UNIVERSITY OF MYSORE

Ph.D. Entrance Examination, November - 2020

SUBJECT CODE : 44

QUESTION BOOKLET NO. 506926

Entrance Reg. No.

QUESTION BOOKLET

(Read carefully the instructions given in the Question Booklet)

SUBJECT : MATHEMATICS

MAXIMUM MARKS : 100 **MAXIMUM TIME : THREE HOURS**

(Including initial 10 minutes for filling O.M.R. Answer sheet)

INSTRUCTIONS TO THE CANDIDATES

1. The sealed questions booklet containing 50 questions enclosed with O.M.R. Answer Sheet is given to you.
2. Verify whether the given question booklet is of the same subject which you have opted for examination.
3. Open the question paper seal carefully and take out the enclosed O.M.R. Answer Sheet outside the question booklet and fill up the general information in the O.M.R. Answer sheet. If you fail to fill up the details in the form of alphabet and signs as instructed, you will be personally responsible for consequences arising during scoring of your Answer Sheet.
4. During the examination:
   a) Read each question carefully.
   b) Determine the Most appropriate/correct answer from the four available choices given under each question.
   c) Completely darken the relevant circle against the Question in the O.M.R. Answer Sheet. For example, in the question paper if "C" is correct answer for Question No.8, then darken against Sl. No.8 of O.M.R. Answer Sheet using Blue/Black Ball Point Pen as follows:

   Question No. 8. Ⓐ Ⓑ ● Ⓓ (Only example) (Use Ball Pen only)
5. Rough work should be done only on the blank space provided in the Question Booklet. Rough work should not be done on the O.M.R. Answer Sheet.
6. If more than one circle is darkened for a given question, such answer is treated as wrong and no mark will be given. See the example in the O.M.R. Sheet.
7. The candidate and the Room Supervisor should sign in the O.M.R. Sheet at the specified place.
8. Candidate should return the original O.M.R. Answer Sheet and the university copy to the Room Supervisor after the examination.
9. Candidate can carry the question booklet and the candidate copy of the O.M.R. Sheet.
10. The calculator, pager and mobile phone are not allowed inside the examination hall.
11. **If a candidate is found committing malpractice, such a candidate shall not be considered for admission to the course and action against such candidate will be taken as per rules.**

INSTRUCTIONS TO FILL UP THE O.M.R. SHEET

1. There is only one most appropriate/correct answer for each question.
2. For each question, only one circle must be darkened with BLUE or BLACK ball point pen only. Do not try to alter it.
3. Circle should be darkened completely so that the alphabet inside it is not visible.
4. Do not make any stray marks on O.M.R. Sheet.

ಗಮನಿಸಿ : ಸೂಚನೆಗಳ ಕನ್ನಡ ಆವೃತ್ತಿಯು ಈ ಪುಸ್ತಕದ ಹಿಂಭಾಗದಲ್ಲಿ ಮುದ್ರಿಸಲ್ಪಟ್ಟಿದೆ.

PART-A

This part shall contains 50 multiple choice/objective type questions, each question carrying one mark. [50 × 1 = 50]

1. The permutation $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 6 & 5 & 4 & 3 & 1 & 2 \end{pmatrix}$ can be written as a product of disjoint cycles as

(A) $(1\ 6\ 2\ 5)(3\ 4)$
(B) $(1\ 2\ 3\ 4)(5\ 6)$
(C) $(1\ 3\ 4\ 5)(2\ 6)$
(D) $(1\ 2\ 5\ 6)(3\ 4)$

2. The Kernel of a homomorphism $f: G \rightarrow G'$ is ________.

(A) a subgroup of G'
(B) a normal subgroup of G'
(C) a normal subgroup of G
(D) $\{e\}$

3. The order of 2-sylow subgroup of A_4 is

(A) 4
(B) 6
(C) 2
(D) None of these

4. The algebraic structure which is not a ring is ________.

(A) $(Z, +, \cdot)$
(B) $(Q, +, \cdot)$
(C) $(Z_n, \otimes, \oplus)$
(D) $(Z_n, \oplus, \otimes)$

5. Let A and B be any two subspaces of a vector space V. Then

(A) $A \cup B$ is a subspace of V
(B) $A \cap B$ is subspace of V
(C) $A \backslash B$ is subspace of V
(D) None of these

6. Let $T: R^3 \rightarrow R^3$ be a linear transformation given by $T(x, y, z) = (x, y, 0)$. Then, the null space is generated by which one of the following?

