KARNATAKA EDUCATION AUTHORITY

(KEA)

DIPLOMA COMMON ENTRANCE TEST

DCET 2016

ACTUAL QUESTION PAPER

BTech (LATERAL ENTRY)

COMPUTER SCIENCE ENGINEERING

DIPLOMA - COMMON ENTRANCE TEST-2016

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 - 1	129897

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 / polythene bag of this question booklet.
   - Do not look inside this question booklet.
   - Do not start answering on the OMR answer sheet.

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 / polythene bag 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 a complete 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.
   - **Completely 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 :

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 Bell 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 (KEA copy), 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. An example of basic S.I. unit is

   (A) Newton (B) Joule

   (C) Ampere (D) Watt

2. The prefix used for 10^{+2} is

   (A) hecta (B) centi

   (C) pico (D) peta

3. An example of dimensionless physical quantity is

   (A) surface tension (B) strain

   (C) impulse (D) period

4. The velocity of a freely falling body gradually _____ as it falls.

   (A) decreases (B) increases

   (C) remains same (D) increases and then decreases

5. A main scale is divided into half mm and having a vernier containing 20 divisions has a least count of _____ cm.

   (A) 2.5×10^{-2} (B) 0.5×10^{-2}

   (C) 0.025×10^{-2} (D) 0.25×10^{-2}

6. For a particular mass of the moving body, its friction is minimum when it is

   (A) sliding (B) static

   (C) rolling (D) dragged

Space For Rough Work

7. All equations of motion hold good under the condition of

(A) constant velocity (B) constant acceleration

(C) variable velocity (D) variable acceleration

8. A force of 1.5×10^{-2} N acts for 3 seconds on a body of mass 0.05 kg moving with velocity 4 m/s. The final velocity of the body is

(A) 4.9 m/s (B) 18 m/s

(C) 9 m/s (D) 7.5 m/s

9. To check the equilibrium of five coplanar concurrent forces, we use law of

(A) Parallelogram of forces (B) Triangle of forces

(C) Lami's theorem (D) Polygon of forces

10. The S.I. unit of momentum is

(A) kg m (B) $kg\ m^{-1}s^{-1}$

(C) $kg\ m\ s^{-2}$ (D) $kg\ m\ s^{-1}$

11. When three forces acting at a point are in equilibrium, the angle opposite to biggest force is always _____ angle.

(A) biggest (B) smallest

(C) equal to other (D) obtuse

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

(A) Law of parallelogram of forces. (B) Lami's theorem.

(C) Law of triangle of forces. (D) Law of polygon of forces.

Space For Rough Work

13. Two forces 3N and 5N acts on a body simultaneously making an angle 60° between them. The resultant force on the body is

