

Sl. No. :

FACAP

Register
Number

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2018

**COMPUTER APPLICATIONS
(Degree Standard)**

Time Allowed : 3 Hours]

[Maximum Marks : 300

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. The applicant will be supplied with Question Booklet 15 minutes before commencement of the examination.
2. This Question Booklet contains 200 questions. Prior to attempting to answer the candidates are requested to check whether all the questions are there in series and ensure there are no blank pages in the question booklet. **In case any defect in the Question Paper is noticed it shall be reported to the Invigilator within first 10 minutes and get it replaced with a complete Question Booklet. If any defect is noticed in the Question Booklet after the commencement of examination it will not be replaced.**
3. Answer all questions. All questions carry equal marks.
4. You must write your Register Number in the space provided on the top right side of this page. Do not write anything else on the Question Booklet.
5. An answer sheet will be supplied to you, separately by the Room Invigilator to mark the answers.
6. You will also encode your Question Booklet Number with Blue or Black ink Ball point pen in the space provided on the side 2 of the Answer Sheet. If you do not encode properly or fail to encode the above information, action will be taken as per commission's notification.
7. Each question comprises four responses (A), (B), (C) and (D). You are to select ONLY ONE correct response and mark in your Answer Sheet. In case you feel that there are more than one correct response, mark the response which you consider the best. In any case, choose ONLY ONE response for each question. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.
8. In the Answer Sheet there are four circles (A), (B), (C) and (D) against each question. To answer the questions you are to mark with Blue or Black ink Ball point pen ONLY ONE circle of your choice for each question. Select one response for each question in the Question Booklet and mark in the Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. e.g. If for any item, (B) is the correct answer, you have to mark as follows :

(A) ● (C) (D)
9. You should not remove or tear off any sheet from this Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the time of examination. After the examination is concluded, you must hand over your Answer Sheet to the Invigilator. You are allowed to take the Question Booklet with you only after the Examination is over.
10. The sheet before the last page of the Question Booklet can be used for Rough Work.
11. Do not tick-mark or mark the answers in the Question Booklet.
12. Applicants have to write and shade the total number of answer fields left blank on the boxes provided at side 2 of OMR Answer Sheet. An extra time of 5 minutes will be given to specify the number of answer fields left blank.
13. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.

SEAL

1. The product of the eigen values of a matrix A is equal to _____ of A .
- (A) trace (B) sum of its principal diagonal
 (C) determinant (D) product of its principal diagonal
2. "All humming birds are richly colored". For the above statement which quantifier can be used?
- (A) Universal (B) Existential
 (C) Uniqueness (D) Both universal and uniqueness
3. Let $A = \{1, 2, 3, 4, 5\}$, $B = \{1, 2, 4, 8\}$, $C = \{1, 2, 3, 5, 7\}$, $D = \{2, 4, 6, 8\}$. Find $A \cup (B - C)$, $(B - C) - D$.
- (A) $\{1, 2, 3, 4, 5, 8\}, \{2, 6\}$ (B) $\{1, 2, 3, 4, 5, 8\}, \phi$
 (C) $\{1, 2, 3, 4, 5, 8\}, \{4, 8\}$ (D) $\{4, 8\}, \phi$
4. Symbolize the following Socrates argument :
- "All men are mortal. Socrates is a man. Therefore Socrates is a mortal" where $H(x)$: x is a man, $M(x)$: x is a mortal and s : Socrates.
- (A) $(x)H(x) \rightarrow M(x) \wedge H(s) \Rightarrow M(s)$ (B) $(x)(H(x) \Rightarrow M(x)) \wedge H(s) \rightarrow M(s)$
 (C) $(x)(M(x) \rightarrow H(x)) \wedge M(s) \Rightarrow H(s)$ (D) $(x)(M(x) \Rightarrow H(x)) \wedge M(s) \rightarrow H(s)$
5. Find the rank of the matrix $A = \begin{bmatrix} 1 & 2 & -1 & 3 \\ 4 & 1 & 2 & 1 \\ 3 & -1 & 1 & 2 \\ 1 & 2 & 0 & 1 \end{bmatrix}$.
- (A) 4 (B) 2
 (C) 3 (D) 1
6. Which one of the following is the absorption law?
- (A) $p \vee (p \wedge q) \Leftrightarrow p$ (B) $p \wedge (p \vee q) \Leftrightarrow p \vee q$
 (C) $p \Leftrightarrow p \vee p$ (D) $p \Leftrightarrow p \wedge p$

7. $y = x \frac{dy}{dx} + \frac{x}{dy/dx}$ is of degree
- (A) zero (B) two
- (C) three (D) one
8. The integrating factor of the differential equation $\sin x \frac{dy}{dx} + 3y = \cos x$ is calculated as
- (A) $e^{\tan^3 x/2}$ (B) $\log \tan x/2$
- (C) $\tan^3 x/2$ (D) $\tan x/2$
9. Which equations have each output signal is expressed as a Boolean function of its input signals?
- (A) Graphical equations (B) Boolean equations
- (C) Linear equations (D) Non-linear equations
10. _____ circuits are referred to as "memoryless" circuit, because their output depends only on their current inputs and no history of prior inputs is retained.
- (A) Combinational (B) Sequential
- (C) Algebraic (D) Boolean
11. Which map is a convenient way of representing a Boolean function of a small number of variables?
- (A) Algebraic simplification (B) Karnaugh map
- (C) Quine-McClaskey (D) Boolean expression
12. Which logic gate have this following truth table?

