370 PU M Sc Computer Science

180 PU_2016_370_Comp Sc_E
Project scheduling is an example of:-

○ Dynamic Programming

○ Greedy approach

○ Randomized approach

○ Divide and Conquer

132 PU_2016_370_Comp Sc_E
What is the first address of a block of classless addresses if one of the addresses is 12.2.2.76/27?

○ 12.2.2.128

○ 12.2.2.32

○ 12.2.2.64

○ 12.2.2.0

148 PU_2016_370_Comp Sc_E
In a two pass assembler the pseudo code EQU is to be evaluated during:-

○ Pass 1

○ Pass 2

○ not evaluated by the assembler

○ evaluated by the assembler

197 PU_2016_370_Comp Sc_E
In case of entity integrity, the primary key may be:-

○ Null

○ both Null & not Null

○ not Null

○ any value

141 PU_2016_370_Comp Sc_E
The SRS document is also known as _____ specification.

○ black-box

○ grey-box

○ preliminary

6 of 100
164 PU_2016_370_Comp Sc_E
Which of the following is not a regular grammar?

- $S \rightarrow aA; \quad A \rightarrow bS/b$
- $S \rightarrow aSa/bSb /\varepsilon$
- $S \rightarrow aA/bB; \quad A \rightarrow b; \quad B \rightarrow a$
- $S \rightarrow aS/bS /\varepsilon$

7 of 100
189 PU_2016_370_Comp Sc_E
The statement i*=3 is equivalent to:-

- i* = 3
- i = 3
- i = 3*
- i = i*3

8 of 100
196 PU_2016_370_Comp Sc_E
The database schema is written in:-

- HLL
- DML
- DDL
- DCL

9 of 100
109 PU_2016_370_Comp Sc_E
_____ is the science and engineering of making intelligent machines especially intelligent computer programs.

- Artificial Intelligence
- Software Engineering
- Knowledge Engineering
- Human Computer Interaction

10 of 100
157 PU_2016_370_Comp Sc_E
In a two pass assembler the object code generation is done during:-

- First pass
- Second pass

Zero pass

Not done by assembler

11 of 100
133 PU_2016_370_Comp Sc_E
If the ACK value is 200, then byte _____ has been received successfully.

198

199

201

200

12 of 100
181 PU_2016_370_Comp Sc_E
Which of the following provides lower access time & high speed data transfer?

Tape drives

Magnetic drums

Magnetic disks

Magnetic tape

13 of 100
212 PU_2016_370_Comp Sc_E
24345 and 33334 are divided by a certain three digit number and the remainder in both the cases is same. What is that divisor and remainder?

103 and 4

101 and 4

106 and 4

102 and 6

14 of 100
173 PU_2016_370_Comp Sc_E
A sort which iteratively passes through a list to exchange the first element with any element less than it and then repeats with a new first element is called:-

insertion sort

heap sort

selection sort

quick sort

15 of 100
149 PU_2016_370_Comp Sc_E
Which of these is most frequently accessed table?

MICROTAB

○ SYMTAB

○ OPTAB

○ LITTAB

125 PU_2016_370_Comp Sc_E
The cost of the network is usually determined by:-

○ Circuit complexity

○ Time complexity

○ Switching complexity

○ Packet size

116 PU_2016_370_Comp Sc_E
8085 microprocessor carryout the subtraction by:-

○ Floating Point subtraction method

○ Hexadecimal subtraction method

○ BCD subtraction method

○ 2's complement method

213 PU_2016_370_Comp Sc_E
The content of a 4-bit register is initially 1101. The register is shifted 2 times to the right with the serial input being 1011101

What is the content of the register after each shift?

○ 1110, 0111

○ 1001, 1001

○ 0001, 1000

○ 1101, 1011

101 PU_2016_370_Comp Sci_E
Which of the following is a mobile operating system?

○ Android

○ OS/2

○ Solaris

○ KDE

117 PU_2016_370_Comp Sc_E

Which flag of the 8085's flag register is not accessible to programmer directly?