(A) (0, 0, 1)
(B) (0, 1, 0)
(C) (1, 0, 0)
(D) None of these

7. Which of the following is a Cauchy sequence?

(A) $\left(\frac{1}{n}\right)$
(B) (n)
(C) $((-1)^n)$
(D) (n^2)

8. The incorrect statement from the following statements is

(A) N is countable set
(B) R is countable set
(C) N × N is a countable
(D) Q is a countable set

9. Which one of the following be true for the function $f(x)=x^2\sin\left(\frac{1}{x}\right)$, if $x\neq 0$, $f(0)=0$

(A) Function f is not continuous on [0, 1]
(B) Function f is not bounded variation on [0, 1]
(C) Function f is does not exists
(D) Function f is of bounded variation on [0, 1]

10. The improper integral $\int_a^b \frac{1}{(x-a)^n}dx$ converges if and only if

(A) $n<1$
(B) $n=1$
(C) $n>1$
(D) None of these

11. Let P(x) be a polynomial of degree $d \geq 2$. The radius of convergence of the power series $\sum_{n=0}^{\infty} P(n)Z^n$ is :

(A) 0
(B) 1
(C) ∞
(D) dependent on d

12. Which of the following functions are analytic in $\mathbb{C}$?

i) $f(z)=|z|^2$ ii) $f(z)=\overline{z}$ iii) $f(z)=\text{Re}(z)$

(A) (i)
(B) (ii)
(C) (iii)
(D) None of the above

13. Let f:D→D be a holomorphic function with $f(0)=0$, where D is the open unit disc $\{z\in\mathbb{C}:|z|<1\}$. Then

(A) $|f'(0)|=1$
(B) $\left|f'\left(\frac{1}{2}\right)\right|\leq\frac{1}{2}$
(C) $\left|f\left(\frac{1}{2}\right)\right|\leq\frac{1}{4}$
(D) $|f'(0)|\leq\frac{1}{2}$

14. Suppose f and g are entire functions and $g(z) \neq 0$ for all $z \in \mathbb{C}$. If $|f(z)| \leq |g(z)|$, then we conclude that

(A) $f(z) \neq 0$ for all $z \in \mathbb{C}$

(B) f is a constant function

(C) $f(0) = 0$

(D) for some $c \in \mathbb{C}$, $f(z) = c\,g(z)$

15. The singularity of the function $f(z) = \log z$ at $z = 0$ is

(A) isolated

(B) non-isolated

(C) pole

(D) removable

16. The initial value problem $y = 2x^{\frac{1}{3}}$, $y(0) = 0$ in interval around $t = 0$ has

(A) no solution

(B) a unique solution

(C) finitely many linearly independent solutions

(D) infinitely many linearly independent solutions

17. Let $y_1(x)$ and $y_2(x)$ be two linearly independent solutions of the differential equation :

$x^2 y''(x) - 2xy'(x) - 4y(x) = 0$ for $x \in [1, 10]$. Consider the Wronskian

$W(x) = y_1(x) y_2'(x) - y_2(x) y_1'(x)$

If W(1) = 1, then W(3) – W(2) equals

(A) 1

(B) 2

(C) 3

(D) 5

18. Characteristic curve of the partial differential equation $x^2 u_{xx} - y^2 u_{yy} = x^2 y^2 + x$; $x > 0$, $u = u(x, y)$ is

