block? [20]
- Q6. What do you understand by loop? Explain with the help of an example, the concept of nesting of loops? [20]
- Q7. Explain:
A. Radio Buttons
B. Visual Inheritance
C. Status Bar
D. Progress Bar (5) [4x5]
- Q8. Explain what is a web server? Describe UDDI & SOAP? Explain the working of a web server? (5) [20]
- Q9. What do you mean by ASP.NET? Explain its features? (5) (5) [20]
- Q10. A. What do you understand by crystal report? (5) [20]
B. Explain:
i. Data Validation
ii. Data Adapters
iii. Command object
iv. List Boxes

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Class: 6th Semester

Branch: Elect/ Mech/ Auto/ WT/ T&T/ FT/ E&C/ ME/ Comp/ IT/ Arch/ I&C/ GT

Subject: Basics of Management

Time: 3 Hours

M. Marks: 100

Scheme: New

Note: Attempt any five questions. All questions carry equal marks.

1	Define the term Management. State its features. How does Management differ from Administration?	20
2(a)	Describe the organization structure suitable for large sized organization.	10
2(b)	Explain the methods of improving motivation in an organization.	10
3	Explain in detail the code of professional ethics.	20
4	What is Leadership? Discuss the need and importance of leadership in management of business organization.	20
5	Define and explain the salient features of Factory Act 1948.	20
6(a)	Define Preventive maintenance. What are the objectives of preventive maintenance?	10
6(b)	Explain briefly the terms: patents and copyrights	10
7	"Success or failure of a consumer is directly related to Pricing Decision." Comment. Explain nature and importance of cost- benefit analysis.	20
8	Explain in detail Excise duty and custom duty	20
9	Explain the need and importance of Customer Relationship Management	20
10	Explain in detail the concept of Quality Assurance.	20

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CLASS : 6TH SEMESTER (NEW SCHEME)
BRANCH : MECH / ELECT / ME / E&C / COMP / IT / ARCH / AUTO / WT / T&T / FT / GT / I&C.
SUBJECT : BASICS OF MANAGEMENT.

TIME : 3 HRS.

MAX. MARKS: 1

INSTRUCTIONS FOR CANDIDATE:-

- i. ATTEMPT ANY FIVE QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.
- ii. USE BLUE PEN ONLY.

- Q1. Define 'Management'. Explain the functions of management.
- Q2. Define 'Values'. What is the importance of values? Explain the factors which affect the individual behaviour.
- Q3. (a) Explain the hierarchical management structure.
(b) Differentiate between manager and leader.
- Q4. Define 'Leadership'. What are its characteristics? Explain.
- Q5. Explain the salient features of Minimum Wages Act, 1948.
- Q6. Define 'Human resource development'. What are its objectives? Explain.
- Q7. Explain the steps involved in manpower planning process.
- Q8. (a) Explain 'Just in time' concept.
(b) Explain 'Total quality management.'
- Q9. Define 'Customer relationship management'. What are its functions? Explain.
- Q10. What is 'inspection'? Describe the functions and objectives of inspection.

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Semester : 6th
Subject: Artificial Intelligence
Time : 3 Hrs

Session: ND22B6SCE

Branch: Computer Engineering
Scheme: New
M.M.: 100

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1. Define the term Artificial Intelligence. What are the application areas of artificial intelligence? (20)
- Q2. What are heuristic search techniques? Using example, explain best first search? (20)
- Q3. Explain expert systems. State and explain the various components of an expert system? (20)
- Q4. What is state space representation? Explain with an example? (20)
- Q5. What is knowledge representation? Explain the knowledge representation methods? (20)
- Q6. Explain the role and importance of expert knowledge engineer and user in expert systems? (20)
- Q7. How are rules represented in PROLOG? Explain the statements used in PROLOG with examples? (20)
- Q8. Explain the concept of Distributed Artificial Intelligence. What are its advantages? (20)
- Q9. What are the features of PROLOG? With the help of an example explain the structure of PROLOG program? (20)
- Q10. What are the current State of the art developments in Artificial Intelligence? Give a few examples? (20)

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JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Semester : 6th
Subject: Artificial Intelligence
Time : 3 Hrs

Branch: Computer Engineering
Scheme: New
M.M.: 100

Session: ND22B6SCE

Note:- Attempt any five Questions. All Questions carry equal marks.

- Q1. Define the term Artificial Intelligence. What are the application areas of artificial intelligence? (20)
- Q2. What are heuristic search techniques? Using example, explain best first (20)
- Q3. Explain State and explain the various components of an expert system? (20)
- Q4. What is state space representation. Give an example? (20)
- Q5. What is knowledge representation? Explain knowledge representation methods? (20)
- Q6. Explain the role and importance of expert knowledge engineer and user in expert systems? (20)
- Q7. How are rules represented in PROLOG? Explain the statements used in PROLOG with examples? (20)
- Q8. Explain the concept of Distributed Artificial Intelligence. What are its advantages? (20)
- Q9. What are the features of PROLOG? With the help of an example explain the structure of PROLOG program? (20)
- Q10. What are the current State of the art developments in Artificial Intelligence? Give a few examples? (20)

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Q9. Explain
Q10. Define Dis

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CLASS : 6TH SEMESTER (NEW SCHEME)
BRANCH : MECH / ELECT / ME / E&C / COMP / IT / ARCH / AUTO / WT / T&T / FT / GT / I&C.
SUBJECT : BASICS OF MANAGEMENT.

TIME : 3 HRS.