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

- (A) NOT (B) NAND
- (C) NOR (D) XOR

13. In mainframe computers, _____ program is known as initial program loader.
- (A) Bootstrap (B) Job control
 (C) Input/output (D) Supervisor
14. Which of the following types of software should you use if you often need to create, edit and print documents?
- (A) Word processing (B) Spreadsheet
 (C) Unix (D) Desktop publishing
15. Remote computing services involve the use of timesharing and
- (A) Multiprocessing (B) Interactive processing
 (C) Batch processing (D) Real time processing
16. Which program merges many object modules?
- (A) Compiler (B) Interpreter
 (C) Loader (D) Linker
17. A string of bits used to represent a character is known as a
- (A) bit (B) nibble
 (C) byte (D) carriage return
18. What is the value of 17, using 9's complement?
- (A) 72 (B) 82
 (C) 92 (D) 102
19. Which gate has the following truth table?

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

- (A) AND (B) OR
 (C) NAND (D) NOR

20. What will be the output of following program?

```
#include <stdio.h>
void main()
{
    int a=10, b=6;
    if (a=3) b++;
    printf ("%d%d", a, ++b);
}
```

- (A) 107
(C) 37

- (B) 108
 (D) 38

21. What is the value assigned to the variable X if b is 7?

$X = b > 8 ? b << 3 : b > 4 ? b >> 1 : b;$

- (A) 3
(C) 14

- (B) 7
(D) 28

22. A _____ initializes a new object to be a duplicate of a previously defined source object.

- (A) default constructor
 (C) copy constructor

- (B) parameterized constructor
(D) destructor

23. What will be the output of following program?

```
#include <stdio.h>
void main()
{
    int a=4, b=5;
    printf ("%d", (a>b)?a:b);
}
```

- (A) -1
(C) 4

- (B) 0
 (D) 5

24. What will be the output of following program?

```
#include <stdio.h>
void main()
{
    char *s="BIRD";
    char s1="BIRD";
    printf ("%d%d", sizeof(s), sizeof(s1));
}
```

- (A) 1 5
(C) 1 4

- (B) 2 5
(D) 2 4

25. What will be the output of the following program?

```
#include<stdio.h>
#include<string.h>
void main( )
{
char s[20] = "C programming" ;
printf("%d", strlen(s)) ;
}
```

- (A) 10 (B) 11
 (C) 12 (D) 13

26. What will be the output of the following program?

```
#include<stdio.h>
void main( )
{
char c = 125;
c = c+10;
printf("%d", c);
}
```

- (A) 135 (B) -135
 (C) 121 (D) -121

27. Which of the following is correctly matched?

- I. Private Data Members - Can be accessed from within a class.
II. Protected Data Members - Can be accessed from anywhere only.
III. Public Data Member - Can be accessed from derived classes.

- (A) I only (B) I and II
(C) I and III (D) II only

28. A member declared as _____ is accessible by the member function within its class and any class immediately derived from it.

- (A) Private (B) Public
 (C) Protected (D) Default

29. The _____ keyword is used to prevent direct access of member variables or function by the object.

- (A) Private (B) Protected
(C) Public (D) Inline

30. The _____ model is based on the fundamental ideas proposed by E.F. Codd.
- (A) Network (B) Object oriented
(C) Hierarchical (D) Relational
31. Which of the following is not an output device of a computer?
- (A) Printer (B) VDU
(C) CRT (D) Keyboard
32. _____ consists of specialized programs, usually running on dedicated servers, which are configured to examine and filter network traffic.
- (A) Proxy server (B) Cryptography
(C) Middleware (D) Firewall
33. The term FTP stands for
- (A) Function Transmission Procedure
(B) File Transmission Procedure
 (C) File Transfer Protocol
(D) Fund Transmission Protocol
34. Expand WAIS
- (A) Web Application Information System
 (B) Wide Area Information Server
(C) Wide Area Information System
(D) Web Application Information Server
35. In RSA cryptography algorithm the acronym RSA stands for
- (A) Rodrigues, Stephen, Andrews
(B) Rodrigues, Shamir, Abraham
(C) Rivest, Shamir, Abraham
 (D) Rivest, Shamir, Adleman

36. The abbreviation OLTP stands for
(A) Off-line Transmission Protocol (B) On-line Transaction Protocol
 (C) On-line Transaction Processing (D) On-line Transmission Processing
37. The _____ report provides a few of the critical statistics from the preceding day's operating activities to the managers on daily basis.
(A) Periodic (B) Key-Indication
(C) On-call (D) Exception
38. The measurement of the number of customers who stop using or purchasing products or services from a company is called
(A) Competitive rate (B) Services rate
 (C) Firm rate (D) Churn rate
39. In _____ normal form, no non-key field may pertain to another non-key field.
(A) First (B) Second
 (C) Third (D) Fourth
40. An unsolicited commercial e-mail is called a
(A) Worm (B) Trojan
 (C) Spam (D) Virus
41. Point out the wrong statement in the following.
(A) Electromagnetic waves ranging between 3 kHz – 1 GHz called radio waves
(B) Waves ranging in frequencies between 1 – 300 GHz called microwaves
(C) Infrared waves with frequencies from 300 GHz – 400 THz
 (D) Electromagnetic spectrum, ranging from 3 kHz – 1900 THz used for wireless communication

