

APPENDIX – V

Model Question Paper

MAXIMUM MARKS	TOTAL DURATION	MAXIMUM TIME FOR ANSWERING
100	150 Minutes	120 Minutes
MENTION YOUR PGCET NUMBER	QUESTION BOOKLET DETAILS	
	VERSION CODE	SERIAL NUMBER

Dos:

1. Check whether the PGCET 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.

DONTs:

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 stapled 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 questions and each question will have one statement and four distractors (Four different options / choices.)
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 start answering on the OMR answer sheet.
3. During the subsequent 120 minutes:
 - ◊ Read each question carefully,
 - ◊ Choose the correct answer from out of the four available distractors (options / choices) given under each question / statement.
 - ◊ Completely darken / shade the relevant circle with a blue or black ink ballpoint pen against the question number on the OMR answer sheet.

CORRECT METHOD OF SHADING

Qn. No.	Answers			
I	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

4. Please note that even a minute unintended ink dot on the OMR answer sheet will also be recognized and recorded by the scanner. Therefore, avoid multiple markings of any kind on the OMR answer sheet.
5. Use the space provided on each page of the question booklet for Rough Work. Do not use the OMR answer sheet for the same.
6. 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.
7. Hand over the OMR answer sheet to the room invigilator as it is.
8. 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.
9. Preserve the replica of the OMR answer sheet for a minimum period of ONE year.



Part - A

(One Mark Questions)

13. Who of the following is the author of the book "The Audacity of Hope" ?
(a) Al Gore (b) Barack Obama (c) Bill Clinton (d) Hillary Clinton
14. Elephant Pass, which is frequently in the news, is mentioned in the context of the affairs of which one of the following.
(a) Bangladesh (b) India (c) Nepal (d) Sri Lanka
15. Which country recently conducted the Nuclear Test ?
(a) South Korea (b) Japan (c) North Korea (d) China
16. If I stand on my head with my face pointing southwards, in what direction will my right hand point ?
(a) East (b) West (c) North (d) South
17. Find out the missing number in the series below:
3, 6, 12, 6, 12, ?, 12, 24, 48
(a) 24 (b) 36 (c) 32 (d) 39
18. Today Radha is five times as old as her daughter. Four years hence the sum of their ages will be 44 years. How old is Radha's daughter now ?
(a) 4 years (b) 10 years (c) 6 years (d) 16 years
19. Twelve men can complete a work in 8 days, three days after they started the work, 3 more men joined them. In how many days will all of them together complete the remaining.
(a) 2 (b) 4 (c) 5 (d) 6
20. The average age of 24 boys in a class is 16. If the teacher is included in the group and one boy is excluded from the group, the average increases by 1. What is the age of the teacher ?
(a) 41 (b) 45 (c) 32 (d) None of these
21. Which of the following will come in place of the question mark (?) in the series below ?
ZGL XHN VIQ TJU ?
(a) QKZ (b) RKY (c) RLZ (d) RKZ
22. If second Saturday and all Sunday's are holidays in a 30 day month beginning on Saturday, how many working days will be there in a month ?
(a) 22 (b) 20 (c) 24 (d) 21
23. Star : Constellation, as is
(a) Soldier : Regiment (b) Patch : Thread (c) Hand : Clock (d) Struggle : Wrestle
24. 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



25. The average of the first 100 natural numbers is
(a) 5050 (b) 50.5 (c) 5.5 (d) None of these
26. If A and B are any two mutually exclusive events, then $P(A/A \cup B)$ is equal to
(a) $P(A \cup B)$ (b) $P(A)/(P(A)+P(B))$ (c) $P(B)/(A \cup B)$ (d) None of these
27. If the mode of a frequency distribution $M_o=16$ and its mean $\bar{X}=16$, the median of the distribution is:
(a) 16 (b) Zero (c) 32 (d) 8
28. If X and Y are two independent random variable, then
(a) $E(xy)=1$ (b) $E(xy)=0$ (c) $E(xy)=c$ any constant (d) None of these
29. A manufacturer produces switches and experiences that 2% switches are defective, the probability that in a box of 50 switches, there are at most 2 defectives is:
(a) e^{-1} (b) $2.5e^{-1}$ (c) $2e^{-1}$ (d) None of these
30. If a constant 50 is subtracted from each of the value of X and Y, then the regression co-efficient is
(a) Reduced by 50 (b) $\frac{1}{50}$ of the original regression co-efficient
(c) Increased by 50 (d) None of these
31. The following is used to connect components in a computer system :
(a) Van (b) Car (c) Bus (d) None of these
32. 'MAR' stands for
(a) Memory Address Register (b) Memory Add Register
(c) Memory Address Record (d) Memory add Record
33. Maximum number of unique characters that can be represented using EbcDIC format is,
(a) 255 (b) 256 (c) 127 (d) 128
34. Pick the odd one out
(a) C (b) C++ (c) Java (d) C#
35. Which one of the following is a single user operating system ?
(a) Linux (b) Unix (c) Dos (d) None
36. Plotter is a
(a) Input device (b) Memory device (c) Cpu (d) Output device
37. In the floating point number 0.1×10^{-12} , 10 is
(a) Base (b) Mantissa (c) Exponent (d) None
38. 2's complement of 0000 is
(a) 1111 (b) 10000 (c) 0001 (d) None