(A) 8 N (B) 4 N

(C) 7 N (D) 49 N

14. Dimensional formula for stress is

(A) $[LM^{-1}T^{-2}]$ (B) $[L^{-1}MT^{-2}]$

(C) $[L^{-1}M^{-1}T]$ (D) $[L^{2}M^{-1}T^{-2}]$

15. The pull in the bicycle chain is an example of

(A) tensile stress (B) volume stress

(C) shear stress (D) shear strain

16. Viscosity of water at 20 °C in centipoise is

(A) 1.792 (B) 0.650

(C) 1.005 (D) 0.470

17. Dimensional formula of surface tension is

(A) $[LMT^{-2}]$ (B) $[L^{2}MT^{-2}]$

(C) $[LM^{-1}T^{-2}]$ (D) $[L^{0}MT^{-2}]$

18. A steel needle can be floated on the surface of water because of the

(A) density of steel is greater than water

(B) density of steel is less than water

(C) surface tension

(D) viscosity

Space For Rough Work

19. Thrust on the bottom of the container having a base area of 10 m^2 filled with water to a height of 6 m is

(A) 60×10^2 N (B) 58.8×10^4 N

(C) 60.8 N (D) 600 N

20. Keeping the temperature constant, if the pressure of the gas is doubled its volume

(A) remains constant (B) doubles

(C) reduces to one fourth (D) reduces to half

21. Heat transfer in the absence of the medium is

(A) conduction (B) convection

(C) radiation (D) absorption

22. Zero of absolute scale of temperature is at

(A) 0 °C (B) 100 °C

(C) 273 °C (D) – 273 °C

23. Ripples on water surface is an example of

(A) electromagnetic waves (B) transverse waves

(C) waves travelling in space (D) longitudinal waves

24. The time interval between two consecutive waxing and waning of sound waves is

(A) beat period (B) wave period

(C) beat frequency (D) wave frequency

Space For Rough Work

25. S.I. unit of intensity of sound is

(A) watt per square meter (B) watt per meter

(C) watt square meter (D) watt meter

26. The study of characteristics of buildings with reference to sound is

(A) resonance (B) interference

(C) echo (D) acoustics

27. The distance travelled by the disturbance in the medium for one complete oscillation is

(A) wave velocity (B) wavelength

(C) wave frequency (D) wave amplitude

28. Momentum of a photon is given by

(A) $P = \frac{\lambda}{h}$ (B) $P = \frac{h}{\lambda}$

(C) $P = \lambda h$ (D) $P = \lambda^2 h$

29. The velocity of sound in case of liquids is given by

(A) $\sqrt{\frac{d}{k}}$ (B) $\sqrt{kd}$

(C) $\sqrt{\frac{k}{d}}$ (D) $\sqrt{\frac{d^2}{k}}$

30. A tuning fork vibrating in air is an example of

(A) damped free vibrations (B) resonant vibrations

(C) undamped free vibrations (D) forced vibrations

Space For Rough Work

31. Raman lines are

(A) unpolarised (B) polarised

(C) diffracted (D) reflected

32. A crystal which has two optic axes is

(A) calcite (B) quartz

(C) mica (D) glass

33. Electron microscope is used to

(A) study virus and bacteria

(B) view three dimensional images

(C) automatic switching on and off of street-lights

(D) electronic industry for soldering

34. Which of the following statements is correct in case of γ-rays ?

(A) Penetrating power is less than β-rays.

(B) Penetrating power is less than α-rays.

(C) Penetrating power is very high.

(D) γ particles are nothing but electrons.

35. For destructive interference of light the path difference should always be

(A) $(2n + 1)\frac{\lambda}{2}$ (B) $\frac{n\lambda}{2}$

(C) $(2n + 1)\frac{\lambda}{3}$ (D) $n\lambda$

Space For Rough Work

36. The resultant intensity of interference of two monochromatic waves having same amplitude and constant phase difference equal to ϕ is

(A) $2a\cos\left(\frac{\phi}{2}\right)$ (B) $4a^2\cos^2\left(\frac{\phi}{2}\right)$

(C) $4a^2\cos\left(\frac{\phi}{2}\right)$ (D) $4a\cos^2\left(\frac{\phi}{2}\right)$

37. For two objects to be just resolved, the principle maximum should be on

(A) first maximum (B) second maximum

(C) first minimum (D) second minimum

38. Resolving power of microscope is given by

(A) $\frac{\lambda}{2n\sin\theta}$ (B) $\frac{n}{2\lambda\sin\theta}$

(C) $\frac{2\lambda\sin\theta}{n}$ (D) $\frac{2n\sin\theta}{\lambda}$

39. In case of acids, the concentration of H^+ ions is

(A) more than 10^{-7} g ions/litre.

(B) less than 10^{-7} g ions/litre.

(C) equal to 10^{-7} g ions/litre.

(D) between 10^{-7} g ions/litre and 10^{-14} g ions/litre.

40. Corrosion of metal can be prevented by keeping it in

(A) acidic medium (B) basic medium

(C) neutral medium (D) moisture

Space For Rough Work

PART – B

APPLIED MATHEMATICS

41. The value of the determinant $A = \begin{vmatrix} 1 & 1 & 1 \\ 3 & 3 & 3 \\ 4 & 5 & 6 \end{vmatrix}$ is

(A) 1 (B) 3

(C) -2 (D) 0

42. The value 'x' by Cramer's rule in $3x + 2y = 4$ and $x - 2y = 8$ is

(A) 12 (B) 3

(C) -13 (D) 15

43. If $A = \begin{bmatrix} 2 & -3 \\ 1 & 5 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 2 \\ 4 & -3 \end{bmatrix}$, then $A + 2B$ is