(A) hyperbola

(B) parabola

(C) circle

(D) straight line

19. The canonical form of quadratic form $q(x, y, z) = x^2 + 5y^2 - 4z^2 + 2xy - 4xz$ over the field R is

(A) $x^2 + 4y^2 - 9z^2$

(B) $x^2 - y^2 + z^2$

(C) $x^2 - 4y^2 + 9z^2$

(D) $x^2 + y^2 + z^2$

20. The Sturm-Liouville problem : $\frac{d^2y}{dx^2}+\lambda^2 y=0$, $y_1(0)=y_1(\pi)=0$ has its eigen functions given by

(A) $y=\sin\left(\frac{n+1}{2}\right)x$ (B) $y=\sin x$

(C) $y=\cos\left(\frac{n+1}{2}\right)x$ (D) $y=\cos nx$, $n=0, 1, 2, \ldots\ldots$

21. If B is the collection of all intervals in the real line $(a,b)=\{x/a<x<b\}$, the topology generated by B is called the

(A) standard topology on the real line
(B) discrete topology on the real line
(C) Hausdorff topology on the real line
(D) none of these

22. Let X and Y be topological spaces and $f: X \to Y$. If f is continuous, then

(A) the set $f^{-1}(B)$ is closed in X, for every closed set B in Y
(B) the set $f^{-1}(B)$ is closed in X, for every open set B in Y
(C) the set $f^{-1}(B)$ is open in x, for every closed set B in Y
(D) none of these

23. The $X=\left\{x\in[0,1]: x\neq\frac{1}{m},\ m\in N\right\}$ be given the subspace topology. Then

(A) X is connected but not compact
(B) X is neither compact nor connected
(C) X is compact but connected
(D) X is compact but not connected

24. The topological space X that has a countable basis at each of its points is said to satisfy

(A) the first countable axioms
(B) the second countable axioms
(C) the third countable axioms
(D) the fourth countable axioms

25. Let X and Y be topological spaces and let $f: X \to Y$ be a continuous surjective function. Which one of the following statements is true?

(A) If X is separable, then Y is separable.

(B) If X is first countable, then Y is first countable.

(C) If X is Hausdorff, then Y is Hausdorff.

(D) If X is regular, then Y is regular.

26. Let N be the Banach space, then

(A) every absolute summable series in N is summable in N

(B) every absolute summable series in N is need not be summable in N

(C) every convergent sequence in N need not be Cauchy sequence

(D) none of the above

27. The space l_p is a Hilbert space if and only if

(A) $p \geq 1$

(B) p = even

(C) $p = \infty$

(D) $p = 2$

28. Let T be a linear transformation of a normed linear space N into another normed linear space N′, then

(A) T is not continuous at origin

(B) T is not bounded

(C) T is continuous

(D) None of the above

29. If $f: X \to X$ is a contraction mapping of a complete metric space (X, d), then f has

(A) Unique fixed point

(B) At most two fixed points

(C) More than two fixed points

(D) None of the above

30. Which of the following statement is not true?

(A) Let $T: B \to B'$ be an onto linear transformation from Banach space B to Banach space B′. If V is open in B then T(V) is open in B′.

(B) Let $T: B \to B'$ be a bijective continuous linear transformation then T is homeomorphism.

(C) Let $T: B \to B'$ be a linear transformation then T is closed if and only if graph of T is closed.

(D) Let Banach space B be made into a Banach space B′ by means of new norm, then the topologies generated by the norms are different.

31. If $f(x, y, z) = x^2y + y^2z + z^2x$ for all $x, y, z \in R^3$ and $\nabla = \frac{\partial}{\partial x}i + \frac{\partial}{\partial y}j + \frac{\partial}{\partial z}k$, then the value of $\nabla \cdot (\nabla \times \nabla f) + \nabla \cdot (\nabla f)$ at (1, 1, 1) is

(A) 0
(B) 3
(C) 6
(D) 9

32. A function $f : R^2 \rightarrow R$ is defined by $f(x, y) = xy$. Let $v = (1, 2)$ and $a(a_1, a_2)$ be two elements of R^2. The directional derivative of f in the direction of v at a is :

(A) $a_1 + 2a_3$
(B) $a_2 + 2a_1$
(C) $\frac{a_2}{2} + a_1$
(D) $\frac{a_1}{2} + a_2$

33. Which of the following statement is false?

(A) Every isometry in E^3 is an orthogonal transformation
(B) Every orthogonal transformation in E^3 is an isometry
(C) Every isometry in E^3 can be uniquely described as an orthogonal transformation followed by a transformation
(D) The composition of two isometries is again an isometry in E^3.