53. Here _____ the doctor.
(a) is coming (b) come (c) comes (d) None of these
54. 'To clip the wings of' means
(a) to remove the powers (b) to face humiliation
(c) destroy one's hopes (d) to solve a problem
55. Provide the appropriate question -tag :
(a) Did the (b) Hasn't he (c) Doesn't he (d) Has he
56. A misogynist is
(a) One who hates the world (b) One who hates learning
(c) One who hates women (d) One who hates music
57. A collection of poems is called,
(a) convoy (b) Volley (c) lexicon (d) anthology
58. The interjection, 'ouch' expresses :
(a) pain (b) happiness (c) discomfort (d) pleasure
59. Which of the following is not a possessive pronoun ?
(a) ours (b) they (c) hers (d) yours
60. She may sing film songs. 'May' indicates
(a) futurity (b) obligation (c) probability (d) ability

PART - B

(Two Mark Questions)

61. The inverse of the matrix $A = \begin{bmatrix} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 0 \end{bmatrix}$
(a) $\begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ (b) $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix}$ (c) A itself (d) None of these
62. Sum of $4^3 + 8^3 + 12^3 + \dots + 40^3$ is
(a) 193600 (b) 183600 (c) 194600 (d) 183700



63. 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) $\left(\frac{-1+\sqrt{5}}{2}, \frac{1+\sqrt{5}}{2}\right)$
64. The length of the perpendicular drawn from the point $(1, 1)$ on the $15x+8y+45=0$ is
(a) 3 (b) 4 (c) 5 (d) 2
65. The equation of the line passing through the point of intersection of $2x-y+5=0$ and $x+y+1=0$ nad the point $(5, -2)$ is
(a) $3x+7y-1=0$ (b) $x+2y+1=0$ (c) $5x+6y+3=0$ (d) None of these
66. The point of intersection of the lines represented by $2x^2 - 9xy + 4y^2 = 0$ is
(a) $(0, 0)$ (b) $(0, 1)$ (c) $(1, 0)$ (d) $(1, 1)$
67. If $y=x+c$ is a tangent to the circle $x^2 + y^2 = 8$, then c is
(a) +3 (b) +2 (c) +4 (d) +1
68. The equation of the parabola whose vertex is $(1, 1)$ and focus is $(4, 1)$ is
(a) $(y-1)^2 = 12(x-1)$ (b) $(y-2)^2 = 13(x-2)$
(c) $(y-1)^2 = 10(x+1)$ (d) None of these
69. The elevation of the tower 100 meters away is 300. The length of the tower is
(a) $75\sqrt{3}$ (b) 75 mts (c) 125 mts (d) $100\sqrt{3}$
70. The smallest angle of a $\triangle ABC$ whose sides are $a = 1$, $b = \sqrt{6} + \sqrt{2}$, $c = 2 + \sqrt{3}$ is
(A) 20° (B) 90° (C) 75° (D) 15°
71. The value of $\frac{2}{3} \log 8 - \frac{1}{2} \log \left(\frac{1}{4}\right)$ is
(a) $3 \log 2$ (b) $2 \log 3$ (c) $5 \log 3$ (d) None of these
72. If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$, then $A^2 - 5A + 7I$ is
(a) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ (b) $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ (c) $\begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix}$ (d) None of these
73. Area of the parallelogram whose adjacent sides are $i+j-k$ and $2i-j+k$ is
(a) $2\sqrt{3}$ (b) $3\sqrt{5}$ (c) $3\sqrt{2}$ (d) $5\sqrt{3}$



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