# KARNATAKA EDUCATION AUTHORITY

# (KEA)

# DIPLOMA COMMON ENTRANCE TEST

# DCET 2015

# ACTUAL QUESTION PAPER

## BTech (LATERAL ENTRY)

## COMPUTER SCIENCE ENGINEERING



Source Link: http://kea.kar.nic.in/diploma 2015/CS A4.pdf

# TEST - 2015

| CS | COURSE | DAY : SUNDAY |
|---|---|---|
| | COMPUTER SCIENCE | TIME : 10.00 A.M. TO 1.00 P.M. |

| MAXIMUM MARKS | TOTAL DURATION | MAXIMUM TIME FOR ANSWERING |
|---|---|---|
| 180 | 200 MINUTES | 180 MINUTES |

| MENTION YOUR DIPLOMA CET NUMBER | | | | | QUESTION BOOKLET DETAILS | |
|---|---|---|---|---|---|---|
| | | | | | VERSION CODE | SERIAL NUMBER |
| | | | | | A – 4 | 132336 |

**DOs :**

1. Check whether the Diploma CET No. has been entered and shaded in the respective circles on the OMR answer sheet.
2. This Question Booklet is issued to you by the invigilator after the **2nd Bell i.e., after 09.50 a.m.**
3. The Serial Number of this question booklet should be entered on the OMR answer sheet and the respective circles should also be shaded completely.
4. The Version Code of this question booklet should be entered on the OMR answer sheet and the respective circles should also be shaded completely.
5. compulsorily sign at the bottom portion of the OMR answer sheet in the space provided.

**DON'Ts:**

1. **THE TIMING AND MARKS PRINTED ON THE OMR ANSWER SHEET SHOULD NOT BE DAMAGED / MUTILATED / SPOILED.**
2. **The 3rd Bell rings at 10.00 a.m., till then;**
   - Do not remove the paper seal of this question booklet.
   - Do not look inside this question booklet.
   - Do not start answering on the OMR answer sheet.

SEAL

## IMPORTANT INSTRUCTIONS TO CANDIDATES

1. This question booklet contains 180 (items) questions and each question will have one statement and four answers. (Four different options / responses.)
2. After the **3rd Bell is rung at 10.00 a.m.** remove the paper seal of this question booklet and check that this booklet does not have any unprinted or torn or missing pages or items etc., if so, get it replaced by acomplete test booklet. Read each item and start answering on the OMR answer sheet.
3. During the subsequent 180 minutes:
   - Read each question (item) carefully
   - Choose one correct answer from out of the four available responses (options / choices) given under each question / item. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose only one response for each item.
   - **Completed darken / shade the relevant circle with a BLUE OR BLACK INK BALL POINT PEN against the question number on the OMR answer sheet.**

**Correct Method of shading the circle on the OMR answer sheet is as shown below:**

① ● ③ ④

4. Use the space provided on each page of the question booklet for Rough Work. Do not use the OMR answer sheet for the same
5. After the **last Bells is rung at 1.00 p.m.** stop marking on the OMR answer sheet and affix your left hand thumb **impression** on the OMR answer sheet as per the instructions.
6. Hand over the **OMR ANSWER SHEET** to the room invigilator as it is.
7. After separating the top sheet, the invigilator will return the bottom sheet replica (Candidate's copy) to you to carry home for self-evaluation.
8. Preserve the replica of the OMR answer sheet for a minimum period of **ONE year.**

## PART - A
## APPLIED SCIENCE

1. In the spectrum of scattered light the lines corresponding to wavelength greater than that of incident light are called

   1. Stokes lines
   2. Antistokes lines
   3. Fluorescent lines
   4. Incident lines

2. Resolving power of telescope is given by

   1. $\frac{d}{1.22\lambda}$
   2. $\frac{1.22\lambda}{d}$
   3. $\frac{1.22d}{\lambda}$
   4. $\frac{\lambda}{1.22d}$

3. To observe diffraction pattern the obstacle should be

   1. Very big
   2. Dark
   3. Absent
   4. Comparable with the wavelength of light

4. When double refraction occurs, extraordinary ray and ordinary rays will have vibrations in the planes _____ to one another

   1. Parallel
   2. Independent
   3. Perpendicular
   4. At $45^{o}$

5. Maxwell's electromagnetic theory could explain

   1. Photo electric effect
   2. Interference of light
   3. Compton effect
   4. Black body radiation

6. The contrast between bright and dark bands of an interference pattern is

   1. Low
   2. High
   3. No change
   4. Gradually decreases

7. A non-electrolyte solution is

   1. Sugar solution
   2. Salt solution
   3. Water
   4. Copper sulphate solution

**Space For Rough Work**

8. In alkalies the concentration of $OH^-$ ions is

1. More than $10^{-7}$g ions / litre
2. Less than $10^{-7}$g ions / litre
3. Equal to $10^{-7}$g ions / litre
4. More than $10^{7}$g ions / litre

