

**POST GRADUATE COMMON ENTRANCE TEST - 2015**

| DATE                     | COURSE         | TIME                       |
|--------------------------|----------------|----------------------------|
| 09-08-2015               | MCA            | 02.30 PM TO 04.30 PM       |
| MAXIMUM MARKS            | TOTAL DURATION | MAXIMUM TIME FOR ANSWERING |
| 100                      | 150 MINUTES    | 120 MINUTES                |
| MENTION YOUR PG CET NO.  |                |                            |
| QUESTION BOOKLET DETAILS |                |                            |
| VERSION CODE             |                |                            |
| SERIAL NUMBER            |                |                            |
| A - 1                    |                |                            |
| 101089                   |                |                            |

**DOs :**

1. Check whether the PG 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 02.25 pm.
3. The serial number of this question booklet should be entered on the OMR answer sheet.
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 02.30 PM, TILL THEN;**
  - Do not remove the seal / staple present on the right hand side 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 80 (items) questions and each question will have one statement and four answers. (Four different options / responses.)
2. After the 3rd Bell is rung at 02.30 pm, remove the seal / staple stapled on the right hand side 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 120 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 ballpoint pen against the question number on the OMR answer sheet.**
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 04.30 pm, 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.

**MARKS DISTRIBUTION**

|          |   |
|----------|---|
| PART - 1 | 60 QUESTIONS CARRY ONE MARK EACH (1 TO 60)  |
| PART - 2 | 20 QUESTIONS CARRY TWO MARKS EACH (61 - 80) |

**SEAL**

**MASTER OF COMPUTER APPLICATIONS**  
**PART - 1**

(60 X 1 = 60)

Each Question Carry One Mark

1. Choose the right synonym for 'RHAPSODY'
  - a. Related to dance
  - b. Related to printing
  - c. Related to music
  - d. Related to acting
2. Choose the right antonym for 'IMPROMPTU'
  - a. Bad tempered
  - b. Bad mannered
  - c. Irritable
  - d. Well planned
3. Fill in the blank with the correct verb:  
Neither Ravi nor his friends \_\_\_\_\_ come.
  - a. Has
  - b. Have
  - c. Has been
  - d. Have been
4. Choose the right preposition for the following:  
The ball fell \_\_\_\_\_ the well.
  - a. by
  - b. into
  - c. of
  - d. at
5. Choose the right choice of the words:  
Like in the rest of the world, crime is \_\_\_\_\_ in Eastern Europe; but it has not reached alarming \_\_\_\_\_.
  - a. serious ..... frequency
  - b. available .... records
  - c. present ..... proportions
  - d. unheard ..... contours
6. Choose the best analogy: Page - Margin
  - a. Book - Print
  - b. Building - Walls
  - c. City - Outskirts
  - d. Road - Pavement
7. Choose the right word.  
The dining hall should be very \_\_\_\_\_ to maintain large crowds
  - a. spacious
  - b. specious
  - c. spesious
  - d. spasious
8. Use the appropriate forms of the word to fill in the blank.  
Soldiers for wars \_\_\_\_\_.
  - a. brave
  - b. braviestly
  - c. bravaly
  - d. bravely
9. Fill in the blank with an appropriate tense form of the verb.  
These dogs \_\_\_\_\_ loudly.
  - a. barking
  - b. bark
  - c. barkly
  - d. None of the above
10. Choose the right passive form for the following:  
I know the man
  - a. The man is known to me.
  - b. The man was known to me.
  - c. The man knows me.
  - d. The man is being known by me.