(A) $\begin{bmatrix} 4 & 1 \\ 9 & -1 \end{bmatrix}$ (B) $\begin{bmatrix} 4 & 1 \\ 9 & 1 \end{bmatrix}$

(C) $\begin{bmatrix} 3 & -1 \\ 5 & 2 \end{bmatrix}$ (D) $\begin{bmatrix} 3 & 1 \\ 5 & 2 \end{bmatrix}$

44. If $A = \begin{bmatrix} 2 & 3 & 4 \\ -2 & x & -4 \\ -5 & 6 & 7 \end{bmatrix}$ is singular, then the value of x is

(A) -3 (B) 3

(C) $\frac{1}{3}$ (D) $\frac{-1}{3}$

Space For Rough Work

45. The characteristic roots of the matrix $A = \begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$ is

(A) 5, 2 (B) –5, –2

(C) 5, –2 (D) –5, 2

46. If ${}^{n}C_{16} = {}^{n}C_{3}$, then the value of n is

(A) –19 (B) 19

(C) 13 (D) –13

47. The last term in the expansion of $\left(3x^2 + \frac{1}{2x^2}\right)^4$ is

(A) $\frac{1}{8x^8}$ (B) $\frac{1}{16x^8}$

(C) $81\,x^8$ (D) $12\,x^8$

48. The unit vector of $\vec{a} = 2i - 3j + 4k$ is

(A) $\frac{2i-3j+4k}{\sqrt{29}}$ (B) $\frac{2i-3j+4k}{\sqrt{11}}$

(C) $\frac{2i-3j+4k}{\sqrt{3}}$ (D) $\frac{\sqrt{29}}{2i-3j+4k}$

49. If $\vec{a} = i - 4j + 3k$ and $\vec{b} = -2i + j + 6k$, then the projection of $\vec{a}$ on $\vec{b}$ is

(A) $\frac{24}{\sqrt{41}}$ (B) $\frac{12}{\sqrt{26}}$

(C) $\frac{-12}{\sqrt{41}}$ (D) $\frac{12}{\sqrt{41}}$

Space For Rough Work

50. The area of triangle whose two sides are $\vec{a} = 3i + 4j + k$ and $\vec{b} = 5i + 6j + 2k$ is

(A) 3 sq. units (B) $\frac{1}{2}$ sq. units

(C) $\frac{3}{2}$ sq. units (D) $\frac{9}{2}$ sq. units

51. The simplification of $\frac{1}{1+\sin\theta} + \frac{1}{1-\sin\theta}$ is

(A) $2\cos^2\theta$ (B) $2\sec^2\theta$

(C) $\tan^2\theta$ (D) $2\operatorname{cosec}^2\theta$

52. The value of $\tan^2 30° + \sin^2 45° + \cos^2 90° + \cos^2 60°$ is

(A) $\frac{4}{3}$ (B) $\frac{13}{12}$

(C) $\frac{13}{24}$ (D) $\frac{25}{12}$

53. The simplification of $\frac{\sin(180°-A)\cos(360°-A)}{\tan(90°+A)\sin(-A)}$ is

(A) sin A (B) cosec A

(C) – sin A (D) – cosec A

54. If $\cos A = \frac{-3}{5}$ where $90° < A < 180°$, then the value of cot A is

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

(C) $\frac{-3}{4}$ (D) $\frac{-4}{3}$

Space For Rough Work

55. The value of $\cos 105°$ is

(A) $\frac{\sqrt{3}-1}{2\sqrt{2}}$ (B) $\frac{\sqrt{3}+1}{2\sqrt{2}}$

(C) $\frac{2\sqrt{2}}{1-\sqrt{3}}$ (D) $\frac{1-\sqrt{3}}{2\sqrt{2}}$

56. If $\tan\frac{A}{2} = \frac{1-\cos A}{\sin A}$, then the value of $\tan 22\frac{1°}{2}$ is

(A) $\sqrt{2}+1$ (B) $1-\sqrt{2}$

(C) $\sqrt{2}-1$ (D) $-1-\sqrt{2}$

57. The value of $\cos 5x \cdot \cos 3x$ is

(A) $\cos 8x + \cos 2x$ (B) $\frac{1}{2}(\cos 8x + \cos 2x)$

(C) $\frac{1}{2}(\sin 8x + \sin 2x)$ (D) $\frac{1}{2}(\cos 8x - \cos 2x)$