9. An example of derived unit is

1. Meter
2. Second
3. Netwon
4. Candela

10. The prefix used for $10^{-15}$ is

1. Femto
2. Pico
3. Peta
4. Nano

11. An example of dimensionless constant is

1. Strain
2. Efficiency
3. Force
4. Pi

12. A main scale is divided into half mm and having a Vernier containing 10 divisions has a least count of _____cm.

1. 0.05
2. 0.005
3. 0.02
4. 0.025

13. According to Newton's second law of motion F = Kma. The value of K is

1. 0.1
2. 0
3. 10
4. 1

14. The velocity of a freely falling body is maximum

1. At the beginning
2. Just before it touches ground
3. Exactly half way
4. After it touches ground

15. Wet clothes are dried in washing machine by the property of

1. Inertia of rest
2. Inertia of direction
3. Inertia of motion
4. Inertia of time

16. A force of $1.2 \times 10^{-2}$ N acts for 3 seconds on a body of mass 0.04kg at rest. The velocity gained by the body is

1. 0.9 m/s
2. 9 m/s
3. 0.09 m/s
4. 9.2 m/s

**Space For Rough Work**

17. An example of vector quantity is

1. Volume
2. Energy
3. Density
4. Force

18. Handle of the door is fixed away from the end where it is fixed with hinges to

1. Increase the moment of force
2. Decrease the moment of force
3. Keep the door firm
4. Lock it easily

19. Resultant of two equal forces perpendicular to each other acts at an angle _____ to first force

1. 90°
2. 180°
3. 30°
4. 45°

20. The resultant of two forces acting on a body cannot be

1. Greater than first force
2. Zero
3. Lesser than first force
4. Lesser than the difference between two forces

21. Towing of a boat by two forces is an illustration of

1. Lami's theorem
2. Law of triangle of forces
3. Law of parallelogram of forces
4. Law of polygon of forces

22. Shock absorber is an example for

1. Compressive stress
2. Tensile stress
3. Shear stress
4. Shear strain

23. Factor of safety of a structure is

1. Within 2
2. Equal to zero
3. Vary between 5 and 10
4. More than 10

24. In case of liquids as the temperature increases, the viscosity of liquid decreases due to

1. Increase in the rate of diffusion of gases
2. Decrease in the rate of diffusion of gases
3. Increase in the potential energy of molecules
4. Increase in the kinetic energy of molecules

**Space For Rough Work**

25. One Pascal is equal to

1. $10\ dynes/cm^2$
2. $1\ dyne\ /\ cm^2$
3. $100\ dynes\ /\ cm^2$
4. $0.1\ dyne\ /\ cm^2$

26. To calm down turbulent sea, sailors use oil to

1. Decrease surface tension
2. Increase surface tension
3. Decrease viscosity
4. Increase cohesive force

27. The thrust on the bottom of the container having a base area of 20 $m^2$ filled with water to a height of 3 m is _____ (given $g = 10 m/s^2$)

1. $6 \times 10^5$ N
2. $6 \times 10^4$ N
3. $6 \times 10^3$ N
4. $6 \times 10^2$ N

28. Amount of heat required to raise the temperature of 1 kg of water through $1^oC$ is

1. One calorie
2. One joule
3. One kilo-calorie
4. One kilojoule

29. Absolute scale of temperature has its zero at

1. $0^oC$
2. $-100^oC$
3. $273^oC$
4. $-273^oC$

30. In case of an ideal gas, the value of pressure or volume co-efficient is

1. $\frac{1}{273}$
2. $-\frac{1}{273}$
3. 273
4. $-273$

31. The distance travelled by the disturbance per unit time in a given direction is

1. Wave amplitude
2. Wave velocity
3. Wave frequency
4. Wavelength

32. The speed of the transverse wave along the stretched string is given by

1. $V=\sqrt{\frac{T}{m}}$
2. $V=\sqrt{\frac{m}{T}}$
3. $V=\sqrt{\frac{1}{T}}$
4. $V=\frac{\sqrt{m}}{T}$

**Space For Rough Work**

33. Absorption co-efficient of sound wave is given by _____. Where $E_m$ is energy absorbed by the given medium $E_{ow}$ is the energy absorbed by open window.