○ Carry flag

○ Auxiliary carry flag

○ Parity flag

○ Zero flag

100 PU_2016_370_Comp Sci_E
Pick the odd pair out.

○ Heap - Priority Scheduling

○ Queue - Recursion

○ Linked List - Memory Allocation

○ Stack - Function call

108 PU_2016_370_Comp Sc_E
DOM refers to:-

○ Document Object Model

○ Data Operating Model

○ Document Ontology Model

○ Disk Operating Model

156 PU_2016_370_Comp Sc_E
A grammar for a programming language is a formal description of:-

○ Structure

○ Semantics

○ Library

○ Syntax

204 PU_2016_370_Comp Sc_E
15 men and 18 women together finish a work in 6 days. One man alone finishes that work in 150 days.
One woman will finish the same work in:-

○ 270 days

○ 170 days

○ 230 days

○ 225 days

172 PU_2016_370_Comp Sc_E
Which of the following sorting algorithm is of divide-and-conquer type?

○ Insertion sort

○ Quick sort

○ Bubble sort

○ Selection sort

217 PU_2016_370_Comp Sc_E
What is the output of the following code?

```
main()
{
        int i=10,j=20;
        if(i==j);
        printf(""%d,%d",i,j)';
}
```

○ 20, 10

○ 10, 20

○ No output

○ Error

140 PU_2016_370_Comp Sc_E
Which one of the following is not an Umbrella Activity that complements the five process framework activities and help team manage and control progress, quality, change, and risk:-

○ Risk management

○ User Reviews

○ Re-usability management

○ Measurement

205 PU_2016_370_Comp Sc_E
What is the annual dividend received from 325 shares if the quarterly dividend is Rs.10 Per share?

○ Rs.5000

○ Rs.3000

○ Rs.2600

○ Rs.6250

188 PU_2016_370_Comp Sc_E
The main() function is always:-

○ recursive function

○ a called function

○ used at the end of the program

○ a calling function

30 of 100
124 PU_2016_370_Comp Sc_E
In open loop congestion control techniques, the decisions are based on the:-

○ without regard to the current state of the network

○ with regard to the choice of the host

○ without regard to the choice of the host

○ with regard to the current state of the network

31 of 100
229 PU_2016_370_Comp Sc_M
Which of the following is related to Optical Fiber?

○ Filter

○ Logic

○ Total Internal Reflection

○ Catalogue

32 of 100
249 PU_2016_370_Comp Sc_M
Binary search algorithm cannot be applied to:-

○ pointer array

○ sorted binary trees

○ sorted linear array

○ sorted linked list

33 of 100
235 PU_2016_370_Comp Sc_M
Cycle stealing technique is used in:-

○ DMA based Data Transfer

○ Polled mode Data Transfer

○ Interrupt based Data Transfer

○ CPU based Data Transfer

34 of 100
246 PU_2016_370_Comp Sc_M

What is the language generated by the grammar?

$$S \rightarrow ASb \mid c$$
$$A \rightarrow a$$

○ $a^m cb^n \mid m,n \in N$

○ $a^n cb^n \mid n \in N$

○ $xcb^n \mid n \in N, x \in \{a^*\}$

○ $acy \mid y \in \{b^*\}$

233 PU_2016_370_Comp Sc_M
The method for updating the main memory as soon as a word is removed from the Cache is called:-

○ Write-through

○ protected write

○ cache-write

○ Write-back

259 PU_2016_370_Comp Sc_M
A control character is sent at the beginning as well as at the end of each block in the synchronous-transmission in order to:-

○ Specify the size of the data transmitted

○ Synchronize the clock of transmitter and receiver

○ Supply information needed to separate the incoming bits into individual character

○ Detect the error in transmission and received system

251 PU_2016_370_Comp Sc_M
The traditional way to create an infinite loop in c++ is:-

○ if(=) break;

○ while()

○ for(; ;)

○ for()

243 PU_2016_370_Comp Sc_M
Which of these are Code optimizing transformations?

○ Dead code elimination

○ Frequency and strength reduction

○ Elimination of common sub-expressions

○ Run time evaluation

39 of 100
224 PU_2016_370_Comp Sc_M
Which of the following inferences is true about the given post-order traversal D C A B I G E H K J?