58. The simplified value of $\tan^{-1}\left(\frac{1}{2}\right) + \tan^{-1}\left(\frac{1}{3}\right)$ is

(A) $\frac{\pi}{4}$ (B) $\frac{\pi}{3}$

(C) 1 (D) $\tan^{-1}\left(\frac{1}{7}\right)$

59. Distance of a point P(– 2, 5) from the origin is

(A) $\sqrt{29}$ (B) $\sqrt{21}$

(C) $\sqrt{3}$ (D) 29

60. The co-ordinates of the point which divides the line joining the points A (8, 3) and B(–5, 6) in the ratio of 2 : 3 externally is

(A) (– 34, –3) (B) (34, 3)

(C) $\left(\frac{14}{5}, \frac{21}{5}\right)$ (D) (34, –3)

Space For Rough Work

61. The area of triangle with the vertices (5, 3), (4, 6) and (5, 8) is

(A) $\frac{15}{2}$ sq. units (B) 15 sq. units

(C) $\frac{5}{2}$ sq. units (D) $\frac{45}{2}$ sq. units

62. The slope of the line making an angle 150° with the x-axis is

(A) $\frac{-1}{\sqrt{3}}$ (B) $\frac{1}{\sqrt{3}}$

(C) $\sqrt{3}$ (D) $-\sqrt{3}$

63. The two point form of a straight line is

(A) $y - y_1 = m(x - x_1)$ (B) $\frac{y - y_1}{x - x_1} = \frac{y_2 - y_1}{x_2 - x_1}$

(C) $\frac{y}{x} = \frac{y_2 - y_1}{x_2 - x_1}$ (D) $\frac{y - y_2}{x - x_2} = \frac{y_2 - y_1}{x_2 - x_1}$

64. The equation of straight line perpendicular to $2x + 5y - 8 = 0$ and passing through $(-1, 2)$ is

(A) $2x + 5y + 9 = 0$ (B) $5x - 2y + 1 = 0$

(C) $5x - 2y + 9 = 0$ (D) $5x + 2y - 9 = 0$

65. The value of $\lim_{x \to 3} \frac{2x^2 - 7x + 3}{2x - 6}$ is

(A) 3 (B) $\frac{2}{5}$

(C) $\frac{5}{2}$ (D) 5

Space For Rough Work

66. The value of $\lim_{x \to 0} \frac{\sqrt{1-\cos x}}{x}$ is

(A) $\frac{1}{\sqrt{2}}$ (B) $\sqrt{2}$

(C) $\frac{1}{2}$ (D) 1

67. If $y = e^x (\cos x - \sin x)$, then $\frac{dy}{dx}$ is

(A) $2e^x \cos x$ (B) $-2e^x \cos x$

(C) $2e^x \sin x$ (D) $-2e^x \sin x$

68. If $x + y = \log x + \log y$, then $\frac{dy}{dx}$ at $x = -1$ and $y = 2$ is

(A) $-\frac{1}{4}$ (B) -4

(C) 4 (D) $\frac{1}{2}$

69. If $x = a \cos^2 \theta$ and $y = b \sin^2 \theta$, then $\frac{dy}{dx}$ is

(A) $\frac{-b}{a}$ (B) $\frac{b}{a}$

(C) $\frac{a}{b}$ (D) $\frac{-a}{b}$

70. The second derivative of $y = \log\left(\frac{1}{x}\right)$ is

(A) x (B) 1

(C) $\frac{1}{x^2}$ (D) $\frac{-1}{x^2}$

Space For Rough Work

71. The equation of normal to the curve $y = (2x + 1)^2$ at $(-2, 0)$ is

(A) $x - 16y + 2 = 0$ (B) $x - 12y + 2 = 0$

(C) $x + 16y + 2 = 0$ (D) $x + 12y + 2 = 0$

72. The maximum value of the function $y = 2x^3 + 3x^2 - 36x$ is

(A) -44 (B) -30

(C) 81 (D) -81

73. The value of $\int \sin 3x \cos 2x \, dx$ is

(A) $\frac{-1}{2}\left[\frac{\cos 5x}{5} + \cos x\right] + C$ (B) $\frac{1}{2}\left[\frac{-\cos 5x}{5} + \cos x\right] + C$