42. A sine wave is offset $1/6$ cycle with respect to time 0. What is its phase in degrees and radians?
- (A) 60° and 1.046 rad (B) 65° and 1.046 rad
(C) 60° and 1.251 rad (D) 65° and 1.251 rad
43. MPEG-2 is related to
- (A) International Standard 11172 (B) International Standard 13818
(C) International Standard 11175 (D) International Standard 13188
44. Who developed the Petri Net Model?
- (A) Danthina (B) Floyd
(C) Jacobson (D) Kanakia
45. Which year improved mobile telephone system was installed?
- (A) 1960 (B) 1961
(C) 1962 (D) 1959
46. Data communication usually take place over media that are specifically setup for the network and are known as _____ media.
- (A) Committed (B) Devoted
 (C) Dedicated (D) Data transfer
47. Which one is an example for hybrid network?
- (A) LAN (B) PAN
(C) WAN (D) CAN



48. In which technology the inward transmission of a message at a node starts before it is completely received by the node?
- (A) Cut-through switching (B) Store and forward switching
(C) Packet switching (D) Token management
49. How many channels can a coaxial cable carry?
- (A) 5,000 (B) 5,500
(C) 50,000 (D) 6,500
50. What is the propagation time if the distance between the two points is 12000 km? Assume the propagation speed to be 2.4×10^8 m/s in cable.
- (A) 60 ms (B) 70 ms
(C) 40 ms (D) 50 ms
51. Which computing is embedded into everyday life, as in the vision of Mark Weiser?
- (A) RFID (B) Mobile computing
 (C) Ubiquitous computing (D) Parallel computing
52. Which database is shared by all users of all databases on the servers for conserving storage space?
- (A) Sybdiag database (B) Sybsecurity database
 (C) Tempdb database (D) dbccdb database
53. Data items grouped together for storage purposes are called
- (A) Record (B) Title
(C) List (D) String

54. Who is responsible for storing, retrieving and updating the data in the database?

- (A) Storage Manager
- (B) Query Processor
- (C) Database User
- (D) System Manager

55. _____ data manipulation language require a user to specify what data are needed without specifying how to get those data

- (A) Explicit
- (B) Implicit
- (C) Procedural
- (D) Non-procedural

56. Which one describes the database design at the physical level?

- (A) Logical subschema
- (B) Physical subschema
- (C) Logical schema
- (D) Physical schema

57. _____ have an ability to change the internal schema without having to change the external schema.

- (A) Logical data dependence
- (B) Logical data independence
- (C) Physical data dependence
- (D) Physical data independence

58. _____ is an outline or a plan that describes the records and relationship existing in the view.

- (A) Data diagram
- (B) Scheme
- (C) Abstraction
- (D) Gist

59. In which data model, the underlying assumption is one child can have more than one parents? The data model is difficult to comprehend

- (A) Network
- (B) Hierarchical
- (C) Relational
- (D) Object oriented



60. In MS-Access _____ is essential for eliminating redundancy in specified field.

- (A) Primary key (B) Foreign key
(C) Check constraints (D) Auto increment

61. In MS Access _____ allows you to view data as a table.

- (A) Print View (B) List View
(C) Slide View (D) Outline View

62. Identify the Desktop publishing software used for page layout purpose.

- (A) Page maker (B) Flash
(C) Paint brush (D) Power point

63. Pages published on the web, using special formatting language is called

- (A) XML (B) WML
(C) UML (D) HTML

64. _____ graphics files have been specially created for use in desk top publishing.

- (A) Clip art (B) Word art
(C) Template (D) Framework

65. _____ guides the user through the process of creating a presentation by asking some questions and designs the complete power point presentation.

- (A) Auto content wizard (B) Template
(C) Blank presentation (D) Design view

66. Choose _____ to copy the contents of the left most column of the selected range into all the remaining columns to the right within this range (M:N)
- (A) Edit → Fill → right (B) Edit → Fill → left
(C) Edit → Fill → up (D) Edit → Fill → down
67. Among the following operators, which one has highest priority : (), /, +, *
- (A) + (B) *
 (C) () (D) /
68. _____ key is used to erase one or more characters left of the insertion point.
- (A) delete (B) insert
(C) ctrl (D) backspace
69. _____ feature of MS-word, helps you to quickly produce a personalized letter for each and every person in your mailing list.
- (A) Document merge (B) Mail merge
(C) Mail split (D) Merge and split
70. In word application, moving a text by copying it to clipboard, and removing it from its original position is done using the short cut key
- (A) Ctrl-C (B) Ctrl-V
 (C) Ctrl-X (D) Ctrl-P
71. _____ allows you to perform various operations on files and folders such as moving and copying.
- (A) Taskbar (B) Status bar
 (C) Explorer (D) My computer



