52

B4M17020   (Pages : 2)   Reg. No:...........................

                                                   Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BVOC IT Degree Examination, March 2017
SDC4IT14 – Advanced Computer Networks
(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART - A

Answer *all* questions. Each question carries *one* mark

1. What layer in the TCP/IP stack is equivalent to the Transport layer of the OSI model?

    a) Application   b) Host-to-Host

    c) Internet   d) Network Access

2. A port address in TCP/IP is _____ bits long.

    a) 32   b) 64

    c) 16   d) 52

3. The IPC methods supported by UNIX system are

    a) Messages   b) Shared memory

    c) Semaphores   d) All of the above

4. FIFOs are also known as _____

5. Which system function is called to create a socket?

6. The end point of a connection of computer network is _____

    a) Socket   b) Switch

    c) Bridge   d) Gateway

7. What is the maximum number of callers in each cell in a GSM?

8. IEEE 802.16 standard is also known as _____

9. PAN stands for _____

10. Bluetooth wireless technology is developed for _____ Network.

11. The two basic types of ISDN are _____ and _____

12. What is the data rate provided by WiMAX?

                                                      (12 x 1 = 12 Marks)

PART - B

Answer *any seven* questions. Each question carries *two* marks

13. What is a network mask?

14. What is slow-start?

15. What is Inter Process Communication?

16. Differentiate Blocking and Non-Blocking System Calls.

17. Define Socket.

18. What is SSL?

19. What is a Cell?

20. What is Distribution System (DS)?

21. Why you need a Geosynchronous satellite?

(7 x 2 = 14 Marks)

PART - C

Answer *any six* questions. Each question carries *five* marks

22. Explain UDP Datagram format and its fields.

23. What is DNS? What are the two important aspects of DNS?

24. Write a short note on PIPEs?

25. List and explain types of sockets?

26. State the goals of 3G cellular networks.

27. Explain mobility principles?

28. Distinguish between GPS and GPRS.

29. Explain Bluetooth?

(6 x 5 = 30 Marks)

PART – D

Answer *any three* questions. Each question carries *eight* marks

30. Explain in detail the TCP/IP architecture.

31. Describe Semaphores?

32. Explain asynchronous I/O?

33. Compare and contrast FDMA, TDMA and CDMA techniques.

34. Explain IP based Mobile Telecommunications?

(3 x 8 = 24 Marks)

B4M17014   (Pages : 2)   Reg. No:...........................

Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BVOC Auto Degree Examination, March 2017
SDC4AE14 - Microprocessors & Applications
(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART –A
Answer all questions. Each question carries one mark.

Operation code field is present in :

(a) programming language instruction   (b) assembly language instruction

(c) machine language instruction   (d) none of the mentioned

A machine language instruction format consists of

(a) Operand field   (b) Operation code field

(c) Operation code field & operand field   (d) none of the mentioned

The length of the one-byte instruction is

(a) 2 bytes   (b) 1 byte

(c) 3 bytes   (d) 4 bytes

ASCII stands for ………

(a) American Standard Code for Information Interchange

(b) American Super Computer for Information Interchange

(c) American Semi-Conductor for Information Interchange

(d) None of the above

The number of instructions in 8085 is

(a) 74   (b) 86

(c) 255   (d) none of the above

Name the 16-bit register in 8085 microprocessor

(a) stack pointer   (b) program counter

(c) (a) & (b)   (d) none of the above

The instruction "JUMP" belongs to

(a) sequential control flow instructions   (b) control transfer instructions

(c) branch instructions   (d) control transfer & branch instructions

In PUSH instruction, after each execution of the instruction, the stack pointer is

(a) Incremented   (b) decremented

(c) not changed   (d) set to zero

The Stack follows the sequence

(a) first-in-first-out   (b) first-in-second-out

(c) last-in-first-out   (d) last-in-last-out

. The stack is useful for

(a) storing the register status of the processor   (b) temporary storage of data

(c) storing contents of registers temporarily inside the CPU   (d) all of the mentioned

. RAM stands for …..

(a) Random Access Memory   (b) Random Available Memory

(c) Recent Available Memory   (d) Recent Access Memory

. ROM stands for …..

(a) Read Output Memory   (b) Read Optimum Memory

(c) Read only memory   (d) None

(12 x 1 = 12 marks)

PART B

Answer any seven questions. Each question carries two marks.

13. What are the basic units of microprocessor?

14. What is a microprocessor?

15. What is the difference between microcomputer and microprocessor?

16. Name any three register in 8085 microprocessor

17. What do you mean by an instruction?

18. Name any three instructions of 8085 microprocessor.

19. What do you mean by stack?

20. Why stack is known as LIFO architecture?

21. What are the error checking methods?

(7 x 2 = 14 marks)

PART C

Answer any six questions. Each question carries five marks.

