**University of Mumbai**

**Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)**

Program: **Computer Engineering**

Curriculum Scheme:Rev2012

Examination: Third Year Semester V

Course Code: CPC501 and Course Name: Microprocessors

Time: 1 hour Max. Marks: 50

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| Question Number | Correct Option (Enter either 'A' or 'B' or 'C' or 'D') |
|---|---|
| Q1. | C |
| Q2. | D |
| Q3. | A |
| Q4 | A |
| Q5 | D |
| Q6 | D |
| Q7 | B |
| Q8. | D |
| Q9. | B |
| Q10. | D |
| Q11. | B |
| Q12. | A |
| Q13. | C |
| Q14. | D |
| Q15. | C |
| Q16. | C |
| Q17. | D |
| Q18. | C |
| Q19. | C |
| Q20. | B |
| Q21. | A |
| Q22. | A |
| Q23. | C |
| Q24. | B |
| Q25. | B |

# University of Mumbai

## Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)

Program: **Computer Engineering**

Curriculum Scheme: Rev2012

Examination: Third Year Semester V

Course Code: CPC501 and Course Name: Microprocessors

Time: 1 hour Max. Marks: 50

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For the students:- All the Questions are compulsory and carry equal marks .

| | |
|---|---|
| Q1. | The word size in 8086 microprocessor is |
| Option A: | 4-bit |
| Option B: | 8-bit |
| Option C: | 16-bit |
| Option D: | 32 bit |
| | |
| Q2. | In 8086 when the CPU accesses a word starting at an odd address, it is said to be accessing a _____ word. |
| Option A: | Aligned |
| Option B: | Even |
| Option C: | Odd |
| Option D: | Non Aligned |
| | |
| Q3. | The _____ must be used in the maximum mode of 8086 to provide the control bus signals to the memory and I/O. |
| Option A: | 8288 bus controller |
| Option B: | 8284 clock generator |
| Option C: | 8282 latch |
| Option D: | 8286 bus transceiver |
| | |
| Q4. | If BL = FFH, then after execution of instruction ADD BL,01H which bits of flag register will set to 1? |
| Option A: | AF, CF, PF, ZF |
| Option B: | CF, PF, ZF, OF |
| Option C: | PF, ZF, OF, DF |
| Option D: | ZF, OF, DF, AF |
| | |
| Q5. | _____ stretch the bus cycle by one or more clocking periods to allow the memory and I/O additional access time in 8086. |
| Option A: | T1 |
| Option B: | T2 |
| Option C: | T3 |
| Option D: | Twait |
| | |
| Q6. | In Indirect I/O port addressing of 8086, which one of the following register is used to define the port address. |
| Option A: | BX |

| | |
|---|---|
| Option B: | SI |
| Option C: | DI |
| Option D: | DX |
| | |
| Q7. | "MOVSW" instruction transfers 16 bit data from data segment to ____ segment |
| Option A: | Data |
| Option B: | Extra |
| Option C: | Stack |
| Option D: | Code |
| | |
| Q8. | Which register is used as the implied counter register in multiple bit shift and rotate instructions? |
| Option A: | CX |
| Option B: | AL |
| Option C: | AX |
| Option D: | CL |
| | |
| Q9. | In 8086 processor, near jump uses ____ bit signed offset. |
| Option A: | 8 |
| Option B: | 16 |
| Option C: | 20 |
| Option D: | 7 |
| | |
| Q10. | The instruction "DEC CX" followed by "JNZ" instruction is equivalent to ____ instruction. |
| Option A: | JCXZ |
| Option B: | JNBE |
| Option C: | JLE |
| Option D: | LOOP |
| | |
| Q11. | Pentium processor Branch Prediction Logic predict branch wrongly, then ___ cycle penalty incur on V pipeline. |
| Option A: | 3 |
| Option B: | 4 |
| Option C: | 5 |
| Option D: | 6 |
| | |
| Q12. | Size of address bus for 80386DX is__ bits and for Pentium processor is___ bits respectively |
| Option A: | 32 & 32 |
| Option B: | 32 & 64 |
| Option C: | 64 & 64 |
| Option D: | 64 & 128 |
| | |
| Q13. | Port C of 8255 can function independently as |
| Option A: | input port |
| Option B: | output port |
| Option C: | either input or output ports |
| Option D: | both input and output ports |
| | |

| | |
|---|---|
| Q14. | If A1=1, A0=1 then which operation is performed in 8255. |
| Option A: | port A to data bus |
| Option B: | port B to data bus |
| Option C: | port C to data bus |
| Option D: | CWR to data bus |
| | |
| Q15. | In the I/O mode, the 8255 ports work as |
| Option A: | reset pins |
| Option B: | set pins |
| Option C: | programmable I/O ports |
| Option D: | only output ports |
| | |
| Q16. | While interfacing 8237, if there is no valid pending DMA request then it is said to be in |
| Option A: | active state |
| Option B: | passive state |
| Option C: | idle state |
| Option D: | wait state |
| | |
| Q17. | How much is the size of 80386DX descriptor. |
| Option A: | 16-bits |
| Option B: | 32-bits |
| Option C: | 48-bits |
| Option D: | 64-bits |
| | |
| Q18. | The 80386DX is a _____ bit microprocessor. |
| Option A: | 8 |
| Option B: | 16 |
| Option C: | 32 |
| Option D: | 64 |
| | |
| Q19. | GDTR of 80368DX is of Size____ |
| Option A: | 16-bit |
| Option B: | 32-bit |
| Option C: | 48-bit |
| Option D: | 64-bit |
| | |
| Q20. | Number of pipeline stages for integer pipeline of Pentium Processor are_____. |
| Option A: | 4 |
| Option B: | 5 |
| Option C: | 6 |
| Option D: | 8 |
| | |
| Q21. | In Pentium Processor Decode1 (D1) stage of Instruction decode Unit checks _____ |
| Option A: | whether instructions can be paired |
| Option B: | Checks whether operand is numerical or string |
| Option C: | Calculates the address of memory resident operands |
| Option D: | Identifies the registers |
| | |

| | |
|---|---|
| Q22. | Pentium processor is ___ issues superscalar architecture. |
| Option A: | 2 |
| Option B: | 3 |
| Option C: | 4 |
| Option D: | 5 |
| | |
| Q23. | How code cache of Pentium processor is organized |
| Option A: | Direct |
| Option B: | Fully associative |
| Option C: | 2-way set associative |
| Option D: | 4-way set associative |
| | |
| Q24. | SPARC is ____ processor. |
| Option A: | CISC |
| Option B: | RISC |
| Option C: | Hybrid |
| Option D: | Super |
| | |
| Q25. | How many maximum instructions are grouped together to perform execution in integer unit of SPARC architecture |
| Option A: | 2 |
| Option B: | 3 |
| Option C: | 4 |
| Option D: | 5 |