72. MPEG-2 is the _____ compression standard required for making DVDs.

(A) frames

(B) images

(C) video

(D) audio

73. Process of converting a sound wave into numbers as bits and bytes is known as

(A) Modulation

(B) Digitizing

(C) Compiling

(D) Converting

74. Compression Technique used in Audio is

(A) Differential Encoding

(B) Transformation Encoding

(C) Entropy Coding

(D) Differential and Transformation Coding

75. Due to lossy compression, some of the original _____ is lost.

(A) network

(B) complexity

(C) data

(D) storage

76. Which one of these is a video file?

(A) frogs.avi

(B) horse.jpg

(C) cat.mp3

(D) all of the above

77. _____ video is transferred through fire wire.

(A) analog

(B) digital

(C) bit mapped

(D) digitized

78. MIDI stands for
- (A) Memory Interleaved Device Independent
 - (B) Musical Instrument Digital Interface
 - (C) Musical Instrument Device Intermediate
 - (D) Musical Instrument Device Interface
79. Time independent media such as text and image are classified as
- (A) Discrete media
 - (B) Continuous media
 - (C) Captured media
 - (D) Synthesized media
80. Programs used to add surface to the wire frame to give image body and solidity is called as
- (A) Inverse kinematics
 - (B) Shaders
 - (C) Anti-aliasing
 - (D) Animation
81. _____ images are formed from a matrix of pixels with different colours.
- (A) Vector
 - (B) Bitmap
 - (C) Quicktime
 - (D) CAD
82. Which of the following is incorrectly paired?
- (A) <TITLE> - It gives an HTML document title
 - (B) <META> - It uses name/value pair to provide information about document
 - (C) <BASE> - It specifies a relative URL address
 - (D) <STYLE> - It encloses style specifications
83. The _____ tag specifies where in a text it would be ok to add a line-break.
- (A) <SBR>
 - (B) <WBR>
 - (C)

 - (D) <SOFT>

84. Which of the following is an automatic response to an email?
 (A) Quick reply (B) Mail bot
 (C) Mail Rep (D) Mail Res
85. Which of the following feature that save typing when email message is composed?
 (A) Stationary (B) Rich text
 (C) Unencoding (D) Bin hex
86. Which of the following regarding email address is not correct?
 (A) Email address is case sensitive
 (B) Email addresses do not have punctuation marks
 (C) Email address has two main parts – Username and domain name
 (D) Email address may be enclosed within angle brackets < >
87. Which of the following is a distributed system of interlined pages that include text, pictures, sound and other information?
 (A) Use net (B) Voice and video conferencing
 (C) File transfer (D) WWW
88. Match the following :
- | | |
|-----------------|---|
| (a) Mail server | 1. Store files that can be transferred |
| (b) Web clients | 2. Act as a switch board for online chats |
| (c) FTP servers | 3. Handling incoming and outgoing mail |
| (d) IRC server | 4. Browser |
-
- | | | | | |
|---|-----|-----|-----|-----|
| | (a) | (b) | (c) | (d) |
| (A) | 3 | 1 | 4 | 2 |
| <input checked="" type="checkbox"/> (B) | 3 | 4 | 1 | 2 |
| (C) | 3 | 2 | 1 | 4 |
| (D) | 4 | 3 | 2 | 1 |

89. $\frac{d}{dx}F(x) = f(x)$ then

(A) $\int_a^b f(x) dx = F(b) - F(a)$

(B) $\int_a^b F(x) dx = f(b) - f(a)$

(C) $\int_a^b f(x) dx = F(a) + F(b)$

(D) $\int_a^b F(x) dx = f(a) + f(b)$

90. Which of the following functions is positive for all X ?

(A) $\cos(\sin x)$

(B) $\tan(\cos x)$

(C) $\cos(\tan x)$

(D) $\log(\tan x)$

91. Convert the decimal number $(67)_{10}$ to its equivalent octal number?

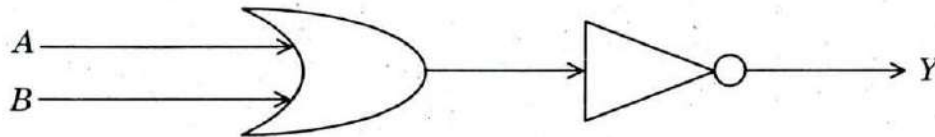
(A) $(100)_8$

(B) $(103)_8$

(C) $(109)_8$

(D) $(99)_8$

92. What is the Boolean equation for the given diagram?



(A) $Y = AB$

(B) $Y = A + B$

(C) $Y = \overline{AB}$

(D) $Y = \overline{A + B}$

93. If an array is declared as $\text{float arg} [] = \{10.0, 20.0, 30.0, 40.0\}$ then what is the address of $\text{arg} [2]$? (base address = 1000)

