GLA University, Mathura

[MCA / MCA (Lateral Entry)]

Q.1. Which of the following is the same as Flood, Fire, Cyclone?
(a) Damage ☐
(b) Earthquake ☐
(c) Rain ☐
(d) Accident ☐

Q.2. 18, 40, 70, 108, 154, ----
(a) 200 ☐
(b) 198 ☐
(c) 208 ☐
(d) 200 ☐

Q.3. Dancer is related to Stage in the same way as Minister is related to _____
(a) Pulpit ☐
(b) Assembly ☐
(c) Parliament ☐
(d) State ☐

Q.4. In each of the following questions four words are given, out of which one is different. Choose out the odd one.
(a) Arrow ☐
(b) Axe ☐
(c) Knife ☐
(d) Dagger ☐

Q.5. An oasis always has
(a) travelers ☐
(b) water ☐
(c) sand ☐
(d) camels ☐

Q.6. A bulb always has
(a) filament ☐
(b) light ☐
(c) glass ☐
(d) current ☐

Q.7. Arun said "this girl is the wife of the grandson of my mother". Who is the Arun to the girl?
(a) father ☐
(b) grandfather ☐
(c) husband ☐
(d) father - in - law ☐

Q.8. A clock is so placed that at 12 noon its minute hand towards north east. In which directions does its hour hand point at 1.30 pm ?
(A) North ☐
(b) South ☐

(c) East ☐
(d) West ☐

Q.9. If the following words are arranged in a natural sequence which word would be the first.
(a) Night ☐
(b) Negative ☐
(c) Neighbour ☐
(d) Near ☐

Q.10. In an office having 55 employees men out number the women by 15. How many women are working in that office.
(a) 30 ☐
(b) 20 ☐
(c) 40 ☐
(d) 50 ☐

Q.11. In a certain code language, if the word REJECTION is coded as SGMIHZPWW, then how is the word MECHANIC coded in that language?
(a) NGFLFTPK ☐
(b) NGPLFTPK ☐
(c) NGFKFTPK ☐
(d) NGPTPKIL ☐

Q.12. A and B are brothers. C and D are sisters. A's son is D's brother. How is B related to C?
(a) Father ☐
(b) Brother ☐
(c) Grandfather ☐
(d) Uncle ☐

Q.13. In each of the following questions four words are given, out of which one is different. Choose out the odd one.
(a) Kiwi ☐
(b) Eagle ☐
(c) Emu ☐
(d) Penguin ☐

Q.14. Choose the correct alternatives-
Eye: Myopia : : Teeth : ?
(a) pyorrhoea ☐
(b) cataract ☐
(c) trachoma ☐
(d) eczema ☐

Q.15. Choose the correct alternatives-
Sculptor : statue : : Poet : ?

(a) canvas ☐
(b) pen ☐
(c) verse ☐
(d) chisel ☐

Q.16. which of the following is the same as Ode, Ballad, Lyric,?
(a) Prose ☐
(b) Epic ☐
(c) Sonnet ☐
(d) Precis ☐

Q.17. In each of the given questions four Group of letters are given. Choose the odd one.
(a) GHC ☐
(b) OPQ ☐
(c) MNW ☐
(d) ILT ☐

Q.18. A jail always has
(a) bars ☐
(b) jailor ☐
(c) lawyers ☐
(d) locks ☐

Q.19. If '+' means '/', '/' means '-', '-' means 'x' and 'x' means '+' then
$48 + 16 / 4 – 2 x 8 = ?$
(a) 3 ☐
(b) 6 ☐
(c) – 28 ☐
(d) 112 ☐

Q.20. Pointing to a lady, a man said, the son of her only brother of my wife. How is the lady related to the man?
(a) mother's sister ☐
(b) grandmother ☐
(c) mother in law ☐
(d) sister of father in law ☐

Q.21. Fill in the blank:
2, 8, 22, 44, 74, _____. ☐
(a) 96 ☐
(b) 98 ☐
(c) 112 ☐
(d) 100 ☐