**University of Mumbai**

**Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)**

Program: **Computer Engineering**

Curriculum Scheme: Rev2012

Examination: Third Year Semester V

Course Code: CPC502 and Course Name: Operating System

Time: 1 hour Max. Marks: 50

==========

| Question Number | Correct Option (Enter either 'A' or 'B' or 'C' or 'D') |
|---|---|
| Q1. | D |
| Q2. | C |
| Q3. | A |
| Q4 | C |
| Q5 | C |
| Q6 | B |
| Q7 | A |
| Q8. | D |
| Q9. | A |
| Q10. | B |
| Q11. | B |
| Q12. | C |
| Q13. | C |
| Q14. | A |
| Q15. | A |
| Q16. | D |
| Q17. | A |
| Q18. | B |
| Q19. | D |
| Q20. | C |
| Q21. | C |
| Q22. | A |
| Q23. | C |
| Q24. | A |
| Q25. | D |

# University of Mumbai

## Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)

Program: **Computer Engineering**

Curriculum Scheme: Rev2012

Examination: Third Year Semester V

Course Code: CPC502 and Course Name: Operating System

Time: 1 hour Max. Marks: 50

==========

For the students:- All the Questions are compulsory and carry equal marks .

| | |
|---|---|
| Q1. | FCFS scheduling algorithm, processes which requests the CPU first get the CPU allocation first and maintained_____ data structure |
| Option A: | Array |
| Option B: | Tree |
| Option C: | Stack |
| Option D: | Queue |
| | |
| Q2. | The content of the matrix Need is _____ |
| Option A: | Allocation – Available |
| Option B: | Max – Available |
| Option C: | Max – Allocation |
| Option D: | Allocation – Max |
| | |
| Q3. | Operating System maintains the page table for _____ |
| Option A: | each process |
| Option B: | each thread |
| Option C: | each instruction |
| Option D: | each address |
| | |
| Q4. | In which type of file access skipping of records is not allowed? |
| Option A: | indexed sequential access |
| Option B: | random access |
| Option C: | sequential access |
| Option D: | Indexed |
| | |
| Q5. | Which interface is provide to access service of operating system |
| Option A: | Assembly instructions |
| Option B: | API |
| Option C: | System Call |
| Option D: | Library |
| | |
| Q6. | The act of switching from one process to another process is called _____. |
| Option A: | System call |
| Option B: | Context Switching |
| Option C: | Aging |
| Option D: | Terminating |
| | |
| Q7. | Which of the following directory structure have name collision problem? |

| | |
|---|---|
| Option A: | Single level Directory structure |
| Option B: | Two level directory structure |
| Option C: | Hierarchical directory structure |
| Option D: | Acyclic directory structure |
| | |
| Q8. | What is maximum filename size in Linux in bytes? |
| Option A: | 32 |
| Option B: | 64 |
| Option C: | 128 |
| Option D: | 255 |
| | |
| Q9. | In which of the following disk scheduling algorithm the head goes only as far as the final request without going till the end of the disk and it then reverses its direction and service the requests? |
| Option A: | LOOK |
| Option B: | SCAN |
| Option C: | SSTF |
| Option D: | CSCAN |
| | |
| Q10. | The _____kernel consist complete OS including memory management, device driver, scheduling, file system |
| Option A: | Multilithic kernel |
| Option B: | Monolithic kernel |
| Option C: | mini kernel |
| Option D: | Microkernel |
| | |
| Q11. | _____is the data structure used by the operating system to keep track of the processes |
| Option A: | Program Control block |
| Option B: | Process Control Block |
| Option C: | Process communication Block |
| Option D: | Program communication Block |
| | |
| Q12. | The directory in which you find yourself when you first login is called your _____. |
| Option A: | Root directory |
| Option B: | Shell directory |
| Option C: | Home directory |
| Option D: | Kernel directory |
| | |
| Q13. | The UNIX shell is both _____ and _____ language |
| Option A: | interactive, responsive |
| Option B: | interpreter, executing |
| Option C: | interpreter, scripting |
| Option D: | high level, low level |
| | |
| Q14. | What Command is used to halt the Linux OS |
| Option A: | init 0 |

| | |
|---|---|
| Option B: | cntrl+alt+dlt |
| Option C: | Shutdown |
| Option D: | halt 0 |
| | |
| Q15. | _____ atomic operation increases the value of semaphore by 1. |
| Option A: | Signal() |
| Option B: | Wait() |
| Option C: | Fork() |
| Option D: | Exec() |
| | |
| Q16. | Consider the virtual page reference string 1, 2, 3, 2, 4, 1, 3, 2, 4, 1 On a demand paged virtual memory system running on a computer system that main memory size of 3 pages frames which are initially empty. Let LRU, FIFO and OPTIMAL denote the number of page faults under the corresponding page replacements policy. Then |
| Option A: | OPTIMAL < LRU < FIFO |
| Option B: | OPTIMAL = FIFO |
| Option C: | OPTIMAL = LRU |
| Option D: | OPTIMAL < FIFO < LRU |
| | |
| Q17. | _____ used to install new software packages, remove available software packages, upgrade existing software packages as well as upgrade entire operating system. |
| Option A: | apt-get |
| Option B: | get-apt |
| Option C: | opt-get |
| Option D: | ls |
| | |
| Q18. | _____command is used for extracting the details of the operating system? |
| Option A: | cd |
| Option B: | uname |
| Option C: | echo |
| Option D: | wc |
| | |
| Q19. | It is not a feature of UNIX? |
| Option A: | multitasking |
| Option B: | multiuser |
| Option C: | portability |
| Option D: | easy to use |
| | |
| Q20. | _____ is the deadlock avoidance algorithm? |
| Option A: | round-robin algorithm |
| Option B: | elevator algorithm |
| Option C: | banker's algorithm |
| Option D: | karn's algorithm |
| | |
| Q21. | In Windows 7, Kernel layer works in _____Mode. |
| Option A: | Public Mode |