(A) 1002

(B) 1004

(C) 1008

(D) 1012

94. In which data model, the relation is the only construct required to represent the associations among the attributes of an entity as well as the relationship among different entities?
- (A) Network (B) Hierarchical
(C) Semantic (D) Relational
95. A relationship may also have descriptive
- (A) Entity (B) Attributes
(C) Mapping (D) Cardinalities
96. The primary functions of a desk top publishing program is
- (A) Layout pages (B) Word processing
(C) Statistical calculation (D) Presentation
97. The cell reference for cell range of G2 to M12 is
- (A) G2.M12 (B) G2;M12
 (C) G2 : M12 (D) G2 - M12
98. Find the odd man out
- (A) Animation (B) Voice script
(C) Audio (D) Video
99. Transportation of data is easier due to
- (A) Decompression (B) Compression
(C) Transmission (D) Pixel

100. Find the no. of subsets of a set of order 3.
- (A) 3 (B) 4
(C) 6 (D) 8
101. Four brothers and three sisters of a family is to be arranged for a photograph. In how many ways can they be seated if all the sisters sit together?
- (A) 720 (B) 600
(C) 480 (D) 360
102. In a class of 25 students, 12 have taken Maths, 8 have taken Maths but not Biology. Find the no. of students who have taken Maths and Biology and those students who have taken Biology but not Maths.
- (A) 13, 9 (B) 12, 8
(C) 13, 4 (D) 12, 9
103. A binary relation R in a set P is called a partial order relation in P iff R is
- (A) Reflexive, symmetric, transitive (B) Reflexive, antisymmetric, transitive
(C) Irreflexive, symmetric, transitive (D) Irreflexive, antisymmetric, transitive
104. State which of the following is true?
- I. Any relation which is irreflexive and symmetric cannot be transitive.
II. Relations $>$ and $<$ are both irreflexive and transitive.
III. Relation of being a mother is transitive.
- (A) I only (B) II only
(C) III only (D) I, II
105. A square matrix A is singular iff
- (A) one of the eigen values is zero
(B) all the eigen values are nonzero and distinct
(C) all the eigen values are nonzero and equal
(D) one of the eigen values is nonzero and unique

106. Which of the following connective is symmetric, associate and distributive?

(A) $\bar{\vee}$ (exclusive OR)

(B) \uparrow (NAND)

(C) \downarrow (NOR)

(D) \Rightarrow (implication)

107. State which of the following is true.

I. Substitution instance of a tautology is a tautology.

II. $P \rightarrow Q \Leftrightarrow (\neg P \vee Q)$.

III. $\neg(P \wedge Q) \Leftrightarrow (\neg P \vee \neg Q)$.

(A) I, II only

(B) II, III only

(C) I, III only

(D) I, II, III

108. Let p : It is below freezing and

Let q : It is snowing.

Write the compound proposition in symbolic form :

"Below freezing is a necessary condition for it to be snowing".

(A) $p \rightarrow q$

(B) $\sim p \rightarrow \sim q$

(C) $p \rightarrow \sim q$

(D) $q \rightarrow p$

109. $\int (\tan x + \cot x) dx$ equals

(A) $\log(c \tan x)$

(B) $\log(\sin x + \cos x) + c$

(C) $\log cx$

(D) none of these

110. $\int \frac{e^x + e^{-x}}{e^x - e^{-x}} dx$ is equal to

(A) $\log(e^x - e^{-x})$

(B) $\log(e^x + e^{-x})$

(C) $\log \sinh x$

(D) $\log \cosh x$

111. If α and β are the roots of $4x^2 + 3x + 7 = 0$, then the value of $\frac{1}{\alpha} + \frac{1}{\beta}$ is

(A) $-\frac{3}{4}$

(B) $-\frac{3}{7}$

(C) $\frac{3}{7}$

(D) $\frac{7}{4}$

112. _____ is a positive exponent exceeds the maximum possible exponent value, it may be designated as $+\infty$ or $-\infty$.
- (A) Exponent overflow (B) Exponent underflow
(C) Significant underflow (D) Significant overflow
113. If two numbers are added, and they are both positive or both negative then _____ occurs if and only if the result has the opposite sign.
- (A) overflow (B) underflow
(C) fixed-point (D) floating point
114. _____ set, when more than one process shares a page.
- (A) Age (B) Modify
(C) Protect (D) Copy on write
115. _____ policy considers all unlocked pages in main memory as candidates for replacement, regardless of which process owns a particular page.
- (A) Local replacement (B) Global replacement
(C) Fixed allocation (D) Variable allocation
116. _____ algorithm selects for replacement that page for which the time to the next reference is the longest.
- (A) Least Recently Used (LRU) (B) First-in-First out (FIFO)
 (C) Optimal (D) Clock
117. If the present bit is not set, then the desired page is not in main memory and a memory access fault is called
- (A) Page fault (B) Segment fault
(C) Memory fault (D) Input/output fault
118. Which program do housekeeping chores such as COPY, ERASE, DIR, etc.?
- (A) Utility programs (B) User programs
(C) Server programs (D) Application programs

119. The term sum-of-products in Boolean algebra means

- (A) The AND function of several OR function
- (B) The OR function of several AND function
- (C) The OR function of several OR function
- (D) The AND function of several AND function

