

Version: D

Common Entrance Test, PGCET – 2010

Master of Computer Applications (MCA)

Time: 2 Hours

Max. Marks: 100

Read the following instructions before answering the test

- i) Write / Darken the particulars of your identity, Test Seat Number and affix your signature on the OMR Response Sheet before the start of the test.

IMPORTANT

Darken the oval corresponding to the correct version of the Question paper you are answering on the OMR Response sheet.

- ii) All Questions have multiple choices of answers, of which only one is correct.
- iii) Mark the correct answer by completely darkening only one oval against the Question number using **Black Ink Ball Point pen** only.
- iv) There will be no negative evaluation with regard to wrong answers. Marks will not be awarded if multiple answers are given.
- v) Do not make any stray mark on the OMR Response sheet. For rough work, use blank page on the Question paper.
- vi) Taking the Question paper out of the test hall is permitted only after the full duration of the test.
- vii) Use of calculator is NOT permitted.
- viii) **START ANSWERING ONLY AT THE SPECIFIED TIME WHEN THE INVIGILATOR GIVES INSTRUCTIONS.**

MARKS DISTRIBUTION

PART – A
PART – B

60 Questions : 60 x 1 = 60 Marks
20 Questions : 20 x 2 = 40 Marks
Total = 100 Marks

PART -A

(One Mark Questions)

- 1) The following is used to connect components in a computer system
a) van b) car c) bus d) None of these
- 2) 'IR' stands for
a) Instruction Register b) Instrument Register
c) Information Register d) Invalid Register
- 3) Maximum number of unique characters that can be represented using ASCII format is
a) 127 b) 128 c) 255 d) 256
- 4) Pick the odd one out:
a) COBOL b) dBase c) ORACLE d) MS- Access
- 5) Supply the appropriate question -tag :
She sings well. _____?
a) Does she b) Doesn't she c) Isn't she d) Hasn't she
- 6) A philanthropist is:
a) One who hates mankind b) One who loves films
c) One who loves mankind d) One who loves comfort
- 7) A number of ships or cars is called a
a) swarm b) bevy c) constellation d) fleet
- 8) The interjection, 'wow' expresses
a) grief b) pain c) great surprise d) recognition
- 9) All the proper nouns begin with _____
a) colon b) capital letter c) small letter d) hyphen
- 10) She can sing film songs. 'Can' indicates
a) futurity b) probability c) ability d) obligation

- 11) Which of the following is a multiuser operating system?
 a) PC-DOS b) MS-DOS c) LINUX d) None
- 12) Printer is a _____
 a) input device b) cache memory
 c) both input and output device d) output device
- 13) In the floating point number 0.1×10^{-12} , 0.1 is
 a) mantissa b) exponent c) base d) None
- 14) 2's complement of 0100 is
 a) 1011 b) 1100 c) 0101 d) None
- 15) When all the observations are same , then variation between A.M, G.M and H.M is
 a) $AM=GM=HM$ b) $AM<GM<HM$ c) $AM<HM<GM$ d) $GM<AM<HM$
- 16) If $A \subset B$, then probability $P(A|B)$ is equal to:
 a) 0 b) 1 c) $1/2$ d) $P(A)/P(B)$
- 17) If the first quartile $Q_1=15$ and third quartile $Q_3=25$, the co-efficient of quartile deviation is:
 a) 4 b) $1/4$ c) $5/3$ d) $3/5$
- 18) If a random variable X has the following probability distribution:
- | | | | | |
|-------|-------|-------|-------|-------|
| X: | -1 | -2 | 1 | 2 |
| Prob: | $1/3$ | $1/6$ | $1/6$ | $1/3$ |
- Then $E(X)$ is
 a) $3/2$ b) $1/6$ c) $1/2$ d) None of these
- 19) The mean and variance of a binomial distribution are 8 and 4 respectively. Then $P(X=1)$ is
 a) $(1/2)^{12}$ b) $(1/2)^8$ c) $(1/2)^6$ d) $(1/2)^4$
- 20) If the coefficient of correlation between two variables X and Y, $\rho=1$, then the angle between the two lines of regression is:
 a) 0° b) 90° c) 60° d) 30°
- 21) If you convert the decimal number 32 into binary number, how many 1s are there in the binary number?
 a) 2 b) 5 c) zero d) 1