22. Define bit, byte, nibble, and word.

23. Differentiate simplex and duplex transmissions.

24. Briefly explain PUSH operation.
25. Name the different interrupts of 8085 microprocessor.
26. Briefly explain POP operation.

27. Briefly explain about any four instructions of 8086.

28. Briefly explain about the addressing modes in 8086 microprocessor.

29. What you mean by the three cycle execution model?

(6 x 5 = 30 marks)

PART D

Answer any three questions. Each question carries eight marks.

30. Explain about the register organization in 8085 microprocessor.

31. Explain the architecture of 8085 microprocessor with a neat diagram.

32. Explain about 8085 instructions in detail.

33. Explain in detail about registers and flags used in 8086.

34. Explain the architecture of 8086 in detail.

(3 x 8 = 24 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester BVOC IT Degree Examination, March 2017

GEC4SE11- Software Engineering Principles

(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART – A

Answer all questions. Each question carries one mark

1. Which of the following model perform risk management?
   (A) Spiral model   (C) Time boxing model
   (B) Waterfall model   (D) All of these

2. Which of the following is a process model?
   (A) DFD   (C) flowchart
   (B) PERT   (D) waterfall model

3. Which of the following is project scheduling technique?
   (A) PERT   (C) spiral model
   (B) E R model   (D) DFD

4. Who developed COCOMO model?
   (A) Barry Boehm   (C) Floyd
   (B) Dijekstra   (D) Dennis Ritchie

5. -------------------- testing is used to perform to check program internal
   (A) White box testing   (C) black box testing
   (B) Unit testing   (D) integration testing

6. The first phase of software development is
   (A) Requirement analysis   (C) Design
   (B) Coding   (D) Testing

7. The recent model is
   (A) Spiral model   (C) waterfall model
   (B) Prototype model   (D) iterative model

8. Which of the following is a function of risk control ?
   (A) Risk mitigation   (C) risk resolution
   (B) Risk monitoring   (D) All of these

9. Waterfall model also known as
   (A) Spiral model   (C) prototype model
   (B) SDLC   (D) linear sequential model

10. Structured analysis is
    (A) Top down approach   (B) top down and bottom up approach
    (B) Bottom approach   (D) none of these

11. DFD also known as
    (A) bubble chart   (C) work flow diagram
    (B) bubble chart and work flow diagram (D) flowchart

12. ---------------- is a diagram that depicts a set of real world entities and the logical
    Relationship among them
    (A) E R diagram   (C) DFD
    (B) Flowchart   (D) Algorithm

(12 x 1=12 Marks)

PART - B

Answer any seven questions. Each question carries two marks

13. Define software Engineering?
14. Define feasibility study?
15. Define process model?
16. What is alpha testing?
17. Define functional requirement
18. What is coupling?
19. What is cohesion?
20. Define Boundary value analysis?
21. What is regression testing?

(7 x 2=14 Marks)

PART- C

Answer any six questions. Each question carries five marks

22. Explain Iterative enhancement model.
23. What is Black box testing?
24. Briefly explain Top down and Bottom up design.
25. Briefly explain DFD
26. Compare validation and verification.
27. Briefly explain SRS and its characteristics
28. Briefly explain project scheduling.
29. Briefly explain Risk management.

(6 x 5 =30 Marks)

PART-D

Answer any three questions. Each question carries eight marks

30. Explain any two process model.
31. Explain SDLC.
32. Explain white box testing.
33. Explain constructive cost model.
34. Explain object oriented design.

(3 x 8=24 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester BVOC Auto Degree Examination, March 2017

SDC4AE13 - Electronic Engine Management Systems

(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART –A

Answer all questions. Each question carries one mark.