1. $a = \frac{E_m}{E_{ow}}$ 2. $a = \frac{E_{ow}}{E_m}$ 3. $a = E_m \times E_{ow}$ 4. $a = E_m + E_{ow}$

34. The rich quality of a musical note depends on
1. Fundamental frequency 2. Loudness
3. Larger number of over tones 4. Pitch

35. Waxing and waning are the characteristics of
1. Periodic motion 2. Oscillations 3. Beats 4. Frequency

36. Velocity of sound in air varies
1. Inversely as the square root of the density of the medium
2. Directly as the square root of the density of the medium
3. Directly as the density of medium
4. Inversely as the density of medium

37. The vibrations of a body of decreasing amplitude are called
1. Undamped free vibrations 2. Damped free vibrations
3. Resonant vibrations 4. Forced vibrations

38. Another name for field emission is
1. Cold cathode emission 2. Thermionic emission
3. Photoelectric emission 4. Secondary emission

39. In case of photoelectric emission, the rate of emission of electron is
1. Independent of frequency of radiation
2. Dependent on frequency of radiation
3. Dependent on wavelength of incident radiation
4. Independent of intensity of radiation

40. Emission of radiation from radioactive element is
1. Slow 2. Fast 3. Spontaneous 4. Very slow

**Space For Rough Work**

## PART - B

## APPLIED MATHEMATICS

41. $\int_{-1}^{1}(2x+1)(5-x)\,dx$ is

1. 10
2. $\frac{26}{3}$
3. $\frac{-26}{3}$
4. $\frac{11}{3}$

42. $\int_{0}^{\pi/4} tan^2x\ sec^2x\ dx$ is

1. $\frac{1}{3}$
2. $\frac{4}{3}$
3. $\frac{1}{2}$
4. $\frac{-1}{3}$

43. The RMS value of $y^2 = x^2 - 2x$ over the interval [1, 3] is

1. $\sqrt{\frac{5}{3}}$
2. $\sqrt{\frac{2}{3}}$
3. $\frac{1}{3}$
4. $\frac{1}{\sqrt{3}}$

44. The differential equation of $y^3 = 5ax$ by eliminating arbitrary constant $a$ is

1. $\frac{dy}{dx} - \frac{y}{3x} = 0$
2. $\frac{dy}{dx} + \frac{y}{3x} = 0$
3. $\frac{dy}{dx} - \frac{3y}{x} = 0$
4. $\frac{dy}{dx} - \frac{5y}{3x} = 0$

45. The integrating factor of the differential equation $x\frac{dy}{dx} - (1-x)y = x^3$ is

1. $\frac{e^x}{x}$
2. $xe^x$
3. $e^{\frac{x^2-2x}{2}}$
4. $e^{\frac{2x-x^2}{2}}$

**Space For Rough Work**

46. If $\begin{vmatrix} 2x+1 & -5x \\ 1 & 3 \end{vmatrix} = 0$, then $x$ is

1. $\frac{3}{11}$ 2. $\frac{-3}{11}$ 3. $\frac{11}{3}$ 4. $-\frac{11}{3}$

47. For the simultaneous linear equations $2x+y+z=1$, $x+y+2z=0$ and $3x+2y-z=2$, the value of $\Delta x$ is

1. 3 2. $-11$ 3. $-7$ 4. $-3$

48. If $A=\begin{bmatrix} 2 & 3 \\ 5 & 4 \end{bmatrix}$, $B=\begin{bmatrix} -1 & 7 \\ -4 & 1 \end{bmatrix}$ then $(A+B)^T$ is

1. $\begin{bmatrix} 1 & 1 \\ 10 & 5 \end{bmatrix}$ 2. $\begin{bmatrix} 1 & 10 \\ 1 & 5 \end{bmatrix}$ 3. $\begin{bmatrix} -1 & 10 \\ -1 & 5 \end{bmatrix}$ 4. $\begin{bmatrix} -1 & -1 \\ 10 & 5 \end{bmatrix}$

49. If $A=\begin{bmatrix} 1 & -3 \\ -5 & 7 \end{bmatrix}$, then adj A is

1. $\begin{bmatrix} 1 & -5 \\ -3 & 7 \end{bmatrix}$ 2. $\begin{bmatrix} 7 & -5 \\ -3 & 1 \end{bmatrix}$ 3. $\begin{bmatrix} -1 & -5 \\ -3 & -7 \end{bmatrix}$ 4. $\begin{bmatrix} 7 & 3 \\ 5 & 1 \end{bmatrix}$

50. The cofactor of O in $A=\begin{bmatrix} 3 & -2 & 5 \\ 1 & 6 & 0 \\ 2 & 7 & -4 \end{bmatrix}$ is

1. $-25$ 2. 25 3. $-17$ 4. 0

**Space For Rough Work**

51. If $\left(\sqrt{3}+1\right)^3 = 10+6\sqrt{3}$, then the value of $\left(\sqrt{3}+1\right)^3 - \left(\sqrt{3}-1\right)^3$ is

1. $12\sqrt{3}$ 2. 0 3. 20 4. $20+\sqrt{3}$

52. The middle term in the expansion of $\left(x^3+\frac{1}{x^2}\right)^6$

1. $10\,x^3$ 2. $20\,x^3$ 3. $\frac{20}{x^3}$ 4. 20

53. If $\vec{a} = i+3j-2k$ and $\vec{b} = 2i-j+3k$, then $\vec{a} \cdot \vec{b}$ is

1. $-5$ 2. 11 3. 7 4. $-7$

54. The work done by the force $2i-j+6k$ when it displaces the particle from (5, 3, $-2$) to (7, $-4$, 8) is

1. 72 2. 48 3. $-71$ 4. 71

55. The sine of the angle between the vectors $\vec{a} = i+j+k$ and $\vec{b} = 2i-3j-4k$ is

1. $\sqrt{\frac{62}{87}}$ 2. $\sqrt{\frac{87}{62}}$ 3. $\frac{-5}{\sqrt{87}}$ 4. $\sqrt{\frac{10}{63}}$