(C) $\frac{1}{2}\left[\frac{\cos 5x}{5} + \cos x\right] + C$ (D) $\frac{-1}{2}[\cos 5x + \cos x] + C$

74. The value of $\int x^2 \sin(2x^3) \, dx$ is

(A) $\frac{-\cos(2x^3)}{6} + C$ (B) $\frac{-\cos(2x^3)}{3} + C$

(C) $12x^3 \cos(2x^3) + C$ (D) $\frac{\cos(2x^3)}{6} + C$

75. $\int \log x \, dx$ is

(A) $\frac{1}{x} + C$ (B) $\frac{1}{x} - x + C$

(C) $x \log x + x + C$ (D) $x \log x - x + C$

Space For Rough Work

76. The value of $\int_0^{\pi/2} \sqrt{1+\sin 2x}\, dx$ is

(A) 0 (B) 1

(C) 2 (D) -2

77. $\int_0^1 \frac{x}{1+x^4}$ is

(A) $\frac{\pi}{4}$ (B) $\frac{\pi}{8}$

(C) $\frac{-\pi}{8}$ (D) $\frac{-\pi}{4}$

78. The area formed by the curve $y = (2x + 1)^3$ between the ordinates $x = -1$ and $x = 1$ is

(A) $\frac{41}{4}$ sq. units (B) 2 sq. units

(C) 20 sq. units (D) 10 sq. units

79. The order and degree of differential equation $\left[1+\left(\frac{dy}{dx}\right)^4\right]^{2/3} = \frac{d^2y}{dx^2}$ is

(A) order 2 and degree 3 (B) order 2 and degree 1

(C) order 1 and degree 2 (D) order 1 and degree 4

80. The solution of differential equation $\sec^2 x \tan y\, dx + \sec^2 y \tan x\, dy = 0$ is

(A) $\tan^2 x + \tan^2 y = C$ (B) $\tan x + \tan y = C$

(C) $\tan x \tan y = C$ (D) $x + y + \log(\sec x \sec y) = C$

Space For Rough Work

PART-C

COMPUTER SCIENCE

It consists of **81** to **180** questions :

81. Which of these is commutative law ?

(A) $A + B = B + A$ (B) $A(A + B) = A$

(C) $AB + BC = B(A + C)$ (D) $A + (B + C) = (A + B) + C$

82. According to De-Morgan's theorem $\overline{A \cdot B}$ is

(A) $\overline{A} \cdot \overline{B}$ (B) $\overline{A + B}$

(C) $\overline{A} + \overline{B}$ (D) $\overline{A} + B$

83. Which of these is an universal gate ?

(A) NAND (B) AND

(C) OR (D) NOT

84. The bit at the input is transferred to the output of the flip-flop when the next clock pulse is applied in

(A) T flip-flop (B) D flip-flop

(C) JK flip-flop (D) SR flip-flop

85. _____ is a combinational circuit that converts binary information from n input lines to a maximum of 2^n unique lines

(A) Encoder (B) Multiplexer

(C) De-multiplexer (D) Decoder

Space For Rough Work

86. The unit that performs arithmetic and logical operations is

(A) ALU (B) MU

(C) CU (D) MMU

87. Terabyte comprises of

(A) 1024 kilobytes (B) 1024 gigabytes

(C) 1024 megabytes (D) 1024 bytes

88. The storage that has high cost per bit of storage is

(A) SRAM (B) Cache memory

(C) ROM (D) Hard disk

89. A spiral shape track formatting is present in

(A) Optical disk (B) Floppy disk

(C) Hard disk (D) Magnetic tape

90. Fixed disk in a computer is also referred to as

(A) Hard disk (B) Floppy disk

(C) Zip disk (D) Compact disk

91. Refreshing circuits are required in _____.

(A) DRAM (B) EPROM

(C) ROM (D) SRAM

92. The most commonly used input device is

(A) Light pen (B) Keyboard

(C) Joystick (D) Scanner

Space For Rough Work

93. _____ is also called as letter quality printing.