| | |
|---|---|
| Option B: | shared Mode |
| Option C: | Protected Mode |
| Option D: | Reverse Mode |
| | |
| Q22. | For large data transfers, _____ is used. |
| Option A: | DMA |
| Option B: | programmed I/O |
| Option C: | controller register |
| Option D: | interrupt handlers |
| | |
| Q23. | Virtual memory is |
| Option A: | Large secondary memory |
| Option B: | Large main memory |
| Option C: | Illusion of large main memory |
| Option D: | large cache memory |
| | |
| Q24. | Which of the following page replacement algorithms suffers from Belady's anomaly |
| Option A: | FIFO |
| Option B: | LRU |
| Option C: | Optimal Page Replacement |
| Option D: | LFU |
| | |
| Q25. | Which of the following condition is not required for a deadlock? |
| Option A: | mutual exclusion |
| Option B: | a process may hold allocated resources while awaiting assignment of other resources |
| Option C: | No preemption |
| Option D: | Wait for graph |

**University of Mumbai**

**Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)**

Program: **Computer Engineering**

Curriculum Scheme: Rev2012 (CBSGS)

Examination: Third Year/Semester V

Course Code: **CPC503** and Course Name: Structured and Object Oriented Analysis and Design

Time: 1 hour Max. Marks: 50

==========

| **Question Number** | **Correct Option (Enter either 'A' or 'B' or 'C' or 'D')** |
|---|---|
| Q1. | B |
| Q2. | B |
| Q3. | D |
| Q4 | B |
| Q5 | A |
| Q6 | C |
| Q7 | D |
| Q8. | D |
| Q9. | B |
| Q10. | C |
| Q11. | B |
| Q12. | D |
| Q13. | D |
| Q14. | B |
| Q15. | A |
| Q16. | B |
| Q17. | C |
| Q18. | D |
| Q19. | A |
| Q20. | B |
| Q21. | D |
| Q22. | C |
| Q23. | B |
| Q24. | A |
| Q25. | D |

# University of Mumbai

## Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)

Program: **Computer Engineering**

Curriculum Scheme: Rev2012 (CBSGS)

Examination: Third Year/ Semester V

Course Code: **CPC503** and Course Name: Structured and Object Oriented Analysis and Design

Time: 1 hour Max. Marks: 50

==========

NOTE

For the students: - All the Questions are compulsory and carry equal marks. 2

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| | |
|---|---|
| Q1. | Structure system analysis is suitable for……. types of project |
| Option A: | Risky large projects with changing requirements |
| Option B: | Well Defined Projects with stable user requirements |
| Option C: | Changing system requirements |
| Option D: | Complex system |
| | |
| Q2. | Which of the items listed below is not an software engineering layers |
| Option A: | Process |
| Option B: | Manufacturing |
| Option C: | Methods |
| Option D: | Tools |
| | |
| Q3. | The code reuse feature of the object oriented paradigm is …….. |
| Option A: | Class |
| Option B: | Aggregation |
| Option C: | Object |
| Option D: | Inheritance |
| | |
| Q4. | The set of steps that needs to be followed to develop an information system is known as |
| Option A: | design cycle |
| Option B: | system development life cycle |
| Option C: | analytical cycle |
| Option D: | program specification |
| | |
| Q5. | Requirements, which are not related to functional aspect of software called |
| Option A: | Non-Functional requirement |
| Option B: | Known Requirement |
| Option C: | Functional requirement |
| Option D: | Unspecified requirement |
| | |
| Q6. | Walk-through is a technique used for |
| Option A: | Cost benefit analysis |
| Option B: | User interface |

| | |
|---|---|
| Option C: | Requirement validation |
| Option D: | System security |
| | |
| Q7. | "What, How, When, Who, Where, and Why" are the six viewpoint perspectives of the stakeholders specified in |
| Option A: | System proposal |
| Option B: | Business Process Reengineering |
| Option C: | SRS document |
| Option D: | Zach man Framework |
| | |
| Q8. | Re-engineering of business process and/or the software is done in |
| Option A: | Process reverse engineering |
| Option B: | System analysis |
| Option C: | System modeling |
| Option D: | Business process reengineering |
| | |
| Q9. | Feasibility that measure of how well a solution meets the system requirements is |
| Option A: | Economic feasibility |
| Option B: | Operational Feasibility |
| Option C: | Technical feasibility |
| Option D: | Schedule feasibility |
| | |
| Q10. | Loss of customer goodwill and employee morale are example of |
| Option A: | cultural cost |
| Option B: | tangible cost |
| Option C: | intangible cost |
| Option D: | direct cost |
| | |
| Q11. | The onetime costs which will not recur after the project has been completed are |
| Option A: | costs of operating the system |
| Option B: | cost of developing the system |
| Option C: | cost of maintaining system |
| Option D: | cost of employee salary |
| | |
| Q12. | This analysis measure determines how much time needed before benefits overtake the costs needed. |
| Option A: | Candidate system |
| Option B: | Net present value |
| Option C: | Return on Investment |
| Option D: | Payback analysis |
| | |
| Q13. | The process of determining project requirements and getting a clear understanding of the project scope ,feasibility etc. is termed as |
| Option A: | Design |
| Option B: | Project study |
| Option C: | Initialization |
| Option D: | Analysis |
| | |