1. K-Jetronic fuel system is an example for ……..type of fuel injection system.
2. Separate injector is provided for each cylinder in ………type of Injection system
   - (a) Continuous type
   - (b) Intermittent type
   - (c) Single point system
   - (d) Multi point system
3. …………………type of valve is most commonly used in gasoline fuel system.
   - (a) Ball valve
   - (b) Globe valve
   - (c) Butterfly valve
   - (d) None of these
4. Cheapest yet reasonably precise gasoline injection system is the
   - (a) Direct injection
   - (b) Port injection
   - (c) manifold injection
   - (d) throttle body injection
5. Cylinder temperature after compression in diesel engine is approximately……degree Celsius.
   - (a) 300
   - (b) 400
   - (c) 600
   - (d) 800
6. A glow plug is a
   - (a)Staring
   - (b) Acceleration
   - (c) deceleration
   - (d) Idling
7. The contact breaker gap measured using
   - (a) Steel rule
   - (b) Dial gauge
   - (c) Dwell meter
   - (d) feeler gauge
8. Capacity of an engine condenser would be………..microfarad
   - (a)2
   - (b) 0.2
   - (c) 20
   - (d) 200
9. Magneto ignition system is preferred in………wheeler vehicles.
10. Fuel is supplied by means of air compressor in the Air injection system pressure in the range of………Mpa
    - (a)1
    - (b) 7
    - (c) 20
    - (d) 35
11. The most commonly used fuel supply system for car engine is
    - (a) Gravity system
    - (b) Pressure system
    - (c) Height system
    - (d) Pump system
12. Content of Normal Heptane for a fuel having octane number 75 is………

(12 x 1 = 12 marks)

PART B
Answer any seven questions. Each question carries two marks.

13   List down the important factors which depends pulse width

14.   Draw the table to find out base pulse width of fuel injection.

15.   What is homogenous lean burn mode of Bosch Motoronic gasoline injection system

16.   Explain the term idle speed.

17.   Compare various injection systems.

18.   What do you mean by Cold behavior, Volatility?

19.   Explain Ignition distributor

20   What are the different types of electronic ignition system?

21.   Note any two advantages of 12V battery usage over 6V system.

(7 x 2 = 14 marks)

PART C
Answer any six questions. Each question carries five marks.

22   Define alternate fuel and list down the extensively used alternate fuels.

23.   Note down any the merits and demerits of Fuel Injection

24.   Draw the diagram of DI and explain GDI.

25.   Explain stratified charge mode, Homogenous charge mode.

26   A diesel engine does not start or stalls just after starting, comment on possible causes.

27.   Explain Distributor fuel injection Pump with necessary diagram

28.   Explain Transistorized coil ignition system.

29.   Explain the details of firing order.

(6 x 5 = 30 marks)

PART D
Answer any three questions. Each question carries eight marks.

30   Explain Mechanical, K-Jetronic and Electronic Injection system with neat sketches

31.   Explain Bosch Motoronic gasoline injection system with its different working modes.

32.   Explain diesel engine fuel supply system by illustrating the functions of various systems associated with it.

33.   Explain Capacitance discharge, Transistorized coil ignition system with necessary diagrams.

34   a) Draw a single diagram to show the injector position in single, multi and direct injection system.
      b) Draw and explain direct injection system.

(3 x 8 = 24 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BVOC Degree Examination, March 2017
A04 – Reading on Society
(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

I . Answer the following questions

1.   Who is the hero in *Stigma Shame and Silence* by Kalpana Jain?
      a) Venketta Rao   b) Mangamma
      c) Ashok   d) Raphael
2.   Economic Globalisation leads to.....................
      a) poverty   b) hatred
      c) passion   d) none of these
3.   ---------------------- is an autobiography of Dr. Salim Ali
      a) The Fall of a Sparrow   b) The Wings of Fire
      c) Discovery of India   d) Memoirs of an Indian
4.   The translator of the story *Widow* into English?
      a) Ruskin Bond   b) Chalam
      c) Ranga Rao   d) Tagore
5.   The language which is the Federal Script of India?
      a) Tamil   b) French
      c) Devanagari   d) Telungu
6.   Rhinoceros requires _____ to exist
      a) Marshy land   b) Swampy forests
      c) Rivers   d) Hilly area
7.   Why does the widow hate the man who impregnated her?
      a) He was a thief   b) he was cruel
      c) he was a coward   d) he was blind
8.   Which region is called the Cradle of Civilization?
      a) North America   b) West Europe
      c) North India   d) West Asia
9.   In.....................Dr. Rajendra Prasad was elected as the President of INC
      a)1934   b)1943
      c)1933   d) 1944
10   PDS stands for-
      a) Public Debit System   b) Public Distribution System
      c) Private Distribution System d) Private Debit System

                                                          (10 x 1= 10 Marks)

II . Answer any TEN of the following in a sentence or two each.

11. What is 'Seed Replacement"?

12. What is the immortal principle which is vital for India and for the continued existence of humanity?

13. What is the primary reason for the disappearance or rarity of most of our wild life according to Dr Salim Ali?

14. What example does the widow point out for conceiving without the involvement of men?

15. There are advantages enjoyed by women according to Amartya Sen. What are they?

16. How can the rate of maternal mortality at child birth be decreased?

17. What is the best way found out by Ashok to deal with the rejection he felt?

18 . Which are the methods to restore and regulate the ecological balance?