(A) Dot matrix printer (B) Inkjet printer

(C) Laser printer (D) Daisywheel printer

94. CRT stands for

(A) Cathode Ray Tube (B) Color Ray Tube

(C) Character Ray Tube (D) Carriage Ray Tube

95. The scanf formatting code to read a character is _____.

(A) %c (B) %d

(C) %e (D) %f

96. Every program statement in a C program must end with a _____.

(A) Colon (B) Semicolon

(C) Single quote (D) Double quote

97. In C language main ( ) is where the program begins its _____.

(A) Linking (B) Execution

(C) Loading (D) Termination

98. In C language all keywords must be written in _____.

(A) uppercase (B) single quote

(C) lowercase (D) double quotes

99. _____ provides information about variables location and visibility in C language.

(A) Keywords (B) Identifiers

(C) Functions (D) Storage class

Space For Rough Work

100. _____ is a group of similar datatype items that share a common name.

(A) Function (B) Structure

(C) Union (D) Array

101. In call by reference mechanism, when the function is called, the _____ are passed as actual arguments.

(A) operators (B) operands

(C) addresses (D) parameters

102. In C, _____ closes a file which has been opened for use.

(A) close (B) rewind

(C) fclose (D) stop

103. In C, _____ allocates space for an array elements, initializes them to zero and then returns the pointer to the memory.

(A) malloc ( ) (B) calloc ( )

(C) free ( ) (D) realloc ( )

104. In C, the string function _____ concatenates two strings.

(A) strcmp ( ) (B) strcpy ( )

(C) strcat ( ) (D) concat ( )

105. In C, _____ operators manipulate data at bit level

(A) logical (B) arithmetic

(C) relational (D) bitwise

106. Type conversion from long int to _____ causes dropping of the excess higher order bits in C.

(A) float (B) int

(C) double (D) string

Space For Rough Work

107. In C, _____ is a built-in multiway decision statement.

(A) for (B) while

(C) do (D) switch

108. In C, each member of _____ has its own storage location.

(A) union (B) structure

(C) while loop (D) pointer

109. The _____ tells that the variable is a pointer variable in C.

(A) * (B) +

(C) & (D) –

110. If ptr is a pointer to an integer variable with value 5, then *ptr++ gives

(A) 4 (B) 5

(C) 6 (D) next integer

111. _____ is not an example for derived datatype.

(A) Array (B) String

(C) Double (D) Queue

112. PUSH is the operation performed on _____ data structure.

(A) queue (B) tree

(C) list (D) stack

113. A linear list to which elements can be added or removed from both the ends of the queue is called

(A) priority queue (B) double ended queue

(C) circular queue (D) two-way queue

Space For Rough Work

114. The next address field of the last node in a linked list contain _____ value.

(A) EOF (B) NULL

(C) NILL (D) END

115. The length of the longest path from root node to any terminal node is called _____ of the tree.

(A) depth (B) level

(C) edge (D) degree

116. In _____ traversal, root node is visited at last.

(A) pre order (B) post order

(C) in order (D) last order

117. 'Operand operator operand' is the format for _____ notation.

(A) prefix (B) infix

(C) post fix (D) suffix

118. A binary tree with n nodes and of depth d is said to be a complete binary tree, if all of its terminal nodes are at _____ level.

(A) $n - d$ (B) d

(C) $d - 1$ (D) $n + d$

119. Among recursive and non-recursive versions of program, the following is true :

(A) Recursive programs executes efficiently.

(B) Non-Recursive programs executes efficiently.

(C) Both types of programs execute efficiently.

(D) Recursive programs save memory.

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120. Consider the syntax of const in C++ const datatype name = value;
If you omit datatype, then C++ assumes it as

(A) int (B) char

(C) float (D) long int

121. C++ allows declaration & initialization of variable at runtime. This is called

(A) Static initialization (B) Dynamic initialization

(C) Class initialization (D) Rigid initialization

122. In C++, data hiding between two classes is performed through keyword

(A) public (B) external

(C) protected (D) private

123. In C++, reference variable can be created using

(A) # (B) &

(C) $ (D) *

124. Function's argument list in C++ is also referred to as

(A) Signature (B) Default list

(C) Modifier (D) Datalist

125. In C++, always the members of a class are _____ by default.

(A) public (B) protected

(C) private (D) static

126. In C++, which of the following operator cannot be overloaded ?

(A) >> (B) <<

(C) += (D) ?:

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127. The technique of deriving a new class from an old existing class is called

(A) Polymorphism
(B) Inheritance
(C) Data Abstraction
(D) Operator overloading

128. In case of Inheritance, the technique of combining two or more forms of Inheritance to derive a class is known as

(A) Single Inheritance
(B) Hybrid Inheritance
(C) Multiple Inheritance
(D) Multi-level Inheritance

129. In C++, _____ functions allow us to declare member functions both in a base class and redefine the same function with same name and same function prototype in its derived class.