Space For Rough Work

11. Data (information) is stored in computer as \_\_\_\_\_ .  
 a. Files                      b. Directories  
 c. Floppies                  d. Matter
12. Program stored in ROM are called \_\_\_\_\_ .  
 a. Hardware                b. Firmware  
 c. Software                d. None of the above
13. ALU is \_\_\_\_\_ .  
 a. Arithmetic Logic Unit  
 b. Array Logic Unit  
 c. Application Logic Unit  
 d. None of the above
14. A source program is the program written in \_\_\_\_\_ language.  
 a. Object                    b. Computer  
 c. Assembler              d. High-level
15. The word length of a computer is measured in \_\_\_\_\_ .  
 a. Bytes                    b. Millimetres  
 c. Metres                    d. Bits
16. Which of the following is a storage device ?  
 a. Tape                      b. Hard disk  
 c. Floppy disk              d. All of the above
17. A Microsoft Windows is a (an) \_\_\_\_\_ .  
 a. operating system  
 b. word processing  
 c. database program  
 d. graphic program
18. The Basic Input/Output System (BIOS) resides in \_\_\_\_\_ .  
 a. RAM                      b. ROM  
 c. CPU                      d. Memory Cache
19. A collection of 8 bits is called \_\_\_\_\_ .  
 a. Byte                      b. Record  
 c. Word                      d. Nibble
20. In the binary number 110.101, the fractional part has the value \_\_\_\_\_ .  
 a. 0.625                    b.  $2^4$   
 c.  $2^{4-1}$                     d. None of the above
21. The binary representation of the hexadecimal 'C3' is \_\_\_\_\_ .  
 a. 1111                      b. 110011  
 c. 110001                  d. 11000011
22. Which of the following memory is volatile?  
 a. RAM                      b. ROM  
 c. EPROM                  d. PROM

Space For Rough Work

23. A four bit number is given as 1001. Its 1's complement is
- a. 1001                      b. 11001  
c. 0110                      d. 0101
24. Add  $(1011010)_2$  and  $(10110)_2$
- a. 1010101                  b. 1110101  
c. 1110000                  d. 1101010
25. Multiply binary number 1011 by 110
- a. 1101010                  b. 1011010  
c. 1000010                  d. 1011111
26. BCD is
- a. Binary Coded Decimal  
b. Bit Coded Decimal  
c. Binary Coded Digit  
d. Bit Coded Digit
27. If the decimal point is placed to the right of the first significant digit, then the number is called as
- a. Orthogonal  
b. Normalised  
c. Determinate  
d. None of the above
28. The first part of floating point represents a signed fixed point number called
- a. Exponent                  b. Digit  
c. Number                    d. Mantissa
29. In computer system, memory management operations are performed by
- a. User  
b. Hardware  
c. Programmer  
d. Operating System
30. A computer program that converts an entire program into Machine Language is called a(an)
- a. Interpreter                b. Simulator  
c. Compiler                    d. Commander
31. If DELHI is coded as 73541 and CALCUTTA as 82589662, how can CALICUT be coded ?
- a. 527943                      b. 5978213  
c. 8251896                    d. 8543691
32. In a certain code '256' means 'red colour chalk', '589' means 'green colour flower' and '245' means 'white colour chalk'. Which digit in the code means 'white' ?
- a. 2  
b. 4  
c. 5  
d. Cannot be determined

Space For Rough Work



33. In a certain code language, 526 means blue, 24 means blue colour and 436 means colour is fun. Which digit in that language means 'fun'?

- a. 5                      b. 4  
c. 3                      d. None of the above

34. Arun said, "This girl is the wife of the grandson of my mother". Who is Arun to the girl?

- a. Father                  b. Grand father  
c. Husband              d. Father-in-law

35. Pesticide : Crop :: Antiseptic : ?

- a. Wound                b. Clotting  
c. Bandage               d. Bleeding

36. Cool : Cold

- a. Length : Width  
b. Gold : Bourne  
c. Plant : Tree  
d. Pretty : Beautiful

37. Choose the odd one out.

- a. Pistol                  b. Sword  
c. Gun                    d. Rifle

38. 13, 32, 24, 43, 35, \_\_\_\_\_, 46, 65, 57, 76

- a. 45                      b. 52  
c. 54                      d. 55

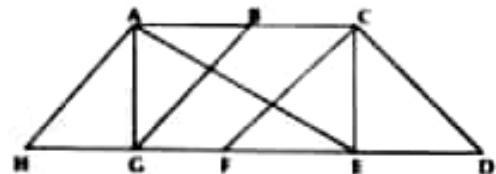
39. In a certain code, GIGANTIC is written as GIGTANCI. How is MIRACLES written in that code?

- a. MIRLCAES            b. MIRLACSE  
c. RIMCALSE            d. RIMLCAES

40. Y, W, U, S, Q, \_\_\_\_\_, \_\_\_\_\_

- a. N, J                    b. M, L  
c. J, R                    d. L, M

41. Find the number of triangles in the given figure



- a. 8                        b. 10  
c. 12                      d. 14

42. The angle of elevation of a ladder leaning against a wall is  $60^\circ$  and the foot of the ladder is 4.6 M away from the wall. The length of the ladder is

- a. 2.3 M                  b. 4.6 M  
c. 7.8 M                  d. 9.2 M

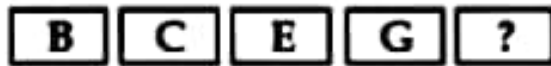
43. Which one will replace the question mark?