19 . What is the result of the unequal heating of the Earth's surface?

20. Why do people consider the outside work of women as "educational"?

21. List out the two levels at which humans meet and deal with his environment.

22. What led to the extinction of settlements in Greenland?

(10 x 2=20 Marks)

III . Answer any FOUR of the following each in a paragraph

23. Impact of Globalisation on farmers

24. Briefly comment on the collective consciousness of India

25 . Lions, a victim to the rising population pressure

26. Factors responsible for long-period changes of climate

27. The problem of the widow in the story.

28. The brutal attitude of the doctor to HIV parent as revealed in Ashok's case.

(4 x 5= 20 Marks)

IV . Answer any TWO of the following in 300 words

29. Elucidate trade liberalization package in the context of Economic Globalisation.

30. Trace the role of man in the ecological imbalance through the ages.

31. How do you look at the revolt of the woman in *Widow*? Corroborate your idea.

32. Happiness for Kochu Rappai is his personal experience . Substantiate.

(2 x15 = 30 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BVOC IT Degree Examination, March 2017
SDC4IT13 – Operating Systems
(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART – A
Answer *all* questions. Each question carries *one* mark

1. Operating system which is used in critical time environment
   a. Distributed OS   b. Real time OS
   c. Time sharing OS   d. Batch OS
2. Full form of BIOS is
   a. Beginners Input Output System   b. Boot Input Output System
   c. Basic Input Output System   d. None of these
3. RPC is a ....
   a. Single thread call   b. inter process communication
   c. calling a procedure   d. None of the above
4. Disk scheduling involves deciding....................
   a. Which disk should be accessed next
   b. The order in which disk access request must be serviced
   c. Physical location where files should be accessed in the disk.
   d. None of the above
5. ....is a data structure in the OS kernel contains information needed to manage a particular process.
   a. Printed circuit board   b. Process control board
   c. Process control block   d. None of these
6. Semaphores are used for...........
   a. Dead lock   b. Process synchronization
   c. Avoid pagefault   d. Segmentation
7. A process can be moved into different ready queue in....................
   a. SJF scheduling   b. FCFS scheduling
   c. Multilevel queue scheduling   d.None of the Above
8. Virtual memory is
   a. An extremely large memory
   b. An extremely large secondary memory
   c. An illusion of an extremely large memory
   d. All of these
9. Suppose the process is in BLOCKED state waiting for some I/O service. When the service is completed it goes to..........state
   a. Suspended   b. Blocked
   c. Ready   d. Running
10. Which is not a function of an operating system?
    a. I/O management   b. Power management
    c. Process management   d. Memory management
11. The first fit, best fit and worst fit are strategies used for selecting ....
    a. Processes from the main memory
    b. Free hole from a set of available holes
    c. Processor to choose next process from memory
    d. All of these

12. Chaining and indexing are the strategies of ....
    a. Contiguous allocation   b. Static allocation
    c. Non-Contiguous allocation   d. Partition allocation

<div align="right">(12 x 1 = 12 Marks)</div>

PART – B
Answer *any seven* questions. Each question carries *two* marks

13. What are distributed systems?
14. How pipe differs from message queue?
15. What you mean by Thrashing?
16. Explain the wait and signal operation in semaphore.
17. Define Working set.
18. What are the benefits of multithreading programming model?
19. What are the functions of an operating system?
20. Explain Domain Naming system.
21. What are the contents of file control block?

<div align="right">(7 x 2 = 14 Marks)</div>

PART - C
Answer *any six* questions. Each question carries *five* marks

22. What are the various operations performed on a file?
23. Explain the various multithreading models?
24. Write a short note on demand paging.
25. What is context switching? How it is performed and what are its disadvantages?
26. What are the necessary and sufficient condition for a dead lock to occur?
27. Write short notes on the following
    a) Real time operating system
    b) Swapping
    c) Critical section problem
28. What do you mean by process? Explain the various states of a process in detail.
29. Comment on "safe state".

<div align="right">(6x 5 = 30 Marks)</div>

PART – D
Answer *any three* questions. Each question carries *eight* marks

30. Explain how paging differs from segmentation?

31. Explain the various CPU scheduling criteria by illustrating with examples.

32. What is meant by deadlock? What are the different methods to handle the deadlock? How can we avoid a deadlock in a system?

33. What is an IPC? What are the different methods used for IPC?

34. What is a file? Explain the different allocation methods in a file.
    What are directories? List the different types of directory structures with examples.
    Explain how free space is managed.

<div align="right">(3 x 8 = 24 Marks)</div>