120. If an AND gate has 7 inputs, how many input words are there in its truth table?

- (A) 16
- (B) 32
- (C) 64
- (D) 128

121. Match the following :

- | | |
|---------------------------|----------------|
| (a) Storage specifier | 1. unsigned |
| (b) Type specifier | 2. switch case |
| (c) Conditional statement | 3. for |
| (d) Iterative statement | 4. extern |

- | | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| <input checked="" type="checkbox"/> (A) | 4 | 1 | 2 | 3 |
| (B) | 2 | 1 | 3 | 4 |
| (C) | 4 | 1 | 3 | 2 |
| (D) | 1 | 4 | 2 | 3 |

122. Which of the following about the following two declarations is true?

I. `int *F()`

II. `int (*F)()`

- (A) Both are identical
- (B) The first is correct and the second is wrong
- (C) The first declaration is a function returning a pointer to an integer and the second is a pointer to function returning int
- (D) Both are different ways of declaring pointer to a function

123. A function calls itself is called a

- (A) inline function
- (B) static function
- (C) friend function
- (D) recursive function

124. floor(x) function returns

- (A) smallest value greater than or equal to x
- (B) smallest value greater than x
- (C) largest value less than or equal to x
- (D) largest value less than x

125. Which of the following statement regarding operator overloading is not correct?

- (A) Only existing operators can be overloaded
- (B) The basic meaning of an operator cannot be changed
- (C) Some operators cannot be overloaded
- (D) Friend function can be used to overload all operators

126. The scope resolution operator is used for

- (A) Arithmetic operations
- (B) Relational operations
- (C) Local variable
- (D) Global variable

127. What will be the output of the following program?

```
#include<stdio.h>
void main()
{
    int a, *p;
    a = 9;
    p = &a;
    a++;
    printf("%d", *p);
}
```

- (A) 9
- (B) 10
- (C) 11
- (D) Error

128. Dynamic memory management functions are defined in _____ header file.

(A) `stdio.h`

(B) `stdlib.h`

(C) `conio.h`

(D) `stdallo.h`

129. A pointer variable of type _____ cannot be dereferenced.

(A) `int*`

(B) `char*`

(C) `void*`

(D) `float*`

130. _____ return type cannot return any value to the caller.

(A) `int`

(B) `float`

(C) `void`

(D) `double`

131. E/M analysis stands for

(A) Efficiency/Means Analysis

(B) Ends/Mode Analysis

(C) Ends/Means Analysis

(D) Efficiency/Mode Analysis

132. Which technique is widely used in academic testing?

(A) MICR

(B) POS

(C) OCR

(D) MOR

133. The third generation of computers have used

(A) Electronic valves

(B) Integrated circuits

(C) Transistors

(D) Vacuum tubes

134. What is a mechanistic system?

(A) A system which seldom interacts with its environment to receive input or generate output

(B) A system mechanises all input and output from its environment

(C) A system which is very much adaptive to its environment

(D) A system which is more organic to its environment and its input and output

135. Alternative decisions can result in more than one outcome. The possible outcome and their probabilities of occurrences can be identified is called
- (A) Decision making under certainty
 - (B) Decision making under risk
 - (C) Decision making under uncertainty
 - (D) Decision making under no risk
136. SPSS stands for
- (A) Systematic Program for Statistical Systems
 - (B) Statistical Program for Systematic Solutions
 - (C) Statistical Package for Social Sciences
 - (D) Statistical Package for Scientific Systems
137. _____ is the mechanism of retrieval of data at whatever level of detail as desired by the user from a concept hierarchy.
- (A) Drill-Out
 - (B) Drill-Down
 - (C) Down-Drill
 - (D) Drill-Up
138. _____ is a category of information system in which decisions adjusting a physical production process are automatically done by computers.
- (A) Process Control Solution
 - (B) Process Communication System
 - (C) Process Control System
 - (D) Product Control System
139. _____ effect is the distortion of information about the demand for a product as it passes from one entity to the next across the supply chain.
- (A) Bear whip
 - (B) Bull whip
 - (C) Cow whip
 - (D) Buffalo whip

140. Match the following :

- | | |
|---------------|-------------|
| (a) 802.11 | 1. 54 Mbps |
| (b) 802.11b | 2. 450 Mbps |
| (c) 802.11a/g | 3. 11 Mbps |
| (d) 802.11n | 4. 1 Mbps |

- | | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| <input checked="" type="checkbox"/> (A) | 4 | 3 | 1 | 2 |
| (B) | 4 | 1 | 3 | 2 |
| (C) | 3 | 2 | 4 | 1 |
| (D) | 2 | 4 | 1 | 3 |

141. Which protocol is used to retrieve email from mail server?

- | | |
|----------|---|
| (A) SMTP | (B) FTP |
| (C) NNTP | <input checked="" type="checkbox"/> (D) POP |

142. Which is used to controls the usage of spectrum in radio access network?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> (A) RNC | (B) GGSN |
| (C) RAN | (D) GPRS |

143. In NSFNET, each supercomputer was given a little brother, consisting of an LSI-11 microcomputer called

- | | |
|--------------------|---|
| (A) Server farm | (B) WIMAX |
| (C) Sensor Network | <input checked="" type="checkbox"/> (D) Fuzz ball |

144. _____ network have a single communication channel that is shared by all the machines on the network.