○ A is the root node of the tree

○ C is a right internal root node

○ J is an internal root node on the right sub tree

○ D is a leaf node in the left sub tree

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221 PU_2016_370_Comp Sc_M
When an element has to be deleted from the queue:-

○ It is deleted from the position where the rear pointer points to and then the rear pointer is advanced by one position

○ It is deleted from the position where the front pointer points to and then the front pointer is advanced by one position

○ The front pointer is advanced by one position and then the element is deleted from that position

○ The rear pointer is advanced by one position and then the element is deleted from that position

41 of 100
298 PU_2016_370_Comp Sc_D
If one-third of one-fourth of a number is 15 then three-tenth of that number is:-

○ 36

○ 35

○ 45

○ 54

42 of 100
267 PU_2016_370_Comp Sc_D
The customized Linux version launched by CDAC is called:-

○ TOSS

○ COS

○ LOS

○ BOSS

43 of 100

295 PU_2016_370_Comp Sc_D
Consider the join of a relation R with relation S. If R has m tuples and S has n tuples, then the maximum size of join is:-

○ m+n)/2

○ m+n

○ mn

○ 2(m+n)

275 PU_2016_370_Comp Sc_D
ATM multiplexes cells using:-

○ asynchronous FDM

○ asynchronous TDM

○ synchronous TDM

○ synchronous TDM

279 PU_2016_370_Comp Sc_D
Which of the following is a project scheduling method that can be applied to software development?

○ PERT

○ CPM

○ CMM

○ PERT and CPM

271 PU_2016_370_Comp Sc_D
The instruction 'ORG O' is a _____.

○ Pseudo instruction.

○ High level instruction.

○ Machine Instruction.

○ Memory instruction

291 PU_2016_370_Comp Sc_D

```
void foo(int N) {
int temp = 0;
for (int i = 0; (i < N) && (temp < N); i++)
for (int j = 0; j < N; j++)
temp++;
}
```

Chose the correct statement. (hint: First figure out what the function does, then analyze its complexity.

○ The asymptotic complexity of foo is $O(N^{2})$

○ The asymptotic complexity of foo is O(N)

○ The asymptotic complexity cannot be analyzed without knowing the value of N

○ The asymptotic complexity of foo does not depend on N, i.e. it is O(1) (constant)

48 of 100
283 PU_2016_370_Comp Sc_D
Resolution of externally defined symbols is performed by:-

○ Loader

○ Compiler

○ Interpreter

○ Linker

49 of 100
287 PU_2016_370_Comp Sc_D
Consider the regular expression (000+00000)*. The minimum number of states in any DFA accepting the language is:-

○ 3

○ 5

○ 8

○ 9

50 of 100
263 PU_2016_370_Comp Sc_D
Which of the following is true?

○ A Complete graph is always a strongly connected graph

○ A Complete graph can be a strongly connected graph only if it has n(n-1) edges, where n is the number of nodes

○ A Strongly connected graph is always a complete graph

○ A Strongly connected graph can be complete graph only if it has n(n-1) edges, where n is the number of nodes

148 PU_2016_370_RQ
What will be the value of x and y after execution of the following statement (in c) n==5; x=n++; y= - x ?

○ 5, 5

○ 5, 4

○ 6, 6

○ 6, 5

120 PU_2016_370_RQ
There are certain packages that allow people to define data items, place these items in particular records, combine the records into designated files and then manipulate and retrieve the stored data. What are they called:-

○ Data Communication Package

○ Data Management System

○ Data Storage System

○ Batch Processing System

150 PU_2016_370_RQ
Consider the following declaration

int a, *b=&a, **c=&b;
the following program fragment are
a=4;
**c=5;

○ assigns address of c to a

○ assigns the value of b to a

○ assigns 5 to a

○ does not change the value of a

142 PU_2016_370_RQ
The complexity of Kruskal's minimum spanning tree algorithm on a graph with 'n' nodes and 'e' edges is:-

○ O(n log n)

○ O(e)

○ O(n)

○ O(e log n)

108 PU_2016_370_RQ
What is the maximum window size in sliding window protocol used in a computer network?

○ 16

○ 8

○ 4

○ 15

56 of 100
156 PU_2016_370_RQ
A hard disk is divided into tracks which are further subdivided into:-

○ clusters

○ sectors

○ vectors

○ heads

57 of 100
128 PU_2016_370_RQ
A Shift register that accepts a parallel input or a bidirectional serial load is called:-

○ End Around

○ Tristate

○ Conversion

○ Universal

58 of 100
154 PU_2016_370_RQ
Which of the following concepts means adding new components to a program as it runs?