| | |
|---|---|
| Q14. | Data encapsulation and data manipulation functions are together a part of |
| Option A: | Method |
| Option B: | Object |
| Option C: | Process |
| Option D: | Module |
| | |
| Q15. | For documentation purposes a dataflow diagram is always accompanied with |
| Option A: | Data dictionary |
| Option B: | Data model |
| Option C: | Database |
| Option D: | Data process |
| | |
| Q16. | ……..are used in activity diagrams to specify which actors are responsible for which activities. |
| Option A: | Triggers |
| Option B: | Swim lanes |
| Option C: | Entities |
| Option D: | Actors |
| | |
| Q17. | The flowchart like diagram that represents the flow of activities performed by objects is called |
| Option A: | Flow diagram |
| Option B: | Process diagram |
| Option C: | Activity diagram |
| Option D: | Dataflow diagram |
| | |
| Q18. | when Source use case explicitly uses behavior of another use case, then it is called as which type of relationship |
| Option A: | Extend |
| Option B: | Inheritance |
| Option C: | Generalization |
| Option D: | Include |
| | |
| Q19. | Which of the following is not an element of structure chart |
| Option A: | Management module |
| Option B: | Boss Module |
| Option C: | called module |
| Option D: | Embedded Module |
| | |
| Q20. | Which of the following is not an relationship use in UML |
| Option A: | Aggregation |
| Option B: | Exclude |
| Option C: | include |
| Option D: | extend |
| | |
| Q21. | Which of the following is not an element of UML Sequence Diagram |
| Option A: | Focus of Control |
| Option B: | Object Life Line |

| | |
|---|---|
| Option C: | Messages |
| Option D: | Forking |
| | |
| Q22. | Which of the following UML diagram is used to model fully distributed system? |
| Option A: | Sequence diagram |
| Option B: | Object diagram |
| Option C: | Deployment diagram |
| Option D: | E-R diagram |
| | |
| Q23. | In the Model-View-Controller (MVC) architecture, the view corresponds to the …….. |
| Option A: | Data access layer |
| Option B: | Interface layer |
| Option C: | Domain object layer |
| Option D: | Business logic layer |
| | |
| Q24. | Which of the following UML Diagram is used to model source code? |
| Option A: | Component diagram |
| Option B: | Deployment diagram |
| Option C: | Use case diagram |
| Option D: | E-R diagram |
| | |
| Q25. | Which of the following architectural style refers to applications that expose and consume functionality of a service using contracts and messages? |
| Option A: | 3-Tier Architecture |
| Option B: | Message Bus |
| Option C: | Mainframe |
| Option D: | Service Oriented Architecture (SOA) |

**University of Mumbai**

**Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)**

Program: **Computer Engineering**

Curriculum Scheme: Rev2012

Examination: Third Year Semester V

Course Code: CPC504 and Course Name: Computer Networks

Time: 1 hour Max. Marks: 50

==========

| Question Number | Correct Option (Enter either 'A' or 'B' or 'C' or 'D') |
|---|---|
| Q1. | B |
| Q2. | B |
| Q3. | C |
| Q4 | A |
| Q5 | D |
| Q6 | C |
| Q7 | A |
| Q8. | A |
| Q9. | C |
| Q10. | C |
| Q11. | A |
| Q12. | D |
| Q13. | B |
| Q14. | B |
| Q15. | B |
| Q16. | A |
| Q17. | D |
| Q18. | A |
| Q19. | C |
| Q20. | C |
| Q21. | C |
| Q22. | C |
| Q23. | C |
| Q24. | C |
| Q25. | A |

# University of Mumbai

## Examination 2020 under cluster 4 (Lead College: PCE, New Panvel)

Program: **Computer Engineering**

Curriculum Scheme: Rev2012

Examination: Third Year Semester V

Course Code: CPC504 and Course Name: Computer Networks

Time: 1 hour Max. Marks: 50

==========

For the students:- All the Questions are compulsory and carry equal marks .

| | |
|---|---|
| Q1. | The name of the First Computer Network is_____ and it is invented in year_____ |
| Option A: | MYRINET, 1967 |
| Option B: | ARPANET,1966 |
| Option C: | DAPRA,1966 |
| Option D: | IPX/SPX, 1968 |
| | |
| Q2. | The process-to-process responsibility of the |
| Option A: | Network Layer |
| Option B: | Transport Layer |
| Option C: | Application Layer |
| Option D: | Data Link Layer |
| | |
| Q3. | Why was the ISO-OSI model developed? |
| Option A: | Manufacturers disliked the TCP/IP protocol suite |
| Option B: | The rate of data transfer was increasing exponentially |
| Option C: | Standards were needed to allow any two systems to communicate |
| Option D: | To make the advancement in the computer network |
| | |
| Q4. | Coaxial cables are categories by _____ratings |
| Option A: | Radio Government |
| Option B: | Registered standard |
| Option C: | Radio Waves |
| Option D: | Registered Jack |
| | |
| Q5. | In an optical fiber, the inner core is _____ the cladding |
| Option A: | less dense than |
| Option B: | the same density as |
| Option C: | another name for |
| Option D: | denser than |
| | |
| Q6. | In the Electromagnetic Spectrum for Wireless communication the frequency range for Radio Wave is |
| Option A: | 1GHz to 300 GHz |
| Option B: | 300GHz to 400 THz |
| Option C: | 3KHz to 1GHz |
| Option D: | 900 THz to 400 THz |
| | |