56. If $\cos\theta = \frac{5}{13}$ and $\theta$ is acute angle, then the value of $3\cos\theta - 2\sin\theta$ is

1. $\frac{9}{13}$ 2. 3 3. $\frac{-9}{13}$ 4. $-3$

**Space For Rough Work**

57. If $x \sin 30^\circ - Sec\ 30^\circ \tan 30^\circ = \tan^2 60^\circ$, then the value of $x$ is

1. $\frac{22}{3}$ 2. $\frac{-22}{3}$ 3. $\frac{11}{6}$ 4. $\frac{3}{22}$

58. The value of $\sin 225^\circ + \cos(-135^\circ)$ is

1. $\sqrt{2}$ 2. $-\sqrt{2}$ 3. $\frac{1}{\sqrt{2}}$ 4. $\frac{-1}{\sqrt{2}}$

59. The simplified value of $\frac{\sin(180^\circ - A)\cot(90^\circ - A)\cos(360^\circ - A)}{\tan(180^\circ + A)\tan(90^\circ + A)\sin(-A)}$ is

1. $\sin A$ 2. $-\sin A$ 3. 1 4. $\operatorname{cosec} A$

60. The simplified value of $\frac{\sin 2A}{1+\cos 2A}$ is

1. $2\tan A$ 2. $\sin A$ 3. $\cot A$ 4. $\tan A$

61. If $\tan A = \frac{3}{4}$ and $\tan B = \frac{1}{7}$, then the value of (A+B) is

1. $\frac{\pi}{6}$ 2. $\frac{25}{23}$ 3. $\frac{\pi}{4}$ 4. $\frac{23}{25}$

62. The value of $\cos 20^\circ + \cos 100^\circ + \cos 140^\circ$ is

1. 0 2. $\cos 50^\circ$ 3. $\frac{1}{2}$ 4. $\sin 50^\circ$

**Space For Rough Work**

63. The value of $\cos^{-1}\left[\tan 135^\circ\right]$ is

1. $0^\circ$ 2. $180^\circ$ 3. $45^\circ$ 4. $90^\circ$

64. The centroid of the triangle formed by the vertices $(-10, 6)$, $(2, -2)$ and $(2, 5)$ is

1. $(-2, 3)$ 2. $(2, 3)$ 3. $\left(-3, \frac{9}{2}\right)$ 4. $(-6, 9)$

65. A point $(-4, 3)$ divides the line AB externally in the ratio of $1 : 2$. Given $A(-1, -3)$ then the point B is

1. $(6, -3)$ 2. $(-10, 15)$ 3. $(2, 9)$ 4. $(2, -9)$

66. The area of triangle formed by the point, $(3, -1)$, $(2, 0)$ and $(K, 4)$ is 10 Sq. Units, then the value of K is

1. 12 2. 7 3. $-22$ 4. 22

67. The slope of the line joining the points $(-2, 3)$ and $(4, -6)$ is

1. $\frac{3}{2}$ 2. $\frac{-3}{2}$ 3. $\frac{2}{3}$ 4. $\frac{-2}{3}$

68. The equation of straight line passing through $(4, -1)$ and having equal intercepts is

1. $x+y-1=0$ 2. $x+y-5=0$ 3. $x+y-3=0$ 4. $x+y+3=0$

69. The equation of the line passing through $(5, -2)$ and parallel to the line $3x+2y+7=0$ is

1. $3x+2y-11=0$ 2. $3x-2y+11=0$
3. $3x-2y-19=0$ 4. $2x-3y-16=0$

**Space For Rough Work**

70. The value of $\lim_{x \to -2} \frac{x+2}{x^5+32}$ is

1. $\frac{1}{80}$ 2. 80 3. $\frac{-1}{80}$ 4. $-80$

71. The value of $\lim_{x \to 0} \frac{2x - \tan 3x}{\sin 2x + 3x^2}$ is

1. $\frac{-1}{5}$ 2. 0 3. $\frac{1}{2}$ 4. $-\frac{1}{2}$

72. If $y = e^x \log x$, then $\frac{dy}{dx}$ at $x = 1$ is

1. $e^x$ 2. e 3. 1 4. 0

73. If $y = \tan^{-1} \sqrt{\frac{1+\cos x}{1-\cos x}}$, then $\frac{dy}{dx}$ is

1. 2 2. $-2$ 3. $\frac{-1}{2}$ 4. $\frac{1}{2}$

74. If $\sqrt{x^3} + \sqrt{y^3} = \sqrt{a^3}$, then $\frac{dy}{dx}$ is

1. $\sqrt{\frac{x}{y}}$ 2. $-\sqrt{\frac{x}{y}}$ 3. $\sqrt{\frac{y}{x}}$ 4. $-\sqrt{\frac{y}{x}}$