Q.22. In the following question four words are given, out of which one is different. Choose the odd one out.
(a) Sun ☐
(b) Universe ☐

(c) Moon ☐
(d) Star ☐

Q.23. Brain is related to Cranium in the same way as Pearl is related to _____.
(a) Sand ☐
(b) Oyster ☐
(c) Box ☐
(d) Shore ☐

Q.24. How many times in 24 hours the hour hand and minute hand of a clock are at right angle?
(a) 44 ☐
(b) 24 ☐
(c) 12 ☐
(d) 48 ☐

Q.25. Kilogram is related to Quintal in the same way as Paisa related to _____.
(A) Rupee ☐
(B) Wealth ☐
(C) Money ☐
(D) Coin ☐

Q.26. Choose the appropriate *Antonym* of *'Anger'*
(A) party ☐
(b) happiness ☐
(c) approval ☐
(d) love ☐

Q.27. Choose the appropriate *Antonym* of *'Dull'*
(a) pale ☐
(b) wise ☐
(c) shining ☐
(d) colourful ☐

Q.28. Choose the appropriate *Synonym* of *'ABATE'*
(a) fish ☐
(b) catch ☐
(c) diminish ☐
(d) embarrass ☐

Q.29. Choose the appropriate *Synonym* of *'LAUD'*
(a) praise ☐
(b) cleanse ☐

(c) replace ☐
(d) squander ☐

Q.30. *Complete the sentence:*
Since he is a teacher of English, we would not expect him to be guilty of a _____
(a) solecism ☐
(b) schism ☐
(c) stanchion ☐
(d) freshet ☐

Q.31. *Complete the sentence:*
The researcher in the field of _____ was interested in race improvement.
(a) euthenics ☐
(b) euthanasia ☐
(c) euphuism ☐
(d) euphonics ☐

Q.32. *Direction:* Choose from the four alternatives the words which best complete the sentence –
The building was so full of _____ that the firemen could not get inside.
(a) some smoke ☐
(b) the smoke ☐
(c) a smoke ☐
(d) smoke ☐

Q.33. *Direction:* Each of the following questions consist of a related pair of capitalized words, followed by five alternate pairs of words. Select the alternative pair that best expresses a relationship similar to that expressed in the pair of capitalized words.
FRUIT : ORCHARD ::
(a) free : forest ☐
(b) fish : sea ☐
(c) lumber : mill ☐
(d) seed : flower ☐

Q.34. *Direction:* Each of the following questions consist of a related pair of capitalized words, followed by five alternate pairs of words. Select the alternative pair that best expresses a relationship similar to that expressed in the pair of capitalized words.

RETREAT : DEFEAT ::
(a) retrench : depression ☐
(b) victory : charge ☐

(c) campaign : advance ☐
(d) stand : death ☐

Q.35. *Direction:* Choose from the four alternatives the words which best complete the sentence:
On seeing the lion she felt too much afraid.
(a) very much ☐
(b) excessively ☐
(c) much ☐
(d) No improvement ☐

Q.36. A man can make 4 cardboard boxes in 1 hr. 10 min. How many cardboard boxes can he make in 7 hours?
(A) 22 ☐
(b) 20 ☐
(c) 18 ☐
(d) 24 ☐

Q.37. The length of a rectangle is 1 cm more than its breadth. The diagonal is 29 cm. find the area of the rectangle.
(a) 481 cm square ☐
(b) 841 cm square ☐
(c) 420 cm square ☐
(d) 870 cm square ☐

Q.38. If the annual increase in the population be 20% and the present population be 10,000. what will be the population after 3 years hence
(a) 16000 ☐
(b) 17280 ☐
(c) 14400 ☐
(d) 1728 ☐

Q.39. IN how many ways can the letters of the word RAINBOW be arranged so that only two vowels always remain together?
(a) 2880 ☐
(b) 1440 ☐
(c) 3200 ☐
(d) None of these ☐