○ Dynamic Loading

○ Dynamic typing

○ Dynamic binding

○ Data hiding

59 of 100
132 PU_2016_370_RQ
Which command is used to sort the lines of data a file in reverse order?

○ sh

○ sort

○ st

○ sort - r

60 of 100
122 PU_2016_370_RQ

GO BOTTOM and skip-3 commands are given one after another in a database file of 40 records the control is shifted to:-

○ 4th Record

○ 38th Record

○ 3rd Record

○ 37th Record

116 PU_2016_370_RQ
Dot Matrix is a type of:-

○ Disk

○ Tape

○ Printer

○ Bus

100 PU_2016_370_RQ
In which of the search algorithm the elements should be in sorted order?

○ Hashing

○ Binary Search Algorithm

○ Linear Search Algorithm

○ shell sort

106 PU_2016_370_RQ
Which of the following is used to proxy in a bound connections?

○ Application Layer Firewalls

○ Physical Layer Firewalls

○ Packet Filtering Firewalls

○ Session Layer Firewalls

102 PU_2016_370_RQ
The step by step instructions that solve a problem are called:-

○ A List

○ An Algorithm

○ A Plan

○ A Sequential Structure

124 PU_2016_370_RQ
9s compliment of the decimal number 546 is:-

○ 454

○ 452

○ 453

○ 455

144 PU_2016_370_RQ
A binary tree has n leaf nodes. The maximum number of nodes of degree 2 in this tree:-

○ n-1

○ n+1

○ n

○ 2^n

104 PU_2016_370_RQ
An example of hierarchical data structure is:-

○ Array

○ Linked List

○ Ring

○ Tree

118 PU_2016_370_RQ
The weak Entity set does not have sufficient attributes to form:-

○ A) Primary Key

○ B) Candidate Key

○ C) Both (A) and (B)

○ D) Super Key

138 PU_2016_370_RQ
Process is a:-

○ program in execution

○ contents of main memory

○ program in high level language

○ a job in secondary memory

110 PU_2016_370_RQ
How long is IPv6 address?

○ 64 bits

○ 128 bits

○ 16 bits

○ 32 bits

134 PU_2016_370_RQ
Which of the following phase has the maximum effort distribution?

○ Testing

○ Requirement Analysis

○ Information Gathering

○ Coding

112 PU_2016_370_RQ
Instruction Prefetching reduces the waiting time of:-

○ CPU

○ I/O Device

○ CU

○ Memory

158 PU_2016_370_RQ
In which addressing mode, the effective address of the operand is generated by adding a constant value to the contents of register?

○ immediate mode

○ indirect mode

○ absolute mode

○ index mode

126 PU_2016_370_RQ
The OR gate has two or more input signals. If any input is _____ the output is high.

○ high

○ low

○ 1

○ 0

136 PU_2016_370_RQ
A Short term scheduler executes at least once every 20ms. If it takes 2ms to decide to execute a process for 2ms. What is the percentage of CPU time wasted:-

○ 10%

○ 9%

○ 11%

○ 8%

152 PU_2016_370_RQ
Which one of the following will declare an array and initialize it with five numbers?

○ int [5] array;

○ Array a = new Array(5);

○ int a [] = new int[5];

○ int [] a = {23,22,21,20,19};

130 PU_2016_370_RQ
The diagram that describes the behaviour of instances of a class in terms of states, stimuli and transitions for a software project using (unified Modelling Language) is:-

○ State Diagram

○ Package Diagram

○ Deployment Diagram

○ Object Diagram

140 PU_2016_370_RQ
Fork is:-

○ increasing the priority of the task

○ creation of a new job

○ creation a new process

○ Dispatching a task

114 PU_2016_370_RQ
The average access time of a disc is:-

○ Rotational Latency + Transfer Time

○ Seek Time + Rotational latency time

○ Seek Time

○ Rotational Latency + Transfer Time + Seek Time

146 PU_2016_370_RQ
Which of the following special symbol allowed in a variable name?

○ *(asterisk)