- 22) The binary equivalent of $(A)_{16}$ is
 a) 1010 b) 1011 c) 1110 d) None
- 23) The decimal equivalent of $(1A)_{16}$ is
 a) 31 b) 26 c) 32 d) None
- 24) The sum of two binary numbers 111 and 101 is
 a) 1000 b) 1110 c) 1100 d) None
- 25) 'A' and 'B' can do a piece of work in 8 days which 'A' alone can do in 12 days. In how many days can 'B' alone do the same work
 a) 24 days b) 16 days c) 20 days d) 18 days
- 26) The average temperature of Monday, Tuesday, Wednesday and Thursday was 38 degrees and that of Tuesday, Wednesday, Thursday and Friday was 40 degrees. If the temperature of Monday was 30 degrees, the temperature of Friday was
 a. 40 degrees b) 39 degrees c) 38 degrees d) 30 degrees
- 27) In the question below, there is some relationship between the first two groups of letters. The same relationship obtains between the third group of letters and one of the four alternative letter groups. Pick the correct alternative
 PNDY:QMEX::JRSF:?
 a) KQRE b) KSTE c) KSRE d) KQTE
- 28) Anil travels 4 miles towards north, He turns to the left and travels 6 miles. Then he turns right and travels 4 miles. How far is he from the starting point?
 a) 5 miles b) 6 miles c) 10 miles d) 8 miles
- 29) The difference between the square of any two consecutive integers is equal to
 a) An even number b) Difference of two numbers
 c) Product of two numbers d) Sum of two numbers
- 30) If in a certain code language, '123' means 'bright little boy', '145' means 'tall big boy' and '637' means 'beautiful little flower', then which digit in that language means 'bright'?
 a) 1 b) 3 c) 4 d) 2
- 31) Subtracting $(1111)_2$ from $(10000)_2$ we get
 a) 1111 b) 11111 c) 1000 d) None
- 32) Expansion of http is
 a) hypertext transport protocol b) hypertech transport protocol
 c) hypertext transmission protocol d) None Of these.

33) Expand MSI

- a) Medium Scale Industry
- b) Medium Scale Integration
- c) Medium Span Industry
- d) None

34) In the following groups of words, one is spelt wrongly. Identify the wrong word.

- a) illiterete
- b) illegal
- c) illogical
- d) illegible

35) NSE is

- a) National Stock Exchange
- b) NATO Stock Exchange
- c) National Stock Election
- d) National Shares Exchange

36) WiMAX is related to which one of the following?

- a) Biotechnology
- b) Space technology
- c) Missile technology
- d) Communication Technology

37) Which one of the following is not a drug/ pharma company

- a) Chevron
- b) Nicholas Piramal
- c) Pfizer
- d) Zydus Cadila

38) A straight road runs from north to south, it has two turnings towards east and three turnings towards west. In how many ways can a person coming from east get on the road and go west

- a) 2
- b) 3
- c) 9
- d) 6

39) Find out the missing number in the series below:

1, 3, 7, 15, ?, 63

- a) 30
- b) 25
- c) 31
- d) 24

40) My mother is twice as old as my sister and my father is 24 years older than me. At the time of my sister's birth, I was 5. My sister is 25 now. What is the difference in the age of my parents?

- a) 3 years
- b) 4 years
- c) 5 years
- d) 6 years

41) Advise is

- a) noun
- b) verb
- c) adverb
- d) adjective

42) A synonym for 'adversary' is

- a) agent
- b) ally
- c) opponent
- d) poor

- 43) The antonym for 'debtor' is
a) plaintiff b) heterodox c) tenant d) creditor
- 44) The original inhabitants of a place are called
a) aborigines b) altruists c) immigrants d) settlers
- 45) Arvind Adiga won the Booker Prize for his book
a) The Tiger b) Slumdog Millionaire
c) The White Tiger d) None of these
- 46) The Swine Flue virus is also known as
a) H2N1 b) H1S1 c) S1N2 d) H1N1
- 47) Who is the Finance Minister of Karnataka
a) B. S. Yadiyurappa b) K. S. Eshwarappa
c) Aravinda Limbavali d) None of these
- 48) Which country recently conducted the Nuclear Test
a) South Korea b) Japan c) North Korea d) China
- 49) Which other language along with Kannada was given 'classical language' status in 2008
a) Tamil b) Malayalam c) Telugu d) None of these
- 50) Which actor won the "Best Actor Award" in the recently conducted film Fare awards
a) Sharukh Khan b) Salman Khan c) Saif Ali Khan d) None of these
- 51) Choose the appropriate article : Character is _____ destiny.
a) an b) a c) the d) None
- 52) Choose the right preposition:
She lives _____ Bangalore.
a) at b) by c) in d) within
- 53) Choose the suitable verb:
Boys _____ kites.
a) will flies b) flies c) none d) fly

54) 'To let the cat out of the bag' means

- a) to reveal a secret
- b) to cause an outburst
- c) to disclose fully
- d) to get ruined

55) Total number of divisors of 200 are

- a) 10
- b) 6
- c) 12
- d) 5

56) What principal would yield a simple interest of Rs 25, invested at 5% for 3 months?