Q.40. A person purchases 150, Rs. 100 shares at a discount of 20%. If the company pays a dividend of 12% find his rate of return.
(a) 20% ☐
(b) 15% ☐
(c) 12% ☐
(d) 25% ☐

Q.41. If a man can build one and a half walls in one day, then 8 men can build how many walls in 8 days?
(a) 84 ☐
(b) 96 ☐
(c) 64 ☐
(d) None of these ☐

Q.42. A certain sum triples in 8 years under compound interest which is calculated annually. In how many years does the sum becomes 9 times itself?
(a) 24 ☐
(b) 32 ☐
(c) 16 ☐
(d) 8 ☐

Q.43. In what proportion water be mixed with spirit to gain 12.5% by selling it at cost price?
(a) 3 : 5 ☐
(b) 1 : 8 ☐
(c) 2 : 7 ☐
(d) 1 : 9 ☐

Q.44. Find the number of terms in
$7 \times a + b \div 3 - c + b$
(a) 3 ☐
(b) 4 ☐
(c) 5 ☐
(d) 6 ☐

Q.45. How many 6 digits number can be formed using the digit 2 two times and the digit 4 four times?
(a) 16 ☐
(b) 15 ☐
(c) 18 ☐
(d) 24 ☐

Q.46. The sum of all odd proper divisors of 360 is
(a) 77 ☐
(b) 78 ☐
(c) 81 ☐
(d) None of these ☐

Q.47. The total number of seven-digit numbers, sum of whose digits is even, is
(a) 9×10^6 ☐
(b) 9×10^5 ☐
(c) 45×10^5 ☐
(d) 81×10^5 ☐

Q.48. The number of real solutions of the equation $\log 0.5\, x = |x|$ is
(a) 1 ☐
(b) 2 ☐
(c) 0 ☐
(d) None of these ☐

Q.49. The number of integral solutions of
$[(x + 2) / (x^2 + 1)] > 1/2$ is
(a) 4 ☐
(b) 3 ☐
(c) 5 ☐
(d) None of these ☐

Q.50. If $\cos^4 x + \sin^2 x - p = 0$, $p \, \varepsilon \, R$ has real solutions then
(a) $p \le 1$ ☐
(b) $3/4 \le p \le 1$ ☐
(c) $p \ge 3/4$ ☐
(d) None of these ☐

Q.51. In a triangle ABC, $\tan 3A - \tan 2A - \tan A$ is equal to
(a) $- \tan 3A \, \tan 2A \, \tan A$ ☐
(b) $\tan A \, \tan 2A \, \tan 3A$ ☐
(c) $\tan A \tan 2A - \tan 2A \tan 3A - \tan 3A \tan A$ ☐
(d) None of these ☐

Q.52. $(\sin \theta + i \cos \theta)^4$ is equal to
(a) $\cos 4\theta - i \sin 4\theta$ ☐
(b) $\sin 4\theta + i \cos 4\theta$ ☐
(c) $\sin 4\theta - i \cos 4\theta$ ☐
(d) $\cos 4\theta + i \sin 4\theta$ ☐

Q.53. The domain of $\sin^{-1} x$ is
(a) $[-1, 1]$ ☐
(b) $(-\pi, \pi)$ ☐
(c) $(0, 2\pi)$ ☐
(d) $(-\infty, \infty)$ ☐

Q.54. The straight roads intersect at an angle of 60°. A bus on one road is 2 km. away from the intersection and a car on the other road is 3 km. away from the intersection. Then the direct distance between the two vehicles is
(a) 1 km. ☐
(b) √2 km. ☐
(c) 4 km. ☐
(d) √7 km. ☐

Q.55. The cube roots of unity lie on a circle
(a) $|z| = 1$ ☐
(b) $|z - 1| = 1$ ☐

(c) $|z + 1| = 1$

(d) $|z - w| = 1$

Q.56. 10 students took a test and each one got different score. In how many ways can three different prizes be given?