75. The second derivative of $y = \log(\sec x - \tan x)$ is

1. $-\sec x \tan x$ 2. $\sec x \tan x$ 3. $-\sec x$ 4. $\sec x$

**Space For Rough Work**

76. Water flows into the cylindrical tank of radius 7mt at the rate of 294 cubic mt/sec, then the rate of height of water rising in the tank is

1. $\frac{\pi}{6} mt/sec$
2. $\frac{6}{\pi} mt/sec$
3. $14406\ mt/sec$
4. $\frac{21}{\pi} mt/sec$

77. The maximum value of the function $y = x + \frac{1}{x}$ is

1. 0
2. 2
3. 1
4. $-2$

78. The value of $\int tan^2 x\ dx$ is

1. $tan\ x - x + c$
2. $x - tan\ x + c$
3. $(sec^2 x)^2 + c$
4. $-cot\ x - x + c$

79. The value of $\int \frac{cos\ x}{1 + sin\ x}\ dx$ is

1. $log(sec^2 x + sec\ x\ tan\ x) + c$
2. $log(sin\ x) + c$
3. $log(1 + sin\ x) + c$
4. $\frac{(1 + sin\ x)^2}{2} + c$

80. $\int sin^2 x\ sin\ 2x\ dx$ is

1. $\frac{sin^2 x}{2} + c$
2. $\frac{sin^4 x}{2} + c$
3. $sin^2 x + c$
4. $\frac{-sin^4 x}{2} + c$

**Space For Rough Work**

## PART - C

## COMPUTER SCIENCE

81. Which of the following is not true in case of a friend function?

1) A friend function can be invoked without the use of a particular object
2) A friend function can be invoked without the use of dot operator
3) Member functions of one class can become friend functions of another class
4) A friend function can access data members directly.

82. In case of operator overloading

1) you can have default arguments
2) you can overload : : operator
3) you can overload << operator
4) you can overload ?: operator

83. In case of inheritance in C++, which of the following is not possible?

1) Single inheritance
2) Multiple inheritance
3) Hierarchical inheritance
4) Mega inheritance

84. In C++ which of the following is not a standard iostream object defined in < iostream h >?

1) C in
2) C out
3) C print
4) C err

85. In C++ which of the following is an ios format function?

1) Set f
2) get f
3) Unget f
4) breadth

86. In C++, consider ios : in. This allows to open the file for _____

1) Writing
2) Reading
3) Appending
4) Binary input

87. In C++, exception handling mechanism is designed to process _____exceptions

1) Only synchronous
2) Only asynchronous
3) Both asynchronous & synchronous
4) Non synchronous

**Space For Rough Work**

88. In C++, there can be _____ number throw statements in a try block of exceptions

1) Only one 2) Two 3) Five 4) Any

89. In C++, the open ( ) function can be used to open _____ number of files for reading / writing same stream object

1) Only one 2) Atmost two 3) Multiple 4) Atmost ten

90. A process can be defined as

1) A file in action
2) A program in execution
3) A program in a file
4) A file in harddisk

91. The following sequence of process states is correct

1) New - Ready - Running - Ready - Terminated
2) New - Ready - Waiting - Terminated
3) New - Ready - Waiting - Running - Terminated
4) New - Ready - Running - Terminated

92. Short term scheduler is also termed as

1) CPU Scheduler
2) Job scheduler
3) Medium term Scheduler
4) Swapper

93. A process is allowed to run for a one time quantum unit. This happens in _____

1) Pre emptive scheduling
2) RR Scheduling
3) FIFO Scheduling
4) SJF Scheduling

94. The number of process completed per unit time is called

1) CPU utilization
2) Response Time
3) Turnaround time
4) Throughput

**Space For Rough Work**

95. In which of the following algorithms on page fault, replacing the page which will not be used in future for the longest period of time?

1) FIFO algorithm
2) Optimal page replacement algorithm
3) LRU algorithm
4) Second chance algorithm

96. A diagram showing process state transition is called _____

1) State queuing Diagram
2) Process Diagram
3) Queuing Diagram
4) State Diagram

97. Dispatcher does not perform which of the following functions?

1) Context switching
2) Switch between supervisor mode and user mode
3) Provide for a jump to a particular user diagram
4) Provide for memory mapping

98. Scheduling criteria does not support the following

1) Increase in throughput
2) Decrease in turnaround time
3) Decrease in response time
4) Increase in waiting time

99. The total size of the program including its data and stack requirements can exceed the amount of physical main memory that is available for it. This concept is