- | | |
|---|------------------|
| <input checked="" type="checkbox"/> (A) Broadcast | (B) Unicast |
| (C) Point-to-point | (D) Peer-to-Peer |

145. Find out the wrong statement for types of DSL technology.

- (A) Symmetric DSL (B) Asymmetrical DSL
(C) High-bit-Rate DSL (D) Low-bit-Rate DSL

146. Match the following :

- | | |
|----------------------------|--------------------------|
| (a) The Data link layer | 1. Transmitting raw bits |
| (b) The presentation layer | 2. Dialog control |
| (c) The physical layer | 3. Syntax and semantics |
| (d) The session layer | 4. Data frames |

- | | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| (A) | 4 | 1 | 3 | 2 |
| <input checked="" type="checkbox"/> (B) | 4 | 3 | 1 | 2 |
| (C) | 3 | 4 | 2 | 1 |
| (D) | 2 | 3 | 1 | 4 |

147. _____ allows the remote workers see and interact with a graphical computer screen.

- (A) email (B) Web page
(C) Face book (D) Desktop sharing

148. Every layer needs a mechanism for identifying the senders and receivers that are involved in the particular message is called

- (i) addressing
(ii) routing
(iii) naming
(iv) protocol layering
- (A) (i) (B) (ii)
 (C) (i) and (ii) (D) (iv) and (ii)

149. _____ database cannot be expanded onto any other devices.
- (A) Owner (B) Master
(C) Temporary (D) Subsidiary
150. _____ defines database objects.
- (A) DDL (B) DML
(C) DBMS (D) DBA
151. Which of the following is not a relational databases?
- (A) dBASE IV (B) 4th Dimension
(C) Foxpro (D) Reflex
152. Which basic operation is used to find tuples that are in one relation but are not in another relation?
- (A) Union (B) Projection
(C) Select (D) Set difference
153. Which symbol represents an entity set in an E-R diagram?
- (A) Diamonds (B) Ellipse
 (C) Rectangle (D) Lines
154. _____ is defined as the number entities to which another entity can be associated via a relationship set.
- (A) Cardinality ratio (B) Participation constraints
(C) Recursive relationship set (D) Descriptive attributes

155. An entity set that does not possess sufficient attributes to form a primary key is called
- (A) Weak entity set
 - (B) Strong entity set
 - (C) Subordinate entity
 - (D) Relationship set
156. In which mapping cardinalities, an entity in A is associated with atmost one entity in B, and an entity in B is associated with atmost one entity in A?
- (A) One-to-one
 - (B) One-to-many
 - (C) Many-to-one
 - (D) Many-to-many
157. The degree of relationship is called
- (A) Specialization
 - (B) Cardinality
 - (C) Generalization
 - (D) Sharability
158. Which language supports the calculation and updation of database objects?
- (A) Data Definition Language
 - (B) Data Manipulation Language
 - (C) Object Description Language
 - (D) Schema Definition Language
159. Who controls the operational data?
- (A) Database Administrator
 - (B) Database Operator
 - (C) Database Manager
 - (D) Database User
160. Which database is one that is congruent with the data defined in object classes and sub classes?
- (A) Hybrid
 - (B) Relational
 - (C) Procedure oriented
 - (D) Object oriented



161. MS-Access is a
- (A) Database Tool
 - (B) Web page Tool
 - (C) Programming Tool
 - (D) Layout Tool
162. In Access a row in table X can have many matching rows in table Y, but a row in table Y can have only one matching row in table X. What type of relationship it is?
- (A) One-to-one
 - (B) One-to-many
 - (C) Many-to-one
 - (D) Many-to-many
163. Identify the logical function that lets you compare the contents of a cell address to a value or label you specify
- (A) = COUNT()
 - (B) = MAX()
 - (C) = MIN()
 - (D) = IF()
164. Name the chart-type that pictorizer relative importance of data values over period of time
- (A) Area
 - (B) Bar
 - (C) Column
 - (D) Line
165. The process of entering a formula in one worksheet that refers to numeric data in another worksheet is called
- (A) 3D-Zooming
 - (B) 3D-Shearing
 - (C) 3D-Spearing
 - (D) 3D-Moving
166. Σ is a _____ tool.
- (A) Auto correlate
 - (B) Auto average
 - (C) Standard deviation
 - (D) Auto sum

167. The desk top contains sma'll pictures which represent the different programs that are installed in the PC. These pictures are called
- (A) Images (B) Cursor
 (C) Icons (D) Files
168. Which of the following applications is useful for storing, sorting and retrieving large amount of data?
- (A) Word processing (B) Paint
 (C) System (D) Database
169. The delay that occur during the playback of a stream is called
- (A) Stream delay (B) Play back delay
 (C) Jitter (D) Event delay
170. Each individual measurement of a sound that is stored as digital information is called a
- (A) buffer (B) stream
 (C) sample (D) byte
171. Which of the following is a music compression scheme to reduce file size?
- (A) MP 3 (B) WAV
(C) JPEG (D) AVI
172. EPS is an acronym for
- (A) Enhanced post script (B) Extended post script
 (C) Encapsulated post script (D) Edited post script



173. What does AVI stands for?

(A) Audio for voice on the internet

(B) Audio ~~voice~~ interleaved

(C) Audio video interleaved

(D) Adapted video for internet

174. _____ applies a bitmap image over a surface to give it more realistic appearance like putting wallpaper on a wall.