| | |
|---|---|
| Q7. | In the PPP frame the Payload maximum bytes are |
| Option A: | 1500 |
| Option B: | 1200 |
| Option C: | 1400 |
| Option D: | 1300 |
| | |
| Q8. | In the collision free protocol channel efficiency is given by |
| Option A: | d/(d + log2(N)) |
| Option B: | d*(d + log2(N)) |
| Option C: | log2(N) |
| Option D: | (d + log2(N)) |
| | |
| Q9. | In Polling Select Function is used when |
| Option A: | Secondary station want to send the data to another secondary station |
| Option B: | Secondary station want to send the Data to Primary station |
| Option C: | Primary station want to send the Data to Secondary station |
| Option D: | Primary station want to receive data from secondary station |
| | |
| Q10. | There are _____channelization protocols |
| Option A: | 2 |
| Option B: | 4 |
| Option C: | 3 |
| Option D: | 5 |
| | |
| Q11. | Access Method use in FDDI is |
| Option A: | Token Passing |
| Option B: | CSMA/CD |
| Option C: | CDMA |
| Option D: | TDMA |
| | |
| Q12. | One of the header fields in an IP datagram is the Time to Live (TTL) field. Which of the following statements best explains the need for this field? |
| Option A: | It can be used to priortize packets |
| Option B: | It can be used to reduce delays |
| Option C: | It can be used to optimize throughput |
| Option D: | It can be used to prevent packet looping |
| | |
| Q13. | Suppose an organization has been given a mask /13. One of its machines has IP address 200.137.34.56. What is the network ID? |
| Option A: | 200.136.0.64 |
| Option B: | 200.136.0.0 |
| Option C: | 200.136.34.0 |
| Option D: | 200.0.0.0 |
| | |
| Q14. | In IP Protocol Head if MF bit is “0” what this indicates |
| Option A: | There are more fragment |
| Option B: | This is last fragment |
| Option C: | This is First fragment |

| | |
|---|---|
| Option D: | There are no fragment |
| | |
| Q15. | _____ are two popular examples of distance vector routing protocols |
| Option A: | OSPF & RIP |
| Option B: | RIP & BGP |
| Option C: | BGP & OSPF |
| Option D: | BGP & SPF |
| | |
| Q16. | ICMP is used for |
| Option A: | Report problems with delivery of IP datagrams within an IP network |
| Option B: | Error Detection and Correction |
| Option C: | Congestion control and avoidance |
| Option D: | Jitter Control |
| | |
| Q17. | To establish the connection in transport layer the server must be in_____mode |
| Option A: | Server |
| Option B: | Accept |
| Option C: | Data Send |
| Option D: | Listen |
| | |
| Q18. | If the new service is created to whome we have to register in transport layer |
| Option A: | Name server |
| Option B: | Web server |
| Option C: | Proxy Server |
| Option D: | File Server |
| | |
| Q19. | Karn Propose not to calculate the RTT on |
| Option A: | Only One Frame |
| Option B: | On Acknowledge frame |
| Option C: | Retransmitted frame |
| Option D: | Duplicate Frames |
| | |
| Q20. | A Port address in TCP is _____bits long |
| Option A: | 32 |
| Option B: | 48 |
| Option C: | 16 |
| Option D: | 64 |
| | |
| Q21. | What is the key size allowed in PGP? |
| Option A: | 1024-1056 |
| Option B: | 1024-4056 |
| Option C: | 1024-4096 |
| Option D: | 1024-2048 |
| | |
| Q22. | Which one of the following allows a user at one site to establish a connection to another site and then pass keystrokes from local host to remote host? |
| Option A: | HTTP |
| Option B: | FTP |

| | |
|---|---|
| Option C: | Telnet |
| Option D: | TCP |
| | |
| Q23. | What part of the URL is resolved first? |
| Option A: | Sub Domain |
| Option B: | Domain Name |
| Option C: | Top Level Domain |
| Option D: | Lower level domain |
| | |
| Q24. | The _____ field in the SNMP PDU consists of a sequence of variables and their corresponding values. |
| Option A: | version |
| Option B: | community |
| Option C: | VarBindList |
| Option D: | bits |
| | |
| Q25. | This is not the message in the SNMP |
| Option A: | GetPreviousRequest |
| Option B: | Trap |
| Option C: | GetRequest |
| Option D: | GetResponse |

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: CPC502 and Course Name: Operating System

Time: 1 hour Max. Marks: 50

==========

| Question | Correct Option (Enter either 'A' or 'B' or 'C' or 'D') |
|---|---|
| Q1. | B |
| Q2. | A |
| Q3. | C |
| Q4 | C |
| Q5 | C |
| Q6 | B |
| Q7 | C |
| Q8. | C |
| Q9. | C |
| Q10. | A |
| Q11. | C |
| Q12. | D |
| Q13. | C |
| Q14. | C |
| Q15. | C |
| Q16. | A |

| | |
|---|---|
| Q17. | B |
| Q18. | C |
| Q19. | D |
| Q20. | D |
| Q21. | C |
| Q22. | D |
| Q23. | D |
| Q24. | C |
| Q25. | C |

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: CPC502 and Course Name: Operating System

Time: 1 hour Max. Marks: 50

==========

Note to the students:- All the Questions are compulsory and carry equal marks .

| | |
|---|---|
| Q1. | Kernel is a_____ |
| Option A: | Software which monitors OS |
| Option B: | set of primitive functions upon which rest of OS functions are built up |
| Option C: | considered as critical part of OS |
| Option D: | made of various modules which can not be loaded in running operating system |
| | |
| Q2. | To access the services of operating system, the interface is provided by the _____ |
| Option A: | System calls |
| Option B: | API |
| Option C: | Library |
| Option D: | Assembly instructions |
| | |
| Q3. | Device communicates with the machine via a connection point called as |
| Option A: | controller |
| Option B: | bus |
| Option C: | port |
| Option D: | host |
| | |
| Q4. | In Round Robin Scheduling, Each process is provided a fix time to execute, it is called a? |
| Option A: | Batch Time |
| Option B: | Job Time |
| Option C: | Quantum |
| Option D: | Response |
| | |
| Q5. | Inter process communication can be done through _____. |
| Option A: | System calls |
| Option B: | Mails |
| Option C: | Message passing |
| Option D: | Traps |
| | |
| Q6. | When several processes access the same data concurrently and the outcome |