1) Virtual memory
2) Paged segmentation
3) Segmentation
4) Stack pointer

100. _____ is not a function of physical layer

1) Representations
2) Framing
3) Synchronization of bits
4) Fine configuration

**Space For Rough Work**

101. The original TCP/IP protocol suite defined was having _____ layers

1) Four 2) Six 3) Seven 4) Five

102. _____ consists of two conductors each with its own plastic insulator

1) Twisted pair 2) Coaxial cable 3) Fiber optic cable 4) Optic cable

103. A random amount of time each station waits before resending its name in pure ALOHA is called

1) Wait time
2) Back - off time
3) Delay time
4) Regression time

104. CSMA stands for

1) Carrier sense multiple access
2) Carriage sense multiple access
3) Carrier state multiple access
4) Context switch multiple access

105. A connecting device which operates at the physical layer

1) Bridge 2) Gateway 3) Passive hub 4) Active hub

106. _____ is used as a connector device between two internetworks that use different models

1) Gateway 2) Passive hub 3) Active hub 4) Repeater

107. Electromagnetic waves ranging in the frequency between _____ are called infrared waves

1) 300 GHz to 400 THz
2) 1 GHz to 300 GHz
3) 3 KHz to 1 GHz
4) 1 MHz to 300 MHz

108. RG - 58 coaxial cable is used to transmit data in

1) Thick ethernet
2) Thin ethernet
3) Cable TV
4) Telephones

**Space For Rough Work**

109. _____ allows a host to discover its internet address when it knows only its physical address

1) ARP 2) RARP 3) ICMP 4) IGMP

110. _____ is responsible for authorizing access to database

1) Database administrator 2) Database designer

3) Software engineer 4) System analyst

111. The description of database is called

1) Database State 2) Database Schema

3) Database Snapshot 4) Metadata

112. ER diagram emphasize on representing the

1) Snapshot 2) Instance

3) Attribute 4) Schema

113. The term _____ represents row in SQL

1) Tuple 2) Relation

3) Schema 4) Attribute

114. The alternate name given to a relation is called

1) Alias 2) View

3) Attribute 4) Alteration

115. Java contains the following datatype

1) Struct 2) Union

3) Float 4) Enum

**Space For Rough Work**

116. Objects in java are created using _____ operator

1) New 2) Instance of 3) Null 4) Public

117. In hierarchical inheritance there will be

1) Only one superclass
2) One superclass & One subclass
3) One superclass & many subclasses
4) Only one subclass

118. The mechanism of deriving a new class from an old one is called

1) Interfacing 2) Inheritance
3) Polymorphism 4) Overriding

119. The keyword super in java is used to invoke the method of the _____

1) Subclass 2) Object
3) Superclass 4) Constructor class

120. In XML a _____ is a set of structural rules called declarations

1) XML 2) HTML 3) DTD 4) XHTML

121. In XML entities defincd referenced anywhere in the content of an XML document are called _____ entities

1) General 2) Public 3) Private 4) Parameter

122. An XML schema is an XML document, so it can be parsed with an _____ parser.

1) XML 2) XHTML 3) HTML 4) Namespace

**Space For Rough Work**

123. IN XML _____ is always physically in the file that represents the document

1) Document entity
2) Weak entity
3) Binary entity
4) Entity relation

124. In PHP the processor has two modes of operation copy mode and _____ mode.

1) Dynamic
2) Compile
3) Interpret
4) Static

125. In PHP _____ function explodes a string into substrings and returns them in an array

1) Explode
2) Explore
3) Implode
4) Explicit

126. In PHP the _____ function takes an array as its parameter and returns an array of the keys of the given array.

1) arrayk
2) array value
3) array-values
4) array-keys

127. In PHP a variable can be tested to determine whether it currently has a value with the _____ function

1) Is Value
2) Is True
3) Is Set
4) Un Set

128. Characters in PHP are _____ bytes.

1) Single
2) Double
3) Four
4) Eight

**Space For Rough Work**

129. In PHP implicit conversions are called_____

1) Recursion
2) Exclusion
3) Explosion
4) Coercions

130. _____ Computer combines the most desirable features of both digital and analog computers

1) Analog
2) Hybrid
3) Digital
4) Analog digital

131. The characteristic feature which specifies the measurement of the performance of computer is

1) Accuracy
2) Versatility
3) Reliability
4) Diligence

132. Which of the following memory is placed with in CPU

1) Cache Memory
2) RAM
3) ROM
4) PROM

133. The magnetic disk address comprises of

1) Sector number and track number
2) Track number and surface number
3) Sector number and surface number
4) Sector number, track number and surface number

134. The most commonly used output device for printing CAD and CAM applications is

1) Plotter
2) Drum printer
3) Laser Printer
4) Daisy wheel printer

**Space For Rough Work**

135. Which of these is associative law

1) A+B = B+A
2) A + (B+C) = (A+B)+C
3) AB+BC = AC+BC
4) A(B+C) = AB+BC

136. According to DeMorgan's theorem $\overline{A+B}$ is

1) $\overline{\overline{A}+\overline{B}}$
2) $\overline{A}+\overline{B}$
3) $\overline{A}\,\overline{B}$
4) $\overline{AB}$