- a) 1000
- b) 3000
- c) 2000
- d) 4000

57) The value of $\frac{(1+i)^2}{2i}$ is

- a) 2
- b) $3+i$
- c) 1
- d) -1

58) The value of $\sin\left(\frac{\pi}{6}\right) + \cos\left(\frac{\pi}{3}\right) - \tan^3(45^\circ)$ is

- a) 0
- b) 1
- c) $2/\sqrt{3}$
- d) $3/\sqrt{2}$

59) In which place in Karnataka, will the Central University be set up

- a) Gulbarga
- b) Mysore
- c) Dharwad
- d) Hubli

60) Who won the men's French Open , 2009 championship

- a) Rafal Nadal
- b) Roger Federer
- c) Andri Agassi
- d) Pete Sampras

Part- B

(Two Mark Questions)

61) MSB is

- a) Most significant Bit
- b) Maximum Significant Bit
- c) Most Scientific Bit
- d) Maximum Scientific Bit

62) Google is a

- a) Database
- b) Search Engine
- c) Programming language
- d) Operating System

63) Introducing a woman a man said, "Her Father's only son is my father". How is the man related to the woman

- a) Father
- b) Son
- c) Uncle
- d) Nephew

64) A three digit number consists of 9, 5 and one more number. When these digits are reversed and then subtracted from the original number the answer yielded will be consisting of the same digits arranged yet in a different order. What is the other digit?

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

- 65) If the circle $9x^2+9y^2=16$ cuts the x-axis at $(a, 0)$ and $(-a, 0)$, then a is
a) $\pm 2/3$ b) $\pm 3/4$ c) $\pm 1/4$ d) $\pm 4/3$
- 66) Equation of the parabola whose vertex is $(-2, 0)$ and directrix $x=1$ is
a) $y^2 = -2(x+2)$ b) $y^2 = -4(x+3)$ c) $y^2 = -6(x-5)$ d) $y^2 = -12(x+2)$
- 67) From a point 100 meters above the ground, the angles of depression of two objects due south on the ground are 60° and 45° . The distance between the objects is
a) $\frac{50(\sqrt{3}-1)}{\sqrt{3}}$ mts b) $\frac{75(\sqrt{3}-1)}{\sqrt{3}}$ mts c) $\frac{100(\sqrt{3}-1)}{\sqrt{3}}$ mts d) None of these.
- 68) the greatest angle of $\triangle ABC$ whose sides are $a=5$, $b=5\sqrt{3}$ and $c=5$, is
a) 45° b) 100° c) 120° d) 60°
- 69) The value of $\log_7^9 \cdot \log_5^7 \cdot \log_3^5$ is
a) 3 b) 2 c) 1 d) None of these.
- 70) The value of the determinant $\begin{vmatrix} 91 & 92 & 93 \\ 94 & 95 & 96 \\ 97 & 98 & 99 \end{vmatrix}$ is
a) 100 b) 202 c) 303 d) 0
- 71) Area of the triangle whose two sides $\vec{a} = 2i - 3j + k$, $\vec{b} = i - j + 2k$ is
a) $\sqrt{35}$ b) $1/2\sqrt{35}$ c) $2\sqrt{35}$ d) None of these.
- 72) A man goes from his home to his office at the speed of 20 km/h and returns from his office to home at the speed of 30 km/h. His mean speed is
a) 24 b) 25 c) 20 d) 30
- 73) If the first 25% observations of a series are 20 or less and last 25% observations of a series are 50 or more, the quartile deviation is
a) 25 b) 35 c) 15 d) 30
- 74) There are two bags. One bag contains 4 red and 5 black balls and the other 5 red and 4 black balls. One ball is to be drawn from either of the two bags, the probability of drawing a black ball is
a) 1 b) $16/81$ c) $1/2$ d) $10/81$

75) If $A = \begin{bmatrix} 2 & -1 \\ 3 & -2 \end{bmatrix}$, then $A^4 + A^3 - A^2 =$

- a) 0 b) I c) A d) None of these

76) Sum up to 10 terms of $1+3+5+7+\dots$ is

- a) 100 b) 102 c) 103 d) 104

77) The roots of the quadratic equation $x^2+x-1=0$ are

- a) $\left(\frac{-1+\sqrt{5}}{2}, \frac{-1-\sqrt{5}}{2}\right)$ b) $\left(\frac{1+\sqrt{5}}{2}, \frac{1-\sqrt{5}}{2}\right)$
c) $\left(\frac{-1+\sqrt{5}}{2}, \frac{1+\sqrt{5}}{2}\right)$ d) $\left(\frac{1+\sqrt{5}}{2}, \frac{-1-\sqrt{5}}{2}\right)$

78) The length of the perpendicular drawn from the point (3, -2) on the line $5x-12y-9=0$ is

- a) $\frac{28}{13}$ b) $\frac{31}{13}$ c) $\frac{30}{13}$ d) None of these

79) If the lines $x-6y+a=0$, $2x+3y+4=0$ and $x+4y+1=0$ are concurrent, then the value of 'a' is

- a) 4 b) 8 c) 5 d) 6

80) The angle between the lines represented by $x^2+3xy+2y^2=0$ is

- a) $\tan^{-1}(2/3)$ b) $\tan^{-1}(1/3)$ c) $\tan^{-1}(3/2)$ d) None of these