(a) 270

(b) 360

(c) 720

(d) None of these

Q.57. The straight roads intersect at an angle of 60°. A bus on one road is 2 km away from the intersection and a car on the other road is 3 km away from the intersection. Then the direct distance between the two vehicles is:-

(a) $\sqrt{2}$ km

(b) 1 km

(c) $\sqrt{7}$ km

(d) 4 km

Q.58. The value of sin 50° sin 70° + sin 10°

(A) 1

(B) 0

(C) 1/2

(D) 2

Q.59. As observed from the top of a 75m high light house from the sea-level, the angle of depression is 60°. Find the distance of the ship from the base of light house.

(a) 25 m

(b) $25\sqrt{3}$ m

(c) $5\sqrt{3}$ m

(d) None of the above

Q.60. The shadow of a pole standing on the level ground is 15 metres when sun's altitude is 30°. Find the height of the pole.

(a) 25 m

(b) $25\sqrt{3}$ m

(c) $5\sqrt{3}$ m

(d) None of the above

Q.61.
$$\frac{5 \sin^2 30° + \cos^2 45° + 4 \tan^2 60°}{2 \sin 30° \cos 45° + \tan 45°}$$

(a) 55/6

(b) $45\sqrt{3}$

(c) 55

(d) None of the above

Q.62.
$$\frac{\sin 17°}{\cos 73°}$$

(a) 1/2

(b) 1

(c) $2/\sqrt{7}$

(d) None of the above

Q.63. If $\log_{16} x + \log_4 x + \log_2 x = 14$, then $x =$

(a) 16

(b) 32

(c) 64

(d) None of these

Q.64. From a bag containing 5 red different pairs and 4 white different pairs of socks. Probability of getting a pair by drawing 2 socks is given by

(a) 9/20

(b) 1/17

(c) 1/20

(d) 1/9

Q.65. If three cubical dice are thrown, the probability that they show the numbers in A.P. is

(a) 1/36

(b) 1/6

(c) 1/12

(d) 1/18

Q.66. The probability that a man will live 10 more years is ¼ and the probability that his wife will live 10 more years is 1/3. Then the probability that neither will be alive in 10 years is

(a) 5/12

(b) 1/2

(c) 7/12

(d) 11/12

Q.67. A train is moving with constant velocity. If the resistance to its motion is 10 lbs wt per ton (of mass) and the force exerted by the engine is 200 lbs wt, the mass of the engine is

(a) 20 tons

(b) 200 tons

(c) 2000 tons

(d) 2 tons.

Q.68. A man falls vertically under gravity with a box of mass m on his head. Then the

reaction force between his head and the box is

(a) 1 *mg*
(b) 2 *mg*
(c) 0
(d) 1.5 *mg*

Q.69. The maximum range for a given particle is possible only when the angle of projection is

(a) 0
(b) 30
(c) 45
(d) 60

Q.70. If $x = \sin t, y = \cos t$, then dy/dx is equal to

(a) tan *t*
(b) cot *t*
(c) tan *t*
(d) cot *t*.

Q.71. Differential Coefficient of sec tan^1 *x* is

(a) $x/(1 + x^2)$
(b) $x (1 + x^2)$
(c) $1/(1 + x^2)$
(d) $x/(1 + x^2)$

Q.72. If $x = 3 \cos \theta$ $2 \cos^3 \theta$, $y = 3 \sin \theta$ $2 \sin^3 \theta$, then dy/dx is

(a) $\cos \theta$
(b) $\tan \theta$
(c) $\sec \theta$
(d) None of these

Q.73. An arc of a circle of radius 7 cm. subtends an angle of 30 at the centre, then the length of this arc is

(a) 11 cm.
(b) 11/3 cm.
(c) 11/2 cm.
(d) 22 cm.

Q.74. A circular wire of radius 3 cm. is cut and bent so as to lie along the circumference of a hoop whose radius is 48 cm. The angle in degrees which is subtended at the centre of the hoop is

(a) 15°
(b) 22.5°
(c) 30°
(d) 45°

Q.75. If OP makes 4 revolutions in one second, the angular velocity in radians per second is

(a) π
(b) 2π
(c) 4π
(d) 8π

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