137. In which of these gates output is true when any one of the input is true

1) OR
2) AND
3) NOT
4) NOR

138. Which one of these counter does not recycle in ten pulses

1) Mod-10
2) BCD
3) Ripple counter
4) Decade

139. The sum output of half adder is identical to _____ gate.

1) OR
2) Exclusive OR
3) NOR
4) Exclusive NOR

140. _____ is a very small computer that can be held in palm

1) PDA
2) Laptop
3) Minicomputer
4) PC

141. _____ is the brain of computer system

1) IU
2) OU
3) CPU
4) MU

142. 1024 bytes is referred to as _____ bytes

1) Kilo
2) Mega
3) Giga
4) Tera

**Space For Rough Work**

143. _____ Memory can be erased by exposing it to the ultraviolet light

1) EEPROM 2) EPROM 3) PROM 4) ROM

144. DVD stands for

1) Digital versatile disk 2) Decoded video disk
3) Digital virtual disk 4) Decoded virtual disk

145. Which of the following is an example for primary memory

1) Magnetic tape 2) Magnetic disk
3) Magnetic drum 4) Semiconductor memory

146. FPI stands for

1) Frames per inch 2) Film per inch
3) Faults per inch 4) Figure per inch

147. Mouse, trackball and joystick are examples of

1) Scanning devices 2) Pointing devices
3) Storing devices 4) Multimedia devices

148. _____ terminal is referred to as non programmable terminal

1) Smart 2) Intelligent
3) Dumb 4) Interactive

149. The smallest individual dot on computer screen is _____

1) Pixel 2) Character
3) Font 4) Screen point

150. _____ is a predefined, standard C function for input data through keyboard

1) Fscan ( ) 2) Print ( ) 3) Scanf ( ) 4) Printf ( )

**Space For Rough Work**

151. _____ in C takes different values at different times during execution

1) Constants 2) Variables 3) Keywords 4) Functions

152. In C the process of giving initial values to variables is called _____

1) Execution 2) Linking 3) Declaration 4) Initialization

153. In C # define is a _____

1) Headers file 2) String function

3) Preprocessor directive 4) Library function

154. The do .. while is an _____ controlled loop in C language

1) Entry 2) Exit 3) Simple 4) Multiple

155. A variable declared as _____ inside a function retains its value even after the function is exited.

1) Auto 2) Static 3) Extern 4) Register

156. In C the process of calling a function using pointers to pass the address of variable is known as

1) Call by value 2) Call by reference

3) Call by operators 4) Call by variables

157. In C _____ sets the position to the beginning of the file

1) fclose ( ) 2) rewind ( ) 3) Close 4) End

158. In C _____ function allocates requested size of bytes and returns a pointer to the first of the allocated space

1) malloc ( ) 2) calloc ( ) 3) free 4) realloc ( )

**Space For Rough Work**

159. The following statement jumps the control out of loop

1) Continue 2) break 3) Sleep 4) getch ( )

160. Type conversion from float to _____ causes truncation of the fractional part in C

1) float 2) int 3) double 4) char

161. In C when a called function in turn calls another function a process of _____ occurs

1) Recursion 2) Repeating 3) Chaining 4) Rewinding

162. In C all the members of a _____use the same memory space

1) Structure 2) Union 3) Array 4) File

163. The variable _____ gives the number of arguments on the command line

1) argv 2) argb 3) argc 4) argp

164. In C _____ function returns the number of characters in a string

1) Strcat ( ) 2) Strcmp ( ) 3) Strcpy ( ) 4) Strlen ( )

165. If ptr is a pointer to an array then printf ("% d", ptr) gives

1) The address of first element of array
2) Value of first element of array
3) Last element address
4) Value of last element

166. _____ is an example of non primitive data structure

1) Float 2) array 3) int 4) double

**Space For Rough Work**

167. In stack, deletion operation is done from _____ of stack

1) Bottom 2) Middle 3) Centre 4) Top

168. The first element follows the last element in _____

1) Circular queue 2) Dequeue 3) Priority queue 4) Queue

169. _____ is a list with each data item containing pointer to the location of the next data item in the list

1) Linked list 2) Array 3) Structure 4) Stack

170. A set of disjoint trees is called

1) Ternary tree 2) Forest 3) Group 4) Siblings

171. In _____ traversal of binary tree root node is visited first

1) Post order 2) In order 3) Pre order 4) First order

172. Postfix notation of a * b - c/d is

1) abcd * -/ 2) ab * cd -/ 3) ab * cd/- 4) abc - *d/

173. A node with degree zero is known as _____ node

1) $ibling 2) Root 3) Leaf 4) First

174. _____ pointer points to the next node in the doubly linked list

1) Left 2) Successor 3) Right 4) Front

**Space For Rough Work**

175. Which of the following is not a feature of object oriented programming

1) Data Abstraction
2) Data Segmentation
3) Data Hiding
4) Polymorphism

176. The built in stream class definitions for >>operator are available in

1) < iostream.h >
2) < conio.h>
3) < iomanip.h >
4) < math.h >

177. The scope resolution operator permits you to access the value of a global variable which is

1) Declared in some other program
2) Declared outside the function main ( )
3) Declared in main function of other program
4) Not declared