- a. 41                      b. 64  
c. 35                      d. 61

Space For Rough Work

44. Which letter will replace the question mark ?



- a. Q                      b. A  
c. Z                      d. K

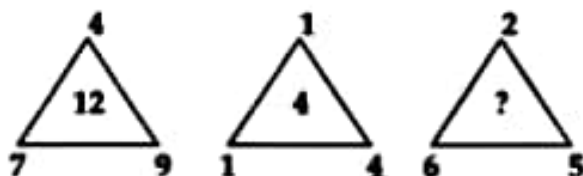
45. Which one of the following is not a prime number ?

- a. 31                      b. 61  
c. 71                      d. 91

46. What least number must be added to 1056, so that the sum is completely divisible by 23 ?

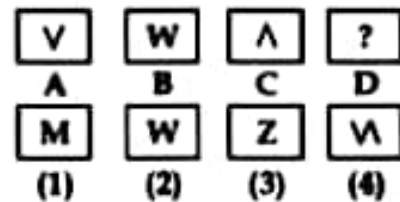
- a. 2                      b. 3  
c. 18                      d. 21

47. Which number replaces the question mark ?



- a. 15                      b. 3  
c. 9                      d. 13

48. There is some relationship between diagrams A & B. The same relationship persists between C & D. Find the right diagram for D from the alternatives



- a. 1                      b. 2  
c. 3                      d. 4

49. Look at this series: 2, 1,  $\left(\frac{1}{2}\right)$ ,  $\left(\frac{1}{4}\right)$ , .....  
What number should come next ?

- a.  $\left(\frac{1}{3}\right)$                       b.  $\left(\frac{1}{8}\right)$   
c.  $\left(\frac{2}{8}\right)$                       d.  $\left(\frac{1}{16}\right)$

50. Which word does NOT belong with others ?

- a. Inch                      b. Ounce  
c. Centimetre                      d. Yard

51. Who out of the following was not a Moderate?

- a. Gopal Krishna Gokhale  
b. Dadabhai Naoroji  
c. Ferozshah Mehta  
d. Bal Gangadhar Tilak

Space For Rough Work

52. The minimum possible temperature beyond which matter cannot be cooled is
- 98.10°C
  - 100.00°C
  - 273.15°C
  - 459.40°C
53. "Interest Rate Policy" is a component of
- Fiscal policy
  - Monetary policy
  - Trade policy
  - Direct control
54. Which of the following was worshipped as a heavenly God by ancient Indians ?
- Surya
  - Angaraka
  - Sukra
  - Shani
55. "A Voice of Freedom" is a book written by
- Benazir Bhutto
  - Corazan Aquino
  - Aung San Sun Kyi
  - Nayantara Sahgal
56. The Constitution of India borrowed the scheme of Indian Federation from the Constitution of \_\_\_\_\_.
- USA
  - Canada
  - Ireland
  - UK
57. The Russian traveller who visited the Deccan during the medieval period of Indian history was \_\_\_\_\_.
- Rastyannikov
  - Shirokov
  - Pavlor
  - Nikitin
58. Gerontology is the study of
- Process of ageing
  - Growth of cells
  - Birds
  - Vegetables
59. Radio carbon dating process is used to know the age of
- Fossils
  - Plants
  - Rocks
  - All of the above
60. The common ore of aluminium is
- Bauxite
  - Chromite
  - Cryolite
  - Monazite

**Space For Rough Work**

**PART - 2**  
Each Question Carries Two Marks

(20 X 2 = 40)