(A) Anti aliasing

(B) Morphing

(C) Texture mapping

(D) Shading

175. A music compression scheme to reduce the file size by motion picture experts group is

(A) .MP4

(B) .MP3

(C) .WAV

(D) .aiF

176. Which one of the following is not an element of a multimedia system?

(A) Text

(B) Sound

(C) Odors

(D) Pictures

177. To compress an image with JPEG the image is divided into _____ blocks.

(A) 5×5 pixels

(B) 6×6 pixels

(C) 7×7 pixels

(D) 8×8 pixels

178. A video consists of sequence of

(A) Frames

(B) Signals

(C) Packets

(D) Slots

179. Which of the following is not a value for Align attributes of ?
- (A) TOP (B) LEFT
(C) BOTTOM (D) CENTRE
180. Which of the following is a folder of internet shortcuts?
- (A) Bookmark (B) Favorites
(C) Internet short cuts (D) History
181. IP addresses are in the format xxx.xxx.xxx.xxx where each xxx is a number from _____ to _____.
- (A) 0 to 128 (B) 128 to 256
 (C) 0 to 255 (D) 0 to 256
182. _____ attribute is used to set an image as the background of the web page.
- (A) img (B) bground
 (C) background (D) picture
183. Which of the following is an HTML document that is stored on the web server?
- (A) Web site (B) Web page
(C) Portal (D) Web guide
184. Who is responsible for running the program in mailing list management?
- (A) Site Admin (B) Site Manager
(C) List Admin (D) List Manager

185. Which of the following is not correct?

- (A) HTML is a programming language (B) HTML is not extensible
(C) HTML is a mark up language (D) HTML is used to create a static page

186. Which of the following provide a way to refer to objects and services on the internet?

- (A) URL (B) http
(C) ftp (D) file

187. Which element is used to specify a scrolling text?

- (A) <MOVE> (B) <SCROLL>
(C) <SLIDE> (D) <MARQUEE>

188. Which attribute contains a list of one or more font names in <BASE FONT> element?

- (A) FONT (B) STYLE
 (C) FACE (D) LIST

189. _____ attribute is used to set the encoding method for form data.

- (A) ENCODE (B) ENCRYPT
 (C) ENCTYPE (D) ECRYPT

190. The _____ element defines the set of frames that makes up the document.

- (A) <SET> (B) <FRAME>
 (C) <FRAME SET> (D) <LF>

191. _____ is used to identify the document specifically.

- (A) URL (B) URN
(C) URC (D) URI

192. The _____ value for the TARGET attribute may be useful for "frame busting".

- (A) -top
- (B) -blank
- (C) -self
- (D) -parent

193. Match the following :

- | List I | | List II | |
|-------------|--|----------------|--|
| (a) Fayol | | 1. Grapevine | |
| (b) Simon | | 2. Cybernetics | |
| (c) Shannon | | 3. Gangplank | |
| (d) Weiner | | 4. Noise | |

- | | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| (A) | 3 | 4 | 2 | 1 |
| <input checked="" type="checkbox"/> (B) | 3 | 1 | 4 | 2 |
| (C) | 3 | 2 | 4 | 1 |
| (D) | 3 | 4 | 1 | 2 |

194. The practice of placing a candidate at the right job is

- (A) Selection
- (B) Placement
- (C) Interview
- (D) None of these

195. Which of the following is not an attribute of <a> tag?

- (A) ACCESS KEY
- (B) TEXT
- (C) TAB INDEX
- (D) REL

196. If the function declaration does not specify any return type, then by default, the function returns _____ value.

- (A) No
(B) Integer
(C) Character
(D) Float

197. The acronym JAD stands for

- (A) Joint Application Development
(B) Joint Analytical Design
(C) Joint Application Design
(D) Joint Application Decision

198. _____ is a set of programs that controls and supervises the hardware of a computer system and provides services to computer users.

- (A) Operating system
(B) Compiler
(C) Assembler
(D) Device Driver

199. Match the following routing concept :

- | | |
|-----------------------------|----------------------------|
| (a) Adaptive routing | 1. Bellman – Ford |
| (b) Non-adaptive routing | 2. Dynamic routing |
| (c) Distance vector routing | 3. Reverse-path-forwarding |
| (d) Broadcast routing | 4. Static routing |

- | | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 2 | 4 | 1 | 3 |
| (B) | 1 | 3 | 2 | 4 |
| (C) | 3 | 2 | 4 | 1 |
| (D) | 4 | 1 | 3 | 2 |

200. In multimode fiber the core diameter is

- (A) 60 microns
(B) 75 microns
(C) 50 microns
(D) 155 microns