178. Function prototyping allows you to put the definition of the function _____ in the program

1) Only before the main function
2) Anywhere
3) At the end of main
4) Only after its usage

179. The missing arguments in a function call are supplied as _____ argument values in C++

1) Default
2) Static
3) Constant
4) reference

180. Which of the following is not true in case of a constructor function?

1) It has no return type
2) Constructor function name is same as class name
3) Constructor is declared in public section of class
4) Constructor function can be called like ordinary function

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SEAL

GOVERNMENT OF KARNATAKA
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DIPLOMA LATERAL ENTRY (DCET-2015)
Answer Keys

SUBJECT: CS Qnver A4

| Qnno | Ans | Qnno | Ans | Qnno | Ans | Qnno | Ans | Qnno | Ans | Qnno | Ans |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 31 | 2 | 61 | 3 | 91 | 4 | 121 | 1 | 151 | 2 |
| 2 | 1 | 32 | 1 | 62 | 1 | 92 | 1 | 122 | 1 | 152 | 4 |
| 3 | 4 | 33 | 1 | 63 | 2 | 93 | 2 | 123 | 1 | 153 | 3 |
| 4 | 3 | 34 | 3 | 64 | 1 | 94 | 4 | 124 | 3 | 154 | 2 |
| 5 | 2 | 35 | 3 | 65 | 4 | 95 | 2 | 125 | 1 | 155 | 2 |
| 6 | 2 | 36 | 1 | 66 | 3 | 96 | 4 | 126 | 4 | 156 | 2 |
| 7 | 1 | 37 | 2 | 67 | 2 | 97 | 4 | 127 | 3 | 157 | 2 |
| 8 | 1 | 38 | 1 | 68 | 3 | 98 | 4 | 128 | 1 | 158 | 1 |
| 9 | 3 | 39 | 1 | 69 | 1 | 99 | 1 | 129 | 4 | 159 | 2 |
| 10 | 1 | 40 | 3 | 70 | 1 | 100 | 2 | 130 | 2 | 160 | 2 |
| 11 | 4 | 41 | 2 | 71 | 4 | 101 | 1 | 131 | 3 | 161 | 3 |
| 12 | 2 | 42 | 1 | 72 | 2 | 102 | 1 | 132 | 1 | 162 | 2 |
| 13 | 4 | 43 | 4 | 73 | 3 | 103 | 2 | 133 | 4 | 163 | 3 |
| 14 | 2 | 44 | 1 | 74 | 2 | 104 | 1 | 134 | 1 | 164 | 4 |
| 15 | 2 | 45 | 1 | 75 | 1 | 105 | 4 | 135 | 2 | 165 | 1 |
| 16 | 1 | 46 | 2 | 76 | 2 | 106 | 1 | 136 | 3 | 166 | 2 |
| 17 | 4 | 47 | 4 | 77 | 4 | 107 | 1 | 137 | 1 | 167 | 4 |
| 18 | 1 | 48 | 1 | 78 | 1 | 108 | 2 | 138 | 3 | 168 | 1 |
| 19 | 4 | 49 | 4 | 79 | 3 | 109 | 2 | 139 | 2 | 169 | 1 |
| 20 | 4 | 50 | 1 | 80 | 2 | 110 | 1 | 140 | 1 | 170 | 2 |
| 21 | 3 | 51 | 3 | 81 | 4 | 111 | 2 | 141 | 3 | 171 | 3 |
| 22 | 1 | 52 | 2 | 82 | 3 | 112 | 4 | 142 | 1 | 172 | 3 |
| 23 | 3 | 53 | 4 | 83 | 4 | 113 | 1 | 143 | 2 | 173 | 3 |
| 24 | 4 | 54 | 4 | 84 | 3 | 114 | 1 | 144 | 1 | 174 | 3 |
| 25 | 1 | 55 | 1 | 85 | 1 | 115 | 3 | 145 | 4 | 175 | 2 |
| 26 | 1 | 56 | 3 | 86 | 2 | 116 | 1 | 146 | 1 | 176 | 1 |
| 27 | 1 | 57 | 1 | 87 | G | 117 | 3 | 147 | 2 | 177 | 2 |
| 28 | 3 | 58 | 2 | 88 | G | 118 | 2 | 148 | 3 | 178 | 2 |
| 29 | 4 | 59 | 1 | 89 | 3 | 119 | 3 | 149 | 1 | 179 | 1 |
| 30 | 1 | 60 | 4 | 90 | 2 | 120 | 3 | 150 | 3 | 180 | 4 |