MAX. MARKS: 1

INSTRUCTIONS FOR CANDIDATE:-

- i. ATTEMPT ANY FIVE QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.
- ii. USE BLUE PEN ONLY.

- Q1. Define 'Management'. Explain the functions of management.
- Q2. Define 'Values'. What is the importance of values? Explain the factors which affect the individual behaviour.
- Q3. (a) Explain the hierarchical management structure.
(b) Differentiate between manager and leader.
- Q4. Define 'Leadership'. What are its characteristics? Explain.
- Q5. Explain the salient features of Minimum Wages Act, 1948.
- Q6. Define 'Human resource development'. What are its objectives? Explain.
- Q7. Explain the steps involved in manpower planning process.
- Q8. (a) Explain 'Just in time' concept.
(b) Explain 'Total quality management.'
- Q9. Define 'Customer relationship management'. What are its functions? Explain.
- Q10. What is 'inspection'? Describe the functions and objectives of inspection.
- *****

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MU-22

Subject: Basics of Management

Semester: 6th

Branch: Computer Engg.

Scheme: New

M. Marks: 100

Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- 1516
- 10
- 5518334
- Q1. Define management also discuss its functions in detail? [20]
- Q2. Explain the management of men, materials & machinery in an organization? [20]
- Q3. Define culture in relation to management, briefly explain the pillars of organization culture? [20]
- Q4. How are qualities of an effective leader connected with effective motivation management? [20]
- Q5. State and explain the necessity of industrial laws? [20]
- Q6. Name & explain the various methods employed for training workers? [20]
- Q7. What do you mean by marketing? Also state the objectives of market research? [20]
- Q8. What do you mean by patent? Describe the advantages of patent to the behavior? [20]
- Q9. Write down the procedure for registration of a trade mark. State the functions of trade mark? [20]
- Q10. What do you mean by ethics in business. Also explain main functions of social conduct? [20]

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BOM

is highest power/status
as we see who is

MJ-22

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Installation, Maintenance & Troubleshooting of Computer Networks

Branch: Computer Engg.

Semester: 6th
Scheme: New

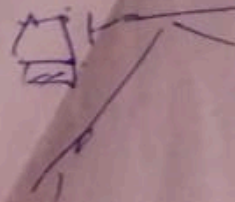
M. Marks: 100

Time: 3 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. Explain briefly preventive and corrective maintenance? What do you understand by site preparation? [20]
- Q2. Explain:
A. LAN Failure B. Hub C. Bridge D. Switches [4x5]
- Q3. Describe power supply requirements of computer and peripherals? What do you understand by "grounding shielding"? [20]
- Q4. Explain in detail the 2-Tier client server architecture? [20]
- Q5. What is Squid Proxy? Explain its functioning? [20]
- Q6. What do you understand by DNS? DOMAIN, Workgroup? [20]
- Q7. A. What do you understand by access point configuration?
B. Briefly explain configuration of manageable switch? [10x2]
- Q8. Explain:
A. Troubleshooting of Routers
B. Router configuration [10x2]
- Q9. Explain different types of addressing used in computer network?
- Q10. Explain with the help of a suitable diagram, TCP/IP model of network?



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MJ-22 JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

Subject: Artificial Intelligence
Scheme: New

Semester: 6th
M. Marks: 100

Branch: Computer Engg.
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- Q1. What do you understand by artificial Intelligence? List few applications of artificial Intelligence in games? [20]
- Q2. Briefly explain architecture of a typical expert system with the help of a suitable diagram? [20]
- Q3. What do you understand by State Space Representation? Explain the importance of "Search" in State Space Representation? [20]
- Q4. Mention some of the heuristic search techniques? Explain any one of the heuristic search technique with the help of a suitable example? [20]
- Q5. What are the different data types in PROLOG? Explain briefly? [20]
- Q6. What is an expert system? Explain its characteristics? [20]
- Q7.(A) What is Knowledge Representation in AI? Name the techniques involved in Knowledge Representation?
- B) What do you understand by semantic network with examples? [20]
- Q8. What is distributed AI? Mention few examples of AI in our everyday lives? [20]
- Q9. Explain the role of AI in the fight against Covid-19? [20]
- Q10. Explain briefly the evolution of AI & list few issues of AI in games? [20]

JAMMU & KASHMIR STATE BOARD OF TECHNICAL EDUCATION

NU- 22

Class: 6th Semester

Branch: Computer Engineering

Max Marks: 100

Roll No.: _____

Subject: Mobile Computing

Time: 3 Hours

Note : Attempt any five questions. All question carry equal marks

- 14/86
- Q1. Explain gateway and middle ware. (10,10)
- Q2. Explain the difference between wireless and wired data networks. (10,10)
- Q3. What is GPRS? Explain its architecture. (20)
- Q4. Explain GSM architecture and its Principles. (20)
- Q5. Describe in detail the 3-tier architecture of mobile computing and explain the various design considerations for mobile computing. (20)
- Q6. Explain in detail RFID and its architecture (10,10)
- Q7. What is Wimax? Explain its features. (10,10)
- Q6. Define J2ME technology? Explain the various design constraints in designing the application for handheld devices. (20)
- Q7. Explain the standard IEEE 802.11.a/b/g/n. (20)
- Q8. Explain in detail Bluetooth architecture. (20)
- Q9. Briefly explain palm and symbian OS features and architecture. (20)
- Q10. a. Define the applications of mobile computing. (10,10)
- b. Explain the various services and security issues concerned with mobile computing.