34. For the curve $\alpha(t) = (3t - t^3, 3t^2, 3t + t^3)$, the torsion function is

(A) $\frac{1}{3t^2}$
(B) $\frac{1}{3t - t^3}$
(C) $\frac{1}{3t + t^3}$
(D) $\frac{1}{3(1 + t^2)^2}$

35. If f is continuously differentiable on $[a, b]$, then $v_f(x) =$ ________.

(A) $\int_a^b |f'(t)| dt$
(B) $\int_a^x |f'(t)| dt$
(C) $\int_a^x f'(t) dt$
(D) $\int_a^b f'(t) dt$

36. If the plane R^2 is provided with the Lebesgue measure, then the measure of the set $\{(x, y) \in R^2 | x^2 + y^2 = 1\}$ is

(A) 0 (B) ∞

(C) 1 (D) -1

37. The measure of singleton set is

(A) 0 (B) 1

(C) 3 (D) Does not exist

38. Let P_1 be the set of all irrationals, then $m^*(P_1)$ is

(A) 2 (B) 1

(C) 3 (D) Does not exist

39. Which of the following statement is not true?

(A) every finite set is measurable

(B) cantor set is not measurable

(C) R is measurable

(D) Q is measurable

40. If $m(A) = 0$, then for any B, $m^*(A \cup B) =$ _______.

(A) $m^*(A)$ (B) $m(B)$

(C) $m^*(B)$ (D) $m(A)$

41. What is the remainder when 8^{130} is divided by 13?

(A) 0 (B) 8

(C) 12 (D) 9

42. If ϕ is Euler phi function then $\phi(19)$ is

(A) 1 (B) 7

(C) 19 (D) 20

43. Consider the congruence $x^n \equiv 2 \pmod{13}$. This congruence has a solution for x, if

(A) $n = 5$ (B) $n = 6$

(C) $n = 8$ (D) None of these

44. Given a natural number $n > 1$ such that $(n-1)! \equiv -1 (\text{mod } n)$, we can conclude that

(A) $n = p^k$ where p is prime, $k > 1$

(B) $n = pq$ where p and q are distinct primes

(C) $n = pqr$ where p, q and r are distinct primes

(D) $n = p$ where n is prime

45. If x and y are both prime to n, then $x^{n-1} - y^{n-1}$ is

(A) prime to n

(B) of the form k_{n+1} $(n \in Z)$

(C) divisible by n^2

(D) divisible by n

46. Which of the following is not true in graphs?

(A) path is a trail

(B) trail is a walk

(C) walk is a path

(D) cycle is a closed path

47. The maximum number of edges in a simple graph on p vertices is

(A) $\frac{p}{2}$

(B) $\frac{p-1}{2}$

(C) $\frac{p(p-1)}{2}$

(D) $\frac{p(p+1)}{2}$

48. Vertex covering number of a path graph with odd number p of vertices is

(A) $\frac{p+1}{2}$

(B) $\frac{p-1}{2}$

(C) $\frac{p}{2}$

(D) $\frac{p}{3}$

49. Independence number of a cycle graph with odd number p vertices is

(A) $\frac{p-1}{2}$

(B) $\frac{p}{2}$

(C) $\frac{p}{4}$

(D) $\frac{p+1}{2}$

50. If G is a graph with p vertices then its chromatic polynomial has degree

(A) $p + 1$

(B) p

(C) $p - 1$

(D) $p(p - 1)$

PART-B

This part shall contains Five questions, each question carrying ten marks.