| | |
|---|---|
| | of the execution depends on the particular order in which the access takes place, is called? |
| Option A: | dynamic condition |
| Option B: | race condition |
| Option C: | critical condition |
| Option D: | essential condition |
| | |
| Q7. | A process executes the code fork(); fork();fork(); The total number of child processes created is |
| Option A: | 3 |
| Option B: | 4 |
| Option C: | 7 |
| Option D: | 8 |
| | |
| Q8. | 3 processes having burst time of 6, 10 and 8 time units each arrive simultaneously at time 0. Using round robin scheduling (with time quantum of 3 units), their total turnaround time = _____ |
| Option A: | 24 |
| Option B: | 32 |
| Option C: | 56 |
| Option D: | 60 |
| | |
| Q9. | Which one of the following is a deadlock prevention technique |
| Option A: | A process should release it's current resource before requesting for next resource |
| Option B: | A process should hold all it's current allocated resources till it does not gets the required resources |
| Option C: | A process should release it's currently allocated resources if the resources it needs are not available |
| Option D: | A process should continue to hold it's currently allocated resources till it completes |
| | |
| Q10. | An edge from process Pi to Pj in a wait for graph indicates that |
| Option A: | Pi is waiting for Pj to release a resource that Pi needs |
| Option B: | Pj is waiting for Pi to release a resource that Pj needs |
| Option C: | Pi is waiting for Pj to leave the system |
| Option D: | Pj is waiting for Pi to leave the system |
| | |
| Q11. | A system has 12 magnetic tape drives and 3 processes : P0, P1, and P2. Process P0 requires 10 tape drives, P1 requires 4 and P2 requires 9 tape drives. Currently allocated are 5, 2, 2 respectively from P0 to P2. Which of the following sequence is a safe sequence? |
| Option A: | P0, P1, P2 |
| Option B: | P1, P2, P0 |
| Option C: | P1, P0, P2 |
| Option D: | P2, P0, P1 |

| | |
|---|---|
| | |
| Q12. | Thrashing_____ |
| Option A: | is always needed |
| Option B: | can always be avoided by swapping |
| Option C: | always occurs on large computers |
| Option D: | can be caused by poor paging algorithms |
| | |
| Q13. | A multilevel page table is preferred in comparison to a single level page table for translating virtual address to physical address because _____ |
| Option A: | it reduces the memory access time to read or write a memory location |
| Option B: | it helps to reduce the number of page faults in page replacement algorithms |
| Option C: | it helps to reduce the size of page table needed to implement the virtual address space of a process |
| Option D: | it is required by the translation look aside buffer |
| | |
| Q14. | In a paged memory, the page hit ratio is 0.35. The required to access a page in secondary memory is equal to 100 ns. The time required to access a page in primary memory is 10 ns. The average time required to access a page is? |
| Option A: | 35 |
| Option B: | 68 |
| Option C: | 68.5 |
| Option D: | 78.5 |
| | |
| Q15. | To solve the problem of external fragmentation _____ needs to be done periodically. |
| Option A: | check |
| Option B: | formatting |
| Option C: | compaction |
| Option D: | replacing memory |
| | |
| Q16. | A computer system has a 32-bit virtual address space with a page size of 8K, and 4 bytes per page table entry. What is the maximum size of addressable physical memory in this system? |
| Option A: | $2^{45}$ |
| Option B: | $2^{41}$ |
| Option C: | $2^{40}$ |
| Option D: | $2^{43}$ |
| | |
| Q17. | Maximum Amount of information that is available at one position of the disk access arm for a removal disk pack (Without further movement of the arm with multiple heads is) |
| Option A: | a plate of data |
| Option B: | a cylinder of data |
| Option C: | a track of data |
| Option D: | a block of data |
| | |

| | |
|---|---|
| Q18. | A CPU generally handles an interrupt by executing an interrupt service routine |
| Option A: | As soon as an interrupt is raised |
| Option B: | By checking the interrupt register at the end of fetch cycle. |
| Option C: | By checking the interrupt register after finishing the execution of the current instruction. |
| Option D: | By checking the interrupt register at fixed time intervals |
| | |
| Q19. | The first argument is read by the shell into the parameter _ |
| Option A: | 1$ |
| Option B: | $3 |
| Option C: | $$ |
| Option D: | $1 |
| | |
| Q20. | In Unix, when a process is ready to run but empty memory is not available, then the process is in which state? |
| Option A: | Ready to run in memory |
| Option B: | Asleep in memory |
| Option C: | Sleep, swapped |
| Option D: | Ready to run, swapped |
| | |
| Q21. | In Linux file system, configuration files are stored in _____ |
| Option A: | /bin |
| Option B: | /sbin |
| Option C: | /etc |
| Option D: | /dev |
| | |
| Q22. | Which of the following is not the field of buffer header? |
| Option A: | device number |
| Option B: | block number |
| Option C: | status |
| Option D: | size |
| | |
| Q23. | Which option of ls command used to view file inode number? |
| Option A: | (-I) |
| Option B: | (-o) |
| Option C: | (-a) |
| Option D: | (-i) |
| | |
| Q24. | What would you type in Run window to open 'MS Word' |
| Option A: | msword.exe |
| Option B: | word.exe |
| Option C: | winword.exe |
| Option D: | Cannot be open from Run |
| | |
| Q25. | Each process on a 32 bit Windows has a virtual address space of ———- |
| Option A: | 4 GigaBytes |

| | |
|---|---|
| Option B: | 4 Terabytes |
| Option C: | 2 Gigabytes |
| Option D: | 8 Terabytes |

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: CPC503 and Course Name: Structured & Object Oriented Analysis and Design

Time: 1hour Max. Marks: 50

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| Question | Correct Option (Enter either 'A' or 'B' or 'C' or 'D') |
|---|---|
| Q1. | D |
| Q2. | D |
| Q3. | C |
| Q4 | B |
| Q5 | D |
| Q6 | A |
| Q7 | A |
| Q8. | B |
| Q9. | A |
| Q10. | C |
| Q11. | C |
| Q12. | A |
| Q13. | C |
| Q14. | C |
| Q15. | D |

| | |
|---|---|
| Q16. | C |
| Q17. | C |
| Q18. | B |
| Q19. | A |
| Q20. | D |
| Q21. | A |
| Q22. | A |
| Q23. | B |
| Q24. | B |
| Q25. | D |

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

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Note to the students:- All the Questions are compulsory and carry equal marks .