(A) friend
(B) static
(C) virtual
(D) dynamic

130. In C++, which of the following is a standard iostream object ?

(A) cprint
(B) cscan
(C) cread
(D) cout

131. In C++, which of the following supports formatted I/O operations ?

(A) istream
(B) ostream
(C) streambuf
(D) ios

132. In C++, which of the following is not a synchronous exception ?

(A) Divide-by-zero
(B) Unable-to-open-file
(C) Unable-to-allocate-memory
(D) Keyboard exception

133. In C++, _____ is an input object that recognizes the datatype of input variable automatically.

(A) readfile
(B) seekg
(C) cin
(D) fin

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134. In C++, which of the following is not true in case of reference variables ?

(A) you can pass reference to functions.

(B) you can perform arithmetic manipulations.

(C) you can return references from functions.

(D) you can initialize references.

135. When a process is created, it enters _____ state.

(A) wait (B) new

(C) ready (D) running

136. Long-term scheduler is also called

(A) CPU scheduler (B) Process scheduler

(C) Job scheduler (D) Medium term scheduler

137. A high priority process can obtain CPU control in

(A) Preemptive scheduling (B) Non-preemptive scheduling

(C) FCFS scheduling (D) RR scheduling

138. The CPU is allocated to a process that has smallest next CPU burst time in which of the following scheduling ?

(A) RR scheduling (B) Multi-level queue scheduling

(C) FIFO scheduling (D) SJF scheduling

139. The CPU generates the addresses. The group of such addresses is called

(A) logical address space (B) physical address space

(C) user space (D) temporary storage space

140. In memory allocation, allocating the largest hole to the requesting process is called

(A) Best fit (B) Worst Fit

(C) First fit (D) Last fit

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141. The no. of processes completed per unit time is called

(A) CPU utilization (B) Response time

(C) Turnaround time (D) Throughput

142. In non-preemptive scheduling, the process can terminate in which of the following situation ?

(A) when the process is running (B) when the process is complete

(C) when the process is started (D) at any time

143. If a process is moved temporarily out of memory and brought back into memory for continued execution, then it is called

(A) overlay (B) dynamic linking

(C) static linking (D) swapping

144. The main memory is divided into several fixed-size partitions and each partition may be allocated to hold exactly one process at a time in the following scheme.

(A) Single-partition allocation (B) Multiple-partition allocation

(C) Paged allocation (D) Segmentation

145. Which of the following is not a function of Data Link Layer ?

(A) Framing (B) Flow control

(C) Error control (D) Synchronization of bits

146. SCTP stands for

(A) String Control Transmission Protocol

(B) Stream Control Transmission Protocol

(C) Stream Combination Transport Protocol

(D) Stream Content Transition Protocol

147. _____ cables are used in SONET networks.

(A) Twisted pair (B) Co-axial

(C) Fiber optic (D) Copper

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148. CSMA is based on the principle

(A) sense before transmit
(B) sense during transmission
(C) sense after collisions
(D) sense during collision

149. In _____ method of CSMA, a station senses a line, if the line is not idle, it waits a random amount of time and senses the line again.

(A) p-persistent
(B) non-persistent
(C) n-persistent
(D) 1-persistent

150. A connecting device which operate at the physical and datalink layers is

(A) Passive hub
(B) Router
(C) Gateway
(D) Bridge

151. Electromagnetic waves ranging in the frequency between _____ are called microwaves.

(A) 1 GHz to 300 GHz
(B) 3 kHz to 1 GHz
(C) 300 GHz to 400 THz
(D) 1 MHz to 300 MHz

152. RG-59 co-axial cable is used to transmit data in

(A) Cable TV
(B) Thick Ethernet
(C) Thin Ethernet
(D) Telephones

153. Which of the following protocol is not used in transport layer ?

(A) SCTP
(B) TCP
(C) HTTP
(D) UDP

154. _____ layer in OSI model is concerned with the syntax and semantics of the information exchanged between two systems.