1. Prove that any finite group is isomorphic to a group of permutations. **[10]**

2. Prove that any finite integral domain is a field. **[10]**

3. If f is Riemann integrable on $[a, b]$ then prove that $|f|$ is also Riemann integrable and $\left|\int_a^b f(x)\,dx\right| \leq \int_a^b |f(x)|\,dx$. **[10]**

4. If p is a prime number then prove that $\lfloor\underline{p-1} + 1 \equiv 0 \pmod{p}$. **[10]**

5. If G is a plane graph with p vertices, q edges and r faces then show that $p - q + r = 2$. **[10]**

✦✦✦✦

Rough Work

<u>ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಸೂಚನೆಗಳು</u>

1. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ಜೊತೆಗೆ 50 ಪ್ರಶ್ನೆಗಳನ್ನು ಹೊಂದಿರುವ ಮೊಹರು ಮಾಡಿದ ಪ್ರಶ್ನೆ ಪುಸ್ತಕವನ್ನು ನಿಮಗೆ ನೀಡಲಾಗಿದೆ.
2. ಕೊಟ್ಟಿರುವ ಪ್ರಶ್ನೆ ಪುಸ್ತಕವು, ನೀವು ಪರೀಕ್ಷೆಗೆ ಆಯ್ಕೆ ಮಾಡಿಕೊಂಡಿರುವ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದ್ದೇ ಎಂಬುದನ್ನು ಪರಿಶೀಲಿಸಿರಿ.
3. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಮೊಹರನ್ನು ಜಾಗ್ರತೆಯಿಂದ ತೆರೆಯಿರಿ ಮತ್ತು ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯಿಂದ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯನ್ನು ಹೊರಗೆ ತೆಗೆದು, ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಸಾಮಾನ್ಯ ಮಾಹಿತಿಯನ್ನು ತುಂಬಿರಿ. ಕೊಟ್ಟಿರುವ ಸೂಚನೆಯಂತೆ ನೀವು ನಮೂನೆಯಲ್ಲಿನ ವಿವರಗಳನ್ನು ತುಂಬಲು ವಿಫಲರಾದರೆ, ನಿಮ್ಮ ಉತ್ತರ ಹಾಳೆಯ ಮೌಲ್ಯಮಾಪನ ಸಮಯದಲ್ಲಿ ಉಂಟಾಗುವ ಪರಿಣಾಮಗಳಿಗೆ ವೈಯಕ್ತಿಕವಾಗಿ ನೀವೇ ಜವಾಬ್ದಾರರಾಗಿರುತ್ತೀರಿ.
4. ಪರೀಕ್ಷೆಯ ಸಮಯದಲ್ಲಿ:
   a) ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಯನ್ನು ಜಾಗ್ರತೆಯಿಂದ ಓದಿರಿ.
   b) ಪ್ರತಿ ಪ್ರಶ್ನೆಯ ಕೆಳಗೆ ನೀಡಿರುವ ನಾಲ್ಕು ಲಭ್ಯ ಆಯ್ಕೆಗಳಲ್ಲಿ ಅತ್ಯಂತ ಸರಿಯಾದ/ ಸೂಕ್ತವಾದ ಉತ್ತರವನ್ನು ನಿರ್ಧರಿಸಿ.
   c) ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಯ ವೃತ್ತಾಕಾರವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬಿರಿ. ಉದಾಹರಣೆಗೆ, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ 8ಕ್ಕೆ "C" ಸರಿಯಾದ ಉತ್ತರವಾಗಿದ್ದರೆ, ನೀಲಿ/ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಬಳಸಿ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ಕ್ರಮ ಸಂಖ್ಯೆ 8ರ ಮುಂದೆ ಈ ಕೆಳಗಿನಂತೆ ತುಂಬಿರಿ:

   ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ 8. Ⓐ Ⓑ ● Ⓓ (ಉದಾಹರಣೆ ಮಾತ್ರ) (ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಮಾತ್ರ ಉಪಯೋಗಿಸಿ)
5. ಉತ್ತರದ ಪೂರ್ವಸಿದ್ಧತೆಯ ಬರವಣಿಗೆಯನ್ನು (ಚಿತ್ತು ಕೆಲಸ) ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಒದಗಿಸಿದ ಖಾಲಿ ಜಾಗದಲ್ಲಿ ಮಾತ್ರವೇ ಮಾಡಬೇಕು (ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಮಾಡಬಾರದು).
6. <u>ಒಂದು ನಿರ್ದಿಷ್ಟ ಪ್ರಶ್ನೆಗೆ ಒಂದಕ್ಕಿಂತ ಹೆಚ್ಚು ವೃತ್ತಾಕಾರವನ್ನು ಗುರುತಿಸಲಾಗಿದ್ದರೆ, ಅಂತಹ ಉತ್ತರವನ್ನು ತಪ್ಪು ಎಂದು ಪರಿಗಣಿಸಲಾಗುತ್ತದೆ ಮತ್ತು ಯಾವುದೇ ಅಂಕವನ್ನು ನೀಡಲಾಗುವುದಿಲ್ಲ. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಉದಾಹರಣೆ ನೋಡಿ.</u>
7. ಅಭ್ಯರ್ಥಿ ಮತ್ತು ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರು ನಿರ್ದಿಷ್ಟಪಡಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯ ಮೇಲೆ ಸಹಿ ಮಾಡಬೇಕು.
8. ಅಭ್ಯರ್ಥಿಯು ಪರೀಕ್ಷೆಯ ನಂತರ ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರಿಗೆ ಮೂಲ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆ ಮತ್ತು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಪ್ರತಿಯನ್ನು ಹಿಂದಿರುಗಿಸಬೇಕು.
9. ಅಭ್ಯರ್ಥಿಯು ಪ್ರಶ್ನೆ ಪುಸ್ತಕವನ್ನು ಮತ್ತು ಓ.ಎಂ.ಆರ್. ಅಭ್ಯರ್ಥಿಯ ಪ್ರತಿಯನ್ನು ತಮ್ಮ ಜೊತೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಬಹುದು.
10. ಕ್ಯಾಲ್ಕುಲೇಟರ್, ಪೇಜರ್ ಮತ್ತು ಮೊಬೈಲ್ ಫೋನ್‌ಗಳನ್ನು ಪರೀಕ್ಷಾ ಕೊಠಡಿಯ ಒಳಗೆ ಅನುಮತಿಸಲಾಗುವುದಿಲ್ಲ.
11. **ಅಭ್ಯರ್ಥಿಯು ದುಷ್ಕೃತ್ಯದಲ್ಲಿ ತೊಡಗಿರುವುದು ಕಂಡುಬಂದರೆ, ಅಂತಹ ಅಭ್ಯರ್ಥಿಯನ್ನು ಕೋರ್ಸ್‌ಗೆ ಪರಿಗಣಿಸಲಾಗುವುದಿಲ್ಲ ಮತ್ತು ನಿಯಮಗಳ ಪ್ರಕಾರ ಇಂತಹ ಅಭ್ಯರ್ಥಿಯ ವಿರುದ್ಧ ಕ್ರಮ ಕೈಗೊಳ್ಳಲಾಗುವುದು.**

<u>ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯನ್ನು ತುಂಬಲು ಸೂಚನೆಗಳು</u>

1. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೆ ಒಂದೇ ಒಂದು ಅತ್ಯಂತ ಸೂಕ್ತವಾದ/ಸರಿಯಾದ ಉತ್ತರವಿರುತ್ತದೆ.
2. ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಒಂದು ವೃತ್ತವನ್ನು ಮಾತ್ರ ನೀಲಿ ಅಥವಾ ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ನಿನಿಂದ ಮಾತ್ರ ತುಂಬತಕ್ಕದ್ದು. ಉತ್ತರವನ್ನು ಮಾರ್ಪಡಿಸಲು ಪ್ರಯತ್ನಿಸಬೇಡಿ.
3. ವೃತ್ತದೊಳಗಿರುವ ಅಕ್ಷರವು ಕಾಣದಿರುವಂತೆ ವೃತ್ತವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬುವುದು.
4. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿ ಯಾವುದೇ ಅನಾವಶ್ಯಕ ಗುರುತುಗಳನ್ನು ಮಾಡಬೇಡಿ.

Note : English version of the instructions is printed on the front cover of this booklet.