| | |
|---|---|
| Q1. | The system is periodically evaluated and modified as needed in ____ phase of SDLC. |
| Option A: | preliminary investigation |
| Option B: | system design |
| Option C: | system implementation |
| Option D: | system maintenance |
| | |
| Q2. | What is not a structured analysis tools? |
| Option A: | Data Flow Diagrams |
| Option B: | Data Dictionary |
| Option C: | Decision Trees |
| Option D: | Data table |
| | |
| Q3. | if we create systems models so we can better _____it |
| Option A: | Analyze |
| Option B: | Design |
| Option C: | Visualize |
| Option D: | Measure |
| | |
| Q4. | To understand new system constraints, which requirement gathering technique is suitable |
| Option A: | list workflow |
| Option B: | Interview users |
| Option C: | research solution |
| Option D: | network checking |
| | |
| Q5. | Validation of requirements done easily by_____ |
| Option A: | Examine the system model for errors |
| Option B: | have the customer look over the requirement |
| Option C: | send the requirement to design team to see if they have any issues |
| Option D: | use the checklist of questions to examine each requirement |

| | |
|---|---|
| | |
| Q6. | _____ is not a Internal stakeholders |
| Option A: | Any person |
| Option B: | Project manager |
| Option C: | User of system |
| Option D: | Customer |
| | |
| Q7. | What is not an example of tangible cost? |
| Option A: | Improved Employee Morale |
| Option B: | Fewer processing errors |
| Option C: | Decreased response time |
| Option D: | increased sales |
| | |
| Q8. | A solution is said to be feasible for implementation if (i)it is cost-effective and finance is available to implement it (ii)technology is available to implement it (iii)it can be opted to work in an organization's environment (iv)it has been implemented in another organization |
| Option A: | ii and iii |
| Option B: | i, ii and iii |
| Option C: | i and iv |
| Option D: | i, ii and iv |
| | |
| Q9. | Various things are included in SRS but from given below one thing is not present in SRS |
| Option A: | Design solutions |
| Option B: | Design Constraints |
| Option C: | Functionality |
| Option D: | External Interfaces |
| | |
| Q10. | In Class-responsibility-collaborator (CRC) modeling wrong statement is _____ |
| Option A: | All use-case scenarios (and corresponding use-case diagrams) are organized into categories in CRC modeling |
| Option B: | The review leader reads the use-case deliberately. |
| Option C: | Only developers in the review (of the CRC model) are given a subset of the CRC model index cards |
| Option D: | External Interfaces are not included |
| | |
| Q11. | A zero level DFD describers |
| Option A: | That the system design cannot be split further |
| Option B: | Fully below up system design |
| Option C: | Overview of processes input and output |
| Option D: | Overview of processes database |
| | |
| Q12. | By identifying the system boundary the scope of the system is defined in_____ |
| Option A: | Context Diagram |

| | |
|---|---|
| Option B: | Level 0 DFD |
| Option C: | Level 1 DFD |
| Option D: | Level 2 DFD |
| | |
| Q13. | While collecting the requirements from various customers the facilator ____ |
| Option A: | arrange the meeting place |
| Option B: | cannot be a customer |
| Option C: | controls the meeting |
| Option D: | must be an outsider |
| | |
| Q14. | object oriented conceptual model____ |
| Option A: | Invariant relationships |
| Option B: | Algorithms |
| Option C: | Classes and Objects |
| Option D: | Goals |
| | |
| Q15. | During Use Case Analysis, which UML diagrams should you use when allocating use-case behavior to classes? |
| Option A: | Activity Diagram |
| Option B: | State Chart Diagram |
| Option C: | Interaction Diagram |
| Option D: | Object Diagram |
| | |
| Q16. | UML diagram which is based on time ____diagram |
| Option A: | Collaboration |
| Option B: | Activity |
| Option C: | Sequence |
| Option D: | Class |
| | |
| Q17. | The three types of relationships use cases have in a use case diagram include? Select one: |
| Option A: | Elaboration, generalization, boundarization |
| Option B: | Inclusion, representation, realization |
| Option C: | Extension, inclusion, and generalization |
| Option D: | Extension, representation, elaboration |
| | |
| Q18. | The life cycle of OOAD is____ |
| Option A: | Analysis, design, and implementation steps in any order and using multiple iterations. |
| Option B: | Analysis, design, and implementation steps in the given order and using multiple iterations |
| Option C: | Analysis, design, and implementation steps in any order and using the steps no more than one time. |
| Option D: | Analysis, design, and implementation steps in the given order and using the steps no more than one time. |
| | |

| | |
|---|---|
| Q19. | Hardware design in system starts only after_____ |
| Option A: | Identification of size and capacity requirements of hardware |
| Option B: | Cataloging price from hardware vendors |
| Option C: | Finding compatibility between hardware and software |
| Option D: | naming hardware |
| | |
| Q20. | Interaction between various entities in use-case descriptor starts from |
| Option A: | product |
| Option B: | use-case |
| Option C: | actor |
| Option D: | product and actor |
| | |
| Q21. | Traditional Approach to Design |
| Option A: | Waterfall System design |
| Option B: | Spiral design |
| Option C: | Incremental design |
| Option D: | prototype design |
| | |
| Q22. | The system design is performed to_____ |
| Option A: | design the programs, databases and test plan |
| Option B: | design only user interfaces |
| Option C: | implement the system |
| Option D: | find out how the system will perform |
| | |
| Q23. | One of the option from below is not the valid notations for package and component diagram |
| Option A: | Notes |
| Option B: | Box |
| Option C: | Extension Mechanisms |
| Option D: | Packages |
| | |
| Q24. | 1 client and 2 servers are present in _____tier architecture |
| Option A: | 4 |
| Option B: | 3 |
| Option C: | 5 |
| Option D: | 2 |
| | |
| Q25. | To represented a component _____is used |
| Option A: | Component symbols |
| Option B: | Stereotypes |
| Option C: | Rectangular boxes |
| Option D: | Component symbols & Stereotypes |

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: CPC504 and Course Name: Computer Network

