Enrollment No……

Bachelor of Engineering

Sixth Semester Examination, June-2021

Micro Processor and Interfacing [CS-601]

Branch: CSE

Time: 3:00 Hrs **Max Marks 70**

Note: 1. Attempt any five questions out of eight.
2. All question carry equal marks.

Q.1 (a) Discuss the evolution of Microprocessor?
(b) What is difference between microprocessor and microcomputer?

Q.2 (a)Draw a block diagram of microprocessor based system and explains the function of each component?
(b) What are interfacing devices? Why they are needed.

Q.3 (a)What are the different addressing modes in 8085 microprocessor? Explain with examples.
(b) Define following:
(i) Stack (ii) Subroutines (iii) Macro

Q.4 (a) Draw and explain in brief Intel 8085 microprocessor architecture.
(b) Explain the Instruction set and addressing modes of 8085 microprocessor with examples.

Q.5 (a) Explain briefly the architecture of 8086 microprocessor?
(b) Discuss the segmentation of memory in 8086 microprocessor?

Q.6 (a) Explain physical memory organization of 8086 microprocessor?
(b) Explain the Register organization of 8085 and explain typical application of each register.

Q.7 (a) What is mean by microcontroller? Describe the Architecture of 8051 Microcontroller?
(b) Compare Microprocessor and Microcontroller? List the features of 8051 microcontroller.

Q.8 (a) What is nested interrupts? Name the five interrupt sources of 8051.
(b) Explain DMA controller in detail with neat block diagram.Why it is needed?

Enrollment No……

Bachelor of Engineering
Sixth Semester Examination, June-2021
Principle of Programming Language [CS-602]
Branch: CS

Time: 3:00 Hrs **Max Marks 70**

Note: 1. Attempt any five questions out of eight.
2. All question carry equal marks.

Q.1 (a) Explain language evaluation criteria? Discuss syntax directed control flow.
(b) What is meant by syntax and semantics of languages? Explain their importance in programming.

Q.2 (a) Distinguish functional programming with logic programming? Explain object oriented programming and logic programming with example.
(b) Discuss the issues in language translation.

Q.3 (a) What is the steps of compilation in PPL?
(b) Define following:-
(i) Parse tree (ii) CFG and BNF grammar

Q.4 (a) Describe the desirable features and design issues of programming languages.
(b) Differentiate records from variant records with suitable example.

Q.5 (a) Discuss the design issues of subprogram and operators.
(b) Explain overloading of function with examples.

Q.6. (a) Explain different parameters passing mechanisms with the help of examples.
(b) Define Abstract data type. What is the design issues regarding abstract data type?

Q.7 (a) Discuss the various storage management schemes in briefly.
(b) Explain Inheritance concept in C++ and java with its advantages and disadvantages.

Q.8 Define following:
(i) Data abstraction (ii) Encapsulation
(iii) Garbage collection (iv) Message passing

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Bachelor of Engineering

Sixth Semester Examination, June-2021

Software Engineering & Project Managements [CS-603]

Branch-CS

Time: 3:00 Hrs **Max Marks 70**

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

Q.1 (a) Discuss in brief the challenges before software engineering. What are the characteristics of software?
(b) Explain the SDLC model briefly. Explain requirement phase of SDLC.

Q.2 (a) Differentiate between a software product and a software process. Define its characteristics in briefly.
(b) Define following (Any 3)-
(i) Waterfall model
(ii) Prototype model
(iii) RAD model
(iv) Spiral model
(v) Incremental model

Q.3 (a) Discuss various software testing strategies. What are the goals of testing?
(b) Differentiate between verification and validation.

Q.4. (a) Write short note on SCM. What is the relation between SCM and maintenance?
(b) What is software re-engineering and software reverse engineering?

Q.5 (a)What are the fundamentals of software project management?
(b) Explain cost estimation methods. Explain COMOMO model.

Q.6 (a) What is SQA? What do you understand by project scheduling? What are objectives of project scheduling?
(b) Write short note on software measurement.

Q.7 (a) Explain various information gathering methods.
(b) Differentiate function oriented and object oriented software development

Q.8 Define following:
(i) Web Engineering.
(ii) CASE tool
(iii) Project tracking
(iv) PERT
(v) Critical path method

Enrollment No……

Bachelor of Engineering
Sixth Semester Examination, June-2021
Computer Networking [CS-604]
Branch-CS

Time: 3:00 Hrs **Max Marks 70**

Note: (i) Attempt any five questions.
(ii) Answer should be precise & to be point only.
(iii) Assume suitable data if necessary & state them clearly.

Q1. (a) What is computer network and how it is different from distributed system?
(b) Write any two differences between connection oriented and connectionless service.

Q.2 (a) What are the advantages of internet TCP/IP model over OSI model?
(b) State the 7 layers of the OSI model in the correct order and briefly describe the function of each layer.

Q.3 (a) Explain the difference between TCP and UDP protocols. Provide an example of an application that uses TCP and an application that uses UDP.
(b) Explain sliding window protocol? Define Go-back N protocol in detail?

Q.4 (a) What is difference between slotted ALOHA and pure ALOHA?
(b) How does CSMA/CD differ from CSMA/CA?

Q.5 (a) What are the functions performed by data link layer? Discus flow and error control protocols in data link layer.
(b) What is queuing theory? Explain the queuing system M/M/1?

Q.6 (a) How adaptive tree walk protocol works?
(b) Explain the mechanism of stop and wait ARQ?

Q.7 (a) Explain IPv4 header format with neat sketch and difference between IPv4 and IPv6 protocol.
(b) Write a short note on- (i) HTTP (ii) DNS (iii) FTP

Q.8 Write a short note on following:

(i) ICMP (ii) DHCP
(iii) ARP (iv) RARP

Enrollment No……

Bachelor of Engineering
Sixth Semester Examination, June-2021
Advance Computer Architecture (ACA) [CS-605]
Branch-CS

Time: 3:00 Hrs **Max Marks 70**

Note: (i) Attempt any five questions out of eight.
(ii) All question carry equal marks.

Q.1 (a) Briefly describe hardware and software parallelism.
(b) Explain Flynn's classification based on multiplicity of instruction stream and data stream.

Q.2 (a) Distinguish between multiprocessors and multicomputer based on their structure resource sharing and inter processor communication.
(b) Explain the architectural operations of SIMD and MIMD computers. Distinguish between multiprocessor and multicomputer based on their structure.

Q.3. (a) What is interconnection network? Explain different interconnection network architectures comparing their architectural features.
(b) Explain interleaved memory organization. Justify the use of interleaved memory organization.

Q.4 (a) Explain the working of arithmetic pipeline with suitable example.
(b) What is the basic concept of VLIW architecture?

Q.5 (a) Discuss and compare the characteristics of RISC and CISC?
(b) Compare distributed and shared memory model.

Q.6 (a) Explain message routing schemes in multicomputer network.
(b) Explain snoopy coherency protocol.

Q.7 Distinguish between the following.
(i) Arithmetic and instruction pipeline
(ii)Unifunctional and multifunctional pipeline
(iii) Static and dynamic pipeline
(iv) Scalar and vector pipeline

Q.8 Write short notes on the following
(i) Parallel software tools

(ii) Object oriented parallel programming model
(iii) Parallel programming environment (iv) Vector access memory schemes