(A) Application
(B) Carrier
(C) Transport
(D) Presentation

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155. _____ users maintain personal database by using readymade program packages.

(A) Sophisticated (B) Parametric

(C) Standalone (D) Casual

156. The data in the database at a particular moment in time is called

(A) Database snapshot (B) Database schema

(C) Metadata (D) Dynamic aspect

157. In ER diagram, _____ symbol represents an entity.

(A) Rectangle (B) Square

(C) Rhombus (D) Oval

158. The term _____ is used to represent the column in SQL.

(A) Tuple (B) Attribute

(C) Relation (D) Schema

159. The _____ command in SQL removes tuples from a relation.

(A) DROP (B) REMOVE

(C) MODIFY (D) DELETE

160. The Java system package for language utility classes such as vectors, hashtables etc is

(A) java.lang (B) java.util

(C) java.io (D) java.applet

161. The java statement import package1 . package2 . A refers to

(A) package2 is inside package1 (B) package1 is inside package2

(C) A is not a classname (D) package2 is toplevel package

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162. Which of the following is not true about threads in java ?

(A) aThread.stop ( ) stops the thread from running

(B) aThread.sleep ( ) blocks for a specified time.

(C) aThread.suspend ( ) blocks until further orders.

(D) aThread.create ( ) creates the thread.

163. In Java, the keyword extends is used in

(A) Polymorphism (B) Inheritance

(C) Templates (D) Message passing

164. The exception caused by bad array indexes is

(A) ArrayStoreException

(B) ArrayIndexException

(C) ArrayoutofBoundException

(D) ArrayoutofReach

165. In XML, the general low level syntax of XML imposes its rules on all _____ documents.

(A) HTML (B) XHTML

(C) XML (D) DTD

166. In XML, defined entities referenced only in DTD's are called _____ entities.

(A) private (B) general

(C) public (D) parameter

167. A _____ defines the structure of a class of XML documents.

(A) namespace (B) DTD

(C) Schema (D) entity

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168. XML means _____

(A) EX Markup Language

(B) Extensible Markup Language

(C) Extended Hypertext Markup Language

(D) X rated Markup Language

169. _____ are handled by browsers.

(A) Binary entities (B) Document entity

(C) Weak entity (D) Dynamic entity

170. In PHP, _____ function catenates the elements of the array together returning a string.

(A) explode (B) implore

(C) implode (D) implicit

171. In PHP, the _____ function, when given the name of an array, returns the key of the current element of the array.

(A) search (B) key

(C) find (D) select

172. In PHP, in pattern matching, the _____ regular expressions are compiled into PHP.

(A) POSIX (B) POSTFIX

(C) PREFIX (D) INFIX

173. In PHP, a whole array can be deleted with _____, as with a scalar variable.

(A) set (B) reset

(C) unset (D) delete

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174. Pass-by-reference parameters can be specified in PHP in _____ ways.

(A) one (B) two

(C) three (D) four

175. _____ computer operates on continuous electrical magnitude like voltage.

(A) Digital (B) Analog

(C) Hybrid (D) Micro

176. The characteristic feature of the computer which tells that a machine can perform multiple tasks simultaneously with equal case is

(A) Versatility (B) Reliability

(C) Diligence (D) Accuracy

177. The memory with largest storage capacity and less expensive is

(A) Primary memory (B) Cache memory

(C) Secondary memory (D) Main memory

178. The track sectors are grouped into a collection known as _____.

(A) Disk sectors (B) Disk pack

(C) Cluster (D) Track pack

179. _____ is an example for non-impact printers.

(A) Dot matrix printer (B) Laser printer

(C) Daisy wheel printer (D) Drum printer

180. FLOPS stands for

(A) Flip-Flop Operation Per Second

(B) Floating Point Operations Per Second

(C) Flip-Flop Operations Performance Specifications

(D) Floating Point Operations Performance Specifications

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