Time: 1 hour Max. Marks: 50

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| Question | Correct Option (Enter either 'A' or 'B' or 'C' or 'D') |
|---|---|
| Q1. | A |
| Q2. | A |
| Q3. | B |
| Q4 | B |
| Q5 | A |
| Q6 | A |
| Q7 | A |
| Q8. | B |
| Q9. | C |
| Q10. | A |
| Q11. | A |
| Q12. | A |
| Q13. | A |
| Q14. | C |
| Q15. | D |

| | |
|---|---|
| Q16. | B |
| Q17. | A |
| Q18. | A |
| Q19. | C |
| Q20. | B |
| Q21. | B |
| Q22. | D |
| Q23. | C |
| Q24. | C |
| Q25. | B |

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: CPC504 and Course Name: Computer Networks

Time: 1 hour Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

| | |
|---|---|
| Q1. | Data communication system within a building or campus is____ |
| Option A: | LAN |
| Option B: | WAN |
| Option C: | MAN |
| Option D: | PAN |
| | |
| Q2. | Which layer is there in OSI model but not in TCP/IP model? |
| Option A: | session layer |
| Option B: | transport layer |
| Option C: | application layer |
| Option D: | Network layer |
| | |
| Q3. | Which layer is responsible for process to process delivery in a general network model? |
| Option A: | network layer |
| Option B: | transport layer |
| Option C: | Session layer |
| Option D: | data layer |
| | |
| Q4. | _____ cable consists of an inner copper core and a second sheath. |
| Option A: | twisted-pair |
| Option B: | Coaxial |
| Option C: | fiber-optic |
| Option D: | shielded twisted-pair |
| | |
| Q5. | Each channel in Bluetooth layer is of |

| | |
|---|---|
| Option A: | 1MHz |
| Option B: | 2MHz |
| Option C: | 3MHz |
| Option D: | 4MHz |
| | |
| Q6. | An interconnected collection of piconet is called ___ |
| Option A: | Scatternet |
| Option B: | Micronet |
| Option C: | Mininet |
| Option D: | Multinet |
| | |
| Q7. | _____ augments the CSMA algorithm to detect collision. |
| Option A: | CSMA/CD |
| Option B: | CSMA/CA |
| Option C: | Carrier signal |
| Option D: | Bandwidth |
| | |
| Q8. | In the _____method, after the station finds the line idle it sends or refrain from sending based on the outcome of a random number generator. If the line is busy, it tries again. |
| Option A: | 1-Persistant |
| Option B: | p-persistent |
| Option C: | Nonpersistent |
| Option D: | Flooding |
| | |
| Q9. | In _____ each station sends a frame whenever it has a frame to send. |
| Option A: | Collision |
| Option B: | Error Path |
| Option C: | Pure Aloha |
| Option D: | Slotted ALOHA |
| | |
| Q10. | The data link layer takes the packets from _____ and encapsulates them into frames for transmission |
| Option A: | Network layer |

| | |
|---|---|
| Option B: | Physical Layer |
| Option C: | Transport Layer |
| Option D: | Application Layer |
| | |
| Q11. | Stop-and-wait is a _____ technique |
| Option A: | Flow control |
| Option B: | Error control |
| Option C: | Line discipline |
| Option D: | Session management |
| | |
| Q12. | Dividing a network address into smaller networks can be called as ___ |
| Option A: | Subnetting |
| Option B: | Super netting |
| Option C: | Encapsulation |
| Option D: | fragmentation |
| | |
| Q13. | IPv6 is designed to allow extension of the _____. |
| Option A: | long-anticipated problem address exhaustion |
| Option B: | long-anticipated problem route |
| Option C: | long-anticipated problem of framing |
| Option D: | long-anticipated problem of access control |
| | |
| Q14. | Which switching techniques is used in network layer? |
| Option A: | Node |
| Option B: | Port |
| Option C: | Packet |
| Option D: | Network |
| | |
| Q15. | How many IP addresses does a class C network have? |
| Option A: | 1 address |
| Option B: | 16,777,216 addresses |
| Option C: | 65,536 addresses |

| | |
|---|---|
| Option D: | 254 addresses |
| | |
| Q16. | A block of addresses is granted to small organization. One of the address is 205.16.37.39/28. What is the first address in the block? |
| Option A: | 205.16.37.0 |
| Option B: | 205.16.37.32 |
| Option C: | 205.16.37.30 |
| Option D: | 205.16.0.0 |
| | |
| Q17. | UDP stand for____ |
| Option A: | User Datagram Protocol |
| Option B: | User Defined Primitive |
| Option C: | User Dedicated Program |
| Option D: | User Datagram Piece |
| | |
| Q18. | A _____ is a TCP name for a transport service access point. |
| Option A: | Port |
| Option B: | Node |
| Option C: | Protocol |
| Option D: | Pipe |
| | |
| Q19. | When TCP Urgent pointer is valid? |
| Option A: | If ACK=1 |
| Option B: | If PSH=1 |
| Option C: | If URG=1 |
| Option D: | If SYN=1 |
| | |
| Q20. | The size of source and destination port addresses in TCP header are _____ respectively |
| Option A: | 16-bits and 32-bits |
| Option B: | 16-bits and 16-bits |

| | |
|---|---|
| Option C: | 32-bits and 16-bits |
| Option D: | 32-bits and 32-bits |
| | |
| Q21. | _____allows you to connect and login to a remote computer |
| Option A: | FTP |
| Option B: | Telnet |
| Option C: | SMTP |
| Option D: | HTTP |
| | |
| Q22. | The protocol which helps in assigning IP address is |
| Option A: | DNS |
| Option B: | SMTP |
| Option C: | FTP |
| Option D: | DHCP |
| | |
| Q23. | What part of the URL is resolved first? |
| Option A: | Sub Domain |
| Option B: | Domain Name |
| Option C: | Top Level Domain |
| Option D: | Lower level domain |
| | |
| Q24. | SMI and MIB are two protocols used by |
| Option A: | FTP |
| Option B: | SMTP |
| Option C: | SNMP |
| Option D: | HTTP |
| | |
| Q25. | _____ is a communication protocol for mail servers to transmit email over the Internet. |
| Option A: | SNMP |
| Option B: | SMTP |
| Option C: | DHCP Discovery |
| Option D: | FTP |