- |  |   |
|--|---|
| <p>61. Find the distance between the points A(-4, 7) and B(2, -5)</p> <p>a. <math>8\sqrt{5}</math> units      b. <math>6\sqrt{5}</math> units</p> <p>c. <math>6\sqrt{4}</math> units      d. None of the above</p>   | <p>66. In how many different ways can the letters of the word LEADING way that the vowels always come together?</p> <p>a. 360                      b. 480</p> <p>c. 720                      d. 5040</p>  |
| <p>62. The co-ordinates of end points of a diameter AB of a circle are A(-6, 8) and B(-10, 6). Find the co-ordinates of its centre</p> <p>a. (-8, 7)                  b. (-7, -8)</p> <p>c. (7, -8)                  d. (-8, -7)</p>                                 | <p>67. Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?</p> <p>a. 210                      b. 1050</p> <p>c. 25200                  d. 21400</p>  |
| <p>63. Find the equation of a straight line whose slope is -2 which passes through the point (3, 7)</p> <p>a. <math>2x + 2y - 13 = 0</math></p> <p>b. <math>2x + y - 13 = 0</math></p> <p>c. <math>2x + y + 13 = 0</math></p> <p>d. <math>2x - y - 13 = 0</math></p> | <p>68. What is the value of b if <math>A = \begin{bmatrix} 1 &amp; 4 \\ 2 &amp; b \end{bmatrix}</math> is a singular matrix</p> <p>a. 5                          b. 7</p> <p>c. 6                          d. 8</p>   |
| <p>64. For what values of K, the following system is consistent?</p> <p><math>x - 3y = k, 2x + 6y = -5</math></p> <p>a. <math>k = -5</math>                  b. <math>k = 5</math></p> <p>c. <math>k = 0</math>                      d. <math>k = -5/2</math></p>    | <p>69. If the Pearson Correlation Coefficient R is equal to 1, then</p> <p>a. there is a positive relationship between two variables</p> <p>b. there is no relationship between two variables</p> <p>c. there is a negative relationship between two variables</p> <p>d. there is a perfect positive relationship between two variables</p> |
| <p>65. The system of equations <math>x - y + z = 1, x + y - z = 1, -x + y + z = 1</math> has</p> <p>a. No solution</p> <p>b. Solution (1, 1, 1)</p> <p>c. Solution (2, 1, 0)</p> <p>d. Many solutions</p>  | <p>70. The coefficient of correlation between two variables x and y is 0.8, while the regression coefficient of y on x is 0.2. Then the regression coefficient of x on y is</p> <p>a. -3.2                      b. 3.2</p> <p>c. 2.3                          d. -2.3</p>   |

Space For Rough Work



71. If the total sum of square is 20 and the sample variance is 5, then the total number of observations are
- a. 15                      b. 25  
c. 4                        d. 35
72. Suppose you buy a lottery ticket, you can either win one dollar (with probability  $1/10$ ) or win nothing (with probability  $9/10$ ). The amount you win is a random variable and it has a
- a. Gamma distribution  
b. Normal distribution  
c. Exponential distribution  
d. Bernoulli distribution
73. A firm estimates that the probability of having an employee off sick on any one day is 0.1. What is the probability that the firm experiences six days without a worker off sick?
- a. 0.001                      b. 0.5  
c. 0.531                      d. 0.765
74. Where is the vertex of a parabola  $x^2 = 4(y-2)^2$
- a. (2, 0)                      b. (0, 2)  
c. (3, 0)                      d. (0, 3)
75. What is the length of the Latus Rectum of the curve  $x^2 = 20y$  ?
- a.  $\sqrt{20}$                       b. 20  
c. 5                            d.  $\sqrt{5}$
76. A parabola has its focus at (7, -4) and directrix  $y = 2$ . Find its equation
- a.  $x^2 + 12y - 14x + 61 = 0$   
b.  $x^2 - 14y + 12x + 61 = 0$   
c.  $x^2 - 12x + 14y + 61 = 0$   
d. None of the above
77. How far from the x-axis is the focus F of the hyperbola  $x^2 - 2y^2 + 4x + 4y + y = 0$  ?
- a. 4.5                        b. 3.4  
c. 2.7                        d. 2.1
78. The Eigen values of the Matrix  $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 1 & 2 \\ 2 & 1 & 0 \end{bmatrix}$  are
- a. 0, -1, 2                      b. -1, 0, 1  
c. 0, 1, 2                      d. None of the above
79. The rank of the matrix will depend on
- a. Number of rows of a matrix  
b. Determinant of a matrix  
c. Number of non-zero rows of a matrix  
d. None of the above
80. The eigen values of  $\begin{bmatrix} 1 & 1 \\ 2 & 3 \end{bmatrix}$  are roots of the equation
- a.  $\lambda^2 - 6\lambda + 3 = 0$   
b.  $\lambda^2 - 6\lambda - 3 = 0$   
c.  $\lambda^2 + 6\lambda + 3 = 0$   
d. None of the above

Space For Rough Work