○ - (hyphen)

○ | (pipeline)

○ _(underscore)

176 PU_2016_370_RQ
The Symbols used in assembly language are:-

○ Mnemonics

○ Codes

○ Lexicals

○ Assembler

170 PU_2016_370_RQ
Prior to the invention of time sharing, the prevalent method of computer access was:-

○ sequential Processing

○ remote access

○ telecommunication

○ batch processing

164 PU_2016_370_RQ
Regression testing is primarily related to:-

○ Data Flow testing

○ Maintenance testing

○ Functional testing

○ Development testing

166 PU_2016_370_RQ
Which Model is most popular for students small projects?

○ Spiral model

○ Prototyping Model

○ Quick and Fix model

○ Waterfall Model

174 PU_2016_370_RQ
Which of the following computer language is used for artificial intelligence?

○ COBOL

○ C Language

○ FORTRAN

○ PROLOG

162 PU_2016_370_RQ
The output of lexical analyser is:-

○ set of tokens

○ syntax tree

○ set of regular expressions

○ string of characters

172 PU_2016_370_RQ
The use of Smart Card represents a form of:-

○ Authorization

○ password encryption

○ User id encryption

○ Authentication

168 PU_2016_370_RQ
Which protocol use Distance Vector Routing?

○ OSPF

○ PPP

○ BGP

○ RIP

178 PU_2016_370_RQ
The postfix form of the expression (A+ B)*(C*D- E)*F / G is:-

○ AB + CD* E - *F *G /

○ AB + CD*E - FG /**

○ AB + CDE * - * F *G /

○ AB + CD* E - F **G /

160 PU_2016_370_RQ
Which table is a permanent databases that has an entry for each terminal symbol?

○ terminal table

○ literal table

○ reductions

○ identifier table

192 PU_2016_370_RQ
A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:-

○ 150°

○ 160°

○ 155°

○ 145°

186 PU_2016_370_RQ
Find the missing number in the sequence: 15, 31, 63, 127, 255, ___.

○ 513

○ 523

○ 517

○ 511

184 PU_2016_370_RQ
Today is Tuesday. After 62 days it will be:-

○ Wednesday

○ Thursday

○ Monday

○ Sunday

182 PU_2016_370_RQ
A man left $5,000.00 to his three sons. For every dollar Abraham received, Benjamin received $1.50 and Charles received $2.50. How much money was left to Benjamin?

○ $1000

○ $750

○ $1100

○ $1500

190 PU_2016_370_RQ

What least value must be assigned to * so that 86325*6 is divisible by 11?

○ 2

○ 3

○ 5

○ 1

180 PU_2016_370_RQ

Pipes A and B can fill a tank in 20 hours and 30 hours respectively. If both the pipes are opened simultaneously, how much time will take for tank to get full?

○ 10 hrs

○ 25 hrs

○ 12 hrs

○ 15 hrs

198 PU_2016_370_RQ

There is a cube in which one pair of adjacent faces is painted red; the second pair of adjacent faces is painted blue and a third pair of adjacent faces is painted green. This cube is now cut into 216 smaller but identical cubes.

How many small cubes are with both red and green on their faces?

○ 32

○ 16

○ 8

○ 12

194 PU_2016_370_RQ

A motorboat, whose speed in 15 km/hr in still water goes 30 km downstream and comes back in a total of 4 hours 30 minutes. The speed of the stream (in km/hr) is:-

○ 10

○ 6

○ 5

○ 4

188 PU_2016_370_RQ
One year ago, a father was four times as old as his son. In 6 years time his age exceeds twice the age of his son by 9 years. The ratio of their present ages is:-

○ 13:4

○ 12:5

○ 11:3

○ 9:2

196 PU_2016_370_RQ
There is a cube in which one pair of adjacent faces is painted red; the second pair of adjacent faces is painted blue and a third pair of adjacent faces is painted green. This cube is now cut into 216 smaller but identical cubes.

How many small cubes are there with at least two different colors on their faces?

○ 33

○ 64

○ 44

○ 54